

INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY, RAU, PITHAMPUR ROAD, OPPOSITE IIM, INDORE – 453331

## ACCREDITATION-FIRST CYCLE

## SELF- STUDY REPORT

## Submitted to



NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL, BANGALORE DECEMBER 2016



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## LIST OF ABBREVIATIONS AND SYMBOLS

## Departments

Symbols	Full form
ECE	Electronics & Communication Engineering
CSE	Computer Science & Engineering
IT	Information Technology
ME	Mechanical Engineering
CE	Civil Engineering
СМ	Chemical Engineering
MBA	Master of Business Administration
PHY	Engineering Physics
EM	Engineering Mathematics

## Designation

Symbols	Full form
Prof.	Professor
Asso. Prof.	Associate Professor
Asst. Prof.	Assistant Professor
LA	Laboratory Assistant

## Degree

Symbols	Full form
M. Phil	Master of Philosophy
M. E.	Master of Engineering
M. Tech.	Master of Technology
M.B.A	Master of Business Administration
PGD	Post Graduate Diploma
PhD	Doctor of Philosophy

## Gender

Symbols	Full form
М	Male
F	Female

## Category

Symbols	Full form
GEN	General
OBC	Other Backward Classes
SC	Scheduled Class
ST	Scheduled Tribe

## Terms used in NAAC documents

Symbols	Full form
AQAR	Annual Quality Assurance Report
CAPU	Central Application Processing Unit
CGPA	Cumulative Grade Point Average

HEI	Higher Education Institution
IEQA	Institutional Eligibility of Quality Assessment
IQAC	Internal Quality Assurance Cell
KAGP	Keys Aspect-wise Grade Point
LOI	Letter of Intent
NAAC	National Assessment and Accreditation Council
NCTE	National Council for Teacher Education
PTR	Peer Team Report
SRA	Statutory Regulatory Authority
SSR	Self-Study Report

## Library

Symbols	Full form
RB	Reference Book
TB	Text Book

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## PART A- INSTITUTIONAL DATA

## A. Preface

This Self-Study Report is a valuable document that has been prepared with utmost sincerity and honesty to the best of our knowledge and belief. This report contains information about Indore Institute of Science & Technology, Indore. The report has been prepared in three parts. The Part-1 consists of Institutional data. The Part-2 consists of Criterion-wise analytical report. The Part-3 consists of evaluation report of departments and annexure.

The College is one of the premier institutes of engineering and management education in Indore. It caters to the need of the youth of 60 districts of Madhya Pradesh specially Indore, Bihar, Uttar Pradesh and few adjoining states. The college gives more emphasis on inculcating practical skills among students. The college runs special programs of soft skills and communication skills through out four years to prepare them to take up Indian as well as foreign assignments in phase with demand of employer.

It is matter of great dignity for the nation that the NAAC has developed a yardstick to measure the quality of higher professional education precisely. I also express my sincere gratitude to Shri Rohit Jain the Chairman of the Shail group of Institution. He inspired to carry out this mammoth task.

The undersigned is keen to welcome the Peer Team of the National Assessment and Accreditation Council (NAAC) at the premises of the Indore Institute of Science & Technology, Indore. It is hoped that all faculty members, lab assistants, support staff, and students would be greatly benefited by noble, expert and well-versed guidance of NAAC.

Dr. Joy Banerjee Director

## B. Profile of the Director

Dr. Joy Banerjee, presently Director of IIST Indore, is an alumnus of IIT Kharagpur and Arthur D. Little Boston, USA. His Phd project was Industry sponsored by SAIL (R&D), DRDL and IIT Kharagpur. He has publications in National and International Journals to his credit.

## **Industry & Finance Sector Experience**

With a very rich exposure to some of the famous global Industries, Dr. Banerjee has served in Corporate in senior position, viz, Larsen and Turbo Ltd, SF India, Steel Authority of India Ltd, Kaiser Ind. Ltd, Greaves Foseco etc. and in the Banking Sector.



## **Experience at the World Bank**

He has served the World Bank, Washington DC, USA, as a senior consultant, and travelled throughout the world on various missions.

## Institutional and Academic Management Experience

He has also served in the senior positions and as Director of many Engineering and Management Institutes, some of which are following:

- 1. Gurgaon College of Engineering and Management; Haryana.
- 2. D.Y. Patil Engineering College; Maharashtra.
- 3. JMIT, Kurukshetra, Haryana.
- 4. Sanghavi College of Engineering; Maharashtra.
- 5. GNIT, NOIDA, UP.

## Visiting Faculty

Dr. Banerjee had been a visiting Faculty of University of Southern California, Los Angeles, and University of Maryland, USA. He was a visiting faculty at IIT, Kharagpur & NIT Durgapur, West Bengal.

## **Consultancy Experience**

He had been Consultant to various Steel Industries like Tata Steel, Modi Steel, Telco and Alloy Steel Plant, Durgapur.

## C. Executive Summary

Indore Institute of Science & Technology is one of the premier Institutions offering quality education in Engineering and Technology in Madhya Pradesh and an institution of high reputation in Central parts of the state. Although only thirteen years old, realizing the need and value of acquiring accreditation from authorized bodies, the college has groomed itself over the years and is now ready for assessment by self and external bodies. The college has prepared the Self- Study Report for the I<sup>st</sup> cycle of accreditation by NAAC, the study covering all and every aspect of the functioning of the Institution. The summary of the ensuing detailed report is précised below:

## **CRITERION I – CURRICULAR ASPECTS**

The College being an Institution affiliated to RGPV University, Bhopal adapts to the syllabi prescribed by the University. However, the College devises innovative and creative methods for the delivery of the curricula. Internalizing the needs of the primary stakeholders – the students – and keeping in sight the expectations of other stake holders, teachers practice different techniques to achieve the set outcomes for each course and the overall attainment of the outcomes of each program. Faculties are encouraged to attend Faculty development programs organized by the University and the Institution to boost their knowledge and teaching efficacy. The identified gaps in curricula are bridged by value added courses and extending the contents of the course beyond the prescribed syllabi. The content of the value added courses are designed in consultation with leading industries and companies. Faculty, who are members of the Boards of Studies utilize their experience and expertise in suggesting valuable modifications in the University syllabi, in the interests of the students and the prospective employers.

The college provides academic flexibility to the students through industry institute interact ion activities. The college is taking every effort to supplement the University's Curriculum to ensure that the Institution's goals and objectives are integrated. The college is addressing the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum. The curricular aspects and learning outcomes are monitored by Program Assessment Committee and Academic Monitoring Committee. Various stake holders involve in this process.

## **CRITERION II – TEACHING – LEARNING AND EVALUATION**

The College being one of the well- known self -financing Institute. All seats are filled through on line admission process of Directorate of Technical Education, Government of Madhya Pradesh. Admission counseling is done in phases. First phase is for students, who have appeared in JEE Mains. This is followed by second phase (QE) for students who could not appear in JEE but have qualifying marks in Higher Secondary examination and applied for participation in on line counseling process of DTE. Last phase (CLC) is for those students who have qualifying marks but could not apply for participation in on line counseling process of DTE MP.

The academic calendar is planned by the institution within the frame work of the schedule set by the affiliating University, making allowances for the conduct of internal assessment processes for theory and lab courses and for co-curricular activities. Each department has its own envisaged Vision and Mission Statements which are tuned to align with that of the College. The Teaching methods are planned and executed to achieve the course and program outcomes, as the College

believes in outcome based education. The evaluation processes are made very transparent and the marks obtained are displayed on the notice boards. A well-oiled mechanism is in place for addressing the grievances if any raised by the students regarding assessment. Adhering to the dates specified by the University, the internal assessment marks of the students are uploaded in the University website.

Several modes of feedback mechanisms make sure that the teaching learning and evaluation processes are conducted smoothly and to the satisfaction of stakeholders.

## **CRITERION III – RESEARCH, CONSULTANCY AND EXTENSION**

The college has well established Research and Development committee to assist and promote research related activities in various fields. Research committee monitors and addresses the issues of research. The college facilitates smooth progress and implementation of various research schemes. The college provides resources like laboratory, library and other infrastructural facilities to carry out the research activities. The college organizes workshops/ training programmes / sensitization programmes with focus on capacity building in terms of research and imbibing research culture among the staff and students. Sufficient budget is earmarked in the budget for the research related activities. The college provides monetary support to the faculty members to accomplish their research. The faculty members are encouraged to apply for research funding. They are also motivated and sponsored to attend seminars / conferences / workshops. Faculty members are provided with incentives for publishing their research articles and obtaining sponsored research projects. Memorandum of Understandings established by the college is also used for collaborative research activities. Apart from regular academic and research activities, the college also concentrates on academic social responsible activities.

## **CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES**

IIST is sprawled over an area of 55 acres within 9 km distance from city. The instructional area covers spacious class rooms, tutorial rooms, laboratories and faculty rooms. Computing center, photocopying facility, spacious canteen with hygienic food, residential blocks for girls and boys, play ground with tennis, basketball and shuttle courts, indoor gymnasium and games such as table tennis, chess and carom, Seminar halls and A/C auditorium add to the infrastructure extravaganza of the college. Potable R.O water supply, uninterrupted power supply through invertors and generators, fire extinguishers for safety and buses to transport students from various parts of the city are the basic well –maintained infrastructure.

Library advisory committee suggests for upgrading the library facilities and utilization. ICT and other tools are deployed to provide maximum access to the library resources. A digital well-equipped library with OPAC, e-journals and NPTEL materials enrich the learning experience of staff and students. 43Mbps fast Internet connectivity with localized wi-fi facility adds technological support to the learning process.

## **CRITEION V – STUDENT SUPPORT AND PROGRESSION**

The students' academic and social needs are taken care by the college by providing mentoring service. A mentor takes the responsibility of academic and personal counseling for 20/30 students. In order to sustain the academic development of the learners, a strong back up system has been developed. The financial needs of the students are addressed through facilitating the

procurement of Government Scholarships every year and by extending free boarding and lodging for very needy students, accepting the tuition fee in installments etc.

The emotional stability is taken care of by internal and external counseling and Grievance Redressal cell.

An active placement cell headed by an able placement officer ensures that training for on-campus and off campus interviews. The placement officer coordinates with the prospective employers in the IT sector and arranges for on-campus interviews. Foe students who have an aptitude for taking up jobs in core engineering industries, on- campus and off- campus interviews either pooled or exclusively for IIST students are arranged.

Extra help is given to those who wish to progress towards higher studies and books and materials for clearing qualifying examinations like GATE, TANCET, TNPSC, CAT and GMAT are made available.

The would-be entrepreneurs are exposed to the intricacies of starting and successfully running an enterprise and are also introduced to successful entrepreneurs for emulating and learning.

## **CRITERION VI – GOVERNANACE, LEADERSHIP AND MANAGEMENT**

The Vision, Mission, Quality Policy and the goals of the Institution are well defined and selfexplanatory. To attain the stated Vision, Mission and the goals a well-structured process is in place, the mechanism of which is monitored at various levels. The overall governance of the college is headed by the Director who manages the Academic & administrative affair along with his competent team. The board of governors which is headed by Chairman (Shail group of Institution) monitor it periodically.

#### **CRITERION VII – INNOVATIONS AND BEST PRACTISES**

The college in its tenure in the academic service has impacted the society with many best practices. The college is well-known for its discipline and academic excellence, followed by its enviable placement record. The special attention bestowed on the slow learners to instill confidence in them to become achievers is an example of the commitment of the teachers. Updating the infrastructure and refurbishing the existing facilities is routinely carried out. With such support extended, the teachers do not lag behind in adopting innovative teaching practices for the dissemination of knowledge.

## D. NAAC Steering Committee

S. No.	Committee Position	Name	Designation
1	Nodal Officer	Dr. Joy Banerjee	Director
2	Chief Coordinator	Dr. Saurabh Jain	Associate Professor
3	Coordinator -1	Dr. Keshav Patidar	Professor
4	Coordinator -2	Dr. Rajeev Vishwakarma	Professor
5	Member	Dr. Aditya Pratap Singh	Associate Professor
6	Member	Mr. K. Anil Kumar	Associate Professor
7	Member	Mr. Anil Khandekar	Associate Professor
8	Member	Mrs. Samta Singh	Associate Professor
9	Member	Mr. Anand Mahajan	Associate Professor
10	Member	Mr. Utkarsh Jain	Assistant Professor
11	Member	Mrs. Neha Gupta	Assistant Professor
12	Member	Mr. Ankit Jain	Assistant Professor

## E. SWOC Analysis of the Institution

Indore Institute of Science & Technology, Indore was established in the year 2003 and offering world class technical education service to the urban and rural youth. Being a well-established institution, the college has state-of-art infrastructure, dedicated faculty members with high retention and disciplined students. The college is in the journey towards quality education. Even then, the college has every strength to feel delight, Weakness to rectify, Opportunities to accomplish and Challenges to face, learn and improve.

The SWOC analysis of the college is presented below.

	• CSE, ECE & ME UG programmes offered in the college are			
	All the UG programmes offered in the college are permanently			
	affiliated to RGPV University Bhopal.			
	• Highly qualified, experienced and dedicated faculty members, including many Doctoral degree holders.			
	• Industry Internship for faculty members and students.			
	• Active Memorandum of Understanding with industries.			
Strengths	• Equal emphasis on co-curricular and value added programs on Emerging Technology.			
	• Strong student mentoring/counseling system.			
	• Strong student feedback system.			
	Decentralized Administration.			
	• Infrastructure over and beyond the basic requirements.			
	High Tech Digital Classrooms.			
	Whole Campus enables Wi Fi.			
	• Excellent sports facilities to enhance physical fitness of the			
	students.			
	• Being an affiliated institution, chances for curriculum refinement is limited.			
	• Students input quality is not controlled by the college.			
	• Competition by nearby engineering colleges with respect to admission.			
Weelmeggeg	Minimum number of Research Promotion Schemes.			
vv eaknesses	• Low turnout in competitive examinations.			
	International Collaboration.			
	• Lack of appreciable Consultancy and IPR.			
	• Poor turnout of village based parents for parents meeting.			
	• Oral and verbal communication in English is slow for rural based			
	• Molls can be further extended to World class technical			
	• Moos can be further extended to world class technical Universities			
	<ul> <li>Incubation center may be established</li> </ul>			
Opportunity	<ul> <li>More faculty members can pursue Doctoral Degrees.</li> </ul>			
	• The college can attract placements from Tire I companies/ Core			
	companies.			
	• Innovations of students can be commercialized.			

	• Scope for entrepreneurs.
	• Diploma and certificate courses can be initiated.
	• Strong research exposure and orientation to faculty members will
	provide opportunities to obtain research projects.
	• Funding from DST & MSME for research projects.
	• Communication skills of students can be further improved.
	• Courses for PMKY.
	AICTE Courses.
	• Fluctuations in students' input quality.
	• Core industry and Tier I companies placements.
	• Offering placements to all the students in the reputed companies.
	• Preparing students for competitive examinations.
Challenges	• Major Gap in curricula as per Industry standards and not able to modify it as per market needs.
	• To motivate faculty for New Product Development / Research /
	R&D / Innovation.
	• To increase the number of GATE qualified students.

## F. Profile of the Institution

1. Name and Address of the College:

Name	Indore Institute of Science & Technology, Indore				
Address	Pithampur Road Opposite Indian Institute of Management				
City	Rau, IndorePin 453331StateMadhya Pradesh, India				
Website	www.indoreinstitute.com				

2. For Communication:

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Director	Dr. Joy	O: 0731	96440244	0731-	joy.banerjee@
	Banerjee	4010520	41	4010522	indoreinstitute.com
Steering	Dr. Saurabh	O: 0731-	97709095	0731-	saurabh.jain@indor
Committee	Jain	4010595	39	4010520	einstitute.com
Coordinator					

3. Status of the College

Affiliated College	✓
Constituent College	
Any other (specify)	

## 4. Type of Institution

## a. By Gender

i.	For Men	
ii.	For Women	
iii.	Coeducation	<ul> <li>✓</li> </ul>

- iii. Coeducation
- b. By Shift
  - i. Regular ✓
  - ii. Day
  - iii. Evening
- 5. It is a recognized minority institution.

Yes			
No			

If yes specify the minority status (Religious/linguistic/any other) and provide documentary evidence

 $\checkmark$ 

6. Sources of funding

Government	
Grant-in-aid	
Self-financing	<b>√</b>
Any other	

- 7. a. Date of establishment of the college: 12/05/2003 (dd/mm/yyyy)
  - b. University to which the college is affiliated/or which governs the college (If it is a constituent college) **Rajiv Gandhi Proudoyogiki Vishwavidyaiaya, Bhopal**
  - c. Details of UGC recognition: Not Applicable

τ	Under Section	Date, Month & Year (dd-mm-yyyy)	<b>Remarks(If any)</b>
i.	2 (f)	19/08/2016	
ii.	12 (B)	NA	

(Enclose the Certificate of recognition u/s 2(f) of the UGC Act)

d. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

Under Section / Clause	Recognition/Approval Details Institution/ Department/ Programme	Day, Month And Year (dd- mmyyyy)	Validity	Remarks
First Approval	AICTE approval of IIST, BE courses (CSE, EC,EI, ME)	12/05/2003		
Latest approval	AICTE approval of IIST, BE courses (CSE, EC, IT, ME, CM, CE) M.E. courses (Digital comm., Machine Design, Computer Sc.)	05/05/2016		
Permanent affiliation	NA			

AICTE Approval copy is enclosed in the Annexure

8. Does the affiliating university Act provide for conferment of autonomy (as Recognized by the UGC), to its affiliated Colleges?

Yes

Yes

No	1
INO	✓

If yes, has the College applied for availing the autonomous status?

No	✓

9. Is the College recognized

a. by UGC as a College with Potential for Excellence (CPE)?

Yes

No

b. For its performance by any other governmental agency?

Yes 🖌

National Board of Accreditation, New Delhi has accredited two (ECE, CSE & ME) UG Programmes and Dates of Accreditation are 08/07/2016. (Period of validity up to 30/06/2018).

10. Location of the campus and area in sq.mts:

Location *	Rural
Campus area in sq. mts.	55 acres
Built up area in sq. mts.	18808 sqm

(\* Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

11. Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other agencies in using any of the listed facilities provide information on the facilities covered under the agreement.

0	Audit	orium/seminar complex with infrastructural facilities	- Available
0	Sport Pl Sv G	s facilities ay Ground wimming Pool ymnasium	Available Under Construction Available
0	Hoste	1	
	Boys	Hostel	
	i.	Number of Hostels	01
	ii.	Number of inmates	79
	iii.	Facilities (Mention Available facilities) Mess hall, Recreation room with audio visual facilities, Connected TV, Internet, Gym and Wi-Fi facilities.	Newspaper/Magazines, Medical Room, DTH
	Girls	Hostel	
	i.	Number of Hostels	01
	ii.	Number of inmates	48
	iii.	Facilities (Mention Available facilities) Mess hall, Reading room, Recreation room with audio via Room, Wi-Fi facilities DTH Connected TV, Interne	Newspaper/Magazines, sual facilities, Medical et
	Work	ing women's Hostel	No
	i.	Number of inmates	NA
	ii.	Facilities (Mention Available facilities)	NA

0	Residential facilities for teaching and non-teaching staff (give n and cadre wise) i. For teaching staff ii. For non-teaching staff	umbers available
	II. I of non-teaching start	-
0	Cafeteria	Available
0	Health Centre First aid, Inpatient, Outpatient, Emergency care facility, Ambulan	Available ce
0	Health center staffPart-timei.Qualified doctor: Full timePart-timeii.Qualified Nurse: Full timePart-time	✓ ✓
0	Facilities like banking, post office, and book shops ATM	available.
0	Transport facilities to cater to the needs of students and staff	Available
0	Animal House	No
0	Biological waste disposal	Available
0	Generator or other facility for managing constant supply and volta and voltage	age of electricity Available
0	Solid waste management facility	Available
0	Waste water management	Available
0	Water harvesting	Available

12. Details of programmes offered by the College (Give data for current academic year)

S. No.	Progra mme Level	Name of the Programme/ Course	Duratio n in years	Entry Qualifica tion	Medium of Instruction	Sanctioned/ Approved Student Places	No. of Students Admitted
		BE-Mechanical Engineering	4	10+2	English	240	45
		BE- Civil Engineering	4	10+2	English	60	17
1	Under- Graduat e	BE-Computer Science & Engineering	4	10+2	English	240	239
		BE-Electronics & Communication Engineering	4	10+2	English	120	25
		B.E- Chemical Engineering	ering 4	10+2	English	60	12
		B.E- Information Technology	4	10+2	English	60	15
C	Post	ME- Machine Design	2	UG	English	18	1
2	Graduat	ME – Computer Science	2	UG	English	18	0

e	& Engineering					
	ME- Digital Communication	2	UG	English	18	1
	M.B.A	2	UG	English	60	0

13. Does the College offer self-financed Programmes?

Yes

10

If yes, how many?

✓

14. New programmes introduced in the College during the last five years if any?

No

Yes	<ul> <li>✓</li> </ul>	No	
If yes, he	ow many?		02

15. List of the departments: (respond if applicable only and do not list facilities like Library, Physical Education as departments, unless they are also offering academic degree awarding programmes. Similarly also do not list the departments offering common compulsory subjects for all the programmes like English, regional languages etc.)

Particulars	UG	PG	Research
Science	NA	NA	NA
Arts	NA	NA	NA
Commerce	NA	NA	NA
Any Other (please specify)	06 Branches of	03 Branches	NA
Professional (Engineering,	Engg.	of Engg and	
Technology & MCA/MBA) B.E /		01	
B.Tech Under Graduate M.E /		management	
M.Tech / M.C.A/M.B.A			

- 16. Number of Programmes offered under (Programme means a degree course like B.A., B.Sc., M.A., M.Com.)
  - a. Annual system
  - b. Semester system
  - c. Trimester system
- 17. Number of Programmes with
  - a. Choice based credit system
  - b. Inter/multidisciplinary approach
  - c. Any other (specify and provide details)
- 18. Does the College offer UG and/ or PG programmes in Teacher Education?



	6	
Γ	4	7

	Ye	s		No	✓	
	If y	yes,				
	a.	Year of batches t	Introduction of I that completed t	Program he prog	nmme ( ramme	s)(dd/mm/yyyy) and number of
	b.	NCTE re Notificat Date: Validity:	ecognition detail	ls (if apj	plicable 	e)  m/yyyy)
	c.	Is the ins Program	stitution opting f me separately?	for asses	ssment	and accreditation of Teacher Education
		Yes			No	$\checkmark$
19.	Do	es the Co	llege offer UG o	or PG pi	rogram	me in Physical Education?
		Yes			No	$\checkmark$
If y	ves,					
a.	Ye	ar of Intro ogramme	oduction of Prog	grammn	ne (s) a	nd number of batches that completed the
b.	NC No	CTE recognitification	gnition details(if No:	applica	ble)	
	Da Va	lidity:		(dc 	1/mm/y	ууу)
c.	Is t Sej	he institu parately?	tion opting for a	assessme	ent and	accreditation of Physical Education
		Yes			No	$\checkmark$

20. Number of teaching and non-teaching positions in the Institution

		Teaching faculty					Non tooching		Tashnisal	
Positions	Profes	Professor		Associate Professor		stant essor	staff		Staff	
	* <b>M</b>	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government <i>Recruited</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yet to recruit										
Sanctioned by the Management/ society or other	8	2	10	5	64	31	13	02	27	9

bodies Beautied	authorized					
<b>D</b> escripted	bodies					
Кестиней	Recruited					
Yet to recruit	Yet to recruit					

\* M-Male \*F-Female

21. Qualifications of the teaching staff

Highest	Highest Professor		Associate	Professor	Assistant	Professor	Total
Qualification	Male	Female	Male	Female	Male	Female	
Permanent Te	achers						
D.Sc./D.Litt.							
Ph.D.	7	2	2	2	0	2	15
M. Phil.	-	-	-	-	1	3	4
PG	1	-	8	3	63	26	100
<b>Temporary Te</b>	eachers						
Ph.D.							
M. Phil.							
PG							
Part Time Tea	chers						
Ph.D.							
M. Phil.							
PG							

- 22. Number of Visiting Faculty Guest Faculty engaged with the College:
- Nil
- 23. Furnish the number of the students admitted to the Institute during the last four Academic years.

Categories	2016		2015		2014		2013		2012	
	Male	Female	Male	Female	Male	Male	Female	Male	Female	Male
SC	10	1	5	1	11	10	1	5	1	11
ST	8	0	3	2	1	8	0	3	2	1
OBC	109	15	113	21	99	109	15	113	21	99
General	151	59	204	80	181	151	59	204	80	181
Others	1	0	4	0	0	1	0	4	0	0

\*Including lateral entry student's admission

24. Details on students enrollment in the College during the current academic year:

Type of students	UG	PG	M. Phil	Ph.D	Total
Students from the same state where the College is located	1528	7	NA	NA	1535
Students from other states of India	127	1	NA	NA	128
NRI Students	-	-	-	-	-
Foreign students	-	-	-	-	-
Total	1655	8			1663

25. Dropout rate in UG and PG (average for the last two batches)

UG	3.16%
PG	0 %

- 26. Unit Cost of Education (Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)
  - a. Including the salary component
  - b. Excluding the salary component

107686/-	
70363/-	

27. Does the College offer Distance Education Programme (DEP)?

Yes	No 🖌
If yes, a.	Is it a registered center for offering distance education programmes of another University
	Yes No
b.	Name of the University which has granted such registration.
c.	Number of programmes offered
d.	Programmes carry the recognition of the Distance Education Council.
	Yes No
28. Provid Techn	le Teacher-student ratio for each of the programme/course offered – Engineering ology
UG	1:15
PG	1:12

29. Is the College applying for Accreditation:

Cycle 1 Ye	es Cycle 2	Cycle 3	Cycle 4	
------------	------------	---------	---------	--

**Re-Assessment:** 

(Cycle 1 refers to first accreditation and Cycle 2, Cycle 3 and Cycle 4 refers to re accreditation)

30. Date of Accreditation\* (applicable for Cycle 2, Cycle 3, Cycle 4 and re- assessment only) –NA

Cycle 1:.....(dd/mm/yyyy) Accreditation Outcome/Result...... Cycle 2:.....(dd/mm/yyyy) Accreditation Outcome/Result...... Cycle 3:.....(dd/mm/yyyy) Accreditation Outcome/Result...... \* Kindly enclose copy of accreditation certificate(s) and peer team report(s) as an annexure.

31. Number of working days during the last academic year

## 278 185

&

32. Number of teaching days during the last academic year

(Teaching days means on which lectures were engaged excluding the examination days)

- 33. Date of establishment of Internal Quality Assurance Cell (IQAC) Quality Improvement Cell (QIC) /IQAC established on \_\_\_\_\_NA\_\_.
- 34. Details on submission of Annual Quality Assurance Reports (AQAR) to NAAC- NA

AQAR (i)	(dd/mm/yyyy)
AQAR (ii)	(dd/mm/yyyy)
AQAR (iii)	(dd/mm/yyyy)
AQAR (iv)	(dd/mm/yyyy)

35. Any other relevant data (not covered above) the College would like to include. (Do not include explanatory/descriptive information)

# PART B CRITERIA - WISE ANALYTICAL REPORT

# CURRICULAR ASPECTS

## **PART B - CRITERIA - WISE ANALYTICAL REPORT**

## **CRITERION I: CURRICULAR ASPECTS**

## **1.1 Curriculum Planning and Implementation**

**1.1.1** State the vision, mission and objectives of the institution, and describe how these are communicated to the students, teachers, staff and other stakeholders.

## **Institute Vision**

To be a nationally recognized institution of excellence in technical education and produce competent professionals capable of making valuable contribution to the society.

## Institute Mission

- To promote academic growth by offering state-of-the-art undergraduate and postgraduate programmes.
- To undertake collaborative projects which offer opportunities for interaction with academia and industry.
- To develop intellectually capable human potential who are creative, ethical and gifted leaders.

## **Quality Objectives**

"We at Indore Institute of Science & Technology, Indore are committed to provide Quality Education through proper Resource Management".

IIST is engaged in imparting quality education. It constantly strives towards achieving high standards of teaching. The objectives of the Quality policy of the institution are as follows:

- 1. To Plan and Implement Innovative Teaching & Learning Processes.
- 2. To Provide Quality Education matching with futuristic trends in Engineering & Technology.
- 3. To develop the college into a global institute of learning and research of academic excellence.
- 4. To strive at establishing an effective Quality Management System ensuring continual improvement.
- 5. To train and develop human resources by encouraging faculty to work as a team and to update their knowledge and skills continually to match the needs of Industry.

The vision, mission and objectives of the institution are communicated to students, teachers, staff and other stakeholders through the following methods:-

- 1. Display at the Director Office.
- 2. Display on the college website.
- 3. Display at department office/ departmental library.
- 4. Display at HoD Office.
- 5. Display at the Training and Placement Office.
- 6. Publish in the Seminar / Workshop Brochure.







Electronics & Communication Department

Director's Office



Examination Room

Figure 1 Dissemination of Mission and Vision

#### **Dissemination of Mission and Vision**

All the stake holders are informed about the vision and mission statements before they are published in the college website. Besides, the dissemination of the college vision and mission statements is brought to:

#### **Students:**

Vision and Mission statements are explained to students at the time of their admission during the induction programme. The students are made aware about the Vision and Mission of the college during every important event organized by the college.

#### **Parents:**

Parents are explained about department's mission and vision during the induction programme organized at the time of admission of their wards in the college.

#### Faculty and Staff:

The mission and vision of the college are explained to all members of the Teaching and Non-Teaching staff during the staff orientation programmes which are conducted periodically for new members of staff.

#### Alumni Members:

During the annual alumni meeting the vision and mission attainment status are discussed; thereby enabling the Alumni members to introinsect, discuss and interact with them.

#### **Employers**:

When employers visit the campus for placements, and when the placement cell approaches the employers, the college brochure containing the mission and vision is exchange with them.

#### **Professional Bodies:**

While organizing events under professional bodies, the brochures that are to be sent to the professional bodies are designed to carry the college vision and mission statements.

#### Industry & Academic Sponsors:

The college brochure containing mission and vision are used to explain to the sponsors when they are approached for sponsorship for various activities organized in the department and in the college.

## **1.1.2** How does the institution develop and deploy action plans for effective implementation of the curriculum? Give details of the process and substantiate through specific example(s).

For an effective Implementation Of the university recommended Curriculum, the institute deploys its action plan in the following steps and processes:-

## Before the commencement of classes:

**Step I**- Receipt of programme wise curriculum/ syllabus & Academic Calendar for the session from University.

**Step II-** Study of the syllabus for the semester by Dept. of Dean / HOD/ team of senior faculty level for identification of introduction of new subject/ changes if any in the existing one.

> Formulation of institute's Academic Calendar for the semester and notification to all.

**Step III-** Competency/ experience based allotment of subjects to various faculty members of the dept.

- Formulation of Faculty wise weekly teaching load including theory lectures/ tutorials/ lab classes/ problem solving sessions if any as per syllabus of the subject laiddown by the university.
- Handing over of weekly teaching load to time table faculty in charge for preparation of class time table.
- Teachers prepare Teaching plans (Lesson plans) for the subjects they teach and the laboratory sessions they conduct. The academic schedule is strictly followed as per the academic calendar.
- > Lesson plans prepared by the faculty which include:

#### **Table 1 e-Course File Content**

S. No.	Course File
1.	RGPV Academic Calendar
2.	Institute Academic Calendar
3.	Individual Time Table
4.	Course Objective and PEOs
5.	Syllabus
6.	Lesson Plan
7.	Lecture notes, Soft copy of relevant videos/ animations/ PPT slides.
8.	Tutorial Questions and Answers
9.	Mid papers and Answer
10.	University Previous Questions papers
11.	Lecture notes for extra topics covered
12.	Quiz Paper
13.	Assignment Paper with Solution
14.	syllabus coverage and actual no. of classes taken
15.	List of slow learners
16.	Result Analysis
17.	Model question bank
18.	Any other relevant material.
19.	Evaluation Scheme

E-Course files available at http://111.118.251.21/library/

Step V- Notification of class time table to faculty & student through display/notice boards and mail.

Display Evaluation Scheme on Notice board.

## After commenced for the semester:

**Step I-** Regular conduct of lectures/ tutorials/ lab classes duly monitored by HOD/ Dean/ Director on regular basis.

Conduct of monthly review meeting by Dean / HOD with faculty members regarding progress on syllabus coverage and other academic issues like feedback, weak student's classes, short attendances etc.

Step II- Conducts of class test/ mid sem exam/ two sessional.

- Conduct Centralized MST and Practical Examination and evaluation also done centralized.
- Evaluation of answer sheets/ distribution of evaluated answer sheets to students/ display the marks on notice board.
- Uploading of marks allotted for attendance, teacher's assessment and compilation of subject wise sessional marks.
- > Conduct of student feedback for the each teaching faculty on the predefined parameters.

## After End of teaching session

Step I- Conduction of end semester university examination.

- > Compilations of sessional marks and upload on RGPV Portal.
- ➤ General review of student performance in internal sessional by Director/ Dean/ HOD.
- Review of Faculty wise student feedback and conduct of counseling/ mentoring of individual by HOD for any shortfall and improvements.

Step II- Declaration of university results.

- > Compilation of analysis of program wise/ year wise performance of the batch.
- Analysis and review of 'Results' by Director/ Dean/ HODs and corrective measures decided for implementation in next semester.

## In addition to above processes following actions/ processes are also performed for effective implementation of curriculum. E.g:

- Prior to the commencement of classes, individual lesson plan and lab schedule are prepared for each subject.
- Course plans are also prepared in advance and senior faculty contribute by rendering advice to the junior faculty.
- ▶ Laboratory manuals are prepared for reference.
- Effective implementation of curriculum is periodically reviewed through departmental meetings and Director's meeting with HoD's.
- As per academic calendar, sessional examinations including quizzes/ unit tests etc are conducted as per the schedule. Proper performance review is carried out by the respective faculty and class coordinator along with the mentors.
- Poor performance of the students is regularly informed to their parents, who can contribute in the improvement of the student. The parents are encouraged to meet the Dean / HOD, and class coordinator to have on the spot feedback of the student.
- Dean / HOD directly get feedback uniformly from the students through class on the progress in individual subjects and takes immediate action by instructing the staff concerned to improve.
- Practical lab session is conducted synchronously with the theory. Thus at the end of the semester, the students get theoretical knowledge blended with practical application.
- Students are given opportunity to exhibit their skills and leadership qualities by attending and organizing national /international conferences, seminars, workshops, symposia, project contests and other extracurricular activities.
- The communication skills of the students are incorporated through various programmes like aptitude session, PDP/ Soft Skill classes, group discussion and mock interviews.



Academic Calendar

# **1.1.3** What type of support (procedural and practical) do the teachers receive (from the University and/or institution) for effectively translating the curriculum and improving teaching practices?

Following procedural and practical support is provided by the institution and university for effective translation of the curriculum and improving teaching practices:

## **1.** Administrative support:

The institution approves the budget projected by a particular department. All requirements related to procurement of equipment and components to enhance the quality of labs are readily approved by the administration.Besides this all amenities such as electricity backup, water supply, cleanliness and maintenance of campus is accomplished by administration.

## 2. University Support

**Portal**: The University has developed a portal which includes the course curriculum, syllabus, notices and other official details. Through this portal the university interacts with various institutes for various academic issues.



Figure 2 University (RGPV) Website

## 3. Central computing facilities:

The institution has provided an internet lab with sufficient number of terminals. Besides this there is a central library which has abundance of books and sufficient volume of journals, technical magazines etc, apart from this every department have its own library.

Faculty is provided with the accessibility of e-journals, text books, photo gallery, reference books, publications, Course files and other technical magazines from the library. Wi-Fi internet facility is available in the entire campus for free access of journals, e-books and other learning resources.





Reading area in Library

Bookshelf in Central Library



Figure 3 Central computing facilities: Central Library & e - Library

## 4. Faculty Development Programme:

The university and institution conducts various FDP's from time to time both at institutional and departmental level for upgrading the technical knowledge of faculty members as per current trends in technology. The college arranges special training programme on Teaching Methodologies by Government bodies like National Institute for Technical Teachers Training and Research (NITTTR), Bhopal for the faculty members.

All the faculty members are encouraged and sponsored to attend the Faculty Development programme / Seminar / Workshop / Conference conducted by other Universities / other engineering colleges for updating and enriching their subject knowledge.





Figure 4 FDP by NITTTR & IIT Kharagpur

## 5. Infrastructural support:

The institution provides excellent infrastructural support both in terms of classrooms, labs and other amenities like faculty cabins etc. All Class rooms are equipped with LCD projection systems, LCD screens, USB ports for laptop connectivity, Wireless audio systems and green board and Desktop. These facilities enhance lecture delivery and effective communication. Besides this each faculty member has an ISO & NBA file which contains detailed notes, previous year question papers that are distributed and discussed with students at length. To supplement this process, tutorials are conducted on weekly basis to rectify any gaps in understanding.

Smart class rooms are also provided to the faculty to deliver effective lectures with practical examples and applications through pictures and technical videos (NPTEL and Online Lectures). Faculty members are motivated for upgrading the students' practical understanding by means of animated explanation for concepts involved in subjects.



Digital learning

## Smart class room euipement list are as follow:

- 1. Digital Slate.
- 2. Hitachi Star Board (Interactive Board).
- 3. Student Response System.
- 4. DoucmentCamera- Visualiser.
- 5. LCD Projector.
- 6. Video Cam.
- 7. TV Tuner Card.
- 8. Allen Heth -Sound Mixer.

**1.1.4** Specify the initiatives taken up or contribution made by the institution for effective curriculum delivery and transaction on the Curriculum provided by the affiliating University or other statutory agency.
The institute does take necessary initiatives in addition to conventional practices of teaching for effective curriculum delivery and transaction on the curriculum provided by the affiliating university, some of them are:

- Allocations of subject, preparation of lesson plan, course materials and lab manuals are done at the beginning of the semester.
- Monitoring of course delivery and syllabus completion is done through class coordinator meetings, feedbacks and regular internal audits.
- Systematic examinations process, proper and prompt evaluation and students progresses are reported to the parents periodically.
- Guest lectures, seminars, industrial visits and various training programmes are organized to supplement the curricular inputs.
- The library is kept open from 8.50 a.m. to 8.00 p.m. The library card is issued to the faculty and students for borrowing books from the library. Digital library facility is available for access the e-journals and books.
- Availability of text books, reference books and journals at the national and international levels in the library is ensured for the effective course delivery.
- The campus has sufficient power backup (Generator facility) to run the laboratories and operate electrical equipment during power shut down.

### **Theoretical Concepts**

- Remedial classes are conducted to make slow learners to understand the subject and catch up with the fellow students.
- Each class room is provided with white / black board, multimedia projectors or OHPs are available in each department for effective curriculum delivery.
- Additional topics are covered by the faculty apart from the curriculum as a part of subject coverage beyond syllabus.
- ➤ 43 Mbps of Internet/ Wi-Fi connections are available throughout the campus including hostel for easy surfing of subject related seminars, conference and other technical notes.
- > Uninterrupted power supply is ensured through generator during 24 X 7 hrs.
- ▶ Use of NPTEL material through Digital Library.
- Effective delivery in analytical subjects is ensured by conducting tutorial classes as per time table. During tutorial classes, each class consisting of 60 students are divided into 2 batches (30 students per batch) and each faculty takes care of each batch.

### **Practical Understanding**

- Laboratory facilities are developed as per AICTE norms and additional equipments are made available to do additional experiments for a thorough understanding of the subject.
- > The laboratories are kept open till extended periods, to make the students to do project related experiments.
- Additional experiments (content beyond the syllabus) are also conducted for the benefit of the students
- Annual project competitions are conducted for display of individual creative ideas/ innovations using emerging technologies.

List of Levels	List of Content Delivery Methods	List of Teaching aids
	1. Lecture with Discussion	
Remember	2. Lecture with Illustration	
	3. Lecture with Animated Videos	
	1. Lecture with Discussion.	
	2. Lecture with Demonstration	1. Black Board
Understand	3.Collabrative Learning	2. LCD
	4. Problem Solving (Text book	3. Videos
	oriented)	4. Software
	1. Group Discussion	5. Power Point presentations
Apply	2. Problem Solving ( from GATE	and
Арріу	Question papers)	Animations
	3. Laboratory Work	6. Smart board
Analyza	1. Lab Experiments	
Anaryze	2. Simulations	
Creata	1. Minor Projects	
Create	2. Major Projects	

Table 2.A sample list of Content Delivery Methods & Teaching Aids based on Levels

### Value Added Course

- > Value added courses are arranged which fulfills the industry requirements.
- Emerging technologies are exposed to students through guest lectures.
- As far as possible, to fill the gap between university curriculum and industry need in technical skill sets at department level, various short term courses are conducted in prevailing/ emerging technologies.

Additional initiatives taken by the institution for effective curriculum delivery are listed below:

### > IIT Delhi Virtual Lab

IIST is the nodal center for virtual lab. Virtual Labs is a project initiated by the Ministry of Human Resource Development, Government of India, under the National Mission on Education through Information and Communication Technology. The project aims to provide remote-access to Laboratories in various disciplines of science and engineering for students at all levels from under-graduate to research.

It also intends to develop a complete Learning Management System where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation. There is also a component wherein costly equipment and resources are shared, that are otherwise available to only a limited number of users due to constraints on time and geographical distances. Seven IIT's (Delhi, Bombay, Kanpur, Kharagpur, Madras, Roorkee and Guwahati), IIIT Hyderabad, Amrita University, Dayalbagh University, NIT Karnataka, and College of Engineering, Pune, are the institutions participating in the project. The Project intends to cover physical sciences, chemical science and various branches of engineering like electronics and communications, computer science and engineering, electrical engineering, mechanical engineering, chemical engineering, biotechnology engineering and civil engineering.

### IIT Mumbai E-Yantra " Robotics Lab"

An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded systems and Robotics. Also, helps in better performance at Robotics competitions such as the e-Yantra Robotics Competition with trainings done at IIST campus.

### > IIT Madras Quality Enhancement in Engineering Education (QEEE)

QEEE program uses real time and synchronous technology to allow for an integration of superior external scholastic inputs into current pedagogical practices. QEEE has got Live Classes wherein IIT faculty delivers live lecture classes to participating colleges. The schedule of lectures is sent to colleges and notifications are provided before start of each session. It also includes Course pack of supplement study material with lecture notes, live class videos, discussion forums, and assessment and evaluation tools to serve as a reference material for QEEE courses. Live Labs are conducted to provide virtual hands-on experience to students on experiments undertaken remotely. It creates an opportunity to work on a real lab experiment tailored to suit their syllabus and curriculum. Bridge Programs are administered to bridge the gap between the initial skills of individuals and what they need to enter and succeed in post secondary education and career-path employment.

### IIT Mumbai Spoken Tutorial

The Spoken Tutorial project is an initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India. Objective is to pass

on the knowledge of technology and free and open source software (FOSS) to the millions in our countrymen who lack opportunities and/or access to learn any software.

### > IIST tie up with Princeton Review, USA

IIST has tied up with The Princeton Review, USA for hands on training of students for Higher Studies in foreign countries. The objectives of the MoU are to encourage the bright students of IIST to pursue Post Graduation aboard. Also, it aims to promote training activities for the IIST students. IIST & the Princeton Review will conduct seminars on current trends & developments in the area of Higher Education.

### **EMC<sup>2</sup>** Center for Academic Excellence

IIST is the academic partner of EMC<sup>2</sup> Academic Alliance program for their training programs. EMC<sup>2</sup> Academic Alliance program, collaboration with colleges and universities worldwide, conducts curriculum-based education on technology topics such as virtualization, cloud computing, big data analytics, and information storage and management.

The global program is geared towards arming students with the knowledge necessary to differentiate themselves in the job market and improve their competitive advantage. EMC<sup>2</sup> Corporation is an American multinational corporation headquartered in Massachusetts, United States. EMC<sup>2</sup> sells data storage, information security, virtualization, analytics, cloud computing and other products and services that enable businesses to store, manage, protect, and analyze data.

### Visual Paradigm, Hong Kong Association

We are now the academic partner of Visual Paradigm, Hong Kong. Under this agreement, we can download and use all the software modeling and software design tools free of cost. IIST is the very first institute in Indore and among very few in India to have this collaboration. Visual Paradigm's software has been adopted by many organizations in the world, including Fortune 500 companies. A lab is set up to teach software modeling using Visual Paradigm software. Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide.

### EC Council Academia, USA

The association aims to deliver information and security skills to improve career and economic opportunities. The program offered at IIST is Certified Ethical Hacker (for students of IT, CS & EC), it incorporates a 40 hour training module at IIST. IIST is the only training partner for the program in Indore.

### > IBM Academic Initiative.

Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide. Extensive expertise, teaching assets, and community resources to develop world-class curricula. No-charge access to IBM software, hardware, technology, and tools. Extended Bluemix-trial access for qualifying courses through the Academic Initiative for Cloud offer. Skill-building opportunities ranging from IBM and ecosystem events to student competitions. The Academic Initiative offers a wide range of professionally developed course ware to help teach students using IBM and open-source products

and technologies. This course ware listing is organized by teaching topics that align with academic curricula. An IBM Academic Initiative lab is started to handle and implement IBM AI program.

### NASSCOM Global Business Foundation Skills (GBFS) & Foundation Skills in IT (FSIT) courses

It improves the Industry readiness of students who want to start a career in BPM companies. The program is of 160 hour duration & delivered over 20 -24 weeks. NASSCOM has recognized IIST as NASSCOM training center in Indore.

#### **BSNL** Tie-up

Bharat Sanchar Nigam Ltd. (BSNL) and IIST signed a Memorandum of Understanding for providing vocational training to IIST engineering students. As per MoU, BSNL CTTC will conduct seminars on emerging technology at IIST. BSNL will also provide technical support to student for project work. Trainees will visit the telephone exchange and transmission centre. Training happens at BSNL center (50 - 150 hours schedule) & is certified training from BSNL. This improves importance of academic program and employability of student.



MOU's with NASSCOM GBFS & FSIT courses

### IIST, IIT join hands to launch virtual lab

#### HT Correspondent

INDORE: Indore Institute of Science and Technology (IIST) has collaborated with Indian Institute of Technology (Delhi) to organise workshops on virtual laboratories. IIST, being a nodal centre

IIST, being a nodal centre for virtual labs, is attempting to revolutionise engineering education in the city.

Delhi faculties, including Tanmay Dass, Sanjeev Soni and Vipul Sharma, are a part of the project.

Joy Banerjee, IIST director, said: "The virtual labs will help students, faculties and research scholars in gaining more knowledge without any hindrance or problem. As it's a programme that com-

Virtual Lab IIT Delhi

pletely runs on the internet with a free access to its common website for all participants, it's surely the next big thing in the engineering education in the city." MOU's with BSNL

### IIST collaborates with 4 IITs for academic excellence

INDORE: The Indore Institute of Science and Technology (IIST-Indore) has collaborated with four Indian Institute of Technology (IITs) to achieve academic excellence. A venture of the IIT-Madras, the step has been taken under the Quality Enhancement Engineering Education (QEEE). An exam was conducted through which this selection was made. QEEE IIT Madras

	ST The Princeton
Visual \Lambda Paradigm	Review
	6. Duration of MOU
1802, Laford Center, 838 Lai Chi Kok Road, Kin, Hong Kong, Tel: +852 2744 8722, Fax: +852 2744 6722	This MOU unless extended by mutual written consent of the institute, shall
	expire in one year after the effective date specified in the opening paragraph
Date: 15 March 2015,	and can be researed for further nation by manual understanding of both the
Rajeev G. Vishwakarma	and can be removed for income providing manufacturing of each set
Indore Institute of Science & Technology,	parties, in accordance to the Terms & Conditions
Indore, India, 453331.	
	- 7. Coordinators
Subject: Research Project- Enhancing Modeling Capabilities of System Modeling	Both Institutes will designate persons who will have responsibility for
Language	coordination and implementation of this agreement. From IIST Dr. Shilps
Dear sir,	Trinafis, Dean Dent, of Chemical Engineering is seminated as coordinator
will contribute to the evolution of SysML. We have already mailed to you the link	
to download the software "Visual Paradigm 13.0". The free download will allow	
the usage of this software for you and your research team members including faculties and students. Your team will also be able to learn through MOOC- Visual	8. Signed in Duplicate
Paradigm Essential, 27 Lectures, and 40 hours of quality videos free of cost. The	This MOU is executed in duplicate with each copy being an official version
terms and conditions will be revised after two years.	and having equal legal validity. By signing below, the institutes, acting by
We are looking forward to great association and academic research.	their duly authorized officers, have caused this memorandum of
	understanding to be exacuted, effective as of the day and year first above
	written.
15 autor	
- / -	On behalf of IIST On behalf of Princeton Review
David Balda, .	Sec.
Academic Research	Por the respector Review Review Review Control
Visual Paradigm, Hong Kong	the second second
	Sign: Sign: Authorized lagratury
	Name: Dr Joy Banerjee Name: Mr.Amit Modi
	Title: Director, UST Title: Director
	DIRECTOR New Initial of Science & Scienciae
	Real DUCKIE (BUP)
	Date: 05th April 2016
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। प्राथमि समय इतिरों की पुत्री-की है। उन्हों हमें कि लिय कोईफिल संपर्ध

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इन्दीर इगतिझील सहकारी साख संस्था मर्थादित, इन्दीर 12851

EC Council Academia, USA



e- Yantra IIT Bombay (Robotics Lab)

Figure 5 Value added courses with media coverage

## बनाने और टेस्टिंग की ट्रेनिंग

आईआईएसटी में आईबीएम एकेडमिक इनिशिएटिव लैब का शुभारंभ टेस्टर भी उनके लिए उपयोगी होंगे, इन सभी सॉफ्टवेअर्स की कीमत लाखों

दबंग रिपोर्टर = इंदौर

द्वया गरपाटर 📰 इयार इंदौर इंडिटट्यूट ऑफ साइंस एंड उंदनोलाजी (आइंकार्य्यूसटी) में युक्तवार को आईर्थापम पुरेडोम्म इंनीश्युटेव लेग का युपारंग आइंडिया येद के डिलिये डिंड सुदर्शन वानी ने किया इसमें आईर्थपम वर्षनी को प्रारं दुर्हमां ये आईर्थपम वर्षनी को प्रारं दुर्हमां ये आईर्थपम वर्षनी को प्रारं दुर्हमां ये आईर्थ के हजारों स्टूउंट्स को मिलेगा लेग में आईर्थपम उंपल में उंगीनवर्षम जोलाजी के हजारों स्टूउंट्स को मिलेगा लेग में आईर्थपम नंपनि के स्ताल रोज जेसे सॉक्टवेश्वर में स्टूउंट्स सॉक्टवेश्वर की डिजादाँम, मॉडलिंग, डॉक्यूमेंट्यन सॉक्टों, यही



रुपए है।

५७। कॉलेज के डायरेक्टर डॉ. बैनर्जी ने

कलिल के उपसेवस्ट रडी, बैनती में स्रताया आईधीएम लिब न केवल छात्रो संक्रियों के दिवसकल स्थित उवलपॉस्टे में महतवपूर्ण योगदान देवी और इस ग्रोग्राम से न केवल आईआईप्रारी के स्टूउँट्स संक्रिक अन्य दोजीनियरिंग कॉलोजी के स्टूउँट्स प्राणानित्या शिंग कम्प्यूटर सार्श्त एंड दोजीनियरिंग डायार्टमें दे के जीन जी.

राजीव विश्वकर्मा ने बताया इसको मद राजीव विश्वकर्मा ने बताया इसको मद से छात्र बिजनेस एनाशिस्ट, बिजनेस इटेलीजेंट जैसे जॉब प्रोफाइल के साथ अपना कॅरियर बना सकते हैं।

मोबाइल फर्स्ट प्लेटफॉर्म से मोबाइल एप्लीकेशन बनाने की ट्रेनिंग भी दी प्रयोगभग मनाने या प्रानं ने प जाएगी। इसके साथ ही रेशनल सॉफ्टवेअर मॉड्यूलर, रेशनल सॉफ्टवेअर आर्किटेक्ट, रेशनल फंक्शन IBM Academic Initiative

T CHER COMPERCIALITY MAIDLINE E-Yantra principals meet at IIST: Indore Institute of Science and Technology, Indore-organized principal meet regarding E-Yantra which is a platform provided by IIT. Bombay to boost the young India and to create utility based robotic applications for usage in agriculture, manufacturing, defense, home, city main-

### 1.1.5 How does the institution network and interact with beneficiaries such as industry, research bodies and the university in effective operationalisation of the curriculum?

For effective operationalisation of the curriculum, the institute resorts to efficient networking and interaction with beneficiaries through the following institutionalized process-

### **Networking and Interaction with Industry**

- The Institute has a Training and Placement cell which maintains professional relations with the representatives of industry. The HR managers of various companies are invited to the college campus to interact with the students. Reputed industries are conducting priority in off campus recruitment drives.
- The institute has a dedicated team of faculty member under the leadership of Professor Rank.
- Faculty which is active in developing and maintaining good liason with prominent industry/ for organizing industrial visits, guest lectures, consultancy/ Research projects, internship for students etc.
- > The institute participates in all conference/ seminar organized by industry bodies pertaining to academics related issues.

### Networking and interaction with Research bodies/ Academic Institutions

The faculty members of the institute are motivated to engage in research activities. Faculty members on their own also keep on interacting with various research bodies and academic institution. They are regularly attending conferences, seminars, workshops etc offered by these institutions like IIT, NIT & RRCAT etc.

### Networking and interaction with the affiliating University

The faculty members of the college keep regularly visiting the University Website from time to time to keep themselves abreast of the latest notifications, initiatives by the university etc. Eminent professionals from industries are invited for delivering lectures of current significance. This facilitates understanding of current technological developments and understanding of practices in the corporate sector at large.

S. No.	Industry Name	Date	Departm ent	Type of Company	Objective of Visit	Outcome of Visit
1.	Sanchi Dugdh Sangh, Mangliya, Indore	12 <sup>th</sup> March,2016	Chemical	Public Limited	To study various operations of milk processing in the plant.	Understanding the Organized way of reducing, processing and marketing of milk and milk products.
2.	Wind Mills, Dewas	6 <sup>th</sup> Nov 2015	Chemical	Government	To create awareness of renewable energy sources and to conserve the environment by promoting the	To understand the importance of renewable energy resources for sustainable development.

#### Table 3 List of Industry Visit in last four year

					Energy Efficiency and Conservation measures, devices in the state	
3.	Tata International Ltd., Dewas (M.P)	12 <sup>th</sup> March 2015	Chemical	Exporter / Manufacture r / Supplier	To understand the process of effluent plant in leather industries	To interpret the proper operation & maintenance of waste water treatment plant and awareness of guidelines prepared by government for waste water treatment plant.
4.	HPCL , Indore Depot, Manglya, Dewas road	1 <sup>st</sup> March 2014	Chemical	Government	To make students aware of safety measures taken in petroleum industries.	Awareness of occupational diseases in industries and importance of safety to be taken on-site.
5.	Srf Ltd., Sector III Pithampur, Indore	2 <sup>nd</sup> Aug 2014	Chemical	Limited	To understand the manufacturing engineering plastic products	To perceive the working of chemical industry equipment like heat exchangers, reactors etc.
6.	Rama Phospahte Sanwer Road	20 <sup>th</sup> Sep 2013	Chemical	Limited	To understand the manufacturing of Sulphuric Acid and Safety aspects	To understand the manufacturing Process and safety measures in Industries.
7.	Mandleshwar Narmada Filter Station	15/3/2014	Civil	Water Filtration Plant	Working Process of Water Filtration	Learn about Water Filtration
8.	Box Culvert Nakhrali Dhani Circle, Rau	24/3/2015	Civil	Construction Site	Box Culvert Construction	Vision of Box Culvert Construction
9.	Waste Water Treatment Plant Kabit Khedi, Indore	23/9/2015	Civil	Waste Water Treatment Plant	Working Process of Waste Water	Learn about Sewage Treatment Practically
10.	Mandleshwar Narmada Filter Station	19/3/2016	Civil	Water Filtration Plant	Working Process of Water Filtration	Learn about Water Filtration
11.	Hostel Building	19/3/2016	Civil	Building Construction	Layout & Construction of Footing	Learn how to set Layout & Construction of Footing
12.	Paver Block Factory	19/3/2016	Civil	Paver Block Construction	Construction of Paver Block	Learn about construction methodology of paver block
13.	Raja Ramanna Centre for Advanced Technology, Indore	28 <sup>th</sup> Feb, 2016	EC	Communicat ion, Industrial Electronics & Instrumentat ion	The main objective behind the visit was to make student aware about how various activities related to research and development in	Students have got Exposure of the Latest research methodologies going on in the current scenario. They got a chance to transfer
14.	Raja Ramanna Centre for Advanced Technology,	1 <sup>st</sup> Feb , 2015	EC	Communicat ion, Industrial Electronics	the areas of Optics & Opto-Electronics, LASERs Biomedical	their theoretical knowledge to practical implementation. This

Indore			&	Applications and	will even help
			Instrumentat	Instrumentation,	students to understand
			ion	advanced materials	subject matter clearly
				and sensors and	in future also. They
				many more related	develop a new vision
				to the advanced	about the upcoming
				research are carried	very knowledgeshle
					educational and
				out.	intellectual for
					students as well as for
					the faculties.
			VLSI,	The main objective	Students have got
<b>a</b> • • 1			Embedded	behind the visit was	Exposure of the Latest
Technologies	14/02/2013		Systems, Industrial	to make student	equipment and
Pvt Ltd Indore	14/02/2013	EC	Electronics	aware about how	research
i vi. Eta maore			&	various	methodologies going
			Instrumentat	instrumentation	on in the current
			ion	WOIKS	scenario
Yspilon	Dec 15	IT	Software	Corporate Working	Learning of Corporate
Infotech	Dec 15	11	Boltwale	Corporate Working	protocols
Sanchi Food	Ian 16	IT/CM	FMCG	Manufacturing of	Process of
Limited	Jan 10		TWICO	goods	Manufacturing
Dewas Metal	10 March		Sheet Metal	To know about	Students have got
Section	2016	ME	Working	Sheet metal	Exposure of the Latest
				working	equipment and
Portual Auto			Manufacture	Experience and	methodologies going
Component ltd	24 Sept 2015	ME	of variety of	Training of	on in the current
component nu		1	steel allow	i i uning 01	on in the current
	Indore Scientech Technologies Pvt. Ltd Indore Yspilon Infotech Sanchi Food Limited Dewas Metal Section Porwal Auto Component Itd	IndoreIndoreScientechTechnologiesPvt. Ltd IndoreYspilonInfotechSanchi FoodLimitedDewas MetalSectionI0 March2016Porwal AutoComponent Itd24 Sept 2015	IndoreIndoreIndoreIndoreScientech Technologies14/02/2013Pvt. Ltd Indore14/02/2013Sanchi Food LimitedDec 15Sanchi Food LimitedJan 16Dewas Metal Section10 March 2016Porwal Auto Component Itd24 Sept 2015ME	Indore&Indore&InstrumentationScientech Technologies Pvt. Ltd Indore14/02/2013Pvt. Ltd Indore14/02/2013Pvt. Ltd IndoreECIndustrial Electronics & InstrumentationSanchi Food LimitedDec 15ITSoftwareSanchi Food Limited10 March 2016Dewas Metal Section10 March 2016Porwal Auto Component Itd24 Sept 2015MEManufacture of variety of steel allow	Indore&ApplicationsandIndore&InstrumentationInstrumentationadvanced materialsionadvancedadvancedand sensorsandadvancedinstrumentationadvancedinstrumentationScientech14/02/2013ECVLSI,The main objectiveTechnologies14/02/2013ECVLSI,The main objectivePvt. Ltd Indore14/02/2013ECInstrumentationaware about howYspilonDec 15ITSoftwareCorporate WorkingSanchi FoodJan 16IT/CMFMCGManufacturing of goodsTo know aboutDewas Metal Section10 March 2016MESheet Metal WorkingTo know about workingPorwal Auto Component ltd24 Sept 2015MEManufacture of variety of steel allowIndustrial Experience and Training of

### Table 4 List of Industry tour in last four year

S. No.	Industry Name	Date	Department	Type of Company	Objective of Tour	Outcome of Tour
1.	K.C Engineers	27 <sup>th</sup> – 3 <sup>rd</sup> April,2016	Chemical	Instrumentation		
2.	Central Scientific Instruments Organization (CSIO), Chandigarh	19 <sup>th</sup> to 28 <sup>th</sup> March 2016	EC	Industrial Electronics & Instrumentation	The main objective behind the tour was to make student aware about how various activities	Students have got real feel of the cutting edge research going on after this visit.
3.	Allain Duhangan Hydro Power Pvt. Ltd. (ADHPL) Kullu	30 Mar to 6 April 2015	EC	Industrial Electronics & Instrumentation	related to research and development in the areas of Optics & Opto-	They got a chance to transfer their theoretical knowledge to
4.	Indian Institute of Remote Sensing (IIRS) Dehradoon	07/04/2014	EC	Embedded Systems, Industrial Electronics & Instrumentation , RF & Microwave	Electronics, Geo- Scientific Instrumentation, Electronics and Nanotechnology,	practical implementati on. This will even help students to
5.	Military Radar System Mt. Abu	17 April to 20 April 2013	EC	Embedded Systems , Industrial Electronics & Instrumentation, RF & Microwave	advanced materials and sensors and many more related to the advanced instrumentation	understand subject matter clearly in future also. To sum up the visit, it

					research are carried out.	was very knowledgeabl e, educational and intellectual for students as well as for the faculty
6.	TOPs Technologies	Apr 2015	IT	Web and mobile development	For live project working	Students were able to understand the working of industry
7.	Sphinx solutions	January 2014	IT	Web and mobile development	For live project working	Students were able to understand the working of industry
8.	Ruplee solutions	April 2016	IT	Web and mobile development	For live project working	Students were able to understand the working of industry
9.	Spa Geo Technology	2 to 5 April 2015	CSE	Software Development	Real Time Development Process	Understand the Software Development Life Cycle & Risk Management
10.	Net Solutions	15 to 17 March 2016	CSE	Software Development	Web Development	Strategies for Software Development
11.	Sun Pharmaceuticals industries Ltd	04/04/2015	ME	Pharmaceuticals Company	To Get Industrial experience	Students were able to understand the working of industry
12.	Coca-Cola Wave Beverages Private Limited	29-03-2016	ME	Beverage company	To Get Industrial experience	Students were able to understand the working of industry

#### Table 5 List of MOU's

S. No.	Industry Name	Date of MOU	Departm ent	Objective of MoU's	Outcome of MoU's
1	EC-Council	30/06/2015	IT	To provide practical working knowledge in Ethical Hacking and web security	Skillfulness of students in Information Security helped them to get web security jobs.
2	BSNL	25 <sup>th</sup> June 2015	EC	To provide Vocational Training for students in Telecom sector and to get exposure to latest technologies in telecom industry.	Students got good exposure to latest telecom technologies and tools used in industry.

3	Wadhwani foundation	26 April 2015	ME	Development of Entrepreneurship Ecosystem at the instiute	Studentsgotknowledgehowtobecome Entrepreneur
4	Porwal Auto Component Ltd Pithampur	5 Jan 2015	ME	Training and Consultancy	Students got good exposure to latest technologies and tools used in industry.
5	Khanwalkar Industries	06 Feb 2015	ME	Training and Consultancy	Students got good exposure to latest technologies and tools used in industry.



Industrial Tour for Chemical IV Year



Industrial Tour for ME IV Year



Industrial Tour for EC IV Year

Figure 6 Glimpses of Industrial Visit and Tour

1.1.6 What are the contributions of the institution and/or its staff members to the development of the curriculum by the University?(number of staff members/departments represented on the Board of Studies, student feedback, teacher feedback, stakeholder feedback provided, specific suggestions etc.

The curriculum design and development process is carried out by the affiliating university based on the needs of the society. The College collects regular feedback from all its stakeholders, viz., students, parents, faculty members, recruiters etc. The suggestions proposed are analyzed and the recommendations are communicated to the affiliating University. **Dr. Shilpa Tripathi Dean Chemical Engineering** functioned as member of BOS made contribution in the revision of syllabus of Chemical Engineering.

FACULTY:	Industrial Technology	
Constitution	of Board of studies in :	Chemical Eng
	(Refer section 32 of the RGPV Act)	
Statue 14-6-(a) 1	Professor and Head of the Deptt. By rotation acco	ording to seniority
Statute 14-6-(b)	Two Professor by rotation according to seniori	ity.
1 V	acant	
2 V	acant	
Statute 14-6-(c)	Four Readers by rotation according to seniorit	y.
1 Sh	ri Anjani Kumar Diwedi, Reađer, UEC Ujjain (Chai	irman)
2 Sh	ri Ashok Sharma, Reader, UEC, Ujjain	
3 M	rs. Shilpa Tripathi, Reader, IIST, Indore,	
4 Sh	ri Shriram Prasad, Reader, MITS, Gwalior	
Statute 14-6-(d)	Six Lecturers by rotation according to seniorit	у
1 5	hri Dharmendra Singh Tomar, Lecturer, MITS, Gwa	alior.
2 M	is. Vandana Sakhare, Lecturer, MITS, Gwalior	
3 5	hri Sanjay Verma, Lecturer, UEC, Ujjain.	
4 5	hri Diwakar Shande, Lecturer, MITS, Gwalior	
5 S	mt. Anuradha Nanewar, Lecturer, IPS Academy, Ind	lore
6.	Vacant	

# 1.1.7 Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating university) by it? If 'yes', give details on the process ('Needs Assessment', design, development and planning) and the courses for which the curriculum has been developed.

The curriculum is as per the affiliating University. But wherever there is a gap in the curricula of the University and the requirements of the industries, employability and higher education, suitable training programs are planned and developed by the Training and Placement Cell and the respective departments and imparted to the students. They are short courses of 4-6 weeks pertaining to emerging technology, personality development, improvement in communication/ soft skills etc. The process normally followed in curriculum development of such course is as follows:

**Need Assessment:** Need for conduct of any course of technical field is assessed based on interaction/ feedback received from industry professionals, normally given during on campus drives by prominent employers. Similarly courses pertaining to personality development/ communication skills/ aptitude etc are generated based on the performance analysis of unsuccessful students during campus placement.

**Design Development**: such courses are designed by expert faculty of the department or the external source person, based on the gap analysis outcomes between the existing university recommended syllabus and what is expected by employing industry. Accordingly, courses are designed to fill the gap and the teaching hours are estimated, may be 10/20/30 hrs. over a semester or vacation.

**Planning**: Once the complete course coverage is designed with the breakdown of smaller modules and estimated time frame, plans are made for scheduling of such courses. Depending upon the spare time available to students in a running semester and time required for the course, they are scheduled to be conducted on regular teaching days/ weekends/ semester breaks/ summer vacations etc.

	That I car
S.No.	PD Module
1	Introduction to PD
2	Profiling / TNA
3	Self Awareness
4	Goal Setting
5	Time Management
6	Communication Skills
7	Self Esteem & Self Image
8	Study Skills
9	Peer Pressure
10	Presentation Skills
11	Relaxation Techniques
12	Group Discussions
13	Guest Lectures

### COURSE MODULE: PDP AND EEP MODULE STRUCTURE

	Second Year
S.No.	PD Module
1	Introduction to PD
2	Profiling / TNA
3	Interpersonal Communication
4	Team Building
5	Stress Management
6	Values Identification
7	Positive Attitude
8	Locus of Control
9	Problem Solving
10	Lateral Thinking
11	Conflict Management
12	Decision Making Skills
13	Group Discussions
14	Guest Lecture

	Third Year
S.No.	EEP Module
1	Introduction to EEP
2	Reiteration of Earlier Topics
3	Self Awareness& Introduction
4	S.W.O.T Analysis
5	CV /Resume Writing
6	Personal Interview
7	Group Discussion
8	Grooming
9	Etiquettes
10	Body Language

	Four Year
S.No.	EEP Module
1	Introduction
2	Goal Setting & CV Writing
3	Goal Setting & Introduction
4	S.W.O.T & Introduction
5	Power Dressing
6	Etiquettes for Corporate
7	Role Plays For Behavioural Modification
8	EQ & IQ In Personal & Professional Life
9	General Awareness / General Knowledge
10	Group Discussion
11	Personal Interview
12	Guest Lecture

TIME / DAY	08.50- 09.50	09.50- 10.50	10.50- 11.50	11.50-12.40	01.30- 02.30	2.30- 03.30	3.30-04.20
MONDAY		PDP CS- 1,III YEAR SC	PDP CS-1 II YEAR KM	PDP ME-1 IV YEAR KM	PDP CE II YEAR SC	PDP CE-1 IV Year MD	PDP IT II YEAR KM
TUESDAY	CS-4 II YEAR SC	PDP CS-1 IV Year KM	PDP CS- 3,III year SC	PDP CS-2,III year KM	PDP EC / EX IV Year SC		PDP ME-2 IV Year KM
WEDNESDAY		PDP IT IV YEAR KM	CS-3 II YEAR SC	PDP ME-3 IV Year KM	ME-2 II YEAR SC	PDP ME- 2,III year KM	ME-1 II YEAR SC
THURSDAY	CM II YEAR KM		PDP ME- 1,III year KM	PDP CM IV YEAR SC	PDP ME- 4 IV Year SC	PDP CE III year MD	e e e e e e e e e e e e e e e e e e e
FRIDAY	CS-2 II YEAR KM	PDP CE-2 IV Year SC		PDP EC+IT+CM III Year KM	EC-II YEAR SC	PDP CS-3 IV Year KM	PDP CS-2 IV Year SC

COURSE MODULE: C AND C++.

### **PROGRAMMING IN C**

Introduction To 'C' Language Character Set. Variables and Identifiers, Built-In Data Types. Variable Definition, Arithmetic Operators And Expressions, Constants And Literals, Simple Assignment Statement, Basic Input/Output Statement, Simple 'C' Programs Conditional Statements And Loops Decision Making Within A Program, Conditions, Relational Operators,

Logical Connectives, If Statement, If-Else Statement, Loops: While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement, Structured Programming.

#### Arrays

One Dimensional Arrays: Array Manipulation; Searching, Insertion, Deletion Of An Element From An Array; Finding The Largest/Smallest Element In An Array; Two Dimensional Arrays, Addition/Multiplication Of Two Matrices, Transpose Of A Square Matrix; Null Te01linated Strings As Array Of Characters, Representation Sparse Matrices Functions.

Top - Down Approach Of Problem Solving, Modular Programming And Functions, Standard Library Of C Functions, Prototype Of A Function: Foo1lal Parameter List, Return Type, Function Call, Block Structure, Passing Arguments To A Function: Call By Reference, Call By Value, Recursive Functions, Arrays As Function Arguments Structures And Unions Structure Variables, Initialization, Structure Assignment, Nested Structure, Structures And Functions, Structures And Arrays: Arrays Of Structures, Structures Containing Arrays, Unions Pointers Address Operators, Pointer Type Declaration, Pointer Assignment, Pointer Initialization, Pointer Arithmetic, Functions And Pointers, Arrays And Pointers, Pointer Arrays File Processing Concept Of Files, File Opening In Various Modes And Closing Of A File, Reading From A File, Writing Onto A File

#### PROGRAMMING IN 'C++'

C++ Overview C++ Characteristics ,Object - Oriented Terminology, Polymorphism ,Object - Oriented Paradigm, Abstract Data Types Functions And Variables Functions: Declaration And Definition ,Variables: Definition, Declaration, And Scope ,Variables: Dynamic Creation And Derived Data ,Arrays And Strings In C++ , Qualifiers Classes In C++ Defining Classes In C++ ,Classes And Encapsulation ,Member Functions ,Instantiating And Using Classes ,Using Constructors ,Multiple Constructors And Initialization Lists ,Using Destructors To Destroy Instances , Friend Class Operator Overloading Operator Overloading ,Working With Overloaded Operator Methods Initialization And Assignment.

Initialization Vs. Assignment, The Copy Constructor, Assigning Values ,Specialized Constructors And Methods ,Constant And Static Class Members Storage Management Memory Allocation, Dynamic Allocation: New And Delete Inheritance .

Overview Of Inheritance ,Defining Base And Derived Classes ,Constructor And Destructor Calls Polymorphism Overview Of Polymorphism Input And Output In C++ Programs Standard Streams , Manipulators , Unformatted Input And Output , File Input And Output.

Time/Day	5.00 - 6.00	6.00 - 6.45
Mon To Friday	С	C++
Faculty Coordinators	Mr. Rakesh Jain	Mr. Ranjeet Osari

### SOFTWARE CLASSES FOR CE DEPARTMENT

### NEED

Teaches the fundamentals of 3D modeling in SketchUp, teaching you how to:

- ➢ Create 3D models.
- ➢ Incorporate textures, scenes and styles.

- Produce visualizations.
- ➤ Use SketchUp's key tools and commands.

The course can be tailored for each client to be relevant to the type of models and Visualizations required.

### ASSESSMENT

3-D UNDERSTAND basic modeling terminology. and basic concepts to create simple building models and useful everyday shapes, from 2-D plans, elevations and sections using SketchUp 3-D modeling software. Utilize tools and techniques unique to SketchUp 3-D modeling software to organize models, modeling environment, the and create repeatable components. manage Employ various methods of displaying, rendering and otherwise changing the appearance of 3-D models using tools integral to the SketchUp 3-D modeling software.

### COURSE SYLLABUS

What is SketchUp? How to get around inside SketchUp Zoom, pan and rotate Understanding the XYZ axis Selecting toolbars Applying templates Drawing and using the pencil tool Drawing basic geometric shapes Drawing with measurements Drawing circles and arcs Sticky Geometry benefits Discovering Layers Using shortcuts.Measuring items inside SketchUp Information and database Moving and move / copy Simple Array techniques Rotating objects Rotate / copy Scale fractional and relative Making components Making groups Comparisons and benefits Saving components Re-loading components Creating a digital warehouse. Modelling techniques Using Push Pull Using Follow Me Intersecting Geometry. Copy and Offset Faces, edges and polygons How to use polygons in 2D drawings. Paint bucket Materials Editor Textures and bitmaps. Getting to understand the Materials Editor What makes a good texture? Where to find textures positioning textures limits to graphics and bitmaps. Create new scenes Create new styles saving scenes and styles.

S.No.	Day	Time
1.	Monday	4:30 PM-6:00 PM
2.	Tuesday	4:30 PM-6:00 PM
3.	Wednesday	4:30 PM-6:00 PM
4.	Thursday	4:30 PM-6:00 PM
5.	Friday	4:30 PM-6:00 PM
6.	Saturday	10:00 AM-12:00 AM

**Introduction to animation:** Dimensions inside SketchUp, Dimensions inside SketchUp, Printing from SketchUp, Exporting 2D images or PDF

### **1.1.8** How does institution analyze/ensure that the stated objectives of curriculum are achieved in the course of implementation?

### **Departmental meetings:**

During a semester, every department conducts departmental meetings once in a month to know the requirements of the faculty if any and to ensure the progress and curriculum as prescribed by the affiliating University. Dean / HOD preside over the meeting.

### Mid Semester Exam / Class Tests/ Semester:

The college conducts two/ three class tests / mid semester Exam per semester to analyze the students' understanding of curriculum. Analysis is made for each test and remedial actions are taken for the poor performing students.

### Assignments / Quiz / Tutorial:

The syllabus allots tutorial classes for the analytical papers as per the credits. Tutorial classes conducted by concerned teachers as prescribed in the time table. Technical quizzes/ assignments done by the students help them in clear understanding of difficult topics of the subjects.

### **Special Classes:**

The slow learners are given special coaching classes to improve their performance. Soft skill training and value added course are the additional efforts to impart the contents beyond syllabi. Both in- house projects and industrial projects are encouraged to develop practical skills and better understanding of theory.

The following tools are deployed to measure the achievement of the stated objectives.

### 1. Direct Assessment Tools

The UG program of the electronics & communication engineering department is credit based with continuous evaluation system. Evaluation is conducted by the subject teacher throughout the semester. Each subject contains three main components for evaluation:

### **Course Work**

- Teacher Assessment: In this component, Assignments, tutorials, problem solving, group discussions, quiz, etc are given and evaluated regularly.
- ➢ Mid Semester Examination: Two Mid semester examinations are conducted within semester after the start of Academic Session.
- End semester Examination: End semester examination is conducted at the end of semester. Complete syllabus is covered in this examination. Major Weightage of marks is given to this component.
- Practical Courses: In these courses, continuous evaluation is done through viva-voce, Lab report submission and laboratory quiz.

Subject Type	Assessment Components	Weightage (%)
Theory	Teacher Assessment	10 %
	Mid Semester Examination	20 %
	End Semester Examination	70 %
Lab / Project / Seminar	Internal Assessment	40 %
	End Semester Examination	60 %

#### The weightage of components are given in the following table:

Component	Frequency
Teacher Assessment	Continuous
Mid Semester Examination	Twice in a Semester
End Semester Examination	Once in a Semester
Internal Assessment	Continuous
End Semester Examination	Once in a Semester
Students Placement analysis	Annually

### 2. Indirect Assessment

- Course Outcome Feedback: After the end of every semester, feedback is taken for individual subject.
- Graduate Exit Feedback: In the last semester i.e. 8th semester, feedback is taken by the student of last year. Achievement of POs and graduate attributes (GA) are taken as criteria in the feedback.
- Alumni Feedback: Alumni, particularly who has graduated within the 3-4 years of current academic year, feedback is taken with reference to the achievement of POs.
- ➤ Industrial Feedback: Students who has undergone Industrial training and internship in the industries as well as who got the jobs in the industries. Feedback is taken from the industries for the performance of students. (This feedback is not yet taken). A verbal feedback is taken from industry persons when our faculty meets them at any conference or when they come to our institute for giving lectures or training.
- Internationally/ Nationally Examinations of repute: In this component, various examinations (national and international level) like GATE, NET, CAT, GRE, IELTS, and TOEFL are taken in to consideration for student's performance and evaluation.

Component	Frequency
Course Outcome Feedback	End of Semester
Graduate Exit Feedback	Annually
Alumni Feedback	Annually
Industrial Feedback	Annually
Internationally/ Nationally Examinations of repute	Annually
Participation in various conferences, workshops and technical symposiums	Annually

The measured parameters are collated and taken up for analysis by the Program Assessment Committee which assesses the level of achievement of PEOs. The findings are then presented to the Department Advisory Committee for approval / modification of PEOs as shown:



#### Figure 8 Process of Redefining the PEO's

The Program Advisory committee also analyses the data collated from direct and indirect assessment modes and examines the achievement level of POs. The results of analysis are reviewed by the Department Advisory Committee and modifications are recommended as flow charted below:



Figure 9 Process of Redefining the PO's

Thus a well-thought out procedure takes care of the monitoring mechanism.

### **1.2 Academic Flexibility**

### **1.2.1** Specifying the goals and objectives give details of the certificate/diploma/ skill development courses etc., offered by the institution.

In order to have better suitability of the passing graduates for the industrial requirements, various skill development programmes are conducted by the various departments of the institution. As the present-day job requirements have become inter-disciplinary in nature, additional skill development programmes in the upcoming technologies have become useful to the students. As

such the following skill development programmes are conducted by the different departments of the institute.

Value added course	Objectives	Outcomes	
IIT Madras Quality Enhancement in Engineering Education (QEEE)	To provide expert lectures to students on academic subjects from IIT professors for Quality Enhancement in Engineering Education	Understanding the core concepts of various engineering field and learn content beyond syllabus	
Visual Paradigm, Hong Kong Association	To Learn Software Modeling Tools	Used tools for Project Activities	
IBM Academic Initiative.	New laboratory establishment with IBM tools and Learn Software Modeling Tools	Exposure with latest IBM software tools & Used tools for Project Activities.	
NASSCOM	Industry Ready Engineers	Bridge the Industry and Academic Gaps	
IIT Mumbai Spoken Tutorial	To pass on the knowledge of technology and free and open source software (FOSS) to the millions in our countrymen who lack opportunities and/or access to learn any software.	To get Elementary knowledge for a particular course.	
Virtual Lab	To provide online access to various practical experiments on academic syllabus	The Virtual lab program is to enthuse students to conduct experiments by arousing their curiosity and it presents a unique opportunity to boost the quality of education, deepen understanding, and provide the necessary practical skills to students through cost effective outreach.	
IIT Mumbai E-Yantra	To learn application of embedded system and provide solution to real world problem.	Understand the Robotics programming and concept of controller, sensors etc.	
EMC <sup>2</sup> Center for Academic	To enhance knowledge of current	Students got aware about different	
EC Council Academia, USA	To get knowledge of ethical hacking	Students Learn about hacking principals and prepared for certification.	
Foreign Languages	To get knowledge of offshore country's languages.	Understand the importance of other country's language and work in global world without obstacles of language	
BSNL	To provide Vocational Training for students in Telecom sector and to get exposure to latest technologies in telecom industry.	Students got good exposure to latest telecom technologies and tools used in industry.	

#### Table 6 List of Value added Courses

### 1.2.2 Does the institution offer programmes that facilitate twinning /dual degree? If 'yes', give details.

No, the institution does not offer the dual degree programme.

**1.2.3** Give details on the various institutional provisions with reference to academic flexibility and how it has been helpful to students in terms of skills development, academic mobility, progression to higher studies and improved potential for employability. Issues may cover the following and beyond:

### **1.** Core/Elective Options:

The structure of UG programme under CBCS Scheme consists of the following: Foundation Courses (Basic Sciences, Engineering Arts & Sciences, Humanities, and Social Science & Management), Departmental Core, Departmental Electives and Open Category Electives distributed over eight semesters, with two semesters per academic year. Credits assigned to these categories are such as to cover 1/3rd of total credits assigned for electives and 2/3rd of total credits for the core.

Registration for all the core subjects is mandatory. Students enhance their academic and employability skills through the following:

- > Additional lecture hours introduced for problem oriented and difficult subjects.
- Guest lecturers given by eminent persons in emerging areas from industry and from renowned Institutions.
- > Mini projects and industry based final year projects.
- Seminars by students.
- ➢ Industrial visits.
- > Teaching content beyond the syllabus in theory and practical courses.

### 2. Choice based credit system and range of subject options:

The range of subject option and choice based credit system are limited as per RGPV curriculum.

### 3. Courses offered in Modular Form:

Syllabus of each course under CBCS scheme is well framed in the form of a module with clear mentioning of course objective and its learning outcomes.

### 4. Credit Accumulation and Transfer Facility:

There is no scope for credit transfer and accumulation facility as per the RGPV regulations.

### 5. Lateral and Vertical Mobility within and across programmes, courses and disciplines:

University does offer lateral mobility by providing significant weightage to open category credits, which allow students of one programme to take courses offered by the other programmes. Future University is planning to make MOOC courses an integral part of the scheme, thus allowing students to take courses offered by other institutes for credits. In order to transform current teaching-learning framework from teacher-centric to student-centric, University has implemented Choice Based Credit System (CBCS). This new students' choice-oriented system ensures seamless mobility among students while promoting learning based on their choices.

### 6. Enrichment Courses:

First year scheme under CBCS offers courses like English, Language Lab, Idea Generation, Introduction to Department, and Rural Outreach with intent to enrich students with skills necessary for their personal growth..

1.2.4 Does the institution offer self-financed programmes? If 'yes', list them and indicate how they differ from other programmes, with reference to admission, curriculum, fee structure, teacher qualification, salary etc.

No, the institution is a self financed institution affiliated to RGPV, Bhopal. Institute by itself does not run any self financed program by its own.

1.2.5 Does the college provide additional skill oriented programmes, relevant to regional and global employment markets? If 'yes' provide details of such programme and the beneficiaries.

Following additional skill development initiatives are undertaken over and above the prescribed university curriculum:

### **1.** Conduct of PDP classes / C /C++ Courses in the campus:

PDP (Aptitude & soft skills) classes are conducted for 30 hrs. Achievers once in a week .This grooms the personality, spoken and written skills of the students and prepares them well with the placement process.

TIME / DAY	08.50-09.50	09.50-10.50	10.50-11.50	11.50-12.40	01.30-02.30	2.30-03.30	3.30-04.20
MONDAY		PDP CS- 1,III YEAR SC	PDP CS-1 II YEAR KM	PDP ME-1 IV YEAR KM	PDP CE II YEAR SC	PDP CE-1 IV Year MD	PDP IT II YEAR KM
TUESDAY	CS-4 II YEAR SC	PDP CS-1 IV Year KM	PDP CS-3,III year SC	PDP CS-2,III year KM	PDP EC / EX IV Year SC		PDP ME-2 IV Year KM
WEDNESDAY		PDP IT IV YEAR KM	CS-3 II YEAR SC	PDP ME-3 IV Year KM	ME-2 II YEAR SC	PDP ME- 2,III year KM	ME-1 II YEAR SC
THURSDAY	CM II YEAR KM		PDP ME- 1,III year KM	PDP CM IV YEAR SC	PDP ME-4 IV Year SC	PDP CE III year MD	
FRIDAY	CS-2 II YEAR KM	PDP CE-2 IV Year SC		PDP EC+IT+CM III Year KM	EC-II YEAR SC	PDP CS-3 IV Year KM	PDP CS-2 IV Year SC

### COURSE MODULE: C AND C++.

### **PROGRAMMING IN C**

Introduction To 'C' Language Character Set. Variables and Identifiers, Built-In Data Types. Variable Definition, Arithmetic Operators And Expressions, Constants And Literals, Simple Assignment Statement, Basic Input/Output Statement, Simple 'C' Programs Conditional Statements And Loops Decision Making Within A Program, Conditions, Relational Operators, Logical Connectives, If Statement, If-Else Statement, Loops: While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement, Structured Programming.

Arrays

One Dimensional Arrays: Array Manipulation; Searching, Insertion, Deletion Of An Element From An Array; Finding The Largest/Smallest Element In An Array; Two Dimensional Arrays, Addition/Multiplication Of Two Matrices, Transpose Of A Square Matrix; Null Te01linated Strings As Array Of Characters, Representation Sparse Matrices Functions.

Top - Down Approach Of Problem Solving, Modular Programming And Functions, Standard Library Of C Functions, Prototype Of A Function: Foo1lal Parameter List, Return Type, Function Call, Block Structure, Passing Arguments To A Function: Call By Reference, Call By Value, Recursive Functions, Arrays As Function Arguments Structures And Unions Structure Variables, Initialization, Structure Assignment, Nested Structure, Structures And Functions, Structures And Arrays: Arrays Of Structures, Structures Containing Arrays, Unions Pointers Address Operators, Pointer Type Declaration, Pointer Assignment, Pointer Initialization, Pointer Arithmetic, Functions And Pointers, Arrays And Pointers, Pointer Arrays File Processing Concept Of Files, File Opening In Various Modes And Closing Of A File, Reading From A File, Writing Onto A File.

### **PROGRAMMING IN 'C++'**

C++ Overview C++ Characteristics ,Object - Oriented Terminology, Polymorphism ,Object - Oriented Paradigm, Abstract Data Types Functions And Variables Functions: Declaration And Definition ,Variables: Definition, Declaration, And Scope ,Variables: Dynamic Creation And Derived Data ,Arrays And Strings In C++ , Qualifiers Classes In C++ Defining Classes In C++ ,Classes And Encapsulation ,Member Functions ,Instantiating And Using Classes ,Using Constructors ,Multiple Constructors And Initialization Lists ,Using Destructors To Destroy Instances , Friend Class Operator Overloading Operator Overloading ,Working With Overloaded Operator Methods Initialization And Assignment.

Initialization Vs. Assignment, The Copy Constructor, Assigning Values ,Specialized Constructors And Methods ,Constant And Static Class Members Storage Management Memory Allocation, Dynamic Allocation: New And Delete Inheritance .

Overview Of Inheritance ,Defining Base And Derived Classes ,Constructor And Destructor Calls Polymorphism Overview Of Polymorphism Input And Output In C++ Programs Standard Streams , Manipulators , Unformatted Input And Output , File Input And Output.

Time/Day	5.00 - 6.00	6.00 - 6.45
Mon To Friday	С	C++
Faculty Coordinators	Mr. Rakesh Jain	Mr. Ranjeet Osari

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### COURSE SYLLABUS

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**Introduction to animation:** Dimensions inside SketchUp, Dimensions inside SketchUp, Printing from SketchUp, Exporting 2D images or PDF

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6.	Saturday	10:00 AM-12:00 AM

### 2. AICTE sponsored Program "Employability Enhancement Training Program (EETP):

This is being conducted at BSNL premises at Indore. Under this program top-notch students from  $3/4_{th}$  yr. B.E (ECE) are selected and training related to novel technologies and latest Telecom equipment is provided on weekly basis. Students selected and found competent for this training program are being graded as Silver certified, Gold certified and Platinum certified Engineers. The college curriculum is adjusted to facilitate smooth conduct of this programme.

Registration N SI	4CIN454
BSNL Connecting function BSNL Connecting function BBNL Connecting function BBSNL Connecting fun	
PROVISIONAL CERTIFICATE	
This is to certify that Ms. NEHA SONI pursuing B. E. (VI Sem.) at Indore Institute of Science & Technology, I (MP) has successfully completed	Indore
BSNL GOLD CERTIFIED ENGINEER	ortro
Course of 16 weeks duration w.e.f. 28-01-2015 with required hands on practical training at BSNL training provider	Cric
Indore under GSNL-AICHE Employability Enhancement Training Grogramme (EEHP).	
We are pleased to avoara limit/her certificate of <u>uroficiency</u> .	
ESNL wishes him/her a bright career.	
This certificate is issued on purely provisional basis. The original certificate will be handed over to the student as and	when
received.	
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Figure 10 Sample Student Certificate for Employability Enhancement Training Program (EETP) - BSNL

### 3. IIT Delhi Virtual Lab

IIST is the nodal center for virtual lab. Virtual Labs is a project initiated by the Ministry of Human Resource Development, Government of India, under the National Mission on Education through Information and Communication Technology. The project aims to provide remote-access to Laboratories in various disciplines of science and engineering for students at all levels from under-graduate to research. It also intends to develop a complete Learning Management System where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation. There is also a component wherein costly equipment and resources are shared, that are otherwise available to only a limited number of users due to constraints on time and geographical distances. Seven IIT's (Delhi, Bombay, Kanpur, Kharagpur, Madras, Roorkee and Guwahati), IIIT Hyderabad, Amrita University, Dayalbagh University, NIT Karnataka, and College of Engineering, Pune, are the institutions participating in the project. The Project intends to cover physical sciences, chemical science and engineering, electrical engineering, mechanical engineering, chemical engineering, biotechnology engineering and civil engineering.



Figure 11 Student Certificate of Participation in Virtual Lab IIT Delhi

### 4. IIT Mumbai E-Yantra "Robotics Lab"

An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded systems and Robotics. Also, helps in better performance at Robotics competitions such as the e-Yantra Robotics Competition with trainings done at IIST campus.



Figure 12 Student Certificate of Participation in eYantra IIT Mumbai

### 5. IIT Madras Quality Enhancement in Engineering Education (QEEE)

QEEE program uses real time and synchronous technology to allow for an integration of superior external scholastic inputs into current pedagogical practices. QEEE has got Live Classes wherein IIT faculty delivers live lecture classes to participating colleges. The schedule of lectures is sent

to colleges and notifications are provided before start of each session. It also includes Course pack of supplement study material with lecture notes, live class videos, discussion forums, and assessment and evaluation tools to serve as a reference material for QEEE courses. Live Labs are conducted to provide virtual hands-on experience to students on experiments undertaken remotely. It creates an opportunity to work on a real lab experiment tailored to suit their syllabus and curriculum. Bridge Programs are administered to bridge the gap between the initial skills of individuals and what they need to enter and succeed in post secondary education and career-path employment.



Figure 13 Student Certificate of Participation in QEEE IIT Madras

### 6. EC Council Academia, USA

The association aims to deliver information and security skills to improve career and economic opportunities. The program offered at IIST is Certified Ethical Hacker (for students of IT, CS & EC), it incorporates a 40 hour training module at IIST. IIST is the only training partner for the program in Indore.



Figure 14 Student Certificate of Participation in EC Council

**1.2.6** Does the University provide for the flexibility of combining the conventional face-toface and Distance Mode of Education for students to choose the courses/combination of their choice" If 'yes', how does the institution take advantage of such provision for the benefit of students?

The University does not provide this flexibility at present.

### **1.3 Curriculum Enrichment**

**1.3.1** Describe the efforts made by the institution to supplement the University's Curriculum to ensure that the academic programmes and Institution's goals and objectives are integrated?

The efforts made by the institution to supplement the university curriculum to realize the goals and objectives of the institution are:

Periodic industrial visits and tours are arranged for the enrichment of student's practical knowledge.



Industrial Tour for EC IV Year - Central Scientific Instruments Organization (CSIO), Chandigarh from 19th to 28th March 2016

➢ Guest lectures are being conducted to create awareness of outside world and to have effective interaction with resource persons from various industries.





Seminar by Principal Consultant Mr. Pankaj Jain from Infosys Pvt. Ltd.

Various topics of content beyond the syllabus are being taught to students in order to have additional knowledge related to the respective subjects.



QEEE Program as content beyond syllabus

Students are encouraged to attend the in plant training programs offered by various industries during summer and winter vacations (industrial training/ internship).



BSNL Tie up for training program

Also, the Institute arranges seminars, value addition programmes, workshops, career guidance programmes, symposium, techfests, entrepreneur development cell facility etc.



Workshop by VBM technologies on Robotics



Project Exhibition by First Year Students



Techfest called as Technoholi 2014 Students participate Certificate

The social service units like NSS organizes socially oriented programs like blood donation camp, computer awareness to local people, tree planting, etc. so as to emphasize the involvement of the institution in national development programs and inculcate the social responsibilities and community orientation amongst the students.







Figure 15 Socially Oriented Programs like blood donation camp, tree planting, Swine Flu and Health check up etc

A library hour within the class time table is provided to encourage library usage by students, so that the students can avail E-journal downloading facilities in addition to books, journals, back volumes, e-books etc.



e- Library

Advanced Language lab facilities are utilized to inculcate good communication skill among students.



Language Lab

**1.3.2** What are the efforts made by the institution to enrich and organize the curriculum to enhance the experiences of the students so as to cope with the needs of the dynamic employment market?

The College strictly adheres to the syllabus designed by RGPV Bhopal. However while delivering the syllabus content to the students, our faculty enrich it with their own expertise and

experience so that the students also gain employable qualities that enable them to get jobs in this highly competitive world.

- The institution enriches the curriculum by supplementing it with extra courses such as Auto CAD, MATLAB, .Net, Java, C/C++ and soft skill so that the students are benefited in the best possible manner.
- All branches of engineering have courses on computer programming skills to enable them to meet the demands of the global market.
- > Students have access to online journals through digital library facilities.
- Special courses on personality development and communication skills are regularly conducted for the students as value added courses.

**1.3.3** Enumerate the efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum?

### 1. Environmental Education / Climate Change

The institution, being a Green Campus with 100 trees, enhances and ambient and environmental quality. The institution is also educating the students continuously through various programmes like tree plantation, rain water harvesting, environmental study through trekking and waste water recycling etc. Through these programmes, the students learn about natural resources management, climate change and creating healthy living. The campus is maintained as smoke free by parking car & two wheeler in separate parking area and plastic pollution free by continuous education of the students.



Green Campus

### 2. Human Rights

The College has constituted an Anti-Ragging Committee and Squad with the Director as the convener. This committee effectively monitors and ensures that the campus as ragging free. At the beginning of every year, Director forms an Anti-Ragging committee with senior professor as a coordinator and all the members of faculty as members of the committee. The squad members are assigned with various duties and responsibilities. At different points faculty members watch

and ensure that students are safe from anti-ragging. The details about the various committees like Anti Ragging Squad and Anti Ragging Committee etc., are display in the notice boards.



### **3. ICT**

The ICT (Information and Communication Technology) activities are in practice for the information and communication enrichment with the students. The objective is to establish and provide a common platform for interaction with the students. The entire campus is connected through LAN and Wi-Fi. The Knowledge Sharing mail forward by Director to staff & students every month.

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		c of today's professional world. Informed choices and						
	and the seal	happen with identifying and creating the desired						
		knowledge base, storing information and sharing it for						
	knowledge to apply in the field, leading to a	the purpose of learning and utilization of this stored						
	The Knowledge Sharing Initiative, which I	has happened for the first time in 115T, as a step						
	researched knowledgebase, expanding th Engineering and other areas for their benef	heir information on various topics related to fits.						
	An Institute is a Temple of Learning and we knowledge takes place at this platform to prepare to face the highly competitive p knowledge of a variety of topics. The prese	c believe, that, maximum learning and sharing of lead each professional andstudents whom we rofessional world, will be well equipped with ht intervention has three precise objectives;						
	2. Knowledge Strengthening							

Figure 16 Knowledge Sharing Initiative

### Knowledge Sharing: http://192.168.0.18/library/directordesk.aspx

### **1.3.4** What are the various value-added courses/enrichment programmes offered to ensure holistic development of students?

Following are the various value-added courses/enrichment programmes offered to ensure holistic development of students:

### 1. Moral and Ethical Values

Regarding moral and ethical values, the students are being taught about the moral, ethical and behavioral values through soft skills classes and through talks by distinguished person in these fields. Further, discipline and punctuality etc are inculcated in to their minds by the faculty.

### 2. Employable and Life Skills

As communication skill is necessary for employment, the institute takes extra care for the development of communication skills of the students through personality development programs, group discussion, debate, Essay writing competition etc. Students are also allotted different responsibilities in organizing various events and activities such as cultural programmes, competitions, seminars, workshops etc. This way they improve their team building and organizational skills.

### 3. Better career options

The institution arranges Verbal and Written Communication Skills, Workshops and Group Discussions regularly. Career guidance is given to students by Career guidance cell. Also value added courses are conducted for students to obtain better career options. Students are assigned different responsibilities in organizing various events and activities such as cultural programme, competitions, seminars, workshops etc. In this way they improve their team building and organizational skills.

### 4. Community orientation

Blood donation programs, Tree plantation and NFCH (National Foundation for Communal Harmony) organizes various fund collections and conduct essay competition on events like —World Communal Harmony Day





Figure 17 Community orientation Program

### **1.3.5** Citing a few examples enumerate on the extent of use of the feedback from stakeholders in enriching the curriculum?

Since our program is already accredited by NBA, we have framed Vision and mission of the college and department. Also in the department level, we have framed Programme Educational Objectives (PEO) and Programme Outcomes (PO).Every year Department Advisory Board(DAB) committee meeting is held to discuss about the fulfillment of the PEO, PO based on university results and the feedback received from students of various batches and the stakeholders.

### The various types of feedbacks collected in our college are:

Alumni Feedback: Every year institute organizes Alumni Meet in which feedback is collected to enrich the curriculum.

Student Feedback: At the end of each semester, a feedback from every student is taken.

#### Table 7 Type of Feedback and its frequency

Component	Frequency
Course Outcome Feedback	End of Semester
Graduate Exit Feedback	Annually
Alumni Feedback	Annually
Industrial Feedback	Annually

**1.3.6** How does the institution monitor and evaluate the quality of its enrichment programmes?

The enrichment programs conducted by the institution are evaluated on the basis of student results, placements and students performance in the competitive examinations and feedback from the stake holders. All these aspects are examined from time to time to modify the programs. The feedback in the form of interactions, discussions and suggestions are analyzed by a specially constituted committee and report is submitted to the Head of the Department. An advisory committee of experienced faculty members has been constituted to monitor and evaluate the efficiency and success of these enrichment programs. This committee meets with the higher authorities like Director from time to time and amends the enrichment programs to meet the desired objectives.

The Institution makes sure that the programs offered in the curriculum and outside the curriculum include contribution to national development, fostering global competencies among students, inculcating a value system among students, promoting the use of technology and quest for excellence. Efforts are continually made to ensure that the curriculum bears a thrust on these core values which includes the initiative for contribution to national development. The college seeks to address the all-round development of the students enrolled in the various academic programs it offers. The institution also monitors the quality of its enrichment programs by direct and indirect evaluation.

### **1. Direct Assessment Tools**

The UG program of the electronics & communication engineering department is credit based with continuous evaluation system. Evaluation is conducted by the subject teacher throughout the semester. Each subject contains three main components for evaluation:

### **Course Work**

- Teacher Assessment: In this component, Assignments, tutorials, problem solving, group discussions, quiz, etc are given and evaluated regularly.
- Mid Semester Examination: Two Mid semester examinations are conducted within semester after the start of Academic Session.
- End semester Examination: End semester examination is conducted at the end of semester. Complete syllabus is covered in this examination. Major Weightage of marks is given to this component.
- Practical Courses: In these courses, continuous evaluation is done through viva-voce, Lab report submission and laboratory quiz.

Subject Type	Assessment Components	Weightage (%)
Theory	Teacher Assessment	10 %
	Mid Semester Examination	20 %
	End Semester Examination	70 %
Lab / Project / Seminar	Internal Assessment	40 %
	End Semester Examination	60 %

Table 8 Indicate Assessment Components, frequency and its weightage
Component	Frequency
Teacher Assessment	Continuous
Mid Semester Examination	Twice in a Semester
End Semester Examination	Once in a Semester
Internal Assessment	Continuous
End Semester Examination	Once in a Semester
Students Placement analysis	Annually

#### 2. Indirect Assessment

Course Outcome Feedback: After the end of every semester, feedback is taken for individual subject.

- Graduate Exit Feedback: In the last semester i.e. 8th semester, feedback is taken by the student of last year. Achievement of POs and graduate attributes (GA) are taken as criteria in the feedback.
- Alumni Feedback: Alumni, particularly who has graduated within the 3-4 years of current academic year, feedback is taken with reference to the achievement of POs.
- Industrial Feedback: Students who has undergone Industrial training and internship in the industries as well as who got the jobs in the industries. Feedback is taken from the industries for the performance of students. (This feedback is not yet taken). A verbal feedback is taken from industry persons when our faculty meets them at any conference or when they come to our institute for giving lectures or training.
- Internationally/ Nationally Examinations of repute: In this component, various examinations (national and international level) like GATE, NET, CAT, GRE, IELTS, and TOEFL are taken in to consideration for student's performance and evaluation.

Component	Frequency
Course Outcome Feedback	End of Semester
Graduate Exit Feedback	Annually
Alumni Feedback	Annually
Industrial Feedback	Annually
Internationally/ Nationally Examinations of repute	Annually
Participation in various conferences, workshops and technical symposiums	Annually

#### 1.4 Feedback System

## **1.4.1** What are the contributions of the institution in the design and development of the curriculum prepared by the University?

The institution is affiliated to the RGPV University and follows the syllabus prescribed by the same. Therefore there is no scope for framing institution curriculum on its own. However, a systematic procedure is followed in the institution to look after the affairs of the feedback process and analysis. The university experts also interact with students and the faculty on several aspects of availability of facilities and teaching-learning process. Any changes/ up-gradations in the

curriculum are solely handled by the university in consultation with participating members of the affiliated colleges. In addition, the Vice Chancellor convenes meeting of Principals of all the affiliated institutions and obtains their opinion on matters of importance. **Dr. Shilpa Tripathi**, **Dean Chemical Engineering** involved in the designing and development of curriculum prepared by the university, as board of studies (BOS) members they have the responsibility to frame the syllabus including all the required details

## **1.4.2** Is there a formal mechanism to obtain feedback from students and stakeholders on Curriculum? If 'yes', how is it communicated to the University and made use internally for curriculum enrichment and introducing changes/new programmes?

During the reformation of the curriculum university invites principal from the college to put forward the view on behalf of all the stakeholders of the Institute.

**Alumni feedback:** The feedback of the alumni members are collected by using the Alumni registration forms, whenever the Alumni meetings are held. This feedback plays a valuable role in training to be given to the budding engineers.

**Parents:** The Feedback of the parents is collected whenever they attend the Parent –Teachers Meeting.

**Employers/industries:** We elicit opinions on the relevance of the curriculum from industry personnel and employers. The feedback of the employers is given due importance and their suggestions are analyzed, and the demand for Add-on courses is met, with regard to the demand of the students.

The analysis of the feedback is done by each department and the same is reported to the Director who represents the Institute on curriculum reformulation by the University.

### **1.4.3** How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/programmes?)

Sanctioned intake of the college is also increased due to the demand of the education.

S. No.	Academic Year	Name of the Program	Intake
1	2012	Civil Engineering	60
2.	2012	Chemical Engineering	60

#### Table 9 List of new programmes that were introduced in last four year

Any other relevant information regarding curricular aspects which the college would like to include.

## CRITERION II TEACHING - LEARNING & EVALUATION

#### **CRITERION II: TEACHING - LEARNING & EVALUATION**

#### 2.1 Student Enrollment and Profile

#### 2.1.1 How does the college ensure publicity and transparency in the admission process?

The publicity and transparency in the process of admission are well ensured. Publicity:

IIST is a premiere institution of Indore and is brand by itself. The college has carved niche in the engineering and MBA education by delivering graduates who make a difference in the industry and the society. Since its inception from 2003, the institution has been continuously striving to make an indelible mark in the higher education scenario by creating technocrats sound in academics and value system. The alumni of the institution serve as ambassadors of the institution.

Publicity is also ensured through the following means:

- College Website <u>www.indoreinstitute.com</u>
  - The website gives the clean picture of the UG and PG programmes offered by the institution and their eligibility criteria.



Advertisements in leading Newspapers like Dainik Bhaskar, Nai Dunia, Patrika, Times of India, and Hindustan Times.



Advertisements in leading Newspapers

- > Our alumni spread over in India and abroad, help us greatly in popularizing our college and securing admissions of their near and dear ones through referrals or recommendation.
- Banners are posted at leading locations in the state/ city.  $\geq$
- College prospectus distributed to aspiring students and their parents.
  - The prospectus contains the details regarding courses offered, infrastructure facilities and the best practices.



College prospectus

> Director of the college regularly sends mails to the environment about Knowledge Expansion Initiative.



Senior faculty addressing students and parents in Career Counseling seminars.  $\geq$ 

The college magazine, UTKARSH and newsletter iiWISDOM is mailed to schools, corporate and professional bodies besides being uploaded in web site.



The college actively participates in educational fairs which enable the institution to show case various courses offered and directly reach the target audience and have a one-to-one interaction with them. During the interaction, materials like the brochures of institution and prospectus are distributed to parents and candidates.

The college annual magazine–"UTKARSH" and the quarterly newsletter– "iiWISDOM", showcase the extra and co-curricular talents of students and faculty members, research and consultancy activities, industry institute interactions, activities of professional society chapters, technical associations, clubs and the alumni association. The magazine and the newsletter are mailed to all the institutions of higher education.

#### Transparency

The admission procedure is transparent. Total annual intake are filled through the single window on line counseling system designed, developed, and adopted by Directorate of Technical Education, Government of Madhya Pradesh. The rank list of the candidates is based on the qualifying examination i.e., JEE Mains and Higher Secondary Examination of the candidate. Process of admission: The admission is carried out strictly through merit by www.dtempconselling.com, Bhopal Online. The government reservation rules and norms are also observed.

# 2.1.2 Explain in detail the criteria adopted and process of admission (Ex.(i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) any other) to various programmes of the Institution.

Admission to UG Programmes: Admissions to UG courses are made on the basis of JEE rankings by the state level engineering counseling committee constituted by the Directorate of Technical Education, Government of Madhya Pradesh. The publicity and transparency in admissions is ensured by this committee. If vacancy exists after JEE ranking basis, seats were filled through qualifying exam merit basis.

Admission to PG Programmes: Students are admitted in the PG courses on the basis of their merit on valid GATE/MAT score. The admissions in the PG Courses are made through centralized counseling organized by the Directorate of Technical Education, Government of Madhya Pradesh. If vacancy exists after GATE ranking basis, seats were filled through qualifying exam merit basis.

S.No	Prog	ramme	Criteria for Admission	
1	UG	Regular	Marks obtained in JEE Mains & Higher Secondary examination and participation in on line admission process of DTE, MP	
2		Lateral Entries	Marks Obtained in Diploma Examinations and participation in on line admission process of DTE, MP	
2	PC	M.E	On line admission process of DTE MP based on marks obtained in GATE & BE	
3	10	MBA	On line admission process of DTE MP based on the marks obtained BA/B Sc/B Com/BBA	

#### Table 10 Criteria for Admission

#### **Basis/criterion for admission:**

- All India entrance / state level entrance / university entrance / 12th standard mark sheet / others
- Eligibility: For General Category of Students 45% in PCM in Class 12<sup>th</sup> exam and for Reserve Category 40% in PCM in Class 12<sup>th</sup> exam.
- Basis of admission is as follows:
  - a. Ranking in JEE prelim result in JEE round of counseling.
  - b. Ranking in qualifying examination in QE round of counseling.
  - c. If vacancy exists after JEE ranking basis/QE round of counseling, seats were filled through College Level Counseling on the basis of JEE/Qualifying merit basis.

d. Entire admission process is done under supervision of Directorate of Technical Education, Govt. of Madhya Pradesh.

#### >UG Programmes: Admission Process

All seats are filled through on line admission process of Directorate of Technical Education, Government of Madhya Pradesh. Admission counseling is done in phases. First phase is for students, who have appeared in JEE Mains. This is followed by second phase (QE) for students who could not appear in JEE but have qualifying marks in Higher Secondary examination and applied for participation in on line counseling process of DTE. Last phase (CLC) is for those students who have JEE or qualifying marks but could not apply for participation in on line counseling process of DTE MP.

#### **Eligibility Criteria**

The eligibility criteria for admission in under graduate studies in engineering are:

#### **Higher Secondary Examination**

A pass in the Higher Secondary Examination or its equivalent with a minimum percentage in Mathematics, Physics and Chemistry put together as given below:

S.No.	Community	Percentage of aggregate marks
1	General Category	45%
2	SC/ST/OBC	40%

#### **>**PG Programmes: Admission Process

Admission to the PG Programmes is through the online admission process of Directorate of Technical Education of Govt of Madhya Pradesh. Admission to the Management seats is again based online admission process of Directorate of Technical Education of Govt of Madhya Pradesh.

#### **Eligibility Criteria**

#### ≻M.E. Degree Programme

A pass in Bachelor's degree in Engineering field from a recognized University and obtained at least 50% (45% in case of candidates belonging to reserved category) at the qualifying examination B.E. / B.Tech. degree programme.

#### **M.B.A. Degree Programme**

A pass in a recognized Bachelor's degree of minimum 3 years duration and obtained at least 50% (45% in case of candidates belonging to reserved category) at the qualifying examination in:

- 10+2+3 years pattern (or).
- 10+3yearsDiploma+3years pattern (or).
- B.E./B.Tech./B.Arch./B.Pharm. (Or).
- 10+2+AMIE or 10+3 Years Diploma +AMI.

## 2.1.3 Give the minimum and maximum percentage of marks for admission at entry level for each of the programmes offered by the college and provide a comparison with other colleges of the affiliating university within the city/district.

The minimum and maximum percentage of marks for the admitted students during the last four academic years at entry level for each of the programmes offered by the College is listed below. On the basis of entrance exam

Academic Year	Marks category	ECE	CSE	ME	IT	СМ	CE
2016 17	Max	83	129.27	123.67	71.62	81.31	100.04
2010-17	Min	24.93	20.8	10.8	28.39	25.99	18.75
2015-16	Max	69.3	86.68	65	61.05	52.9	60.2
	Min	4.46	7.98	34.41	15.47	32.5	8.58
2014 15	Max	79.29	94.4	99.2	61.46	109.8	95.1
2014-15	Min	30.00	4.96	12.89	34.12	28.8	10.69
2012 14	Max	91	100	108	82	86	91
2013-14	Min	39	35	41	52	35	35
2012 13	Max	95	107	102	75	86	82
2012-15	Min	24	24	33	39	36	36

Table 11 Minimum and maximum marks for admission at entry level (UG & PG)

On the basis of qualifying exam

Academic	Marks	ECE	CSE	ME	ІТ	СМ	СЕ	
Year	category	202				0112		
2016 17	Max	80.4	84.8	73.8	73.4	77.2	85.2	
2010-17	Min	56.8	52.4	46.4	73.4	70.6	85.2	
2015-16	Max	82.8	82.6	82.8	64	57.6	83.8	
	Min	50.2	50.8	46	64	49.6	65.4	
2014 15	Max	77.2	85	73.2	-	65.8	82	
2014-13	Min	54.8	59	49	-	61.8	53	
2013 14	Max	50	78	61	63	64	61	
2013-14	Min	50	43	47	63	57	43	
2012-13	Max	74	53	46	80	62.1	66	
	Min	47.33	53	46	65	51.66	51	

#### On the basis of qualifying exam

Academic Year	Marks category	ECE (PG)	CSE (PG)	ME (PG)	MBA (PG)
2016 17	Max	61.31	62	60.08	-
2010-17	Min	61.31	62	60.08	-
2015-16	Max	-	71.34	73.8	-
	Min	-	62.19	73.8	-
2014 15	Max	-	-	-	-
2014-15	Min	-	-	-	-
2012 14	Max	72.25	77.47	78.56	-
2013-14	Min	62.78	61.69	78.56	-
2012 13	Max	62.63	76.40	68.53	65.29
2012-13	Min	68.97	54.97	56.88	62.35

#### **Comparison with Other Colleges**

#### Table 12 Admission data Comparison with other college in year 2016-17

S.No.	College	Total Intake	Total Admission
1	IPS Academy, Institute of Engineering and Science, Indore (1999)	756	592
2	Acropolis Institute of Technology & Research, Indore (2005)	648	523
3	Sagar Institute of Research & Technology, Indore	480	480
4	Swami Vivekanand College of Engineering, Indore	600	429
5	Indore Institute of Science & Technology, Indore (2003)	780	353
6	Chameli Devi Group of Institutions, Indore (2006)	600	342
7	Acropolis Technical Campus, Indore (2009)	600	340
8	Prestige Institute of Engineering Management and Research, Indore	420	301
9	Sushila Devi Bansal College of Technology, indore	480	299
10	Astral Institute of Technology & Research, Indore (2006)	450	286
11	Sri Aurobindo Institute of Technology, Indore (2009)	450	249
12	Patel Group of Institutions (Patel College of Science & Technology,	420	220
13	Malwa Institute of Science & Technology, Indore (2008)	480	212
14	Lakshmi Narain College of Technology, Indore (2004)	480	187
15	Sushila Devi Bansal College of Engineering, Indore	300	185
16	Malwa Institute of Technology, Indore (2004)	480	180
17	Mathura Devi Institute of Technology & Management, Indore (2007)	420	175
18	Lakshmi Narain College of Technology & Science (RIT), Indore (2002)	300	98
19	Vindhya Institute of Technology & Science, Indore (2006)	450	98

20	Vikrant Institute of Technology & Management Indore (2007)	570	97
21	Lord Krishna College of Technology, Indore (2006)	300	65
22	BM College of Technology, Indore (2007)	480	62
23	Sanghvi Institute of management & Science, Indore (2006)	420	46
24	Sanghvi Institute of Engineering and Technology, Indore (2008)	180	28
25	Shiv Kumar Singh Institute of Technology & Science,	330	18
26	Star Academy of Technology & Management, Indore	240	14
27	Vidya Sagar Institute of Technology, Indore (2011)	300	10
28	Priyatam Institute of Technology, & Management, Indore (2007)	165	2
29	Royal College of Technology, Indore (2006)	300	1

## 2.1.4 Is there a mechanism in the institution to review the admission process and student profiles annually? If 'yes' what is the outcome of such an effort and how has it contributed to the improvement of the process?

Though the admission process is totally under the control of State Government we are maintaining student admission related details in admission cell and in the college office.

Apart from that, student history files are created and maintained for each and every student. These files include all details of the students such as percentage in 10th, 12th etc., medium of studies, academic and other extracurricular activities of the student in each and every semester and issues related to counseling/discipline. These details serve as an input for modifying /amending admission policies with the perspective of improvement for the subsequent batches seeking admission under management category.

The admission is based on Directorate of technical education; Government of Madhya Pradesh counseling and the institutions have no role in the admission process. The analysis of the students is done annually with respect to category wise cut-off marks, geographic location, gender, etc. The institution analyzes the student profiles immediately after their admission into the college to gain insight into:

- > Opening and closing cut off marks community wise.
- Geographical distribution of candidates.
- Gender classification.
- District wise data analysis.
- Board and Medium of study.

#### The outcome of the analysis is helpful for the following:

- ➢ For the decision about publicity for admissions.
- > To identify the students coming from the medium of instruction other than English.

- > To work on improving the communication skill of students identified as above.
- To identify the students who have studied vocational group and to improve their knowledge in Mathematics and Physics.

2.1.5 Reflecting on the strategies adopted to increase / improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate / reflect the National commitment to diversity and inclusion

#### 1. SC/ST/OBC

- The Institute follows the directions of the Government issued from time to time regarding statutory reservation policies.
- Madhya Pradesh hosts a large cluster of population from diverse backgrounds including communities with significant tribal presence.
- Suitable age and eligibility qualification relaxations are made applicable to reserved category students as per the State Government norms.
- University / Institute provide reservation in admissions to SC/ST/OBC/ Women/ Differently-abled candidates as per the norms of the State of Madhya Pradesh. The SC/ST candidates of Madhya Pradesh are also exempted from paying the application fee. SC/ST/OBC candidates of Madhya Pradesh are also granted with the travel allowances as per the University/Govt. of Madhya Pradesh norms.
- Government of Madhya Pradesh has a policy of reserving 50% seats in admission for SC/ST/OBC students. The institution abides by the reservation policies of the government. A conducive environment is provided for the SC/ST/OBC students ensuring good learning. The institution aids the student in obtaining all the government scholarships.

#### 2. Women

➢ Govt of MP has Tuition Fees Waiver (TFW) Scheme for meritorious students wherein 33% of TFW seats are reserved for girl students. Beside this, the single window system does not have a provision for special reservation of women candidates. At the college level, it has been analyzed that the admission of women candidates to the college has constantly been around 40% of the total strength during the last four academic years. To encourage the admission of women candidates, the college provides separate hostel facilities for girl students.

#### **3.** Persons with varied disabilities

- Govt of MP has a scheme of Tuition Fees Waiver (TFW) Scheme for meritorious students wherein 33% of TFW seats are reserved for students with disabilities. Support mechanisms for the differently abled students in the college include:
  - Ramp Facilities.

- Availability of wheel chair.
- Special facilities in the rest room.

#### 4. Economically weaker sections

Candidates from economically weaker sections are supported through government scholarships. The college ensures that the scholarships reach the students on time.

#### 5. Minority community

Reservation is available for the minority community as per the state government's policies.

#### 6. Outstanding achievers in sports and extracurricular activities

➤ The single window counseling system has no reservations for outstanding achievers in sports. However the college encourages outstanding achievers in sports by giving scholarship of various which goes upto 100% tuition fees waiver depending upon their level of achievement.

#### 7. Extra-curricular activities

- The Management sponsors 50% of the Registration fee for students whose papers have been selected in International Conferences for presentation in India or abroad.
- Grants for travelling abroad for paper presentations are supported by the Management.

Outstanding achievers in academics, sports along with extra-curricular activities are rewarded during the Annual Day.

Catagoria	2016-17		2015-16		2014-15		2013-14		2012-13	
Categories	Male	Female								
SC	10	1	5	1	11	1	6	0	27	3
ST	8	0	3	2	1	1	4	1	3	0
OBC	109	15	113	21	99	16	138	21	174	38
General	151	59	204	80	181	43	235	98	226	71
Others										
(lateral	1	0	4	0	0	0	0	0	2	1
Entry)										

Table 13 Category wise admissions in B.E program during 2012-2016

**2.1.6** Provide the following details for various programmes offered by the institution during the last four years and comment on the trends. i.e. Reasons for increase/decrease and actions initiated for improvement.

The following information specified the Number of applications and Number of students admitted for the various programs.

	2015-2016		2014-15		2013-1	14	2012-13	
Branch	Number of applications	Number of students admitted	Number of applications	Number of students admitted	Number of applications	Number of students admitted	Number of applications	Number of students admitted
CSE	Not known	223+12	Not	135+2	Not	169+3	Not	118 + 2
ME	since	69+15	known	123+3	known	180+6	known	120+4
ECE	admissions	26+6	since	10+0	since	30+2	since	113+3
IT	are made	28+2	admissions	4+0	admissions	14+2	admissions	55+0
CE	through	33+2	are made	59+1	are made	60+1	are made	60+0
СМ	DTE	12+1	through DTE	15+1	through DTE	32+2	through DTE	33+1

#### Reasons for increase/decrease in Demand and actions

The institution continuously monitors the social trends and industrial demand for the addition of courses and increase in intake. In accordance, the numbers of seats have been increased in the UG courses in the recent years.

#### **Reason for less admission**

- 1. Falling interest in Engineering among students.
- 2. Less awareness of future scope.
- 3. Job opportunities are less in the nearby region and also the mentality of student is to stay in home town.
- 4. College level placements are less in core branches.
- 5. Starting salary is less comparatively with software companies.
- 6. Less awareness of chemical engineering branch in the region.
- 7. Wrong assumption of students that in chemical engineering branch, they have to deal with only hazardous chemicals.
- 8. In most of the public sector and Govt. jobs chemical engineering students are not eligible.

#### Steps taken to improve admission

- 1. Focusing more on outer state students where Mechanical / chemical / Electronics industries are more.
- 2. Arranging Camps to create awareness.

- 3. Calling Students and explaining them about the future scope of each branch of Engineering in Govt jobs such as IFS, PSUs etc.
- 4. Giving Presentation to the school students and explaining them about engineering.
- 5. Improving placements.

#### **2.2 Catering to Student Diversity**

### **2.2.1** How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

The institution caters to the needs of differently-abled students as per the requirements of the individual student. Such students are attached to faculty counselors/ class in-charges to take care of their specific requirements. The institution is fully adhering to governmental policies regarding the needs of differently-abled students. Seats are reserved at the time of admission in various programmes. The college makes sure that the classes of such students are held at ground floor to the possible extent. Moreover, tuition fee waiver scheme given by government has been applicable to all differently-abled students.

### 2.2.2 Does the institution assess the student's needs in terms of knowledge and skills before the commencement of the programme? If 'yes', give details on the process.

Yes, the institution provides an opportunity for the students before their admission process, to interact with the senior faculty members and to get clarity about various courses, details of curriculum, syllabi and special features of each course available in the college.

An orientation programme is arranged for the students and parents who had embraced this institution. This programme gives awareness of the admission procedure and about the courses that the institution offers and the avenues that are open to the students. It informs the fresh graduates to excel not only in academics but also in various other activities. The importance of communication skills is stressed and they are motivated towards setting goals of their interest. The students are also made aware of the facilities, faculty expertise and the rules and regulations, discipline code of the college and the teaching learning process. Special classes are conducted for the lateral entry students who are admitted in II year.

Dean / Head of the Departments gives presentation related to the contents of the courses, facilities available in the department, various value added courses carried out in the department, distinguished alumni profiles and various placement opportunities in the branch of study. Moreover, the visits to the various departments of the institute are arranged.

## 2.2.3 What are the strategies adopted by the institution to bridge the knowledge gap of the enrolled students (Bridge/Remedial/ Add-on/ Enrichment Courses, etc.) to enable them to cope with the programme of their choice?

Yes, the college provides bridge, remedial and add-on courses to the students.

#### Remedial Classes

Members of faculty handling different courses interact with students in clearing all their doubts of the respective courses. The teachers after first internal assessment guide the students as far as student-specific gray areas are concerned. The students who obtain marks below the class average are identified as slow learners and special coaching classes are being conducted for the students based on their performance in the test.

#### > Add-On Courses

#### General Courses

TPO gets support of experienced faculties from industries and academia. They design, develop and implement various training programmes from first year to final year. The best practices from various leading colleges are studied and the program is designed based on the local requirements. TPO also provides employability enhancement programmes right from the first semester on wards with a focus on developing the technical and soft skills of the students.

S. No	Year	Training
1	First Year	1. English Language Enhancement & Soft Skill
2	Second year	<ol> <li>Aptitude</li> <li>English Language Enhancement &amp; Soft Skill</li> <li>Group Discussions</li> </ol>
3	Third Year	<ol> <li>Aptitude, Logical Reasoning &amp; Soft Skill</li> <li>Group Discussions &amp; Mock Tests</li> </ol>
4	Final Year	<ol> <li>Resume Preparation</li> <li>Group Discussions, Mock Tests, Mock Interviews</li> </ol>

#### • Higher Education in India

In-house training is conducted for students aiming to pursue higher studies in reputed institutions within the country by clearing GATE.

#### • Entrepreneurship Development Cell

Entrepreneurship Development Cell incubates and encourages students with innovative ideas in cubates and encourages students with innovative ideas.



Seminar on Entrepreneurship Development by Mr. V.P. Sharma

#### • Foreign Languages

Students are provided with an option of learning French & German languages at the campus itself, as knowledge of a foreign language may improve their chances of placement.



Figure 18 Foreign Languages Class

#### Programme Specific Courses

#### • Technical Value added courses

Students are equipped with globally recognized technical value added courses for improving their technical skills.



Figure 19 Chart for Remedial and Add-on Courses

#### Following strategies are adopted to bridge the knowledge gap of the students:

Conduct of Mentorship/Tutorial Classes: Tutorials periods are conducted in order to give exercise to the students and also to closely monitor their learning ability and achievement. Courses which required more practice includes critical thinking or programming are provided with tutorial hours.

Those courses which are given with two tutorials hours per week are assigned one credit. Tutorials hours are specially marked in the time table and the lesson plan with predefined activities is prepared before the starting the course. It is taken care by the module in charges that the classes are conducted according to the schedule.

A class divides in to 30 sized batches and each batch is handled by single faculty member in Classroom / tutorial room. Different exercises related to the topic were given and are solved by student during the tutorial hours with guidance of faculty. Students are divided in two groups based on their understanding level in group activity will be assigned to them.

#### IMPACT

- > Integration of knowledge is possible during the discussion of activity.
- Close interaction with the faculty will help to clarify their doubt which is not possible in regular theory classes.
- Skills like critical thinking, communication skills, team collaboration, Problem solving are improved.

A group of 15-20 students is assigned to a faculty member to help the students to clarify their doubts and to improve their academic performance. Mentoring will help the students to improve their knowledge in the technical aspects as well.

Meetings will be conducted periodically so that the mentors can monitor the student performance. Through interaction with students the mentor can identify the issues faced by students and can make decisions regarding how the support needed can be provided through guidance. If needed, meetings can be arranged with the parents.

In addition to the class room teaching, professional guidance is provided to enhance technical aspects of students by arranging expertise lectures. These programs can be organized by the head of the department. Along with arranging recruitment drives the placement cell also provides training to the students. The tutorial hour helps the faculty members to interact with students to clear their doubts and deal with the practical applications of the course. The faculty members interact with students and can identify the areas which he/she needs guidance and support.

For conducting lab sessions the whole class is divided into two batches each with 30 students. A faculty member handles around 30 students during the lab session with which the students can get the maximum attention to clarify doubts and have a better understanding of the concepts and its applications. Each faculty member can take special care for the students while experiments are being handled. The laboratory records are evaluated after the experiment is held.

In addition to academics the overall development of the student is focused. The technical, literary, cultural and sports activities are conducted which offer team spirit, leadership qualities, decision making abilities, analytical capabilities, social awareness which helps in the personal development of the students.

Through mentoring system faculties can provide counseling to students. The benefits of mentoring include:

- Improvement in study habits.
- Improvement in academic performance.
- Developing self confidence.
- > Counseling and guidance helps students to overcome stress.
- > Train the students to face challenges of the modern world.





#### Conduct of Evening classes in the campus:

#### COURSE MODULE: C AND C++.

#### **PROGRAMMING IN C**

Introduction To 'C' Language Character Set. Variables and Identifiers, Built-In Data Types. Variable Definition, Arithmetic Operators And Expressions, Constants And Literals, Simple Assignment Statement, Basic Input/Output Statement, Simple 'C' Programs Conditional Statements And Loops Decision Making Within A Program, Conditions, Relational Operators, Logical Connectives, If Statement, If-Else Statement, Loops: While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement, Structured Programming.

#### Arrays

One Dimensional Arrays: Array Manipulation; Searching, Insertion, Deletion Of An Element From An Array; Finding The Largest/Smallest Element In An Array; Two Dimensional Arrays, Addition/Multiplication Of Two Matrices, Transpose Of A Square Matrix; Null Te01linated Strings As Array Of Characters, Representation Sparse Matrices Functions.

Top - Down Approach Of Problem Solving, Modular Programming And Functions, Standard Library Of C Functions, Prototype Of A Function: Foollal Parameter List, Return Type, Function Call, Block Structure, Passing Arguments To A Function: Call By Reference, Call By Value, Recursive Functions, Arrays As Function Arguments Structures And Unions Structure Variables, Initialization, Structure Assignment, Nested Structure, Structures And Functions, Structures And Arrays: Arrays Of Structures, Structures Containing Arrays, Unions Pointers Address Operators, Pointer Type Declaration, Pointer Assignment, Pointer Initialization, Pointer Arithmetic, Functions And Pointers, Arrays And Pointers, Pointer Arrays File Processing Concept Of Files, File Opening In Various Modes And Closing Of A File, Reading From A File, Writing Onto A File.

#### **PROGRAMMING IN 'C++'**

C++ Overview C++ Characteristics ,Object - Oriented Terminology, Polymorphism ,Object - Oriented Paradigm, Abstract Data Types Functions And Variables Functions: Declaration And Definition ,Variables: Definition, Declaration, And Scope ,Variables: Dynamic Creation And Derived Data ,Arrays And Strings In C++ , Qualifiers Classes In C++ Defining Classes In C++ ,Classes And Encapsulation ,Member Functions ,Instantiating And Using Classes ,Using Constructors ,Multiple Constructors And Initialization Lists ,Using Destructors To Destroy Instances , Friend Class Operator Overloading Operator Overloading ,Working With Overloaded Operator Methods Initialization And Assignment.

Initialization Vs. Assignment, The Copy Constructor, Assigning Values ,Specialized Constructors And Methods ,Constant And Static Class Members Storage Management Memory Allocation, Dynamic Allocation: New And Delete Inheritance.

Overview Of Inheritance ,Defining Base And Derived Classes ,Constructor And Destructor Calls Polymorphism Overview Of Polymorphism Input And Output In C++ Programs Standard Streams , Manipulators , Unformatted Input And Output , File Input And Output.

Time/Day	5.00 - 6.00	6.00 - 6.45
Mon To Friday	С	C++
Faculty Coordinators	Mr. Rakesh Jain	Mr. Ranjeet Osari

#### SOFTWARE CLASSES FOR CE DEPARTMENT

#### NEED

Teaches the fundamentals of 3D modeling in SketchUp, teaching you how to:

➢ Create 3D models.

- Incorporate textures, scenes and styles.
- Produce visualizations.
- ➤ Use SketchUp's key tools and commands.

The course can be tailored for each client to be relevant to the type of models and Visualizations required.

#### ASSESSMENT

UNDERSTAND basic 3-D modeling terminology, and basic concepts to create simple building models and useful everyday shapes, from 2-D plans, elevations and SketchUp 3-D modeling sections using software. Utilize tools and techniques unique to SketchUp 3-D modeling software to organize models, manage the modeling environment, and create repeatable components. Employ various methods of displaying, rendering and otherwise changing the appearance of 3-D models using tools integral to the SketchUp 3-D modeling software.

#### COURSE SYLLABUS

What is SketchUp? How to get around inside SketchUp Zoom, pan and rotate Understanding the XYZ axis Selecting toolbars Applying templates Drawing and using the pencil tool Drawing basic geometric shapes Drawing with measurements Drawing circles and arcs Sticky Geometry benefits Discovering Layers Using shortcuts.Measuring items inside SketchUp Information and database Moving and move / copy Simple Array techniques Rotating objects Rotate / copy Scale fractional and relative Making components Making groups Comparisons and benefits Saving components Re-loading components Creating a digital warehouse. Modelling techniques Using Push Pull Using Follow Me Intersecting Geometry. Copy and Offset Faces, edges and polygons How to use polygons in 2D drawings. Paint bucket Materials Editor Textures and bitmaps. Getting to understand the Materials Editor What makes a good texture? Where to find textures positioning textures limits to graphics and bitmaps. Create new scenes Create new styles saving scenes and styles.

**Introduction to animation:** Dimensions inside SketchUp, Dimensions inside SketchUp, Printing from SketchUp, Exporting 2D images or PDF

S.No.	Day	Time
1.	Monday	4:30 PM-6:00 PM
2.	Tuesday	4:30 PM-6:00 PM
3.	Wednesday	4:30 PM-6:00 PM
4.	Thursday	4:30 PM-6:00 PM
5.	Friday	4:30 PM-6:00 PM
6.	Saturday	10:00 AM-12:00 AM

#### > Conduct of PDP classes in the campus:

Academic excellence alone is not enough and cannot guarantee a good career. Certain personality attributes and soft skills are essential not only to get a good job placement but also to be able to contribute and grow in an organization. Taking cognizance of this, the college emphasizes all round development through a range of extracurricular activities as well as organizing and conducting formal Personality Development Program.

#### PDP AND EEP MODULE STRUCTURE

Table 14 PDP Module Structure for First to Fourth Year Students

First Year		
S.No.	PD Module	
1	Introduction to PD	
2	Profiling / TNA	
3	Self Awareness	
4	Goal Setting	
5	Time Management	
6	Communication Skills	
7	Self Esteem & Self Image	
8	Study Skills	
9	Peer Pressure	
10	Presentation Skills	
11	Relaxation Techniques	
12	Group Discussions	
13	Guest Lectures	

Third Year		
S.No.	EEP Module	
1	Introduction to EEP	
2	Reiteration of Earlier Topics	
3	Self Awareness& Introduction	
4	S.W.O.T Analysis	
5	CV /Resume Writing	
6	Personal Interview	
7	Group Discussion	
8	Grooming	
9	Etiquettes	
10	Body Language	

	Second Year	
S.No.	PD Module	
1	Introduction to PD	
2	Profiling / TNA	
3	Interpersonal Communication	
4	Team Building	
5	Stress Management	
6	Values Identification	
7	Positive Attitude	
8	Locus of Control	
9	Problem Solving	
10	Lateral Thinking	
11	Conflict Management	
12	Decision Making Skills	
13	Group Discussions	
14	Guest Lecture	

Four Year		
EEP Module		

S.No.	EEP Module	
1	Introduction	
2	Goal Setting & CV Writing	
3	Goal Setting & Introduction	
4	S.W.O.T & Introduction	
5	Power Dressing	
6	Etiquettes for Corporate	
7	Role Plays For Behavioural Modification	
8	EQ & IQ In Personal & Professional Life	
9	General Awareness / General Knowledge	
10	Group Discussion	
11	Personal Interview	
12	Guest Lecture	

Conduct of Guest Lectures by experts from Industry/Academia: All Departments of the institution conducting lectures delivered by experts from various industries, research organizations and from the field of academics. These guest lecturers improve the professional knowledge of students and faculty.







Seminar by Principal Consultant Mr. Pankaj Jain Infosys

Figure 21 Guest Lectures by experts from Industry/Academia

### 2.2.4 How does the college sensitize its staff and students on issues such as gender, inclusion, environment etc.?

There is no gender discrimination and religious discrimination in the campus. There are no complaints. No staff and no student feel it. The institution takes all the measures to sensitize these sensitive issues. Women's grievance Redressal cell, Grievance Redressal Cell deal with these issues and brings awareness of these issues.

- > The staff members and students are treated equally in religious aspects.
- ➢ Women Grievances cell is activated and it functions separately for the benefit of the women employees and girl students.
- All kinds of academic help are provided for the benefit of the economically and socially weaker section students.
- > The institution imparts education with emphasis on ethical and moral principles.
- Professional Ethics & Morals and Environmental Studies are part of their regular curriculum.
- Suggestion boxes are placed in all the departments, institution common areas to acknowledge and take necessary action upon any kind of issues arising from student /staff members.
- Separate rest rooms, toilet facilities / hostel facilities are provided for male and female.

## 2.2.5 How does the institution identify and respond to special educational / learning needs of advanced learners?

The institution identifies advanced learners by their performance in the end\ semester examinations, internal assessment tests, continuous evaluation scheme, research paper presented in conferences/symposia and teacher-student interaction. It offers opportunities for advanced learners to augment their talent and meet their learning needs by ways of providing satisfactory facilities. These students are encouraged to set higher goals. The needed guidelines and support is extended by the faculty for their career planning and growth.

- Encourage them for classroom seminars, group discussions and technical quiz that develop analytical, problem solving and presentation skills.
- ➤ Motivating to access latest online journals, reference materials and help them to understand the emerging trends in their field of study.
- > Effective Training to use audio-visual aids like power point, charts and models for effective presentation.
- ➤ Importance of research activity is stressed.
- > Motivate them to publish and present papers at national and international conferences.
- Motivate them to do certification courses.
- > Special training is given for GATE , CAT, GRE, TOFEL & IELTS.
- > Special coaching is given to improve communication skills.
- Seminar topics are given and encouraged to develop public speaking skills.
- > Reference books, journals and sites are suggested to be beyond the syllabus.
- > Paper presentation skills are imparted.
- Laboratories and Library is made available beyond working hours to help the students in self-learning.
- The Campus is fully residential which enables learning beyond working hours with formal and informal interaction with faculty and peer groups.
- Students are encouraged to involve themselves in various co-curricular and extracurricular activities at Institute and Departmental level line.
- Many eminent personalities are invited to interact with students on many occasions to help students learn recent trends in engineering, technology and practices.
- > Robotics Lab opens after working hour so students free to work.
- > QEEE Program in association with IIT Madras for online video lectures.
- Virtual Lab in association with IIT Delhi through which students got the opportunities to interact with eminent professors of IIT's through Video Conferencing which help to enhance the technical skills of the students.
- e- Yantra project in association with IIT Bombay for Robotics in which we have developed robotics lab for students as well as faculties which helps in improving the knowledge in the areas of robotics.

- Advanced learners are guided to undergo internship programmes at industries to attain the practical knowledge in their respective disciplines.
- Domain experts as resource persons are invited from leading industries and academic institutions to deliver guest lectures on the modern topics for the benefit of the students.
- > The advanced learners are encouraged to do their project in the emerging and challenging area of interest.

#### Modes and Modules for self learning and learning contents beyond syllabus:

#### 1. Web-based Learning:

The internet is an open information system from where the students can obtain various kinds of information, media and materials of their interest. Institute provides internet facility in both the academic and hostel campuses for 24 hours to promote and motivate students to self learning. The availability of internet facility allows them to learn and to gather the information from worldwide network without any interruptions.

#### 2. Learning with Multi-media:

The Institute provides the information related to various web-based learning sites such as NPTEL, MIT OPEN COURSEWARE, SCHOOL OF OPEN LEARNING, etc. To facilitate this, these course materials are made available. Digital Library facility and LCD projectors for presentations are also made available to promote group discussions and knowledge sharing.

#### 3. Learning Resource Centre:

Learning Resource Centre, the Institute Library, is open up to night on all working days and has online Journal, E books and lecture notes etc.

Items	Description	Specification of self-learning modes and modules
Generation of self- learning facilities	Projects/Seminars/ Workshop	<ul> <li>Attending Seminars/Workshops</li> <li>Attending short term courses on a specialized topic</li> </ul>
Availability of materials for learning beyond syllabus	Materials from published sources	<ul> <li>Materials prepared and supplied by the teacher</li> <li>use of Institute Digital Library</li> </ul>

#### Table 15 Self Learning Modes

#### Collaborations

- ➢ IIT Delhi Virtual Lab.
- ➢ IIT Mumbai E-Yantra.
- > IIT Madras Quality Enhancement in Engineering Education (QEEE).

- ➢ IIT Mumbai Spoken Tutorial.
- ▶ IIST tie up with Princeton Review, USA.
- ► EMC<sup>2</sup> Center for Academic Excellence.
- ➢ Visual Paradigm, Hong Kong Association.
- ➢ EC Council Academia, USA.
- ➢ IBM Academic Initiative.
- NASSCOM Global Business Foundation Skills (GBFS) & Foundation Skills in IT (FSIT) courses.
- ➢ BSNL Tie-up

# 2.2.6 How does the institute collect, analyze and use the data and information on the academic performance (through the programme duration) of the students at risk of dropout (students from the disadvantaged sections of society, physically challenged, slow learners, and economically weaker sections etc. who may discontinue their studies if some sort of support is not provided)?

In this institute, there have been very less number of dropouts in UG and in PG in the last few years as the institute has a sound system of identifying such students, counseling and mentoring them. Academic performance of the students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc. is detected by the teachers during their lectures in classroom. These students who do not seem to cope up with the pace of learning are advised and counseled by the faculty members and the Head of the department. Moreover, mentorship programs are also running under every department to provide special attention to these students. The training and placement cell also facilitates counseling to students. Students are counseled from time to time regarding their academic performance by class in-charges and the head of the department. Head of the department will meet good learner and slow learners after every sessional test and even in between if required. If required, parents are also invited for counseling along with the students. The institution follows peer group learning, an innovative methodology which allows both the slow and advanced learners to take up combined learning.

- ➢ For every batch of 60 students, a faculty is deputed as class coordinator and for each 15-20/30 students a faculty is designated as mentor and he/she monitors the academic performance of the students.
- ➤ The subject faculty member collects and maintains the attendance and academic performance of every student of his/ her class.
- ➤ The class coordinator concerned, the mentor and Dean / HOD jointly analyze and identify the students who are at risk of drop out.

Necessary steps are taken (Counseling, extra coaching classes) to reduce the risk of drop out students.

The institution pays keen attention to make each and every student do their better academic performance. It collects, analyzes and uses the data on the academic performance of the students through the results of end semester examinations, internal and continuous assessment tests. The following steps are taken to ensure academic excellence of all students.

- The slow learners are identified through their performance in the university examinations and internal assessment tests during the course of program. Accordingly mentoring is adopted.
- > Special counseling is given to increase their interest in studies.
- The identified slow learners are given special attention by conducting remedial classes, mentoring sessions, providing learning materials and solved question papers to promote their studies.
- Every mentor takes the responsibility of monitoring and counseling of atleast fifteen students.
- The students who have poor attendance and lack of interest to learn the subjects are identified by class Coordinator. The class coordinator discusses their setbacks with the students. Parents are informed about the status of their wards through phone calls. Parents Teachers meetings are also being conducted in the department to discuss progress of the students.

#### **2.3 Teaching-Learning Process**

## **2.3.1** How does the college plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)

#### Academic Calendar

The college prepares the academic calendar for UG and PG separately before the beginning of every semester and is displayed on the department notice boards as well as on the college website. The academic Calendar is prepared every year by the Director assisted by a Professor. The calendar is prepared in consultation with all the Heads of Departments and other administrative officers of the college. Academic calendar mentions the academic days of delivery, schedule for conduct of mid-semester and end-semester examinations, assessment, submission of attendance defaulter report, declaration of results, other institute level events (co-curricular and extra-curricular) and the holidays.

#### > Teaching Plan

#### • Subject Allotment

1. Subject allotment is planned at the department level at the end of the previous semester itself.

- 2. Subject allotment is based on the expertise and interest of the faculty members.
- 3. First Faculty submits the Subject choice form to HOD and than by knowing the strength of the faculty, particular subject of faculty's expertise is allotted.

#### • Timetables

- 1. The timetable is planned well in advance before the commencement of classes for each semester.
- 2. The timetable is planned for six days of the week, 7 periods of 55 / 50 minutes duration for each period.
- 3. There is a master time table coordinator for the institution who ensures that the workload to every faculty member is as per the prescribed norms.
- 4. The timetable is also prepared such that 3 credit courses have a minimum of 3 lecture hours per week and prepare as per scheme of University.
- 5. Practical courses are planned such that one laboratory session (2 hours) is conducted every week for every practical course.
- 6. The time table also incorporates Placement Training, library along with details of class room allocation, Name of faculty designated for each course and tutorial class, Class Coordinators and Activity Classes.
- 7. The master time table for every semester is prepared and one copy is provided to Institute / each department.
- 8. The copies of the time tables are made available in the department for information to faculty and staff members and document purpose.

#### • Course Schedule and Delivery Plan

At the beginning of each semester, once the subjects were allocated, the faculty members will prepare a detailed plan of the course delivery or say Course file. Course file contains Academic Calendar, Syllabus, Lesson plan or teaching plan, model question paper, old university paper, Tutorial Sheet, Quiz paper, Course objective, Course Outcome, mapping between PO and CO's, Evaluation System and handouts.

#### 1. Lesson Delivery Plan

For every course the faculty member prepares the Lesson Delivery Plan consisting of:

- Course Objectives.
- Course Outcomes.

- Number of hours required to complete each topic and thereby the entire syllabus.
- References.
- Mapping of PO and CO's.

The format for the Lesson Delivery Plan is as shown below:

Lesson No.	Topics to be covered	No. of Periods	Pedagogical	Reference
		required	Tools	Book No.

The Lesson Delivery Plan would also include the Content beyond Syllabus to be taught for that course, activities planned, tutorials, assignments, mini projects, etc.

The Lesson Delivery Plan is part of the course file for every course.

#### 2. Tutorials

- They are conducted for subjects of highly analytical nature, with the objective to increase problem solving capabilities, analytical thinking and logical ability.
- They help the students to attempt / solve problems individually and independently.
- For the tutorial session, a class is divided into two groups and faculty members are assigned to each group.

#### 3. Projects

The inclusion of Mini Projects in the curriculum develops application engineering and nurtures good practices and innovative methods of learning, teaching and assessment. The traditional lecture and laboratory activities have evolved into more open-ended, project-based experiences that help students develop additional skills and contextualize the learning of theories.

#### 4. Practical Sessions

- Each of the lab sessions is handled by 1 teaching faculty members assisted by lab technician.
- A manual related to the lab will be issued to the students at the beginning.
- Students are expected to come prepared for pre lab viva-voce for that particular experiment and tested with post lab viva questions after completing the experiment.

- The Laboratory records are evaluated after the experiment is completed.
- Innovative experiments are added for students in the laboratory experiments to ensure better understanding of the subject.
- If the student is interested to carry out any innovative idea, even after the college hours lab is open and a faculty will be available for discussion.
- Content beyond syllabus experiments ensure opportunities for better learning for advanced learners.

#### Evaluation Components

- **Teacher Assessment:** In this component, Assignments, tutorials, problem solving, group discussions, quiz, etc are given and evaluated regularly.
- Mid Semester Examination: Two Mid semester examinations are conducted within semester after the start of Academic Session.
- End semester Examination: End semester examination is conducted at the end of semester. Complete syllabus is covered in this examination. Major Weight age of marks is given to this component.
- **Practical Courses:** In these courses, continuous evaluation is done through vivavoce, Lab report submission and laboratory quiz.

Subject Type	Assessment Components	Weight age (%)
Theory	Teacher Assessment	10 %
	Mid Semester Examination	20 %
	End Semester Examination	70 %
Lab / Project / Seminar	Internal Assessment	40 %
	End Semester Examination	60 %

The weight age of components are given in the following table:

Component	Frequency
Teacher Assessment	Continuous
Mid Semester Examination	Twice in a Semester
End Semester Examination	Once in a Semester
Internal Assessment	Continuous
End Semester Examination	Once in a Semester
Students Placement analysis	Annually

#### 2.3.2 How does IQAC contribute to improve the teaching-learning process?

The college is in the process of forming the Internal Quality Assurance Cell (IQAC). In order to implement a system for conscious, steady and catalytic improvement in the overall performance of college, it follows ISO and NBA criteria for improving the teaching-learning process. Apart from it, the Academic Improvement Cell is also functioning in the college under the senior faculty member. The objectives of the Academic Improvement Cell are:

- Designing and implementing the academic calendar for Institution level activities for quality enhancement.
- > Arranges feedback responses from students for quality related institutional processes.
- Organizes workshops and seminars on quality related themes and promotion of quality circles and institutions wide dissemination of the proceeding of such activities.
- Develops and applies innovative practices in various programmes / activities leading to quality enhancement.
- > Allows participating in the learner centric environment conducive for quality education.
- Prepares internal quality report for improving the strategies to be followed to improve the academic excellence.

#### Functions of the Academic Improvement Cell (AIC)

Academic Improvement Cell is formed to bring up the quality of both the faculty members and the students. It motivates and assists the faculty to switch from the traditional learning mode to the blended learning mode for the enhancement in quality of technical education. Apart from the text books, in the blended learning mode, faculty members avail the video lectures provided by eminent scholars / institutions. Faculty members are insisted on attending conferences / seminars and workshop to update themselves on the current affairs. Incentives are provided to encourage their participation.

In addition, faculty members are also motivated to submit articles in reputed journals and they are awarded for their submission. To improve the quality of faculty members and students, various activities are planned and executed systematically. Some of the activities are:

- Spoken tutorial workshops on various open source software like SciLab, Python, etc. are organized with the support IIT, Bombay.
- > QEEE Program in association with IIT Madras for online video lectures.
- Virtual Lab in association with IIT Delhi through which students got the opportunities to interact with eminent professors of IIT's through Video Conferencing which help to enhance the technical skills of the students.
- e- Yantra project in association with IIT Bombay for Robotics in which we have developed robotics lab for students as well as faculties which helps in improving the knowledge in the areas of robotics.
- In-house programs are also arranged for both the faculty members and supporting staff members every semester to upgrade their skills.
- Faculty Development Programmes, concentrating on core subjects, tough subjects and communication skills are conducted regularly.

- Conferences are conducted at regular intervals to provide a platform for brain storming technical discussion. Eminent experts in respective fields are also invited to bridge the gap between industry and institution.
- "Knowledge sharing", is regularly to enable the technical interaction among the faculty members of various disciplines and students of various branches respectively.
- In addition, Research work of the faculty is supported and several programs like "How to write journal papers", "How to start the research work", etc, are conducted and organized efficiently.

By following the above mentioned strategies the objectives of IQAC are met through the functioning of AIC and the quality of teaching - learning process is enhanced.

**2.3.3** How is learning made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?

The Institution is practicing the Outcome Based Education which is student centric by associating the students with the ownership of the knowledge.

- ➢ For analytical subjects tutorials are conducted to ensure individual attention to every student and participation of every student in the group.
- Industrial training / Visit / Tour which is part of the curriculum ensures involvement and participation of the students to learn practical side of an engineering problem.
- > The encouragement for student seminars ensures learning, presentation, discussions and enhancing the understanding.
- Implant training and Industry internship enhances hands on training, practical exposure resulting in "practice engineering" rather than "studying engineering".
- > Peer Learning is highly encouraged and practiced.
- Technical associations, professional societies and clubs functioning with the students as the executive committee members and the faculty taking up the role of a facilitator helps for:
  - Developing organizational abilities.
  - Leadership qualities.
  - Time management.
  - Financial management.
  - Working in a team.
  - Inter personal communication.

Activity based learning provides encouragement to the students to fabricate small models demonstrating certain principles and concepts enhancing the idea of "practice engineering".

### The support structure and system provided by the institution for teachers to develop different types of learning skills in students are listed:

- Well-equipped digitized library with access to e-journal and NPTEL / MIT / IIT's learning resources.
- > Infrastructure for ICT enabled teaching and learning for interactive learning.
- Well-resourced laboratories that enhance the application, evaluation, and analytical skills of the student along with augmenting the psychomotor skills of the learner due to independent and collaborative learning.
- ➤ Air conditioned seminar halls with the precise ambience for conducting seminars, workshops and guest lecture for interactive learning.
- Ample computer facility with 43Mbps internet connection and wi-fi connectivity for fast and precise access of information for independent and interactive learning.
- Software and equipment for planning and executing project work for collaborative learning.
- > Guest lectures and interactive sessions with successful alumni for interactive learning.
- Motivation to appear for qualifying examinations like GATE and GRE by independent learning.
- Adoption of interactive and collaborative learning as well as independent learning approaches during the classroom session is a mandatory task for all the faculty members of our college. As such the teachers use different teaching methodologies to make their classes' fully interactive as well as collaborative. The Institute also organizes special training programmes which include aptitude test, GD, personality development, spoken English classes and communication sessions, with an aim to develop the students to face on-campus as well as off campus interviews. Such training sessions are conducted by both internal faculty members of different departments and professional organizations.
- Student chapters of various Professional Societies are formed involving students to conduct the technical, co-curricular activities to improve their skills. The students are, hence, encouraged to produce papers on specific topics concerning to their field of studies. Igniting the talents of the students through cultural fests and social events is a common feature of our academic programs.
- Classrooms: All Class rooms are equipped with LCD Projection Systems, LCD Screens, USB ports for Laptop connectivity, Audio systems and Green board. These facilities enhance lecture delivery and effective communication.

- In all departments ,all faculty rooms are equipped with desktop computers, Laptops and all necessary resources such as Wi-Fi connectivity which is available free of cost throughout the campus.
- Availability of large number of text books, Reference books, Technical journals, Technical magazines etc.
- Minimum 45 Hours of teaching is planned and imparted for every full unit subject per semester which is monitored by HoDs of each department.
- > Encourage faculty to develop new experiments beyond syllabus.
- Students do projects in group under the guidance of a teacher.
- Central computing, LAN facilities, e-Library facilities help teachers and students in teaching learning process.

The current curriculum offers several electives covering diverse areas. To make it more studentcentric, from the academic session 2015, University has adopted the Choice Based Credit System, which incorporates need-based and outcome oriented courses facilitating seamless mobility and interdisciplinary learning among students – a truly student-centric approach.

The sport and cultural activities organized by the university / Institute and the students are the key to inculcate the feeling of social corporate responsibility among them. The scholarship programs are designed to provide the financial support for the merit holder students.

The campus recruitment drives organized by the Training and Placement Cell is the event that facilitates the employment to the students well before they complete their degree programs. TCS, Infosys, Wipro, Satyam, HCL, HP etc. are few of the major recruiters.

The industrial exposure under the Industrial Training Program of each course provide the access and chance to work within the industry before completing the courses which builds the confidence of students before entering to the industry environment.

## **2.3.4** How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?

In order to cherish their knowledge in socio-economical way, students are guided with enormous inputs for their betterment throughout their life. They are as follows,

#### 1. Science Exhibition and Project Competition

The students are boosted to enrich technological and practical knowledge and enhance skills by participating in science exhibition, project competition and project model competition.



Figure 22 Science Exhibition and Project Competition

#### 2. Entrepreneurship Development Cell

In view of the worldwide shortage of jobs (both government and private sectors) leading to unemployment problems and lack of proper utilization of human resources, the cell strives to identify talented youth and makes them involve with entrepreneurial work.



Mr. V P Sharma, Dy. Director, MSME (Ministry of Micro, Small and Medium Enterprises). on 28/07/2015

Figure 23 Entrepreneurship Development Cell Program

#### 3. Industrial Visits / Tour

With an aim to stimulate lateral thinking, the students are equipped with the lectures on recent trends beyond the syllabus. The Institution arranges to take students to visit many industries and plants so as to visualize the concepts which are taught in the classroom. The table explains a number of industries visited by the students of the departments for the past three years.

S. No.	Department	Academic year					
		2012-13	2013-14	2014-15	2015-16		
1.	ECE	2	1	2	2		
2.	CSE	0	0	1	1		
3.	IT	1	1	2	2		
4.	ME	0	0	1	3		
5.	СМ	0	1	2	3		
6.	CE	0	1	1	3		

Fable	16	Summary	of	Industrial	Visit &	Tour in	Last Four	Year
auto	10	Summary	O1	muusuitai	v ISIL CC	TOUL II	Last I Our	1 Cai

#### 4. Research activities

The students are motivated to attend a number of conferences and many project presentations in order to hone their skills in their academia. They are guided to focus more on the research areas which are absolutely necessary for a country's technological growth.

Students publish their scientific articles in the department/college magazine and newsletters. The students are encouraged to organize project expos. Various events that involve problem solving competitions are conducted by the individual departments to promote creativity and critical thinking among the students. Institute also encourages and guides the students to participate in the national level technical competitions organized by other colleges and universities.

Institute invites eminent personalities, entrepreneurs and industry resource persons to share their success stories with our students. Institute insists and encourages students to bring out technical articles/papers at the end of final year project, so that they are exposed to technical paper writing skills, blind reviews, plagiarism and research ethics. Students publish their scientific articles in the symposia and conferences conducted by other colleges. Students are involved in research projects/ paper publications in conferences/ workshops and other programs which help them to gain exposure to the latest research trend in the selected technical area and also inculcate in them the habit of reading which makes them life-long learners and innovators.

2.3.5 What are the technologies and facilities available and used by the faculty for effective teaching? Eg: Virtual laboratories, e-learning-resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

The faculty members supplement the latest technologies with regular teaching for learning to be more effective.

- > Computers/ laptop with internet facility in all departments.
- ➤ Use of OHP/ LCD projectors for animations and ppt slides.
- > Access to e-journals apart from print journals.
- ➢ Virtual Laboratories.
- > Open educational resources through elearning.
- ➢ Language laboratory.
- > NPTEL digital contents.
- Smart class room.
- ➢ Expert lectures.
- Audio visual rooms.
> Well stocked library resources with standard books.

#### **1. Virtual Laboratories**

The college has become one of the nodal centers of the MHRD initiative for Virtual Laboratories. The Virtual Laboratories will be used to provide remote-access to labs. Virtual Labs will cater to students at the undergraduate level, post graduate level as well as research scholars.

Indore Institute of	शौ ल Shail Group of Institutions	<b>(</b>
Science and Technology		IIT Delhi
INDORE INSTITU	JTE OF SCIENCE AND TECHN	OLOGY, INDORE
	VIRTUAL LAB: IIT DELHI	
An initiative of Ministry of H	Juman Resource Development under the National Mission	n on Education through ICT
	Certificate of Participation	
	This is to certify that	
Pro	of / Dr. / Mr. /Ms. Devashish Bhadariy	a
	of Indore Institute of Science & Technology, Indore	2
,	participated in Workshop on "Virtual Lab" held a	t
Indore	Institute of Science & Technology, Indore on 9-10]	Sep]2015
Atr. Braineb Patra Executive Trainer	Dr. Sturality Jan Nodal Coordinator	Dr. Joy Banerjoe Director Jorretor
IIT- Delhi	list, indore	UST, Indore

Student's certificate of Participation

#### 2. E-learning

**Digital Library** is utilized by the students to get acquainted with the recent trends in the industry.

Video Contents - Students are given access to Video Contents of NPTEL, MIT and IIT's Lectures.

**Audio Visual Aids** – Teachers effectively make use of audio visual aids to make learning a satisfying experience for the students.



Figure 24 e Library Portal

#### 3. Language Laboratory

Language Lab is made open to all students from the beginners to the advanced level of usage. The Software focuses on all four skills of language (LSRW, L- learning, S-speaking, R-reading, W-writing). Student who uses this software will emerge well trained in all these four skills of language.



Language Lab

#### 4. Open Educational Resources

NPTEL - Accessing NPTEL improves the quality of self-learning. NPTEL provides E learning through online Web and Video courses in Engineering, Science and humanities streams. The use of NPTEL resources enhances the quality of engineering education.

#### 5. MIT Open Courseware

#### 6. Spoken Tutorial

Spoken tutorial is an Audio-Video based teaching tool which is used to teach open source software in a self –learning, easy way.

#### 7. WEB CONTENT

Course file, Lecture Notes and PPT can access through Digital Library.

#### 8. Mobile Learning

The institution has provided Wi-Fi connectivity for 24 x 7 learning.

### **2.3.6** How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?

As the world is getting groomed with enormous growth in Science and Technology, the faculty and students are inspired to learn and acquire the new technologies entering into the world. To meet the demands, the faculty and students are motivated and supported with financial assistance to attend a large number of guest lectures, seminars, workshops, software courses, internships and faculty development programmes each year.

#### **Exposure for Faculty**

- To bridge generation gap between the faculty and students as it increases every year, the college gives training to the staffs from external experts in the college on a certain topics like tackling the adolescent students' problems, class room management and sends them for outbound trainings.
- To bring effective class room management and to be aware of different teaching methodologies, the college encourages the faculty to attend NITTTR programs and pedagogy programs.
- > The college promotes the faculty members to familiarize the practical knowledge in industries.
- > The faculty who attend the workshops, lectures, seminars and courses are prompted to share their acquired knowledge with all faculty members in their respective department.
- > The Institution also creates a webpage in e Library known as Knowledge Sharing for recent trends and technologies among all the faculty members of the institution.

#### **Exposure for Students**

The classroom teaching isn't the only way of learning for the students in the college, but also it can be learned through the lectures by the industrialists, motivation from the emerging leaders and seminar by the eminent academicians as well as interacting with same cadre in conferences. Such opportunities are often created for them by means of conducting various programs in the department and college level to upgrade them. These prospects are provided for the students.

#### **Extra-Curricular and Co-curricular activities**

Many opportunities are being given to students to exhibit and improve their sports, social responsible and managerial skills in the name of the following clubs/association:

#### **IIST Youth Club (IISTYC)**

The IISTYC is introduced in the campus for conducting student activities at IIST for the holistic development of the students of the institute. The activities conducted under the IISTYC are definitely helps the students to educate, entertains and overall development. The IISTYC members to organize the cultural and social events like annual day function, cultural events, technical fests, various departmental events and other spontaneous activities to maintain high levels of enthusiasm and team integration.

Various activities are organized by the sub-bodies called Clubs that cater to the needs of each aspect of the society and life.

S. No	Club	President	Secretary
1	Photography Club	Anshul Sharma: 8989897257	Shubham Geete
2	Music Club	Shubhankar pol : 8602630880	Tanvi Kulkarni
3	Dance Club	Akshay Enchalwar: 8109094071	Aditi Sharma
5	Drama Club	Anshul yadav: 7415305722	Shakit Prakash
6	Movie Making	Amaan Sarwar (8602220693)	Aman Sharma

#### IIST clubs / committees include (2016-17)

#### (2015-16)

S. No	Club	President	Secretary
1	Photography Club	Abhijeet yadav (9630953056)	Mayank Lambhate
2	Music Club	Himanshu Sharma (8871596562)	Shrayash Joshi
3	Dance Club	Ritika Singh (8817121602)	A k Akshara
4	Art Club	Rupesh Damanwar (602685894)	Tarjani Pagare
5	Drama Club	Shakti Prateek (9754264010)	Sakshi Joshi
6	Movie Making	Amaan Sarwar (8602220693)	Aman Sharma

#### (2014-15)

S. No	Club	President	Secretary
1	Photography Club	Abhijeet yadav (9630953056)	Anuj Joshi
2	Music Club	Kevalya Kulkarni (8962268348)	Abhijit Satogiya
3	Dance Club	Chitransh Mandloi (9755885587)	Ritika Singh
4	Art Club	Rupesh Damanwar (602685894)	Tarjani Pagare
5	Drama Club	Shantanu Shukla (9165888724)	Sakshi Joshi

### SESSION JULY 2016 – DEC. 2017

S.No.	Date	Time	Activity / Event	Theme	Venue
1	05/09/16	10:30AM - 12:30PM	Members of Photography club of IIST covered the orientation program of I year	Using DSLR cameras	Auditorium 1 and 2
2	05/09/16	10:30AM - 12:30PM	Group and solo dances are prepared and performed by students of dance club	General	Auditorium 1 and 2
3	05/09/16	12:00PM- 12:30PM	Two group songs are prepared and performed by students of music club	Classical and light music. Instruments played by students.	Auditorium 1 and 2

4	17/11/16	11:00AM	Classical music by students of music club	Saraswati vandana	Auditorium 1
5	17/11/16- 18/11/16	11:00 AM- 4:00PM	Members of Photography club of IIST covered national seminar held in the institute	Event coverage	Auditorium 1
6	30/12/16	11:00 AM- 3:30PM	Workshop will be conducted by expert	Workshop cum exhibition of photographs taken by club members	W/S-Seminar hall-3 Exhibition- cafeteria

### SESSION JULY 2015 - DEC. 2016

S.No.	Date	Time	Activity / Event	Theme	Venue
1	11/09/15	9:30AM -4:30PM	IIST Photography Exhibition	Cell Phone Clicks	Entrance C-Block
2	20/10/15	9:30AM -4:30PM	Theme Photography	Life in IIST	Entrance C-Block
3	25/09/15	12:00-12:30PM	Musicanos	Music Vocals	Open Stage, B-Block
4	20/10/15	4:00 PM-4:30PM	Music Mania	Music Instrumental	Open Stage, B-Block
5	27/11/15	4:00 PM-4:30PM	Band Buzzers	Bands & Vocals	Open Stage, B-Block
6	6/11/15	4:00 PM-4:30PM	Engineer's Stage Show	Fusion	Open Stage, B-Block
7	4/12/15	4:00 PM-4:30PM	Dance Mania	Indian & Western	Open Stage, B-Block
8	18/10/15	9:30AM-4:30PM	IIST Art Exhibition	Different Strokes	Entrance A-Block
9	28/11/15	9:30AM-4:30PM	Art Attack	Best of the Waste	Entrance A-Block
10	4/12/15	12:00-12:30PM	Drama	Nukkad	Open Stage, B-Block

### SESSION JULY 2014 – DEC. 2014

DATE	15/09/14	26/09/14	10/10/14	21/10/14	31/10/14	11/10/14
	Event : IIST Photography Exhibition Organizer: Photography Club Theme: Cell Phone Clicks Venue: Cafeteria B Block Time:	Event :Musicanos Organizer: Music Club Theme: Music Vocals Venue: Open Stage, B-Block Time: 12:00PM- 12:30PM President: Kevalya Secretary:Abhijit satogiya	Event :Drama Organizer: Drama Club Theme: Venue: Open Stage, B-Block Time: 12:00PM- 12:30PM President: Shantanu Secretary:Sakshi Joshi	Event :Drama Organizer: Drama Club Theme: Dance Drama Venue: Open Stage, B-Block Time: 12:00PM- 12:30PM President: : Shantanu Secretary:Sakshi Joshi	Event : Theme Photography Organizer: Photography Club Theme: Nature and Wildlife Venue: Time: 9:30AM- 4:30PM	Event : Art Attack Organizer: Art Club Theme: Best of the Waste Venue: Cafeteria B Block Time: 9:30AM- 4:30PM President: Rupesh Damanlia Secretary: Tariani

	9:30AM -				President:	Pagare
	4:30PM				Abhijeet	
	President:				yadav	
	Abhijeet				Secretary:	
	yadav				Anuj Joshi	
C	Secretary:					
	Anuj Joshi					
	Event :		Evont ·	Event ·	Event :	
	Engineer's	Event :	L = 1	Theme	Dance Mania	Event :Band
	Stage Show	Music Mania	Exhibition	Photography	Organizer:	Buzzer
	Organizer:	Organizer: Music	Organizer: Art	Organizer:	Dance Club	Organizer: Music
	Dance Club	Club	Club	Photography Club	Theme:	Club
	Theme:	Theme: Music	Club Thoma: Different	Thoma: Life in	Indian & Hip	Theme: Bands &
	Fusion	Instrumental	Strokes		Нор	Vocals
	Venue: Open	Venue: Open	Vonue: Cafataria	Nonuo: Cafataria	Venue: Open	Venue: Open
	Stage, B-	Stage, B-Block	R Block	R Block	Stage, B-	Stage, B-Block
	Block	Time: 4:00-	D DIOCK Time: 0.20 A M	D DIOCK Time: 0.20 A M	Block	Time: 4:00-
Y	Time: 4:00-	4:30PM	1 IIIIe. 9.30AM	11111e. 9.30AM	Time: 4:00-	4:30PM
	4:30PM	President:	4.30F WI Drasidant: Dunash	4.30F WI	4:30PM	President:
	President:	Kevalya	Demonlie	A bhijaat yaday	President:	Kevalya
	Chitransh	Secretary:Abhijit	Socratory: Torioni	Socratory: Anui	Chitransh	Secretary:Abhijit
	Secretary:	satogiya	Degoro	Joshi	Secretary:	satogiya
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#### Lexicon Club

The Lexicon Club-Personality Development Activities are as follow:

- ➢ Knowledge Sharing.
- Enhancing Language Proficiency.
- > Nurturing the Talent.
  - Debate Competition- 17/02/2016.
  - Name & Logo Contest- 02/03/2016.
  - Extempore Competition- 07/04/2016.
  - General knowledge Quiz-Sept-Oct 2016.



Debate Competition Winners



Name & Logo Contest Winners



Winners of Extempore Competition Figure 25 Glimpses of Lexicon Club-Activities

## **2.3.7** Detail (process and the number of students \ benefitted) on the academic, personal and psycho-social support and guidance services (professional counseling / mentoring / academic advice) provided to students?

#### Academic support

With enormous motivation and guidance, the students perform better in their academics through both in Internal Assessment Test and University Examination. Special classes and academic counseling are provided to slow learners to improve their interest in the subject. Experts from various industries are invited regularly for guest lectures and seminars to provide industrial exposures. These activities and reports are monitored and reported to the Head of the Departments and the Director periodically.

#### Support to the Students

A Faculty mentor is deputed for every 30 students and they continue to be the advisor for the particular student till he completes his course by monitoring the growth of the students and their academic needs, giving career counseling etc. The faculty mentors normally keep in touch with the parent/guardian of their students.

A group of 30 students is assigned to a faculty member to help the students to clarify their doubts and to improve their academic performance. Mentoring will help the students to improve their knowledge in the technical aspects as well. A register is maintained to track the performance of each student which includes the following details:

- > Personal information.
- Previous academic record.
- > Academic performance.
- Problems identified.
- Corrective actions.
- ▶ How we can support them, identify the frequency of meetings.

- ➢ Evaluation.
- Competitive examinations details.
- > Details of internship and industrial trainings.
- Scholarship received.
- > Co-curricular and Extra-curricular activities.

Meetings will be conducted periodically so that the mentors can monitor the student performance. Through interaction with students the mentor can identify the issues faced by students and can make decisions regarding how the support needed can be provided through guidance. If needed, meetings can be arranged with the parents.

In addition to the class room teaching, professional guidance is provided to enhance technical aspects of students by arranging expertise lectures. These programs can be organized by the head of the department. Along with arranging recruitment drives the placement cell also provides training to the students. The tutorial hour helps the faculty members to interact with students to clear their doubts and deal with the practical applications of the course. The faculty members interact with students and can identify the areas which he/she needs guidance and support.

For conducting lab sessions the whole class is divided into two batches each with 30 students. A faculty member handles around 30 students during the lab session with which the students can get the maximum attention to clarify doubts and have a better understanding of the concepts and its applications. Each faculty member can take special care for the students while experiments are being handled. The laboratory records are evaluated after the experiment is held.

In addition to academics the overall development of the student is focused. The technical, literary, cultural and sports activities are conducted which offer team spirit, leadership qualities, decision making abilities, analytical capabilities, social awareness which helps in the personal development of the students.

### Through mentoring system faculties can provide counseling to students. The benefits of mentoring include:

- Improvement in study habits.
- ➢ Improvement in academic performance.
- Developing self confidence.
- Counseling and guidance helps students to overcome stress.
- > Train the students to face challenges of the modern world.

#### **Career Guidance**

The Institute has created the following facilities for career guidance:

➢ Full time Placement Officer.

- > On campus training for placements.
- > Companies are invited for presentation and conduct campus placements.
- ➢ Guidance for preparing for GRE and GATE.

The following are the programs conducted by the Placement & training cell for improving the skills of the students:

S. No.	Course / Activity	Status of the Course	Level at which it is offered	Duration	Resource persons
1	English	Co-Academics	First Year	One Semester	Internal
2	<b>Communication Skills</b>	Curricular	First Year	One Semester	Internal
3	Aptitude Training	Co-Academics	Seventh Semester	One Semester	Internal
4	Personality Development	Co-Academics	Seventh Semester	One Semester	Internal
5	GATE Coaching	Co-Academics	Seventh Semester	One Semester	Internal
6	Workshops	Co-Academics	All Semesters	One/Two Days	Internal & External
7	Guest Lectures	Co-Academics	All Semesters	One/Two Hours	External

Table 17 Training & Placement cell activities for improving the skills of the students

S. No.	Activity	Year	Duration
1.	Career Orientation Seminar	3rd and 4th Year Students	Once in Semester for 2 hours
2.	Aptitude classes	2nd, 3rd and 4th Year students	1 to 2 hour per week
3.	TCS Preparation Classes	4th Year Students	1 to 2 hour per week
4.	C/C++ Program Classes	4th Year Students	1 hour per week
5.	Technical Subjects Classes	4th Year Students	2 hour per week
6.	GATE Classes	4th Year Students	2 hour per week

2.3.8 Provide details of innovative teaching approaches / methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faulty to adopt new and innovative approaches and the impact of such innovative practices on student learning?

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced in various departments.

- LCD projector screens / Overhead projectors help the faculty to deliver interactive lectures and demonstrations of animations/ ppt slides/ lecture contents.
- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- SMART Class SMART boards are being used for teaching purposes.
- > Augmentation of conventional black board teaching by using audio-video aids.

- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.
- > Online availability of journals in the intranet for the project guidance.

#### 2.3.9 How are library resources used to augment the teaching- learning process?

The library is the knowledge hub of any college. IIST library offers different services to augment the teaching-learning process. It is opened beyond working hours.

- ➢ Internet access.
- ➢ Reference books.
- > Multimedia service.
- ➢ Digital library.
- ➢ E- book , e- journals & e- lectures.
- Previous examination question papers.

: 1500 M2
: 800 M2
: 200
: 120
: 100
: 09:00 AM to 08:00
PM
: 07
: 04
: Y (ERP)
rchives: Y

Year	Number of new titles added	Number of new editions added	Number of new volumes added
2012-2013	47	47	2413
2013-2014	60	55	872
2014-2015	53	53	229
2015-2016	87	87	804

Table 18 Detail of new title added in library in last four year

Availability of digital library content: Yes (7 Courses, 900 e-Books)(If available, mention number of courses, number of e-books, etc.)Availability of an exclusive server: Yes

Availability over Intranet/Internet	: Yes
Availability of exclusive space/room	: Yes (With 45 Computers)
Number of users per day	: 30

## **2.3.10** Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If 'yes', elaborate on the challenges encountered and the institutional approaches to overcome these.

Calendar of events is prepared well in advance at the college level. Referring to the calendar of events, faculty members prepare lesson plans for various subjects. Hence, normally it is not a problem to complete the syllabus in time. If an additional holiday is declared by the Government under unavoidable circumstances, it is compensated by arranging special classes for subjects for whom classes are lost.

#### 2.3.11 How does the institute monitor and evaluate the quality of teaching learning?

The process of teaching learning does not mean that ends once the tests conducted and trainings are given. It has to be monitored and evaluated often. The evaluations by students are permitted by the way of provide feedbacks, open up their difficulties with class coordinator and communicate their issues through suggestion boxes. Remedial measures are taken immediately by counseling the faculty by the Dean / HoD and Director.

#### Students' feedback

The students are entertained to provide their feedback on the subjects, the faculties, Institution and its facilities. The feedback on the teaching practices and methods are assessed with due attention and the reports will be sent to the respective Dean / HoDs. The teaching quality can be observed periodically by the Head of the Department and the Director and further guidance and reports will be discussed with the faculty member in person. The motivation and encouragement of the Head of the Department would enable the faculty to perform better.

#### **Course End Survey**

Course End Survey is collected at the end of the semester for each course. The students give feedback, evaluating themselves on the attainment of course outcomes. The analysis of the course end survey is recorded as part of the course file prepared by the faculty.

#### Alumni Survey

Feedback is collected from the alumni students, to know how well they are faring in their career.

This serves as an indirect tool to evaluate

- > The quality of teaching.
- > The teaching methodologies used.
- > The facilities of the college.
- > Attainment of Programme Outcomes of the Department.

> Attainment of Programme Educational Objectives.

The alumni feedback is considered as an important input to refine any of the listed processes.

#### **Mentor System**

Being a bridge between the students and the faculties, Institute introduce mentor system and mentor counseling twice or thrice in a semester to know and discuss the status of the syllabus completion, issues and doubts in the teaching practices and the other grievances. After assessing the conditions and issues, the remedial measures will be discussed among the faculty members and students in order to make them move ahead in an effective manner.

#### Suggestion box

The students have freedom to express their grievances and difficulties and put their report in the suggestion box. The issues addressed in the suggestion boxes are reviewed by the Director and respective measures are taken immediately and accordingly.

#### **Class Visits**

The Head of the Department or other senior faculty members of the department, visit any class randomly to be apprised of the quality of teaching practiced by the faculty.

#### Monitoring

- The quality & quantity teaching learning process is monitored by Director, Dean and HOD through regular review of academic delivery system.
- Student feedbacks are collected in each semester.
- Surprise visits by the Director, Dean and HOD in ongoing lectures and feedback from students help in the assessment of quality of teaching learning process.
- > Corrective and preventive actions are taken through discussions in department meetings.
- > Alumni feedback and parents' inputs are also considered.

#### **Result Analysis**

- Internal Tests The results of internal examinations are submitted to the test coordinator, within 7 days of the last day of the test. The results are consolidated to assess the performance of the students and the quality of teaching. Remedial measures are taken for the slow learners.
- End Semester Examinations The results of end semester examinations are assessed to identify and help the slow learners. The results are compared with the results of the previous years, to reinforce the quality of teaching.

#### Evaluation

- Performance of students in the quizzes/ class tests/ sessional examination and university examinations are analyzed subject wise and corrective action are modular.
- Sessional marks are awarded on per laid down guidelines of university / Institute.

#### **Class Coordinator Meetings**

Class Coordinator Meetings are convened by the Dean of the department. The teachers who handle subjects for the class and student representatives attend the meeting to discuss issues related to the teaching learning process. The agenda for the Class Coordinator Meetings include:

- ➢ Syllabus coverage.
- > Availability of text books and other learning material.
- Difficulties faced in learning the subject.
- Feedback from the students on the quality of teaching and the teaching methodologies used.
- Performance of students in Internal Tests.
- > Punctuality in performing academic work.
- Participation in extra-curricular activities.
- Quality of Placement Training.
- Convenience and Proper condition of teaching aids used in the class room.

#### 2.4 Teacher Quality

#### 2.4.1 Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum

The college takes an utmost care of the wide gap between curriculum and the technology developments. It adopts the following strategies for planning and management of its human resource to meet the changing requirements of the curriculum.

- > Recruits faculty member's expertise in recent trends with higher qualification.
- > The existing and new faculty members are given periodical training to bridge the knowledge gap through external specialists.
- Faculty members are trained by industrial and academic experts to upgrade the knowledge in new curriculum.

- Encourage the faculty members to attend faculty development programme, workshop, and seminar to enrich their knowledge with allowances and on duty.
- Provides incentives to faculty members to present papers in national & international conferences.
- > Motivates the faculty members to do their higher studies by providing On Duty.
- Motivates the faculty members to apply for research oriented proposals and giving financial incentives for the research grant obtained.
- > The institute organizes various programs to refresh and also motivate the faculty members.
- Provides award for the faculty members who publish their paper in National / International journal with impact factor.
- Before the onset of new academic session during May/ June months, department wise/ programme wise, the expected strength of the students, no. of sections, new subject to be taught, due to any change in syllabus/ departure of expert teacher etc is forecasted by Dean.
- Accordingly total number of faculty required programme wise is also forecast with an eye on departures/ likely vacancies being created, is forecasted and supplied to HR dept. of the institute.
- Necessary advertisement in National/ local newspaper, job portals etc for vacant position are published through HR Dept.
- ➤ After receiving the applications from the candidates in response of the advertisement given by the institute, candidates short listed as per merit are called for the interview. The candidates are selected department wise by the corresponding interview panel.
- A committee comprising of Management members, Director, concerned department HOD and senior faculty members is formed which conduct the interview & demo classes of the candidates, and submit the report of selected candidates based on their performance. Finally, Director in consultation with the management takes the final decision. An identical procedure is also adapted in case of non-teaching staff. Faculty and staff retention is ensured through providing a healthy working environment conducive for self growth, well defined transparent and uniform policies, good remunerations and incentives for superlative growth.
- Conduct Code 30 Interview for the staff approval.

Depart- -ment	Highest Qualification	Professor	Associate Professor	Assistant Professor	Total
	PhD	1	0	0	1
EC	M.E / M. Tech	0	1	18	19
	B.E / B.Tech	0	0	1	1
	PhD	1	0	0	1
CSE	M.E / M. Tech	0	2	21	23
	B.E / B.Tech	0	0	1	1
	PhD	1	0	0	1
IT	M.E / M. Tech	0	1	4	5
	B.E / B.Tech	0	0	0	0
	PhD	3	1	0	4
ME	M.E / M. Tech	2	4	26	32
	<b>B.E / B.Tech</b>	0	0	3	3
	PhD	0	0	0	0
CE	M.E / M. Tech	0	1	9	10
	<b>B.E / B.Tech</b>	0	0	2	2
	PhD	1	0	0	1
CM	M.E / M. Tech	0	1	3	4
	<b>B.E / B.Tech</b>	0	0	1	1
	PhD	1	4	2	7
ESH	M. Phil PG	0	0	3	3
	UG	0	0	1	1

#### Table 19 Number of Professor, Associate Professor and Assistant Professor in all departments

#### STAFF RECRUITMENT PROCEDURE



Retention of Faculty: A healthy and good retention ratio is maintained in the faculty cadre by creating a good environment and providing incentives as detailed below:

- Sponsorship to workshops/seminars/refresher courses and is considered on duty.
- > All teaching and non teaching staff members are provided with free transport facility.
- ➢ Group Insurance Policy.
- Lunch is provided at very low cost.

#### Leave Rules:

Leave is a privilege and cannot be claimed as a matter of right. An employee who has been sanctioned leave can be required to report for duty by revoking his/her leave due to exigencies of service. Only the authority that sanctions leave can revoke leave already sanctioned. Absence of leave for more than 10 days without due authority will constitute as break in service/disciplinary action.

	VACAT	ION S	TAFF	NON VACATION STAFF			TAFF		
Type of Leave	Teachin g Staff	Tec Su S	hnical pport taff	Prin Regis Admini	cipal, strars, istrators	Ad S	lmin & SEWS Staff	Remarks	
Casual Leave	12		12	]	2		12	Casual leave cannot be combined with any other leave	
Earned leave	10		10	]	.5		15	Can be accumulated and en-cashed to a maximum of 180 days as per condition given above	
Vacation Leave	30		30	N	IA		NA		
Maternity leave	02 months	half p	aid after r	esuming	of duties to	o per	rmanent f	emale employees only	
Compensato ry leave	4		2	1	0		10	Granted towards work on closed holidays. Not eligible when compensated by TA/DA. Not applicable for outstation official work	
Study Leave	2 year	s	2 ye	ears	Sanction case basi	ed b is	by the m	anagement on case to	
EOL	6		6	5	6		6	Total six calendar days (06) maximum of twice a year.	

Table 20 Summary of Froposed Leave Rules	Table 20	Summary	of Proposed	Leave	Rules
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2.4.2 How does the institution cope with the growing demand / scarcity of qualified senior faculty to teach new programmes / modern areas (emerging areas) of study being introduced (Biotechnology, IT, Bio informatics etc.)? Provide details on the efforts made by the institution in this direction and the outcome during the last three years.

To attract the new qualified faculty and retain the existing ones the institution provides requisite facilities like free transport for all faculty and staff, research facilities like library, internet, etc. To encourage staff to participate in workshops and seminars, the faculty is sent on duty and also with other benefits to upgrade their knowledge by participating in national and international seminars. During the last three years many of our teachers have participated in number of state and national level conferences and workshops. All these teacher centric facilities attract the teachers and best of the faculty from the area join our college.

The senior faculty members are enthralled towards the college due to attractive salary as per government norms, other perks, medical allowance faculty recreation programme, higher studies option, training in new technology etc., and for the last 3 years retention is good and competent senior faculty members are increased. Due to the continuous efforts and motivation by the management, there has been an increase in faculty members pursuing and completed Ph.D.

### **2.4.3** Providing details on staff development programmes during the last four years elaborate on the strategies adopted by the institution in enhancing the teacher quality.

#### a) Nomination to staff development programmes

Table 21 Number of faculty members nominated to staff development programmes

S. No.	Name of Faculty	Title	Date	Organizing Institute
1.	Mr. Rupesh Rathore		12/07/2016	
2.	Mr. Anand Raghuwanshi	E – Learning	to 15/07/2016	Dr. Prasanna Kumar, IIST
3.	Mr. Utkarsh Jain			Dr. Sudach Kumar Sahani
4.	Mr. Lalitesh Sinha	Preparing the Workforce of Tomorrow		HOD Acropolis Institute
5.	Mr. Shailendra Singh	A Framework For Technical Education	16/01/2016	of Technology and
6.	Mr. Manish K. Nimoriya			Research. Indore
7.	Ms. Gulezehra Hussain			
8.	Mr. Anand Raghuwanshi			
	Mr. Utkarsh Jain	Introduction to Structural Engineering	30/11/2015- 03/01/2016	Mr. Vijay Ramakant Rode Prof. S.G.S.I.T.S. Indore IIT, Khadagpur
		Future Concrete and Failure of Structures	01/05/2015	Mr. Shahjad Mohammad Prof. Acropolis Technical Campus, Indore
9.		Earthquake Resistant Design of	19/09/2013-	Mr. R.K. Khare
		Buildings and Structures	23/09/2013	Prof. S.G.S.I.T.S. Indore
		Remote Sensing and GIS Applications in Civil Engineering	08/01/2014- 12/01/2014	Dr. Sandeep Narulkar Prof. S.G.S.I.T.S. Indore
		Effect of Plastic Fiber on Concrete Mix Design	14/02/2014	SVCE, Indore
10	Ma Gulazahra Hussain	Natural Disaster Mitigation & Management	12/09/2015	Mrs. V Tare Prof. S.G.S.I.T.S. Indore
10.	Ms. Gulezehra Hussain	Construction Industry & Smart Development	17/10/2015	Dr. S.K. Sohani Convener AITR, Indore

#### **DEPARTMENT OF CIVIL ENGINEERING**

S. No.	Name of Faculty	Title	Date	Organizing Institute
		Two week ISTE Workshop on 'Database Management Systems	21 to 31 May, 2013	Prof. S. Sudharsan Course Coordinator IIT Mumbai IIT Bombay and MHRD
		Workshop on "Quality Issues in Academics, Paper Setting & Valuation"	26 September 2012	Dr. Priyesh Kanungoo Conveyer, DAVV
1.	Anil Khandekar	AppsFluxus-2013	27-28 February, 2013	Mr. Shivendra Kumar Niranjan Manager, Finland Lab Finland Labs In association with Fluxus IIT, Indore and IIST
		International Conference on Advances & Development in Eng & Technology	8-9 Feb, 2013	Mr. Pradeep Kumar Mallick ,Chairman , IRD (India), Malwa Institute of Technology and ICADET-2013
		ISTE workshop on DBMS	21-31 May, 2013	Prof. S. Sudharsan Course Coordinator IIT Mumbai at SGSITS
2.	Margi Patel	Challenge to Interface Nanotechnology and Superconductivity	12-13 April 2013	Dr. Shilpa Tripathi , Principal, IIST Indore
		Microcontroller	14-19 Jan 2013	Kaim SoftTech IIST
3.	Mr. T. S. Arora	AppsFluxus-2013	27-28 February, 2013	Mr. Shivendra Kumar Niranjan Manager, Finland Lab Finland Labs In association with Fluxus IIT, Indore and IIST
		AppsFluxus-2013	27-28 February, 2013	Mr. Shivendra Kumar Niranjan Manager, Finland Lab Finland Labs In association with Fluxus IIT, Indore and IIST
4.	Neha Raja Panwar	Challenge to Interface Nanotechnology and Superconductivity	12-13 April 2013	Dr. Shilpa Tripathi , Principal , IIST
		Workshop on Emerging Trends & Technologies Series II	4-5 Dec 2012	Ms. Mamta Punjabi , Coordinator , Sushila Devi Bansal College of Engineering, (SDBCE) Indore
		ISTE workshop on DBMS	21-31 May, 2013	Prof. S. Sudharsan Course Coordinator IIT Mumbai at SDBCE
5. Neha Jain		Workshop on Machine Learning Support System	8-9 March 2013	Ms. Savita Sisodiya Conveyer, Truba college of Engg & Tech, Indore & Computer Society of India
6.	Ms. Chanchal Bansal	Two days National Workshop on "Success Mantras for Biz-IT"	2-3 Nov 2012	Prof. Krunesh Saxena Aishwarya Institute of Management and Technology, Udaipur (Rajasthan)
7.	Mr. K Anil Kumar	AppsFluxus-2013	27-28 February, 2013	Mr. Shivendra Kumar Niranjan Manager, Finland Lab Finland Labs In association with Fluxus IIT, Indore and IIST
8.	Neha Jain	3rd National Seminar on Contemporary Scenario in CSE and Engineering Physics : Innovations and Growth	4th Oct 2013	Dr. Manoj K Rawat Conference Conveyer LNCT, Indore

#### **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

		National Level Seminar on Computer Application in Engg: Emerging	Dec-2013	Dr. Shilpa Tripathi IIST
9.	Mr. K Anii Kumar	Participated and Qualified in 3rd Research Methodology Course	16-21 Dec 2013	R& D Cell , JNTU
10.	Poorva shukla	Impact of cloud computing in education	17th and 18th march 2015	Ms. Ritu Bansal , Co- Conveyer , TCET Truba college of engg
11.	Chanchal Bansal	Impact of cloud computing in education	17th and 18th march 2015	Ms. Ritu Bansal , Co- Conveyer , TCET Truba college of engg
12.	Swapnil Jain	Impact of cloud computing in education	17th and 18th march 2015	Ms. Ritu Bansal , Co- Conveyer , TCET Truba college of engg
13.	Nitesh Rastogi	Impact of cloud computing in education	17th and 18th march 2015	Ms. Ritu Bansal , Co- Conveyer , TCET Truba college of engg
14.	Akanksha Varghese	Two- Week ISTE Workshop on Computer Programming	16-21 June	Prof Shreedhar Iyer , Course Coordinator IIT Bombay
		Data Lakes for Big Data	June 15	Mr. Barry Heller, Instructor Emc2
15.	Margi Patel	Cloud Intro.x: Introduction to Cloud Computing	14 Nov-14 Dec 2015	Phillip Laplante, Professor Software and system A course of study offered by IEEEx
		Seminar on A.I.	29th Nov 2015	Mr. Neeraj Srivastava , Coordinator IES/IPS Academy
16.	Poorva shukla	Statistical skills (ISCA)	8th and 9th august 2015	Dr. Ashish Sharma Coordinator Maharaja ranjit singh college
17.	Akanksha Varghese	Seminar on A.I.	29th Oct 2015	Mr. Neeraj Srivastava , Coordinator IES/IPS Academy
18.	Chanchal Bansal	Seminar on A.I.	29th Oct 2015	Mr. Neeraj Srivastava , Coordinator IES/IPS Academy
		Seminar on A.I.	29th Oct 2015	Mr. Neeraj Srivastava , Coordinator IES/IPS Academy
19.	Nitesh Rastogi	Short Term Training Programme on "Use of SPSS for Data Interpretation"	30th Nov to 5th Dec 2015	DAVV Director UGC- Human Resources Development Centre

#### DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

S. No.	Name of Faculty	Title	Date	Organizing Institute
1.	Mr. Devendra Singh Mandloi	eYantra IIT Bombay Workshop on "ROBOTICS "	18th -19th Aug. 2016	Mr. Pavan Attavane, Mr. Shubham Gupta.
2.	Mr. Neeraj Malviya	eYantra IIT Bombay Workshop on " ROBOTICS "	18th -19th Aug. 2016	Sr. Project manager IIT, Bombay
3.	Mr. Sachin Manglasheril	"Embedded System Design using TIVA Platform"	3rd Sept to 5th Sept 2015	Mr. Raghav Goyal ,
4.	Mr. Atul Singh Kushwah	"Embedded System Design using TIVA Platform"	3rd Sept to 5th Sept 2015	Banglore R.G.P.V Bhopal
5.	Neha Choudhary	Use of SPSS for DATA INTERPRETATION	30 Nov to 5th dec 2015	Dr. Mayank Saxena DAVV, Indore

6.	Mr.Devendra Mandloi	Use of SPSS for DATA INTERPRETATION	30 Nov to 5th Dec 2015	
7.	Ms. Neha Chaudhary	Recent trends in Power Electronics	06th feb 2015	IES-IPS Academy Indore
8.	Mr. Shravan Namdeo	Recent trends in Power Electronics	06th feb 2015	IES-IPS Academy Indore
9.	Mr. Ankit Jain	Recent trends in Power Electronics	06th feb 2015	IES-IPS Academy Indore
10.	Ms. Amrita Pahadiya	Recent trends in Power Electronics	06th feb 2015	IES-IPS Academy Indore
11.	Mr. Shravan Namdeo	Advances in DSP & VLSI technology	9th OCT to 10th OCT 2012	SDBCT, Indore
12.	Ulhas Kothari	"Digital signal processor controlled power electronic converters and drive"	29th Sept to 1st Oct 2015	Dr. T srinivasa Rao,Dr. K Sivakumar NIT, Warangal
13.	Ms Neha Choudhary	"Robotics"		
14.	Ms Amrita Pahadiya	"Robotics"		
15.	Ms Sangeeta Solanki	"Robotics"		
16.	Mr. Sachin Manglasheril	"Robotics"		
17.	Mr. Atul Singh Kushwah	"Robotics"		
18.	Mr.Ullas Kothari	"Robotics"		
19.	Devendra Singh Mandloi	"Robotics"		
20.	Ankit Jain	"Robotics"		Mr. Suriit Kumar. IIT Delhi
21.	Rupesh Dutta	"Robotics"	9 Sept to	and
22.	Veena Tiwari	"Robotics"	2015	VBM Technologies
23.	Ram Sewak Kumar	"Robotics"	2015	
24.	Mr. Mohan Karma	Virtual lab		
25.	Dr. Keshav Patidar	Virtual lab		
26.	Mr. Ulhas kothari	Virtual lab		
27.	Mr. Deepak yadav	Virtual lab		
28.	Ms Sangeeta Solanki	Virtual lab		
29.	Ms. Amrita Pahadiya	Virtual lab		
30.	Mr. Shravan Namdeo	Virtual lab		
31.	Mr. Devendra Singh Mandloi	Virtual lab		
32.	Mr. Devendra Singh Mandloi	"Recent trends in Communication Networks"	08th Dec to 12th Dec /2014	SGITS, Indore
33.	Ms. Neha Chaudhary	COMPUTER NETWORK	30th June to 05th july 2014	IIT Bombay
34.	Mr. Dhannajay Kumar	CEP under TEQIP-II sponsored Short Term Training Program on "Implementation of Power Electronics Systems"	29th Dec to 02nd Jan 2015	Sardar Vallabh bhai National Institute of Technology, Surat [Gujraat]
35.	Mr Ankit Jain	"Introduction to Robotics" E-yanta Robotic Competition	17th to 18th April 2015	IIT Bombay
36.	Mr Sachin Manglasheril	"Introduction to Robotics" E-yanta Robotic Competition	17th to 18th April 2015	IIT Bombay

37.	Ms.Veena Tiwari	"Introduction to Robotics" E-yanta Robotic Competition	17th to 18th April 2015	IIT Bombay
38.	Mr Ankit Jain	Embedded System	11-12 Sep 2014	IndEyes InfoTech Pvt. Ltd. at IIST, Indore
39.	Mr Ankit Jain	QEEE	Jan – Apr 2015	IIT Madras
40.	Mr Rupesh kumar Dutta	Embedded System	11-12 March 2015	IndEyes InfoTech Pvt. Ltd. at IIST, Indore
41.	Veena Tiwari	Advance Antenna Design Techniques & Microwave Engineering	20th to 21th sep,2013	Ni logic Pvt.ltd , STS & EMSS, (South Africa), at IIST, Indore
42.	Veena Tiwari	Android	27th to 28 sep,2013	By(NADC) IIT,delhi at IIST
43.	Mr. Ankit Jain	"Microcontroller Workshop"		
44.	Ms. Veena Tiwari	"Microcontroller Workshop"		
45.	Mrs. Sangeeta Solanki	"Microcontroller Workshop"	14/01/201	
46.	Mr. Shravan Namdeo	"Microcontroller Workshop"	3 to	D <sub>W</sub> VAIM SOFTECH
47.	Mrs. Reeta Charde	"Microcontroller Workshop"	19/01/201	By KAIM SOFTIECH
48.	Ms. Amrita pahadiya	"Microcontroller Workshop"	3	
49.	Mr. Devendra Singh Mandaloi	"Microcontroller Workshop"		
50.	Ms. Neha Choudhary	"Microcontroller Workshop"		
51.	Mr. Anand Mantri	"Microcontroller Workshop"		
52.	Mrs. Reeta Charde	" Image Processing"		
53.	Ms. Veena Tiwari	" Image Processing"		
54.	Mr. Devendra Singh Mandaloi	" Image Processing"	26/12/201	itia Knowledge selections of
55.	Ms. Neha Choudhary	" Image Processing"	2 to	itie Knowledge solutions, at
56.	Mrs. Sangeeta Solanki	" Image Processing"	20/12/201	
57.	Ms. Amrita pahadiya	"Image Processing"	]	
58.	Mr. Ankit Jain	"Image Processing"	]	
59.	Mr. Anand Mantri	" Image Processing"		

#### **DEPARTMENT OF BASIC SCIENCE & HUMANITIES**

S. No.	Name of Faculty	Title	Date	Organizing Institute
1.	Dr.Saurabh Jain	Attended National Seminar on "Number Theory and Cryptography" held at School of Mathematics	19-21 December 2013	DAVV, Indore
		Attended Seminar on "Applications of Mathematics and Statistics in engineering field"	Jul-14	MITM Indore
2.	Dr Namrata Kaushal	Attended national Seminar on "Analytical Number Theory" on National Mathematics day conducted by School of Mathematics	22-Dec-12	DAVV
		Presented a paper on "Study of generation of modular lattice by orientation of connected acyclic diagraph" in research seminar on GANITIYA GYAN SANDHAN-2013	23 rd March 2013.	Govt. Girls Post Graduate College Ujjain M.P
		Presented a paper on "Discrete Dynamic Model for Characterization of Class of Distributive Lattices in National Seminar of	6-7 March 2014	Govt. Madhav Science P.G. College

		Contributions of Ramanujan in Mathematics and its Applications in Mathematical Sciences		
		Application of Mathematics and Statistics in Engineering Field	16-Jul-14	Medi-Caps Group of Institute, Indore
3.	Dr. Purti Bilgayan	Synthesis and Antibacterial Screening of Novel Mannich Bases of 2,4, diamino-6- piperidino pyrimidine-3-oxide (minoxidill).	2015	International Young Scientist Congress at MRCPS Indore
		Participated in National Symposium on "Waste & Biomass Valorization: Potential and Challenges"	12th & 13th Sept. 2014.	Institute of Science and Technology, Indore
4.		Attended a National workshop on "Linear Algebra & its Applications" conducted by School of Mathematics	26-27 November 2012.	DAVV
	Dr.Saurabh Jain	Attended Four Days Short Term Course on Optimization Methods and Applications.	December 16- 20, 2014	IIT, Delhi
		Attended a National workshop on "Linear Algebra & its Applications" conducted by School of Mathematics	26-27 November 2012.	DAVV
5.	Dr.Namrata Kaushal	Attended national Seminar on "Analytical Number Theory" on National Mathematics day conducted by School of Mathematics	22-Dec-12	DAVV
		Attended a two days workshop on "Use of SPSS in Research Methodology"	24-25 The May 2013.	Sri Aurobindo Institute of Management & Science

#### **DEPARTMENT OF INFORMATION TECHNOLOGY**

Name of Faculty	Title	Days	Year	
Dr. Ashish Bansal				
Mrs. Neha Gupta				
Mr. Akhilesh Chauhan				
Mr. Aditya Nagdiya	Internet of Things	1 day	2015	
Mrs. Alpana Meena				
Mr. Piyush Vyas				
Mr. Ankur Nahar				
Dr. Ashish Bansal				
Mrs. Neha Gupta				
Mr. Akhilesh Chauhan		1 day		
Mr. Aditya Nagdiya	Hadoop Platform & Training		2015	
Mrs. Alpana Meena				
Mr. Piyush Vyas				
Mr. Ankur Nahar				
Dr. Ashish Bansal				
Mrs. Neha Gupta		1 day	2015	
Mr. Akhilesh Chauhan				
Mr. Aditya Nagdiya	Android basics training			
Mrs. Alpana Meena				
Mr. Piyush Vyas				
Mr. Ankur Nahar				
Dr. Ashish Bansal	Software Testing training	1 day	2015	
Mrs. Neha Gupta	Software resting training	i day	2015	

Mr. Akhilesh Chauhan			
Mr. Aditya Nagdiya			
Mrs. Alpana Meena			
Mr. Piyush Vyas			
Mr. Ankur Nahar			
Dr. Ashish Bansal			
Mrs. Neha Gupta			
Mr. Akhilesh Chauhan			
Mr. Aditya Nagdiya	Unix Workshop	1 day	2015
Mrs. Alpana Meena			
Mr. Piyush Vyas			
Mr. Ankur Nahar			
Dr. Ashish Bansal	IOS University Lab	1 .1	2015
Mrs. Neha Gupta	105 University Lab	1 day	2015
Dr. Ashish Bansal	NAMCOM	1 day	2015
Mrs. Neha Gupta	NAMCOM	1 day	2013
Dr. Ashish Bansal			
Mrs. Neha Gupta			
Mr. Akhilesh Chauhan			
Mr. Aditya Nagdiya	Microsoft Azure	1 day	2015
Mrs. Alpana Meena			
Mr. Piyush Vyas			
Mr. Ankur Nahar			
Mrs. Neha Gupta	Cloud Computing	5 day	2012-13
Ms. Akansha Jain	Cloud Computing	5 days	2012-13
Mrs. Neha Gupta	FDP on data warehouse	1 day	2012-13
Mrs. Neha Gupta	FDP on Agile software	1 day	2012-13
Mrs. Neha Gupta	Machine learning workshop	1 day	2013
Mr. Sanket Gupta	Machine learning workshop	1 day	2013
Mrs. Neha Gupta	Information Security	1 day	2013
Mrs. Sheetal Chauhan	FDP on warehousing	1 day	2013
Mrs. Sheetal Chauhan	FDP on cloud computing	1 day	2013
Ms. Akansha jain	FDP on cloud infrastructure	1 day	2013
Ms. Akansha Jain	Training on .NET	1 day	2013
Mr. Akhilesh Chauhan	Research Methodology	1 day	2013
Mr. Akhilesh Chauhan	Seminar on success mantra for BIZ-IT	2 days	2013
Mr. Vivek Gupta	FDP on cloud infrastructure	1 day	2012
Mrs. Neha Gupta	FDP on Advanced Computing	2 days	2013

b) Faculty Training programmes organized by the institution to empower and enable the use of various tools and technology for improved teaching-learning

1.

#### Teaching learning methods/approaches

The college organizes programs to encourage teachers to prepare computer aided teaching materials. The Heads of the department of the college regularly organize training programs for faculty members to make them aware of the latest development in the technology, thereby empowering the teachers to improve their teaching methods.

#### Handling new curriculum

The college has experienced and qualified faculty to handle the new curriculum effectively. HOD calls for the meetings with the faculty members to brief and explain the new syllabus and device methods to empower the teachers to handle the new courses. Faculty members are asked to attend the FDP Programmes.

#### 3. Content / knowledge management

Teachers and students are assisted in the use of digital library and accessing e- journals. Digital library of freely available e- books which have been categorized and stored. Students are encouraged to access these books for effective learning.

Faculty members attend National & International seminars & workshops. They also organize seminars through which they interact with the academicians and the industry workforce and update their knowledge & skills. In addition to this the faculty members are also exposed to various teaching and research articles of journals /e-journals subscribed by the Institute.

### 4. Selection, development and use of enrichment materials

The college organizes seminars, workshops, dissemination workshops, to enrich all practices and aspects of teaching and learning process. Further the faculty members receive invitation from various institutions to act as resource persons. They also present paper in the leading national and international conferences. Newly inducted faculty will be given orientation program by the Director and HoD which enable the new faculty to enrich their knowledge. Learning Management System is available in digital e library which contains power point presentations, notes, questionnaires, videos etc. related to all subjects.

#### 5. Assessment

The faculty performance assessment is done on the basis of the student feedback, self appraisal report and HOD's feedback. It gives a clear picture in terms of their performance & research activities. Suggestions for improvement in the academic system given by the faculty members through self-appraisal reports are considered and used as reference for further actions.

#### 6. Cross cutting issues

Nil

7.

#### Audio Visual Aids / multimedia

Our faculty members are trained to use the audio visual aids, multimedia and video conferencing technologies in the classroom/seminar halls. Faculty members are provided with computers and internet browsing facility for the preparation of teaching/learning materials. They take the help of these advanced technologies in their classes as and when required. We have the latest computer aided packages which include projectors; computers, sound system and smart board etc. Students are also given opportunities to handle audio visual aids, multimedia in the project seminar. Institute digital library has a collection of NTPEL / IIT's / MIT videos and virtual lab links (IIT Delhi). Students can use department seminar halls / e Library having audio visual equipments for watching the above learning materials.

2.

#### Teaching learning material development, selection and

use

Faculty members are given free access to internet which helps them to traverse through ocean of learning materials. The college has a well-stocked library containing both reference and text books of various subjects. Further attending and organizing seminars, symposiums and workshops also help the faculty in developing the course materials. A variety of teaching aids are developed such as multiple choice questions (Response system), quiz programmes for normal and advanced learners, power point presentations and so on.

#### c) Percentage of faculty

- Invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies:
- Participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies:
- Presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies

#### 9% (Refer Annexure IV)

2.4.4 What policies / systems are in place to recharge teachers? (eg: providing research grants, study leave, support for research and academic publications teaching experience in other national institutions and specialized programmes industrial engagement etc.)

The Institution provides full supports to their faculty members for their overall growth and development. Following policies have been adopted by the institution.

$\mathbf{A}$	Higher Studies.
	Seminars/ Workshops/Conferences.
	Professional Society Life Membership Fee.
	Promotion of Research.
$\triangleright$	Awards.

# 2.4.5 Give the number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the institutional culture and environment contributed to such performance / achievement of the faculty.

Our faculty members have published 375 technical papers in national/ international journals. Many faculty members of our institution have been rewarded for presenting technical papers in various seminars/conferences that were conducted by external professional agencies.

8.

Following are the details of the awards won by our faculty

S.No.	Name of faculty	Given By	Name of the award	Year
1.	Mr. Sandip Rashinkar (Civil Department)	Srijan RGPV	Excellent Faculty	2015-16
2.	Ms. Richa Jain (Mathematics Department)	International Young Scientist Congress at MRCPS Indore.	Young Scientist award	2015-16
3.	Mr. Piyush Vyas (IT Department)	Srijan RGPV	Excellent Faculty	2015-16
4.	Mrs.Neha Gupta (IT Department)	IIT QEEE	Quality Teacher	2015-16
5.	Mr.Aditya Nagdiya (IT Department)	IIT QEEE	Quality Teacher	2015-16
6.	Mr.Akhilesh Chauhan (IT Department)	IIT QEEE	Quality Teacher	2015-16
7.	Mr Sumit Shukla (ME Department)	Srijan RGPV	Excellent Faculty	2015-16
8.	Dr. K.K. Gupta (ME Department)	Srijan RGPV	Excellent Faculty	2015-16
9.	Mr. Ankit Jain (EC Department)	IIT QEEE	Quality Teacher	2015-16
10.	Mr. Shravan Namdeo (EC Department)	IIT QEEE	Quality Teacher	2015-16
11.	Mr. Atul Singh Kushwah (EC Department)	IIT QEEE	Quality Teacher	2015-16

#### Table 22 Details of the awards won by faculty

#### उत्कृष्ट शिक्षण के लिए आईआईएसटी के शिक्षकगण सम्मानित



आत्त. दिल्ली के दू देकर सम्पानित डॉ.जॉय बेन्जी नीकी शिक्षकों के सम्मान का एक वृहद कार्यक्रम या गया। इस अदसर पर राज्य के तकनीकी क्षेत्र के अत्र बड़ी संख्या में उपस्थित वे। समिति के अध्यक्ष । आहंअ किया ग

Dr. K.K.Gupta, Dean Mechanical Engineering department.



THE TIMES OF INDIA



**इंदौर।** इंदौर इंस्ट्रीट्यूट् ऑफ साइंस एंड टेक्नालाजी की असिस्टेंट प्रोफेसर रिचा जैन को यंग साइंटिस्ट अवार्ड मिला है। सुश्री जैन ने लैपलेशियन एजेनवेल्युज ऑफ कनेक्टेड ग्राफ विषय पर अपना शोध पत्र प्रस्तुत किया था। इस शोध पत्र के परिणाम विज्ञान की तमाम शाखाओं और शोधों के लिए मददगार है। आईआईएसटी के डायरेक्टर डॉ जॉय बैनर्जी ने बताया कि पहली इंटरनेशनल यंग साइंटिस्ट कॉन्फ्रेंस का आयोजन महाराजा रणजीतसिंह कॉलेज में किया गया था।

Ms. Richa Jain, Mathematics Department, Young Scientist Award



Dr. Saurabh Jain, Dean, Mathematics Department, Projector coordinator for Virtual Lab

Figure 26 Awards won by faculty members

## **2.4.6** Has the institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process?

Yes, Quality evaluation of teachers by the students is done through students' feedback once in a semester for the theory subjects taught by the faculty. Feedback reports are discussed with the staff members and suggestions for improvements are solicited. This evaluation makes the teaching - learning process more effective. At the end of every academic year staff self appraisal by the HOD are reviewed by the Director for necessary corrective measures and rewards for faculty. The college also collects exit level feedback from the passing out graduates. These are also analyzed by the HOD.

Specify the feedback analysis process:

- > The feedback analysis is done manually.
- > All the parameters mentioned in the feedback form will be analyzed in two levels.

1st level: Average of one parameter with respect to teachers is calculated. 2nd level: Average of averages of the parameters is calculated.

- Ability of teaching with respect to each item and comprehensive ability of the teachers will be analyzed.
- All the comments written by the students in the feedback forms will be communicated to the respective faculty members along with their feedback levels to know their strengths and weaknesses and enhance their teaching skills.

Question	Excellent	Very Good	Good	Average	Poor	Total Mark	Would you recommend him/her to teach the same subject to your junior?	Yours suggestio n
1. Knowledge of Subjects								
<ol> <li>Ability to explain</li> <li>Use of examples to</li> </ol>								
clarify the material								
4. Opportunity for raising questions and discussion								
5. Regularity in engaging class								
6. Fairness & impartiality								
7. Attitude towards student difficulties								

#### **Feedback Template:**

8. Completion of				
course				
9. Presentation of				
course				
10. Use of teaching aids				
Total				

#### Basis of reward / corrective measures, if any:

- ➤ Faculty members who get average feedback below 3 on 1-5 scale are identified.
- Those faculty members are given orientation lectures and special inputs by the heads of the department.
- Also the faculty members who get average feedback of 4 or above 4 on 1-5 scale are appreciated at the department level staff meetings.

#### **2.5 Evaluation Process and Reforms**

### **2.5.1** How does the institution ensure that the stakeholders of the institution especially students and faculty are aware of the evaluation processes?

The regulations, curricula and syllabi of all the programmes offered by the Institute are available in the departments and the affiliated University websites. The regulations contain the details of the evaluation process. The periodic instructions issued by the parent university are promptly communicated to the students. The faculty members read the instructions in the classrooms and copy of the same is also displayed on the student's notice board.

Students are clearly made aware of the eligibility conditions required to appear in the final exams. They are informed of the criterion of the internal assessment. During the orientation program the newly admitted students are updated about the attendance requirements as well as the pass percentage and grading systems. The evaluation is the integral part of teaching learning process. So, the institution makes effective arrangements for the smooth application of the rules about the evaluation processes. Time to time staff meetings are also conducted concerning evaluation process.

Prepared an Institute academic calendar which contains the various events such as conduct of Midsem test, unit tests and end semester theory and practical examinations. The academic calendar is also available in college website.

The entire examination process is absolutely transparent. Initial first year examinations papers are sent online 30 minutes prior to examination with all security features in place, and the evaluation is done centralized in the University and its nodal and regional centers. University even has a policy for revaluation and for showing answer books to students for persuasion, if desired.

### 2.5.2 What are the major evaluation reforms of the university that the institution has adopted and what are there for ms initiated by the institution on its own?

College follows the continuous evaluation through the system with Weight age given both for the periodic assessment and end examination. The evaluation process is made applicable to both students and faculty members.

#### The major examination reforms initiated by the University are as follows:

- Examination Section of the University has implemented Online Paper Delivery System (OPDS), which directly mails question paper online to examination centers.
- > Every dissertation should contain a proof of check for plagiarism.
- University has adopted Choice Based Credit System, which supports continuous assessment of learners' ability through mid-terms, quiz, assignments, tutorial sheets and the final examination.
- ▶ From 2015-16 academic sessions, University is conducting Online Practical Examination.
- > All the examination in the institute conducts by university under CCTV surveillance.

### The following is the list of major evaluation reforms for different categories initiated and implemented by the college:

- Class Coordinator Meeting is held to evaluate the teaching/learning process of the class activities.
- Same pattern of question papers are used for in house examination.
- > Internal assessment is conducted to the students as per the university criteria.
- > Tests are conducted to evaluate the performance of students.
- Student centric learning through assignments, projects, seminars and practical sessions.
- Display of the MST / PUT marks on the respective department notice boards to ensure transparency.
- > The teaching learning process is evaluated in a continuous manner by the senior faculty members.
- To make the teaching learning process effective and to handle the classes in more interactive way, from I year onwards one programme are split into two or more sections (Section A, B & C) with a strength of 60 students each in majority of the programmes.

#### Some of the positive changes brought in by the colleges are

- Encouraging teachers to frame the question papers to include questions that will test the various levels of knowledge; for example GATE examination questions.
- Introducing objective type questions (time bound answering) mainly multiple choice- as a part of the assessment process.

➤ As far as the lab courses are concerned, every experiment carried out by the student is marked and taken into account for internal assessment along with viva voce.

### **2.5.3** How does the institution ensure effective implementation of the evaluation reforms of the university and those initiated by the institution on its own?

#### By the University:

University (RGPV) ensures the examination process that it is going on is strictly adhering the norms & principles laid by the university. In this regard, University appoints Nodal center in charges, Center superintendent, Flying squads which are independent of each other. These entities cross verify the procedures and audit one another. This ensures smooth operations.

#### By the Institution:

- Conducting a HoD meeting by the Director before every semester examination regarding the smooth conduct/implementation of examination rules, where every HoD give their suggestion on various aspects of examination and evaluation based upon the previous examinations. This enables further improvement in the subsequent examination and evaluation.
- Conducting a general meeting of all faculty members by the Director/Examination Superintendent before end semester examination regarding the smooth conduct/implementation of examination rules, where every faculty members are encouraged to give their suggestion on various aspects of examination based upon inputs of previous examinations.

#### **Conducting Examinations**

- Conducting all examinations with same discipline and transparency as the external semester end examinations.
- > The rules and regulations pertaining to conducting of exams will be carefully monitored by the examination department.

#### **Publishing Results**

- > The verified answer scripts will be shown to the students for further clarification which they need.
- ➢ Based on the results achieved by students a personal counseling is given by their respective faculty members.
- Special attention will be shown on poor performers and they are encouraged to perform better by the respective faculty and department head.
- > Finally the marks are pasted in the notice board.

#### **Reviewing Performance of the Students**

- The performance of the students will be strictly monitored by the class coordinator and HOD's. The students are suggested to improve their learning abilities as well as performance in the forth coming examinations.
- To enhance the performance of the students, a special care will be taken by the HOD who suggests them to practice necessary steps which will improve the methodology of their learning.
- The Director reviews the performance of the students along with all the HOD's and takes necessary steps in the process of teaching learning.

#### **Maintenance of Records**

> The test copy and results analysis are maintained properly.

## 2.5.4 Provide details on the formative and summative assessment approaches adopted to measure student achievement. Cite a few examples which have positively impacted the system.

Measures adopted by the institute to measure student achievement based on the formative and summative assessment approach:

The Institute follows semester system of teaching learning and continuous evaluation system is adopted to measure a student achievement in a holistic manner.

### All faculty members follow the formative approach to measure student's achievements & performance through:

- ➢ Assignments.
- > Presentations.
- Class interactions.
- ➢ Group discussions.
- ➢ Workshops/Seminars.
- Projects/Viva-voce.
- ➢ Written and practical tests.
- > Overall attendance.

For summative approach two Internal Assessment tests and a model examination at the end of the semester are taken in the college. This process helps the students to gain confidence and to achieve good results. This is how the institution uses the formative and summative evaluation approach to

measure the student's performance. Finally, the university conducts end semester examination at the end of each semester in the following forms.

- a. Written Exams.
- b. Practical Exams.
- c. Comprehensive Viva voce.
  - For academic performance in theory and practical lab/ classes. He/ she is evaluated on his participation in attending lectures/ tutorials/ lab classes, his level of interaction in the class, his absolute performance in unit test/ quizzes/ periodical class tests, the quality of timely submission of assignment sheet and the end semester university examination.
  - He/ she is also evaluated in his/ her participation / contribution/ group behavior in activities beyond classroom hours, namely co-curricular and extra- curricular activities as well as self conduct in disciplined manner or otherwise in the campus/ hostel.

### Initiatives by students for attainment of positive impact on the overall achievement of student:

- The institute runs many value added courses for personality development as well as emerging technical fields through internal / external resource person. This effort has increased the volume/ percentage of placement in in/off campus drives.
- One to one mentoring by faculty members has encouraged doing well in competitive examinations like GATE, GMAT, GRA, CAT etc. resulting in above average achievements by the students leading towards higher studies from prestigious National/ International institution of repute.
- Encouragement in 'project contests' and other innovations leading towards research work, presenting/ publishing papers etc, has led to high number of students attaining membership of prestigious professional bodies like CII, ESSAR, ISTE etc.

# 2.5.5 Detail on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weightage for behavioral aspects, independent learning, communication skills etc.

**Rigors of Internal Assessment:** The academic load of a student has been gradually increased by introduction of evaluator in bits & piece like assignments, quiz, unit test, minimum two tests, viva-voce for labs etc. In nutshell, the students are fully loaded with academics for study/ learning and perform in continuous evaluation system. This is in addition to their engagement with co-curricular/ extra- curricular activities for overall development of personality.

**Transparency in Internal Assessment:** After evaluation of the test papers, the results are discussed in the class and displayed in the notice board. The results of the class tests, quizzes are recorded from time to time in the departmental files. Institute/ department ensure that he/she views his overall sessional marks awarded for a subject after he/ she pass the university exam.

Weightages assigned in internal assessment for the overall development of the student: After evaluation of the assignments/tests/projects/ etc. the outcome results are discussed in the class, results are put on the notice board, and students are individually counseled. While evaluating students for internal assessment, transparency is maintained and weightage is given as per the University Internal marks.

### **2.5.6** What are the graduates attributes specified by the college / affiliating university? How does the college ensure the attainment of these by the students?

### Graduate attributes specified by the college / affiliating university is guided by NBA (National Board of Accreditation, New Delhi) and they are:

- Engineering Knowledge: Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
- Problem Analysis: Identify, formulate, review literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
- Design/ Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, social and environmental considerations.
- Conduct investigations of complex problems.
- Using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.
- Modern Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- The Engineer and Society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
- Environment and Sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
- Ethics: Apply and commitment to professional ethics, responsibilities and norms of engineering practice.
- Individual and Team Work: Function effectively as an individual, as a member or leader in diverse teams and in multi disciplinary settings.
- Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and

write effective reports and design documentation, make effective presentations and give and receive clear instructions.

- Life-long Learning: Recognize the need for and have the preparation and ability to engage in independent and life- long learning in the broadest context of technological change.
- Project Management and Finance: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

NBA has identified twelve Graduate Attributes of Engineering which are referred to as program outcomes by Washington record. The institution is trying its best for attainment of these attributes by the students through its teaching, learning and evaluation processes.

With the implementation of the specified delivery methods, the effectiveness of the courses is enhanced.

#### The following lists the different modes of content delivery of the courses:

- ➢ M1: Lecture with discussions.
- ➢ M2: Presentations using LCD Projector.
- ➢ M3: Tutorial.
- ➢ M4: Demonstrations.
- ▶ M5: Individual/ Group project.
- ➢ M6: Seminars & Assignments.
- ➢ M7: Expert (Guest) Lectures.
- ▶ M8: Industrial Visit/ tour.
- ➢ M9: Specialized Training

### The college ensures the attainment of graduate attributes by the students through an evaluation and assessment plan which consists of the following components:

- > Class attendance and participation in class discussions etc.
- ➢ Homework and Assignments.
- ➢ Projects.
- ➢ Tests.

- Internal Assessment Examinations.
- ➢ Quiz.
- > Independent learning and behavioral aspects.
- End-Semester Examinations.
- ➢ Presentations.
- Survey based on PO's (Graduate Exit survey, Alumni Survey, Course Outcome Survey).

### **2.5.7** What are the mechanisms for Redressal of grievances with reference to evaluation both at the college and University level?

#### > At College Level

Internal evaluation is made by the concerned subject teacher. The evaluated answer sheets are shown in the class. The students approaches the teachers in case they need a clarification on the award of marks based on the answers and scheme of valuation discussed in the class.

#### > At University Level

Under Ordinance of the University, there is a provision for verification of marks. Under Ordinance, photocopy of the answer-books can be provided at the request of the student, and then as per the recommendation of the Redressal Committee, the answer-book is sent for revaluation. Other complaints and queries are addressed by the separate sections for separate examinations as per the prescribed mechanisms

#### 2.6. Student performance and Learning Outcomes

### 2.6.1 Does the college have clearly stated learning outcomes? If 'yes' give details on how the students and staff are made aware of these?

Yes. The college has clearly defined learning outcomes which are stated in terms of the Vision and Mission of the college. Each department also has Vision, Mission and well defined program outcomes & program specific outcomes which reiterate the learning outcomes. Each course has well stated course objectives and course outcomes which are made available to the students along with the syllabus or by the course teacher at the beginning of the semester.

The Vision and Mission of the college are prominently displayed in strategic points in the college campus such as Front Office area, Main lobby, each floor corridor, canteen and hostels, visible for students, faculty and other visitors to read and imbibe. The college website also carries this information in its Home Page.

The Vision, Mission Program Educational Objectives and the Program Outcomes of each department are put up on the department notice boards, laboratories and each floor corridor. These are also posted in the departmental pages of the college website.

The course teachers refresh the students' memory by recalling the vision and mission of the college and of the department; explain the course outcomes and the program outcomes.

2.6.2 Enumerate on how the institution monitors and communicates the progress and performance of students through the duration of the course / programme? Provide an analysis of the students results / achievements (Programme /course wise for last four years) and explain the differences if any and patterns of achievement across the programmes / courses offered.

A multi-level monitoring process and communication of the progress and performance of the students is in place in the Institution:

- The course teacher keeps a record of the marks obtained by the student in each of the tests / experiments and keeps an eye on the progress or the lack of it shown by the student. Based on the performance the teacher renders extra help to the student to help him/her improve.
- The class coordinator compiles the marks obtained by the students of the class in all courses in each test and analyses the performance with respect to:
  - Pass percentage for each subject.
  - Number of failures in each subject.
  - Comparison of pass percentages in the different subjects.
  - Overall pass percentage of the class.
- > The above compilation and analysis is also done and the details are displayed on the notice boards.
- The mentor keeps a record of the academic performance of each of his/her mentee in the Academic Performance Record.
- > Communication to parents is through SMS as and when necessary.
- Parent / guardian also are met in person by the mentor / class coordinator and the HOD to discuss ways ans means of improving the performance of the student.

University Result Analysis (Odd Schester)											
		2012-13		2013-14		2014-15		2015-16			
Semester	Department	No. of	Pass								
		Students	Percentage	Students	Percentage	Students	Percentage	Students	Percentage		
Ι	CE	57	53	58	64	60	40	34	38		
III	CE	-	-	55	53	48	29	54	33		
V	CE	-	-	-	-	42	76	53	49		
VII	CE	-	-	-	-	-	-	38	97		
Ι	СМ	33	67	33	66	15	27	12	50		
III	СМ	_	-	31	58	31	58	15	60		

#### University Result Analysis (Odd Semester)
V	СМ	-	-	-	-	27	96	32	94
VII	CM	-	-	-	-	-	-	22	77
Ι	IT	52	65	16	81	4	75	34	38
III	IT	43	58	52	53	16	62	4	50
V	IT	57	82	43	62	46	93	16	94
VII	IT	44	97	57	98	43	90	43	100
Ι	CSE	113	78	164	54	130	58	223	62
III	CSE	117	79	108	78	153	55	119	58
V	CSE	119	96	137	91	105	94	128	97
VII	CSE	110	91	115	94	112	97	100	95
Ι	ME	124	50.8	186	42.4	126	51.5	84	51.1
III	ME	122	53.27	155	94.48	95	32.63	95	33
V	ME	121	87.60	105	89.52	127	72.44	127	72.44
VII	ME	119	92.43	109	30.32	100	100	100	94
Ι	EC	116	57	32	62.5	10	6	32	68.75
III	EC	109	62.3	104	64.5	28	78.5	07	71.42
V	EC	125	93.6	107	94.3	88	90	34	85.29
VII	EC	129	96.1	120	96.6	104	90	86	87.2

### University Result Analysis (Even Semester)

		20	12-13	20	13-14	20	14-15	20	2015-16	
Semester	Department	No. of	Pass							
		Students	Percentage	Students	Percentage	Students	Percentage	Students	Percentage	
II	CE	55	56	58	28	56	5	33	58	
IV	CE	-	-	55	49	50	50	53	28	
VI	CE	-	-	-	-	48	33	51	59	
VIII	CE	-	-	-	-	-	-	42	100	
II	СМ	33	21			19	68	12	58	
IV	CM	-	-	31	67	32	44	15	47	
VI	СМ	-	-	-	-	22	77	32	88	
VIII	СМ	-	-	-	-	-	-	24	100	
II	IT	52	84	16	62	4	50	30	65.5	
IV	IT	43	62	52	71	16	50	4	50	
VI	IT	57	98	43	93	46	100	16	93.7	
VIII	IT	44	97	57	100	43	97	45	97.8	
II	CSE	113	78	164	54	130	58	223	62	
IV	CSE	117	79	108	78	153	55	119	58	
VI	CSE	119	96	137	91	105	94	128	97	
VIII	CSE	110	91	115	94	112	97	100	95	
II	ME	122	51.6	182	43.4	122	54.09	83	53.01	
IV	ME	121	54.54	119	59.66	159	48.42	96	14.58	
VI	ME	122	89.3	119	94.11	118	66.94	138	84.78	
VIII	ME	118	99.15	119	100	109	99.08	106	96.22	
II	ECE	113	58.4	30	66.6	8	75	31	67.7	
IV	ECE	120	58.3	103	62.1	30	63.3	8	62.5	
VI	ECE	127	90.5	109	88.07	102	87.2	28	96.42	
VIII	ECE	119	100	120	100	103	98	94	98	

## **2.6.3** How are the teaching, learning and assessment strategies of the institution structured to facilitate the achievement of the intended learning outcomes?

The teaching and learning outcomes are intended to motivate the students and also to encourage performing well. To facilitate the achievement of outcomes the following strategies are projected:-

### 1. Teaching

### > Allotment of subjects to the faculty

First Faculty submits the Subject choice form to HOD and than by knowing the strength of the faculty, particular subject of faculty's expertise is allotted.

### > Additional Content beyond the syllabus

Additional concepts beyond the syllabus paved a path to knowledge imparting and critical thinking.

### > Readiness of the faculty

Students are supplied with necessary subject materials and tutorial questions by the respective faculty members. Also Available Digital Library where students can access complete course file of each subject along with motivation.

### > Scheduling

Timetable is prepared for the number of tutorial and practical hours required for each and every subject.

### > Delivery

- Apart from traditional black board teaching, the students are facilitated to modern teaching methods such as LCD/OHP.
- Promotion of ICT in teaching learning process.
- Providing SMART CLASS rooms and lab facilities.
- > Faculty development programs are conducted by the institution from time to time.
- A course file has been prepared before the beginning of each semester which includes objective, Outcomes, program education objective, syllabus, lesson plan, assignments, previous year question papers and notes.
- Library books are procured based on the teacher syllabus requirements from college library and departmental library.
- Class visit by HODs to assess the teaching standard of faculties and suggestions for improvement if required.

### 2. Learning

- The institution has a conducive learning environment. Slow learners and advance learners are identified and given remedial classes and special assignment respectively.
- Library, Robotics lab and computer lab working hours are scheduled keeping in mind the extended support these departments can extend after regular class hours.
- > Students are motivated to take part in seminars, Workshop and group discussions.
- Library issues book bank (text books prescribed in the curriculum) to every student before the commencement of each semester. Apart from these books, library books are also issued to the students for prescribed time.

3.

### Assessment

- Classroom interactions help teachers to assess the learning outcome of that session.
- > Two midterm examinations and one external examination are conducted for each subject.
- Faculty members of respective subject will evaluate the midterm exams and the university people will evaluate the final exams.
- > Tests like assignments are conducted in order to materialize the learned concepts in written form.
- > Key concepts in particular subjects is repeated twice or thrice in slow learning process.
- The training and placement cell of the college nurtures the entrepreneurial skills of the students, and encourages student in public speaking and group discussion through Personality Development Programs (PDP).
- Every department has its technical society which conducts different events on enhancing creative talent of students.
- > The sports committee caters to the physical development of the students by not only encouraging them to participate in various sports but also develop sportsmanship in them.
- Guest lectures, workshops, seminars and conferences are conducted by every department for graduate and postgraduate students.

# 2.6.4 What are the measures / initiatives taken up by the institution to enhance the social and economic relevance (student placements, entrepreneurship, innovation and research aptitude developed among students etc.) of the courses offered?

**T & P Cell:** The Training and Placement Cell is committed to fulfilling the dreams of all those who graduate from our institute. The main objective of the placement cell is to place the students in good companies. This is achieved through campus selections conducted in the college for which the students are trained in aptitude, technical and soft skills, much ahead of campus

selections. The Cell believes in overall development of the students' personality, which will help them to achieve a rewarding career.

**PDP:** The College conducts Personality Development Program which enhances the soft skills of students, building up their self-confidence and motivating them to scale new unbound heights of glory.

**Quality jobs:** Suitable value addition programs to fill the curricular gaps, employability training camps, industrial visits, guest lectures, in-plant trainings and effective practical sessions are organized to obtain quality jobs in core areas. Guest lectures by industry experts assist students to gain good knowledge in the relevant courses. Students are encouraged to do projects with social and economic relevance. Teachers who undergo sabbatical training give additional support to the students in their projects.

**Entrepreneurship**– 'Earn while you learn is one of the entrepreneurship initiatives of the institution. Entrepreneurship Development Cell organizes programmes and motivates and helps students to acquire entrepreneurial skills.

S. No.	Name of Student	Batch	Company detail	Post
1.	Mr. Amit Porwal	2005-2009	Expert Village Media Technologies	Managing Director
2.	Mr. Sachin Dhanotiya	2005-2009	GWB IT Solutions	Managing Director
3.	Mr. Vivek Gupta	2005-2009	Conative IT Solutions	Managing Director
4.	Mr. Tarun Naliya & Jaytesh Barange	2005-2009	Spiral Infotech	Managing Director
5.	Mr. Jayant Asodkar	2008-2012	Strennus IT Solutions	Managing Director
6.	Mr Prashant Patel	2008-2012	Creatoweb design Pvt. Ltd.	Managing Director
7.	Mr Tikendra Maitry	2004-2008	Techinfini Solution Pvt. Ltd.	Managing Director
8.	Mr. Devendra Kushwah	2006-2010	Avkonics India Pvt. Ltd.	Managing Director
9.	Mr. Ankit M Vyas	2004-2008	Monetary Solution Pvt Ltd.	Managing Director
10.	Mr. Shashank Chourey	2004-2008	India Infotech Pvt. Ltd.	Managing Director
11.	Abbas Hussain	2007-2011	Taheri Construction	owner
12.	Tushar Manglani	2008-2012	Shri sai car deals	co-owner
13.	Mayank Lambhate	2012-2016	Study marvel	owner
14.	Soma Sharma	2012-2016	study marvel	co-owner
15.	Yoesh Raghuwanshi	2008-2012	Aswmegh electrical infrastructure pvt ltd	owner

#### Table 23 List of Entrepreneur from our college from 2008 to 2016

S. No.	Title	Date	Objective	Outcome
1	Entrepreneur Educators Program NEN (Prof Atul Bharat & Prof Rakhi)	14-16 July 2016	Faculty development program	To develop faculties to run different curriculum in institute.
2	Entrepreneurship course module WFNEN (Ms. Marlina Ramchandaran)	26/09/2016	Launch course module for students	To improve the skill and to provide learning towards skill development
3	Leveraging Entrepreneurs BY IEN X	01/10/2016	Talk Series	To provide solutions to problems faced by aspiring entrepreneurs by connecting them to mentors.
4	E Leader Workshop at IIT Indore	13-14 /10/2016	Workshop	To provide overview to student E –leaders how to run activities in College E cell

	FOUNDATION ATTOM
Student Leader 1	Student London 3
Name: Adarsh Pahare	Nome: Kemel Televatel
Phone: +919630335906	Phone:+818020200004
Email: adarsh.pahare@indoreinstitute.com	Email: kamal.tripathi@indoreinstitute.com
Contact Details of Institute Partner's Manageme	ent Team:
Name: Mr. Oscar Reeves	Name: Dr. Joy Baneriee
Designation: Secretary	Designation: Director
Phone: +919827050095/07314010510	Phone: +919644024441/07314010524
Email: or@indoreinstitute.com	Email:joy.baneriee@indocelostitute.com
Phone: +91 9893058643 Email: <u>marlina@nenglobal.org</u>	
institute Head	NEN, SED Director
besignation: Directory	Name: Asgar Ahmed
inter 36/04/2026	Designation: Director SED, NEN
DIRECTOR	Date: 01-04-2016
State of Science & Technology	12
Rau, HIDORE (M.P.)	
Rau, INDORE (M.P.)	
Rau, INDORE (MP)	
Rau, HOORE (MP)	
Rau Odore (NP)	

ind

#### Figure 27 MoU with NEN

**Innovation**: In TECH FEST, project/ Design contest in the campus. It is a platform for students to showcase their inherent creative talent and ideas applied on theoretical concepts. Students are also encouraged to participate in poster presentation, presenting/ publishing papers, attending conferences etc.



Figure 28 Innovation in 3D Printer

**Research:** Research aptitude of students is kindled right from the first year of graduation and also by encouraging students for course relevant in-house projects and final semester projects and guiding in preparing and presenting technical papers in seminars and conferences.

### **CITY DIGEST**

### IIST team bags 'Pride of Indore' award in BAJA '16

Indore: Team Vijayrath from IIST won 'Pride of Indore' award and a cash prize of Rs 1 lakh in BAJASAE India 2016, which was held from February 17 to 21. The competition consisted of technical inspection, statics event, dynamic events and 4-hour long endurance race Day-to-day activities and tests which the team cleared included weight check, engine check, completing technical inspection, brake test, acceleration test, hill climb test, manoeuvrability test, suspension design presentation, cost report and presentation, sales presentation and endurance race.



IIST team wins Pride of Indore Award in BAJA 2016

Figure 29 Pride of Indore Award

To enhance innovation and research aptitude among students Conference, workshop, Seminars, Guest Lectures, Industrial Visits and Implant training are organized on regular basis.

### Collaborations

### IIT Delhi Virtual Lab

IIST is the nodal center for virtual lab. Virtual Labs is a project initiated by the Ministry of Human Resource Development, Government of India, under the National Mission on Education through Information and Communication Technology. The project aims to provide remote-access to Laboratories in various disciplines of science and engineering for students at all levels from under-graduate to research. It also intends to develop a complete Learning Management System where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation. There is also a component wherein costly equipment and resources are shared, that are otherwise available to only a limited number of users due to constraints on time and geographical distances. Seven IIT's (Delhi, Bombay, Kanpur, Kharagpur, Madras, Roorkee and Guwahati), IIIT Hyderabad, Amrita University, Dayalbagh University, NIT Karnataka, and College of Engineering, Pune, are the institutions participating in the project. The Project intends to cover physical sciences, chemical science and engineering, electrical engineering like electronics and communications, computer science and engineering, electrical engineering, mechanical engineering, chemical engineering, biotechnology engineering and civil engineering.

### IIT Mumbai E-Yantra " Robotics Lab"

An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded systems and Robotics. Also, helps in better performance at Robotics competitions such as the e-Yantra Robotics Competition with trainings done at IIST campus.

### > IIT Madras Quality Enhancement in Engineering Education (QEEE)

QEEE program uses real time and synchronous technology to allow for an integration of superior external scholastic inputs into current pedagogical practices. QEEE has got Live Classes wherein IIT faculty delivers live lecture classes to participating colleges. The schedule of lectures is sent to colleges and notifications are provided before start of each session. It also includes Course pack of supplement study material with lecture notes, live class videos, discussion forums, and assessment and evaluation tools to serve as a reference material for QEEE courses. Live Labs are conducted to provide virtual hands-on experience to students on experiments undertaken remotely. It creates an opportunity to work on a real lab experiment tailored to suit their syllabus and curriculum. Bridge Programs are administered to bridge the gap between the initial skills of individuals and what they need to enter and succeed in post secondary education and career-path employment.

### > IIT Mumbai Spoken Tutorial

The Spoken Tutorial project is an initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India. Objective is to pass on the knowledge of technology and free and open source software (FOSS) to the millions in our countrymen who lack opportunities and/or access to learn any software.

### > IIST tie up with Princeton Review, USA

IIST has tied up with The Princeton Review, USA for hands on training of students for Higher Studies in foreign countries. The objectives of the MoU are to encourage the bright students of IIST to pursue Post Graduation aboard. Also, it aims to promote training activities for the IIST students. IIST &The Princeton Review will conduct seminars on current trends & developments in the area of Higher Education.

### **EMC<sup>2</sup>** Center for Academic Excellence

IIST is the academic partner of EMC<sup>2</sup> Academic Alliance program for their training programs. EMC<sup>2</sup> Academic Alliance program, collaboration with colleges and universities worldwide, conducts curriculum-based education on technology topics such as virtualization, cloud computing, big data analytics, and information storage and management. The global program is geared towards arming students with the knowledge necessary to differentiate themselves in the job market and improve their competitive advantage. EMC<sup>2</sup> Corporation is an American multinational corporation headquartered in Massachusetts, United States. EMC<sup>2</sup> sells data storage, information security, virtualization, analytics, cloud computing and other products and services that enable businesses to store, manage, protect, and analyze data.

### > Visual Paradigm, Hong Kong Association

We are now the academic partner of Visual Paradigm, Hong Kong. Under this agreement, we can download and use all the software modeling and software design tools free of cost. IIST is the very first institute in Indore and among very few in India to have this collaboration. Visual Paradigm's software has been adopted by many organizations in the world, including Fortune 500 companies. A lab is set up to teach software modeling using Visual Paradigm software. Faculties

are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide.

### EC Council Academia, USA

The association aims to deliver information and security skills to improve career and economic opportunities. The program offered at IIST is Certified Ethical Hacker (for students of IT, CS & EC), it incorporates a 40 hour training module at IIST. IIST is the only training partner for the program in Indore.

### > IBM Academic Initiative

Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide. Extensive expertise, teaching assets, and community resources to develop world-class curricula. No-charge access to IBM software, hardware, technology, and tools. Extended Bluemix-trial access for qualifying courses through the Academic Initiative for Cloud offer. Skill-building opportunities ranging from IBM and ecosystem events to student competitions. The Academic Initiative offers a wide range of professionally developed course ware to help teach students using IBM and open-source products and technologies. This course ware listing is organized by teaching topics that align with academic curricula. An IBM Academic Initiative lab is started to handle and implement IBM AI program.

### NASSCOM Global Business Foundation Skills (GBFS) & Foundation Skills in IT (FSIT) courses

It improves the Industry readiness of students who want to start a career in BPM companies. The program is of 160 hour duration & delivered over 20 -24 weeks. NASSCOM has recognized IIST as NASSCOM training center in Indore.

### > BSNL Tie-up

Bharat Sanchar Nigam Ltd. (BSNL) and IIST signed a Memorandum of Understanding for providing vocational training to IIST engineering students. As per MoU, BSNL CTTC will conduct seminars on emerging technology at IIST. BSNL will also provide technical support to student for project work. Trainees will visit the telephone exchange and transmission centre. Training happens at BSNL center (50 - 150 hours schedule) & is certified training from BSNL. This improves importance of academic program and employability of student.

## 2.6.5 How does the institution collect and analyzed at on student performance and learning outcomes and use it for planning and overcoming barriers of learning?

**Collection of data:** Students performance and learning outcomes (both internal and external teaching-learning and evaluation activities are collected from source level through faculty members and are recorded. Attendance will be recorded in ERP system of the institute.

The institution makes use of direct and indirect assessment tools to collect and analyze data on student learning outcomes.

The alumni surveys and employer surveys are used as performance indicators of advancement in

professional career, attainment of higher education, ability to excel in their respective domains, and interpersonal skills.

Institution has specified procedure to collect and analyze data on student learning outcome; the following points are adopted by the institute in this context:

- Continuous evaluation comprising of class tests, sessional tests, pre-university test, assignments and quiz.
- Mentorship classes, class tests, viva in the lab.
- ➢ Projects.
- ➢ Internal and External examination.
- Seminar and project presentation by students.

**Analysis of data:** At faculty/ HOD/ Dean / Director level for as attendance data/ sessional / university marks other achievements are analyzed/ reviewed for necessary actions.

### **Corrective action:**

- > Every Staff member is allotted with 15-20 Students for counseling over the entire semester.
- By showing MST/ PUT answer books to students to make them understand their relative strengths and Weaknesses
- For slow learners, special classes are conducted based on the performance in the class test, internal assessment and University results.
- > Remedial classes for the subject where the number of failures are more.
- Special pre-placement training classes are conducted before annual campus placement season.
- At the mid of the semester, feedback is collected for the faculty members of each subject and it helps in rectifying the weakness in the teaching-learning process, in the subsequent offering of the particular course.
- At the end of the semester, feedback is collected on the attainment of course outcomes and it helps in rectifying the weakness in the teaching-learning process, in the subsequent offering of the particular course.
- Feedback on the attainment of Program Outcomes collected from the graduate (exit feedback) also helps in identifying the short comings and taking steps to rectify them for the subsequent batch of students.
- Alumni Meeting is conducted by the institution to get the feedback from the passed out students.

- On the whole such data are analyzed, discussed for planning additional efforts/ introduction of corrective measures for better outcome.
- If there is any issue, counseling has been done by HOD and corrective actions/ measures have been taken in that regard.

### 2.6.6 How does the institution monitor and ensure the achievement of learning outcomes?

Meetings are conducted on a regular basis involving Director, Advisor, Registrar, Dean, Heads of Departments, and Placement Officer to formulate strategies for achievement of learning outcomes by the students.

### The capability level of a student is generally assessed based on the following parameters:

- > Marks scored by him/her in internal as well external examinations.
- > Performance in aptitude tests, mock interviews and group discussions.

### Monitoring of learning outcomes are done at following levels:

- Class level for course outcome.
- Departmental level for program outcome.
- > College level for program outcome, consolidating various programs.
- Stakeholder level.

Class coordinator and subject faculty plays an important role in overall achievement of outcome by the student through continuous assessment through the modular form of the syllabus.

The second level of monitoring is at HOD level through the review of stated outcomes of the programme and giving the feed back to the concerned faculty for better academic results. Further it is conveyed to the students through motivational briefing/ talks.

Other, stakeholder like alumni, Industry also provides feedback to the institute/department level to analyze the learning outcomes of each programme and in turn help in improving the quality of the education.

The institution is trying its best to see that the students attain all graduate attributes. The results are visible through the alumnus occupying top positions in the society.

DIRECT MEASURES					
S.No	Assessment Tools	Evaluation Methods			
1.	<b>Internal Test</b>	• Periodical tests are conducted as per schedule.			
		Group assignments.			
2.	Assignment	• Presentations.			
		• Evaluation by the faculty member.			

#### Table 24 Direct Assessment Tools

3.	Laboratory Exercises	<ul> <li>Pre-viva questions.</li> <li>Post-viva questions.</li> <li>Laboratory experiments beyond the content of syllabus</li> </ul>
4.	Project	<ul> <li>Students in a group of 2 or 3 apply their.</li> <li>Students in a group of 2 or 3 apply their.</li> <li>Theoretical knowledge to solve the problems.</li> <li>In the final year, as per the curriculum the studentsare encouraged to select and solve real world problems.</li> <li>The faculty members are allotted as project guide to help them to proceed in the right direction.</li> <li>The progress is monitored through continuous reviews and viva-voce.</li> </ul>
5.	End Semester Examination	<ul> <li>The end semester examination is conducted with the question papers set by the University.</li> <li>Exam results are analyzed by the faculty members and reviewed by the HOD.</li> </ul>

#### Table 25 Indirect Assessment Tools

	INDIRECT MEASURES					
S. No	<b>Assessment Tools</b>	Evaluation Methods				
1.	<ul> <li>Alumni feedback forms are used for collecting the feedback from the students at the time of completion the programme.</li> <li>The feedback is analyzed and the suggestions are into consideration.</li> </ul>					
2.	Employer	• Feedback is received from the employers to understand the performance of our graduates.				
3.	<ul> <li>Students progressing to higher studies higher studies</li> <li>Students are encouraged to pursue higher studies and necessary information are provided to them.</li> <li>The details of students opting for higher studies are maintained in the department.</li> </ul>					
4.	Placement	<ul> <li>An exclusive Career Development and Placement Division are functioning in the institution.</li> <li>The Institution maintains an excellent placement record.</li> <li>85% of the students are placed incore companies, product development, service-based companies etc.</li> </ul>				

# 2.6.7 Does the institution and individual teachers use assessment / evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples.

The institution and an individual faculty member do use assessment/ evaluation outcome as an indicator for evaluating student performance and achievement of learning objectives. Evaluation includes marks in Midsem Examination, Class test, Tutorial/ Assignment, Quiz and Attendance Percentage.

Some of the details of process being followed by the institute/ department/ Faculty, may be E.g.

After a month teaching i.e. around 15- 20 lectures taken, the syllabus/ course coverage is assessed by the HOD/ Faculty concerned. Further it is compared with schedule of lectures for further necessary actions.

Class performance after internal and the overall class performance is monitored subject wise. Slow learners/ weak performances are identified for remedial class.

Attendance % of student is renewed by HOD and students lagging behind are identifies. Reason for poor performance is ascertained through in- person interaction with students sometimes with parents for improvement in rest of the semester classes and also letter was dispatch to the parents to inform the status of weak Attendance.

In case, generally poor performance by the class for a particular subject, the degree of difficulty in question paper, student feedback about quality of teaching by the concerned faculty etc are renewed for necessary correct actions.

Students are assessed on the basis of their performance in the internal examinations and classroom/lab activity. Student's performances in PDP classes are also taken into consideration for assessing the performance. These aspects are discussed in the Class Representatives meetings conducted by the Head of the Department which includes the concerned faculty and Class Coordinator

The alumni feedback is a valuable source of evaluation and the alumni feedbacks have been very encouraging and serve as a trigger for innovations in teaching –learning exercise.

After completion of every internal assessment test the course outcome (CO) is checked with the PO attainment and analyzed by the head of various departments and the same is recorded in the theory course files.

Any other relevant information regarding teaching - Learning and Evaluation which the college would like to include.

# CRITERION III RESEARCH, CONSULTANCY AND EXTENSION

### CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

### **3.1 Promotion of Research**

## **3.1.1** Does the institution have recognized research center/s of the affiliating University or any other agency/organization?

No, the institution is not a research center of the affiliating University, but we are working to improve the research environment in the institute. IIST is planning to establish research center soon for the various department.

# **3.1.2** Does the Institution have a research committee to monitor and address the issues of research? If so, what is its composition? Mention a few recommendations made by the committee for implementation and their impact.

Yes. The College has a Research Committee namely Research and Development Cell to promote Research Activities encouraging faculty members to publish papers in reputed journals and submitting proposals. It has been constituted to facilitate and monitor research projects and their related activities.

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. A. P. Singh	Dr. A. P. Singh Associate Professor, Mechanical Engineering	
2.	Dr. Namarta Koushal Associate Professor, Engineering Science & Humanities		Member
3.	Mr. Rakesh Thakur Associate Professor, Mechanical Engineering		Member
4.	Mr. K. Anil Kumar	Associate Professor, Computer Science & Engineering	Member
5.	Mr. Virendra Singh	Associate Professor, Computer Science & Engineering	Member
6.	Mr. Utkash Jain	HOD, Civil Engineering	Member
7.	Ms. Samatha Singh Chemical Engineering		Member
8.	Mr. Akhilesh Chauhan	Asst. Professor, Information Technology	Member

#### Table 26 Research Committee

### **Recommendations of the Research committee are to:**

- > Motivate the entire faculty to register for Ph.D and carry on active research work.
- Encouraging faculty by providing cash awards and to follow differential encouragement i.e., higher reward for the papers published in journals of high impact factor / citation index. Encourage and support the faculty in applying for research projects under various Government funding agencies like AICTE, DST, CSIR, etc.

- Encourage all the faculty and students to attend more number of Symposia /Seminars /Conferences /Workshops/FDPs.
- Recommend the institution to allot fund for Faculty/student research activities.
- > To monitor the funding from the college budget for promotion of research activities.
- > To provide adequate infrastructure and technological support for research activities.
- Motivate research interest in emerging research areas and create awareness about the latest technological developments.
- Create awareness among the faculty & the student community on the research culture and latest technological developments and provide knowledge about research methodologies.

### **Impact of the Research committee Efforts:**

- The number of publications by the faculty member in national/international journals and conferences are on the rise.
- Participation of students in intra-college seminars/conferences/technical fests has shown improvement.
- > Culture of organizing workshop, seminar and conferences by departments is peaking up.
- Duty leave with partial registration fee will be given to faculty members to participate and present research papers in national or International conferences.

**3.1.3** What are the measures taken by the institution to facilitate smooth progress and implementation of research schemes/ projects?

- autonomy to the principal investigator
- timely availability or release of resources
- adequate infrastructure and human resources
- time-off, reduced teaching load, special leave etc. to teachers
- support in terms of technology and information needs
- facilitate timely auditing and submission of utilization certificate to the funding authorities
- any other

### 1. Autonomy to the principal investigator

After approving the project by the research committee, autonomy will be given to the principal investigator. The students/researchers have full freedom to suggest the topic as research oriented projects. Infrastructural facilities are provided for the researcher without time limit. Faculty members doing research are given the facility of duty leave for attending the workshops / seminars relevant to their research associated works.

### 2. Timely availability or release of resources

The Institute allocates budget for R & D work for each department every year and provides all facilities and releases fund on time for the sanctioned projects.

### 3. Adequate infrastructure and human resources

All the departments have established well-equipped laboratories with wired internet facility. This includes adequate software such MATLAB, IBM Rational Rose with necessary computing facilities like HP and HCL work station class machines, three IBM Servers enclosed within the AC server rack, Thirty MACMINI IOS Systems are established in a Lab for skilled development and training. These facilities are established under the Computer Science and Engineering Department.

The research lab established in the Electronics & the Communication department is equipped with computer facility, including Microprocessor Kits, latest software and very good internet connectivity. FEKO Software available in the departmental antenna lab which is good simulation software for design antenna.

Different bridge circuit panels for testing purpose, converter & inverter modules are available for research work.

In Mechanical Department, CNC Machine Centre, and relevant software like Solid Works are available for research activities.

MBA department has library facilities with relevant E –journals and computer lab facilities with the required software SPSS- 16, 0 to assist research work.

All the departments have separate department library and the copies of all project works/seminar/mini project reports, etc., done in the previous semesters are kept in the department library for ready reference.

Central library is equipped with up-to-date relevant print and online journals. Faculties from the departments guide the students in all the aspects of their project work. Necessary infrastructure is available with the department.

S. No.	License Software Name	Department
1	Microsoft Campus Agreement (All Microsoft Software's)	CS/IT/ SGI Campus
2	MSDN Academic Allianze	CS/IT/ SGI Campus
3	Windows 7 Base License	SGI Campus
4	Microsoft Windows XP	SGI Campus
5	Microsoft Windows 2003 Enterprise Server / Standard Server	SGI Campus
6	Turbo C++ Suite	CS/IT
7	Oracle 9i Database	CS/IT
8	Oracle Application Server 10 G	CS/IT
9	ANSI C	CS/IT
10	SCO Unix	CS/IT
11	Rockwell Automation 2007	EC

#### Table 27 List of License Software Available in the Campus

12	RX Logic	EC
13	KEIL Development Tool	EC
14	Xilinx (7.1 i)	EC
15	Modelsim (5.5 e)	EC
16	Target 3001	EC
17	ECG Simulator	EC
18	Microwind	EC
19	NI LAB View	EC
20	MATLAB 2010B	EC
21	CADFEKO	EC
22	SCADA Software	EC
23	Circuit Design, Simulation & PCB Design Software	EC
24	Tinapro	EC
25	ETNL Language Lab	First Year
26	NX6	ME
27	Solid Edge	ME
28	Ansys 12.1	ME
29	AutoCAD 2016	ME
30	CHEMCAD	Chemical
31	IBM SPSS	MBA
32	Quick heal Admin Console Antivirus	SGI Campus

### 4. Time-off, reduced teaching load, duty leave etc. for teachers

The Institution reduces teaching workload, sanctions academic leave for attending workshops/seminars relevant to their research projects and associated works. Duty leave & TA is given to faculty members to participate and present research papers in national / international conferences.

### 5. Support in terms of technology and information needs

PG and UG students are encouraged to do their project work at esteemed research promoting institutes.

- The institute encourages the students and faculty to utilize the laboratories, central library, digital library, computer center and software for carrying out their research projects and also provides facility for obtaining the necessary information and technology from external sources.
- > The college provides copies of published journals, e journals to strengthen the library.
- Technical talk & interactions by eminent academicians and industrialists are arranged to create awareness and interest among the students and faculty interested in research.

## 6. Facilitate timely auditing and submission of utilization certificate to the funding authorities

College arranges auditing at the end of each semester/ academic year.

## **3.1.4** What are the efforts made by the institution in developing scientific temper and research culture and aptitude among students?

- To develop scientific temper and attitude, the institute organizes industrial visits for students of all the departments to interact with various research scholars. All the departments of the college also organize sponsored seminars to create curiosity among the students as well as to get a chance to meet with the distinguished persons of the related area. The staff members are assigned to promote research and extension activities.
- The college organizes seminar, workshop and national conferences a yearly in order to develop scientific temper among students.
- A technical competition is organized every year for students in order to exhibit their creative ideas. The best ideas are processed further.
- > Inculcating research in the mind of the students is the main motive of the institution.
- The institute motivates the students for higher education; the staff members are always on their toes when it comes to encouraging the students to join higher education for research.
- > To understand the basic needs of the present trend and to develop scientific temper and aptitude, the institution organizes industrial visits and paper presentation competition for the Second, Third & Forth year students of all departments to interact with the industry to enable them to carry out a practical exposure and gain the practical knowledge of their respective field.
- The students are encouraged to participate in different tech-fest, Science fair and Technical paper competitions within and outside the institute.
- > The students have published their papers in international and national journals. Some students have won prizes in various technical competitions at national level.
- > Best projects of final year students are converted into papers for publication.
- In order to inculcate the research habit among MBA students, it has been made mandatory to carryout major research project during the IV semester.

## 3.1.5 Give details of the faculty involvement in active research (Guiding student research, leading Research Projects, engaged in individual/collaborative research activity, etc.

### **Guiding student research**

The faculty members are actively involved in guiding student projects. The papers are published by the students and faculty members of various departments in national & international conferences/ seminars and journals.

### **Leading Research Projects**

Some faculty members from all the departments submitted research proposals as principal investigators to National funding agencies for grants which are awaited.

### Engaged in individual/collaborative research activity

The faculty members are actively involved in pursuing research work and publish their findings in journals. All the professors are engaged in active research.

# **3.1.6** Give details of workshops/ training programmes/ sensitization programmes conducted/organized by the institution with focus on capacity building in terms of research and imbibing research culture among the staff and students.

Following list provides details of Conferences/Seminars, FDPs and other activities conducted/ organized by the institution with focus on capacity building in terms of research and imbibing research culture among the staff and students:

Activities / Year	2012-13	2013-14	2014-15	2015-16	Total
Seminar / Expert Lecture / Conference	14	17	22	24	67
Workshop / FDP	7	8	11	12	38
Total	21	25	33	36	-

### Table 28 Details of Conferences/ Seminars organized

S. No.	Resources person	Торіс	Duration / date	Department
1.	Sh. Vinay Verma Genarl Manager, Sun pharmaceutical industries ltd. Dewas, M.P	Expert talk on "Opportunities & challenges in pharmaceutical industries : An overview"	11:00 a.m- 13:00 p.m. 5 <sup>th</sup> May,16	Chemical Engineering
2.	Dr. S.P. Chourasia, Professor, Deptt. Of Chemical Engineering, MNIT, Jaipur (Rajasthan)	Expert lecture on "Bioethanol production from agricultural waste"	11:00 a.m- 13:00 p.m. 4 <sup>th</sup> Feb,16	Chemical Engineering
3.	Dr.V.K.Shrivastava,Ex DeanR &D, IIT Delhi	Expert lecture on "Environmental protection management"	10:30a.m 12:30p.m 25 <sup>th</sup> Nov,2014	Chemical Engineering
4.	Dr.L.M.Kukreja, Sr. Scientist, RRCAT, Indore (M.P)	Expert lecture on "Emerging trends in nanotechnology"	10:30a.m 12:30p.m 25 <sup>th</sup> July,2014	Chemical Engineering
5.	Mr. Pradyumna Sharma Territory technical services manager, Ultra tech cement, Aditya Birla Group	Expert talk on "Modern trends in cement manufacturing industries"	10:30a.m. onwards 11 <sup>th</sup> Feb 2013	Chemical Engineering

6.	Mr. S.P.Gautam, Former Chairman, Central Pollution Control Board	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
7.	Dr. V.P. Thergaonkar, Ex Scientist NEERI, Nagpur, Managing Director, Enviro Techno Consult Private Ltd, Nagpur	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
8.	Mr. Dharmendra M. Ramteke, Sr. Manager (HRD), Rashtriya Chemicals & Fertilizer, Mumbai	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
9.	Dr. Devendra Deshmukh, Department of Mechanical Engineering, IIT Indore	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
10.	Mr. B.D.Dalwadi, Chief Executive Officer, Bharuch Enviro Infrastructure Ltd., (Waste management company) Ankleshwar, Gujarat	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
11.	Mr. Sanjay Kapoor, Tata International Ltd., Solid waste management in tanneries, Dewas	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
12.	Mrs. Radha Pandey, M.P. Waste management project: An integrated approach in hazardous material/waste management	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
13.	Dr. S. Solanki Professor IIT, Bombay	Non Conventional Energy Resources	02/11/2012	Civil Department
14.	Dr. A.N. Patel Processor S.G.S.I.T.S.	Geo-Tech Engg.	08/03/2013	Civil Department
15.	Dr. R.K. Shriwastava Professor S.G.S.I.T.S.	Water Resources Engg	2nd August 2013	Civil Department
16.	Er. Ketan Jain Structure Engineer	Designing of multistory building using STADD PRO Software.	24th August 2013	Civil Department
17.	Dr. Abhay Gupta Principal Consultant to ESCDM Pvt. Ltd.	The Engineers future through Civil engineering corporate in India	20th Sep-13	Civil Department
18.	Mrs. Vandana Tare Professor S.G.S.I.T.S.	Expectation of corporate from fresh Engineering Graduates.	29th March 2014	Civil Department
19.	S. B. Sarwate Consultant	Demolition of High Rise Building in busy areas by explosion	7thAugust 2014	Civil Department
20.	Ar. Siddharth Inani Director (Kalagraha Consultant )	Smart city	12th March 216	Civil Department

21.	Mr. Sandip Rashinkar	Mural the Elevational Magic	12th March	Civil
	Assistant Professor (IIST)		216	Department
22.	Mr. Gaurav Gupta (Intel, Banglore)	Internet Of Things	15/6/15	IT department
23.	Mr. K.K Rathi, Microsoft technology ivengelist & IT consltant , gatwing pvt ltd. Ahmedabad	Microsoft Azure	26/11	IT department
24.	Rupesh Patel, senior trainer (Appin Knowledge, indore.)	Ethical Hacking and Security	10/04/2014	IT department
25.	Sumit Shukla, Trainer Tevesa Infotech, Delhi	Ethical Hacking and Security	5/03/2014	IT department
26.	Vikrant madhav shinde, Tecno commercial manager, apple, IOS University Lab	IOS University Lab	26-06/2015	IT department
27.	Dr. Sandhya Chintala, Global business foundation skills, FSIT (foundation skill in IT)	NAMCOM	30-07-2015	IT department
28.	Arindham paul, Director Startrite Engineer's pvt. Ltd, hydrabad	EC-Council, ethical hacking	30/05/2014	IT department
29.	Mr. Aditya Rai, CEO of study Metro, Indore	Foreign Education	12/03/2016	IT department
30.	Mr. Pankaj Jain, Senior Project Developer, Infosys, benglore	Future of IT Industry	17/04/2015	IT department
31.	Mr. Ujjwal Bhargava, Ubites technologies, indore	Latest Trend on going in IT space	07/08/2015	IT department
32.	Ms. Kriti Namdev, senior quality assurance analyst, waste management logistics, Indore	Software Testing	27/10/2015	IT department
33.	Mr. Kamlesh Suryavanshi, Sky Flyers	Aero-modeling	18/09/2015	ME Department
34.	Mr. Hamid, Sagar automobile	Engine assembly	8/9/2015	ME Department
35.	Mr. V P Sharma, Dy. Director, Ministry of Micro, Small and Medium Enterprises	ENTREPRENEUR DEVELOPMENT CELL	27/07/15	ME Department
36.	Mr.Sumeet Sharma, IICAE,Indore	Hypermesh	22/09/2014	ME Department
37.	Mr. Shashank Chourey India infotech Ltd. (Digitral Marketing & search Engine optimization)	Seminar on Interaction with Alumni Entrepreneur	11-04-15	ME Department
38.	Mr.Faisal, Mozilla -Community Head- Bhopal	Mozilla-Moz Connect	20 March 2015	CS Department
39.	Mr.Pankaj Jain, Infosys Pvt. Ltd.	IT expert and its opportunity	17 April 2015	CS Department

40.	Mr. Varun Kapoor, PRTS - IG -Police Dept. MP	Cyber Security	22 April 2015	CS Department
41.	Mr. V. Sudarshan, Head (Delivery Dept) Ideavate	Sudarshan, Head ( Delivery Dept) Ideavate IBM Academic Initiative Lab 22		CS Department
42.	Mr Abhishel Kapoor, TCS Pvt. Ltd.	FDP on the topics-ERP, Access Control, Single Signon	6 June 2015	CS Department
43.	Mr. Gaurav Gupta, Sr. Project Manager, Intel, Bangalore	Internet of Things	15 June 2015	CS Department
44.	Mr.Anil Pandey and Mr.K Pradeep, MD, Prodyovidhi	Intellectual Property Rights and patenting	13 July 2015	CS Department
45.	Mr.Gourav, TCS PVT. LTD	TCS Orientation	20 Aug 2015	CS Department
46.	Mr.Shafique Patni Mozilla Reps	Developers Boot Camp (Mozilla)	6 Sept 2014	CS Department
47.	Mr. Jaffar Appin Technology	Ethical Hacking Seminar	April 2013	CS Department
48.	Mr. V. Sudarshan. Head (Delivery Deptt) Ideavate	First year Induction program	August 2013	CS Department
49.	Mr. James Malasmani TCS Pvt. Ltd	Campus Placement Overview	27-08-2013	CS Department
50.	Mr.Akram Khan K.A.S.A	Seminar On K.A.S.A Test	7-10-2013	CS Department
51.	Dr. Ashesh Tiwari Institute of Engineering & Technology and Honorary Secretary IEI, ILC.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
52.	Dr. P.K. Chande Ex Group Director, Truba Group, Ex Director MNIT.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
53.	Dr. K.A. Subramanyam Professor, I. I. T. Delhi	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies" CS Department	22-23 Nov 2013	CS Department
54.	Dr. M.P.S. Chawla, SGSITS, Indore	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
55.	Dr. Santhosh sahu Professor, I.I.T. Indore	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
56.	Mr Anil Pandey & K Pradeep Head, Tushar Surti Gridlogics Technologies Pvt. Ltd, Managing Director Prodyovidhi	Intellectual Property Rights in Electronics, IT & ICT	13th July 2015	EC Department
57.	Shri V P Sharma Deputy Director MSME	Entrepreneurship Development Cell	28th July 2015	EC

				Department
58.	Ms. Kriti Namdeo Senior quality assurance analyst in waste management logistics	software testing	27-10-15	EC Department
59.	Mr Veeresh Nayak Scientific Officer BARC Mumbai	Introduction of attenuator	16/10/14	EC Department
60.	Mr. Deepak Pandey i3indya <sup>™</sup> Technologies Pvt. Ltd	Introduction of Propellor Clock System	30/01/15	EC Department
61.	Dr. Krishna Lala, Sr. Project Manager IIT Bombay	Robotics	10/2/2015	EC Department
62.	Mr. Surendra Yadav Scientific Officer RRCAT, Indore	MATLAB & Simulink	29/11/2013	EC Department
63.	Dr. Vaibhav Neema IET DAVV, Indore	CMOS VLSI Design	25/3/14	EC Department
64.	Mr. P.S.Rathore Doordarshan Indore	Digital Earth Station & DTH Services	23/08/12	EC Department
65.	Dr. Ram Bilas Pachori IIT, Indore	Signal Processing (Wavelet Transform)	13/03/13	EC Department
66.	Dr. Vaibhav Neema IET DAVV, Indore	VLSI Design	12/4/2013	EC Department
67.	Professor Apoorv Gaiwak , SGSITS, Indore	SONET & SDH (Optical Network)	21/05/12	EC Department

### Table 29 Details of the FDPs/Workshops organized

S. No.	Date	Workshops / Training	Organized by / Resource Person	Department
1.	18th to 19th Sep 2015	Workshop on Robotics	VBM Technologies in association with IIT Delhi	EC Department
2.	09/09/2015 to 10/09/2015	Workshop on Virtual Lab	IIT Delhi	EC Department
3.	10-10-2015	Project Exhibition	IIST Robotics club members	EC Department
4.	17/04/2015 to 18/04/2015	Workshop on Embedded system	eYantra IIT Bombay	EC Department
5.	26/3/15 & 27/3/15	Workshop on Virtual Lab	IIT Delhi	EC Department
6.	30/01/2015	iPDC (Propeller Display Challenge) workshop	Techkriti 2015, IIT Kanpur with i3indya Technologies	EC Department
7.	11-12 Sep 2014	Workshop on Embedded System	Indeyes Infotech Pvt. Ltd.	EC Department

8.	29-30 Oct 2014	Workshop on Introduction of Embedded System	IIST Indore under ISTE Chapter	EC Department
9.	27-28 Sep 2013	National Robotics Championship & workshop	ARK Techno solutions in association with Helios, IIT – Bombay	EC Department
10.	20-21 Sep 2013	Workshop on EM simulations and Antenna Designs using CAD FEKO tool	Safew Tech System	EC Department
11.	2014	Workshop on Autonomous robotics (line follower, edge detection, grid solving)	IIST Indore under ISTE Chapter	EC Department
12.	31/08/2012 to 3/09/2012	National Robotics Championship & workshop	Novel Technologies	EC Department
13.	26-27-28 Dec 2012	Workshop on Fun with MATLAB toolbox	ITIE Knowledge Solution Bangalore	EC Department
14.	14-19 Jan 2013	Workshop on Advance Controller	Kaim softech Bangalore	EC Department
15.	16 June 2013	Sponsored IEEE Sponsored National Level conference on "Recent Advances in Mechtronics and Computing Technology & Management" (RAMCTM-2013)	RAMCTM Teams	EC Department
16.	29-30 October2015	National Workshop On "Breakthrough Energy Technologies & Challenges for Sustainable Development	<ol> <li>Mr. Sudesh Sharma, Addl. Chief Engg. CP &amp; CC Directorate, NPCIL Mumbai</li> <li>Dr. S Suresh, Prof. Deptt. Of Chemical Engineering MANIT Bhopal</li> <li>Mr. Ankit Gupta , Consultant at Power Trading Corporation India Ltd.</li> <li>Prof. D.K.Sharma, Centre for energy studies, IIT Delhi</li> <li>Mr. Manideep Saxena, Senior</li> <li>Manager KWATT Solution Pvt. Ltd.</li> <li>Dr. C. Mukharjee, Scientist R.R.Centre for Advanced Technology, Indore</li> </ol>	Chemical Engineering
17.	12-13 , Sep,2014	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	Sponsored by S.E.R.B., Department of Science & Technology, Govt. of India	Chemical Engineering
18.	12th March 216	Various Field Layout in construction	Project Engineer (Agrawal Construction Ltd.)	Civil Department
19.	27-28 Feb -2013	Mr. Jitu and Ms. Bindu, Technical Team, Flexus Infotech	Workshop on ANDROID	CS Department
20.	18-19 Oct, 2013	TCS Team	Two Days Technical Workshop for TCS	CS Department
21.	18/9/15	Mr. Aditya	Hadoop Platform & Training	IT department

22.	19/9/15	Mr.Hemant Vishwakarma	Android Workshop	IT department
23.	31/10/15	Mr. Vikas naidu	Unix Workshop	IT department
24.	18/04/2014	Assain Shekh, HR- Manager Universal Infotech, Indore	HTML	IT department
25.	6-7/3/14	Sagar wadhwani	Workshop by google group	IT department
26.	26/2/15	Sagar wadhwani	Workshop by google group	IT department
27.	31/03/2016	Mr. Dinesh Kumar (Mentor National Institute of Entrepreneurship small business development Noida)	one day Workshop on Empowerment of Entrepreneurship NIESBUD	ME Department
28.	18/09/2015	Mr. Kamlesh Suryavanshi, Flyer India	Workshop on Aero-modeling	ME Department
29.	09-08-15	Mr. Hamid from Sagar Automobile Indore	Workshop on Engine assembly	ME Department
30.	8/10/2014 to 30/10/2014	Mr. Deepak Modi Easy CAD Solutions Indore.	Training Programme on Auto CAD.	ME Department
31.	19/06/2014 to 03/07/2014	Mr Himanshu Singh	Workshop for vehicle dynamics	ME Department
32.	22/09/2014 to 30/10/2014	Mr.Sumeet Sharma IICAE Indore.	Workshop on Hypermesh.	ME Department
33.	23/09/2014 to 01/10/2014	Param Technology	Workshop on Cre o	ME Department
34.	16/04/2014 to 20/04/2014	Mr Himanshu Singh	Workshop for vehicle dynamics	ME Department
35.	06/02/2014 (20 Days)	Dr.Shuyog Maheshawari	Workshop on Pro-E	ME Department
36.	24/01/2014 to 25/01/2014	Mr Himanshu Singh	Workshop for vehicle dynamics	ME Department
37.	17/08/2013	Dr. B.V. Reddy University of Ontario,Canada	National Workshop on Advances in Thermodynamics and Energy system.	ME Department
38.	07-03-13	Dr. P.P.Chatraj Additional Director Natrip.	Cre-O workshop	ME Department





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workshop on solar energy

ng used across the world adopt solar energy for mit-ting harmful effects of bal warming. Prasanna mar presented a panoram-view of solar energy appli-tion starting from solar lis to solar towers.

Workshop on big data & hadoop and robotics

#### (IIST zonal Center for NLCC 2015-16, IIT Delhi)



Figure 30 Workshop, Seminar, and Conference

## Apart from these conferences/ seminars and FDPs, following are the other activities conducted by the institute:

S. No.	Name of the Programme	Description
1	Activities/ Events conducted by Departmental Society	All departments have established departmental technical societies which have been conducting various technical competitions at intercollegiate level. Students are encouraged to participate in various events such as fabrication of hardware projects in areas like robotics, instrumentation, communication engineering etc. To accomplish this, necessary support is provided in terms of components and guidance from the department.
2	Conduct of Guest Lectures by experts from Industry/Academia	All Departments conduct lectures delivered by experts from various industries, research organizations and from the field of academics. These guest lecturers improve the professional knowledge of students and faculty.
3	AICTE sponsored Program "Employability Enhancement Training Program(EETP) with BSNL	Employability Enhancement Training Program (EETP) for 3rd Year B.E. (ECE) students are being conducted under AICTE – BSNL MoU. The objective of this program is to provide competency based employability enhancement skills and hands-on skill training through BSNL Training Centers. Five students of 3rd year B.E. (ECE) are presently undergoing this program. It is being conducted on every Monday by Bharat Sanchar Nigam Ltd. At Advance Level Telecom Training Center (ALTTC), Indore. This programme commenced w.e.f 15th July, 2015 for duration of 18 months.
4	Conduct of PDP classes in the campus	Academic excellence alone is not enough and cannot guarantee a good career. Certain personality attributes and soft skills are essential not only to get a good job placement but also to be able to contribute and grow in an

		organization. Taking cognizance of this, the college emphasizes all round development through a range of extracurricular activities as well as organizing and conducting Personality Development Program. This programme spanning over 30 hours is conducted on once / twice in a week and includes training in communication skills, group discussion, interpersonal skills and interviews. This programme helps in the overall personality development of students. The whole exercise is intended to increase the employability of students. Amidst an inspiring and invigorating environment, students undergo training that turns them into top notch professionals
5	Establishment of Virtual Labs	Virtual Lab is an initiative of Human Resource Development (MHRD) under the National mission on education through Information and Communication Technology (ICT). Objective of the virtual lab is providing remote access to labs in various disciplines of science and engineering. This would help the students in learning advanced concepts through remote experimentation. This will provide a complete learning management system where students can avail various tools for learning including additional web resources such as video lectures, animated demonstrations and self evaluation tests. For conducting the above listed programmes, various committees comprising of members from faculty and students are assigned.
б	Quality Enhancement in Engineering Education (QEEE)	QEEE program uses real time and synchronous technology to allow for an integration of superior external scholastic inputs into current pedagogical practices. QEEE has got Live Classes wherein IIT faculty delivers live lecture classes to participating colleges. The schedule of lectures is sent to colleges and notifications are provided before start of each session. It also includes Course pack of supplement study material with lecture notes, live class videos, discussion forums, and assessment and evaluation tools to serve as a reference material for QEEE courses. Live Labs are conducted to provide virtual hands-on experience to students on experiments undertaken remotely. It creates an opportunity to work on a real lab experiment tailored to suit their syllabus and curriculum. Bridge Programs are administered to bridge the gap between the initial skills of individuals and what they need to enter and succeed in post secondary education and career-path employment.
7	E-Yantra "Robotics Lab"	An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a

		practical outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded systems and Robotics. Also, helps in better performance at Robotics competitions such as the e-Yantra Robotics Competition with trainings done at IIST campus.
8	Spoken Tutorial	The Spoken Tutorial project is an initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India. Objective is to pass on the knowledge of technology and free and open source software (FOSS) to the millions in our countrymen who lack opportunities and/or access to learn any software.
9	EC Council Academia, USA	The association aims to deliver information and security skills to improve career and economic opportunities. The program offered at IIST is Certified Ethical Hacker (for students of IT, CS & EC), it incorporates a 40 hour training module at IIST. IIST is the only training partner for the program in Indore.
10	IBM Academic Initiative	Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide. Extensive expertise, teaching assets, and community resources to develop world-class curricula. No-charge access to IBM software, hardware, technology, and tools. Extended Bluemix-trial access for qualifying courses through the Academic Initiative for Cloud offer. Skill-building opportunities ranging from IBM and ecosystem events to student competitions. The Academic Initiative offers a wide range of professionally developed course ware to help teach students using IBM and open- source products and technologies. This course ware listing is organized by teaching topics that align with academic curricula. An IBM Academic Initiative lab is started to handle and implement IBM AI program .
11	NASSCOM Global Business Foundation Skills (GBFS) & Foundation Skills in IT (FSIT) courses	It improves the Industry readiness of students who want to start a career in BPM companies. The program is of 160 hour duration & delivered over 20 -24 weeks. NASSCOM has recognized IIST as NASSCOM training center in Indore.
12	Bharat Sanchar Nigam Ltd. (BSNL) tie up	Bharat Sanchar Nigam Ltd. (BSNL) and IIST signed a Memorandum of Understanding for providing vocational training to IIST engineering students. As per MoU, BSNL CTTC will conduct seminars on emerging technology at IIST. BSNL will also provide technical support to student for project work. Trainees will visit the telephone exchange and transmission centre. Training happens at

	BSNL center (50 – 150 hours schedule) & is certified
	training from BSNL. This improves importance of
	academic program and employability of student.

3.1.7 Provide details of prioritized research areas and the expertise available with the institution.

Following are the details (Department Wise) of prioritized research areas and the expertise available with the institution.

### **CSE Department**

S. No.	Name of faculty	Area of Research	Area of Interest
1	Deepak Vishwakarma	Computer network, N/W	MANET
		Security, MANET	
2	Ms. Chanchal Bansal	Data Mining	Data Mining
3	Mr. Ranjeet Osari	Info. Security	MANET
4	Mr. Pradeep Baniya	S/W Engg.	TOC, Compiler
5	Mr. Nitin Rathore	Req. Analysis Methodology	Cryptography and N/W
			Security
5	Mr. Chetan Sule	Data Mining	Comp. N/W
6	Mr. Siddharth Jain	S/W Engg.	Computer Graphics
7	Mr. Vishal Chandel	Cloud Comp., Mobile Cloud	Genetic Algorithms, Cloud
		Comp., Soft Comp.	Computing
8	Mr. K. Anil Kumar	Wireless sensor N/Ws,	MANET, Computer N/Ws
9	Mrs. Margi Patel	Comp. N/Ws	Comp. N/Ws
10	Mr. Anil Khandekar	S/W Engg.	S/W Engg.
11	Dr. Rajeev Vishwakarma	S/W Engg.	S/W Engg.
12	Mr. Bhupendra Ramani	.Net	TOC Compiler
13	Mr. T. S. Arora	Object Oriented	Data Structure
14	Mr. Rakesh Jain	Object Oriented	Algorithm Analysis
15	Ms. Neha Jain	Comp. N/Ws	Data Mining
16	Ms. Nidhi Nigam	N/W Security	Manet
17	Mrs. Lalita Bargadiya	Soft Computing	Soft Computing
18	Ms. Geetika Batra	Object Oreinted	Data Structure
19	Mrs. Akansha Varghese	OS	Soft Computing
20	Ms. Swapnil Jain	OS	CSO
21	Mr. Nitesh Rastogi	DBMS	S/w Engg
22	Ms. Poorva Shukla	Soft computing	CSO
23	Mr. Virendra Singh	Cloud Computing	Formal Algorithm
24	Ms. Neha R. Panwar	Web Engg	Compiler

### **ME Department**

S. No.	Name of faculty	Area of Research	Area of Interest
1.	Dr A P Singh	Thermal Engineering	Thermal Engineering

2	Pokoch Thokur	Engine Exhaust assembly	Machine Design ,Theory
۷.	Kakesii Illakui	mechanism	of Machine
3.	Mukesh Sharma	Thermal Engineering	Heat Exchanger
4.	Amit Yadav	Industrial Engineering	Thermal Engineeering
5.	Rajesh Songar	Industrial Engineering	Industrial Engineering
6.	Kamta PrasadTiwari	Non-conventional Energy Sources	Thermal Engg, RAC, Energy Management, Automobile Engg.
7.	Ashish Soni	Tribology and Maintenance	Engineering Design
8.	Sumeet Shukla	Automobile Engg.	Industrial Management
9.	Yogesh Dodiya	Fault Diagnosis	Thermal Engg,RAC
10.	Falguni Gorana	Design in Mechanical System	Machine Design
11.	Minakshi Das	Production and machine Design	Machine Design
12.	Ajay Pagare	Operation Research and SCM	Manufacturing Technology
13.	Rajesh Songar	Industrial Engineering	Industrial Engineering
14.	Shantanu Roy	Production and Engg. Design	Engineering Design
15.	Anand Mahajan	Industrial Engineering	Machine Design, Dynamics of Machine and Operation Research
16.	Jitin Mandloi	Design Engg.	Design and Analysis of Automobile Engg parts or Product
17.	O P Singh	Manufacturing and Fabrication	Manufacturing and Fabrication

### **EC Department**

S. No.	Name of faculty	Area of Research	Area of Interest
1.	Dr. Keshav Patidar	Power Electronics	Power Electronics
2.	Mrs. Balbhadrapatruni	Digital Instrumentation	VLSI
	Harita		
3.	Mr. Ankit Jain	VLSI Design & Signal	VLSI Design & Signal
		Processing	Processing
4.	Ms. Amrita Pahadiya	Digital Instrumentation	VLSI
5.	Mr. Anand Mantri	VLSI	VLSI Design
6.	Mr. Devendra Singh	Digital Instrumentation	Mobile Communication
	Mandloi		
7.	Mrs. Sangeeta Solanki	Digital Communication	Wireless Communication
8.	Ms. Neha Choudhary	Digital Communication	Digital Communication
9.	Mr. Shravan Kumar	Digital Communication	Digital Communication
	Namdeo		
10.	Mr. Navanit Palrecha	Digital Signal Processing	Digital Signal Processing
11.	Mr. Prerit Jain	RF & Microwave	RF & Microwave
12.	Mrs. Hemlata Pal	Digital Communication	Wireless Communication
13.	Ms. Nihal Gupta	Digital Signal Processing	Digital Signal Processing
14.	Mrs. Reeta Charde	Digital Communication	Digital Communication
15.	Mr. Dhananjay Kumar	Digital Communication	Digital Communication
16.	Mr. Mohan Karma	Power Electronics	Power Electronics
17.	Mr. Ulhas Kothari	Digital Instrumentation	Power Electronics

18.	Mr. Sachin Manglasheril	Embedded System	Embedded System
19.	Mr. Rupesh Dutta	Embedded System	Embedded System
20.	Mr. Neeraj Malviya	Digital Communication	Digital Communication
21.	Ms. Aarti Yadav	Digital Communication	Digital Communication
22.	Mr. Indrajeet Kumar	Digital Communication	Digital Communication
23.	Mr. Atul Singh Kushwah	Digital Communication	Digital Communication
24.	Mr. Deepak Yadav	Digital Communication	Digital Communication

### **CE Department**

S. No.	Name of faculty	Area of Research	Area of Interest
1.	Mr. Utkarsh Jain	Structure	Structure Design
		Aesthetic part of	Aesthetic part of
2.	Mr. Sandip Rashinkar	buildings/Premises through	buildings/Premises through
		murals.	murals.
3	Mr. Amon Tiwari	СТМ	New materials & new
5.		CIW	construction techniques
			Water Resource Engineering
4	Mr. Runesh Rathore	WRF	Design of hydraulic Str. Fluid
т.	with Rupesh Ratione	WILL	Mechanics Quantity Surveying
			coasting Geotech Engineering.
		Structure Analysis & Design,	Structure Analysis & Design,
5.	Mr. Anurag Saraogi	Geotechnical Engg.,	Geotechnical Engg.,
		Environmental Engg. & Fluid	Environmental Engg. & Fluid
		Mechanics.	Mechanics.
			Finite Demant Method
6.	Mr. Shailendra Singh	Structure	Structural Analysis, Elasto
		Geotechnical Engg., Environmental Engg. & Fluid Mechanics. Structure Structure	Plastic Analysis
7	Mr. Manish Kumar	Structure	Structure Design (Building &
7.	Nimoriya	Structure	Bridge)
8.	Mr. Avinash Singh	Structure	Structure
0	Mr. Ghanshyam	СТМ	СТМ
9.	Patidar	CIM	CIM
10	Ms. Gulezehra	Structuro	Structure Design, Construction
10.	Hussain	Suuciure	Materials
11	Mr. Anand	Transportation	Pavement Design, Planning and
11.	Raghuwanshi	Tansportation	Management of Traffic

### **Chemical Department**

S. No.	Name of faculty	Area of Research	Area of Interest		
1	Mrs.Samatha Singh	Microbial Fuel Cell	Energy generation using nano materials		
2.	Ms.Amrita	Bio remediation & Bio Leaching	Algal technology		
3	Ms.Arshia Khan	Environment Management	Solid waste management		
4	Mr.Rahul Gupta	Waste water treatment	Stoichiometry		
5	Mr. Rahul Bhargava	Bio fuels	Water treatment		

### **IT Department**

S. No.	Name of faculty	Area of Research	Area of Interest
1	Mrs. Neha Gupta	Software engineering, Soft	Software engineering, Soft
1	Neema	Computing	Computing
2	Mr. Piyush Vyas	Data Mining, Soft computing, Information Science, Data Analysis, Information retrieval, Data Visualization	Data Mining, Soft computing, Information Science, Data Analysis, Information retrieval.
3	Mr. Aditya Nagdiya	Network Security And Information Security	Network Security And Information Security
4	Mr. Ankur nahar	Mobile Adhoc Net.	Computer Networks
5	Ms. Alpana Meena	Network Security And Information Security	Network Security And Information Security

## **3.1.8** Enumerate the efforts of the institution in attracting researchers of eminence to visit the campus and interact with teachers and students?

College is in the good books of excellent academic and technical service for conducting many programmes. It attracts eminent researchers to visit the campus. They interact with the faculty members and the students in order to cultivate research culture. The efforts taken by the institution in this regard are as follows:

- The college organizes Technical symposium, Leader's talk, Guest Lectures, Seminars, sponsored programs and value added courses by inviting experts.
- Establishes Memorundam of Understanding with leading industries / technical forums to attract industrial experts.
- Eminent industrial personalities are invited to the college through Entrepreneurships Development Cell, Industry Institute Partnership Cell and Training and Placement Cell on various occasions.
- The faculty members and the students interact with the experts committee members visiting the college.

## **3.1.9** What percentage of the faculty has utilized Sabbatical Leave for research activities? How has the provision contributed to improve the quality of research and imbibe research culture on the campus?

The college has 27 faculties with Ph. D. as their highest qualification. At present some teachers are pursuing their research work within college hours or after college hours, in holidays, vacations etc. There is provision of duty leave during presentation of research papers.

# **3.1.10** Provide details of the initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land)

Both post graduate and under graduate students prefer to take up projects related to Industrial and society's need. UG/PG students are doing various project works under the guidance of faculty as part of their course curriculum. Students of EC and ME Department participated in Robot war and BAJA competition respectively. Institute published online newsletter every quarter. Student's blooming ideas are shared through such newsletter to all. Course projects are carried out by the students of management. Recommendations based on findings are passed on to the concerned industries. Students participate in the Technical Fest and Exhibitions organized by the IIST and other technical colleges. The college motivates students to participate in projects. The best project of each department is awarded.

The following are few examples of their findings:

- Students participate in various technological programs and contests where they display their research and project works.
- > The students are given exposure through seminars/conference/workshop.
- > A reward is offered to the faculty and students for their international journals.
- > In all the labs, some additional experiments beyond the prescribed syllabus are conducted.

### **3.2 Resource Mobilization for Research**

## **3.2.1** What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization.

- In the beginning of every academic year nearly 5- 10% of the departmental budget is planned for research activity.
- The major heads of expenditure of research are on the purchase of advanced equipments, books, journals and also for organizing workshops, training programmes, seminars and conferences.
- Faculty members are provided with registration charges, travel expenditures and incentives for their publications in reputed journals.

The year wise budget allotted and utilization by the various departments are indicated in the ensuing table: The data is in lakhs of rupees.

Central Budget, Approval & Expenditure Statement									
		2014-15			2013-14			2012-13	
Head	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure
				Libra	ary				
Mech	0.55	0.51	0.51	1.3	1.29	1.29	2	1.84	1.84
CS	0.50	0.5	0.5	2.5	2.43	2.43	1.5	1.01	1.01
EC	0.50	0.33	0.33	1	0.87	0.87	1.5	1.41	1.41
IT	0.12	0.08	0.08	0.5	0.46	0.46	0.15	0.11	0.11
Civil	0.15	0.12	0.12	1.2	1.19	1.19	0.75	0.66	0.66
Chemical	0.15	0.14	0.14	1.2	1.08	1.08	0.4	0.39	0.39
Others	1.00	0.82	0.24	1.2	1.18	0.93	5	4.87	4.85
Total	2.97	2.50	1.92	8.90	8.5	8.25	11.30	10.5	10.3
				Lab Equi	ipment				
Mech	0.55	0.50	0.12	0.55	0.50	0.28	2.50	2.50	2.02
CS	0.00	0.00	0.00	0.27	0.25	0.13	4.20	4.00	3.88
EC	0.50	0.50	0.00	1.20	1.00	0.00	21.00	20.00	20.90
IT	1.54	1.50	1.23	0.00	0.00	0.00	0.23	0.20	0.00
Civil	2.12	2.00	1.78	0.50	0.50	0.40	0.45	0.40	0.20
Chemical	11.00	11.00	10.36	2.00	1.75	3.01	0.45	0.40	0.13
Others	2.50	2.50	2.70	0.00	0.00	0.00			
Total	18.21	18.00	16.19	4.52	4.00	3.82	28.83	27.50	27.13
	1			Lab Cons	umable	L	1	I	L
Mech	1.30	1.00	0.48	0.53	0.50	0.46	1.00	1.00	1.85
CS	1.25	1.00	0.52	0.78	0.75	0.51	2.10	2.00	1.95
EC	0.50	0.50	0.23	0.50	0.50	0.31	2.10	2.00	1.83
IT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civil	0.00	0.00	0.00	0.00	0.00	0.00	1.50	1.25	0.75
Chemical	0.00	0.00	0.00	0.25	0.25	0.31	1.00	0.75	0.38
Others									
Total	3.05	2.50	1.55	2.06	2.00	1.59	7.70	7.00	6.76
	1		Teaching	and Non-Tea	aching Staff S	alaries	1	1	1
Mech	155.00	155.00	153.24	135	135.00	129.39	120.00	120.00	121.62

### Table 30 Budget for research work

CS	140.00	140.00	138.77	110	110.00	105.64	100.00	100.00	120.89			
EC	85.00	85.00	84.59	80	80.00	84.67	100.00	100.00	105.47			
IT	10.00	10.00	8.36	25	25.00	24.10	45.00	45.00	38.68			
Civil	70.00	70.00	68.17	55	55.00	45.28	35.00	35.00	7.88			
Chemical	20.00	20.00	20.23	10	10.00	7.79	10.00	10.00	6.19			
ESH	50.00	50.00	50.97	45	45.00	53.11	40.00	40.00	46.43			
Total	530.00	530.00	524.32	460	460.00	449.98	450.00	450.00	447.15			
R & D												
Mech	7.00	6.50	6.81	3.70	3.50	3.40	4.50	4.00	3.81			
CS	1.50	1.25	1.21	1.00	1.00	0.85	1.00	1.00	0.88			
EC	0.50	0.50	0.58	0.50	0.45	0.40	1.10	1.00	1.11			
IT	0.25	0.25	0.13	0.05	0.05	0.06	4.00	4.00	4.30			
Civil	0.25	0.25	0.00	0.00	0.00	0.00	3.00	3.00	2.59			
Chemical	0.25	0.25	0.00	0.00	0.00	0.00	1.50	1.00	1.10			
Total	9.75	9.00	8.73	5.25	5.00	4.71	15.10	14.00	13.79			
				Training &	k Travel							
Mech	1.30	1.00	0.78	1.30	1.00	0.66	1.00	0.80	0.62			
CS	1.30	1.00	0.85	1.00	0.90	0.73	1.00	0.75	0.66			
EC	1.30	1.00	0.37	0.60	0.50	0.45	0.70	0.50	0.62			
IT	0.00	0.00	0.08	0.20	0.10	0.46	0.50	0.45	0.39			
Civil	0.00	0.00	0.15	-	0.00	0.00	-	0.00	0.00			
Chemical	0.00	0.00	0.63	-	0.00	0.00	-	0.00	0.00			
Total	3.90	3.00	2.86	3.10	2.50	2.30	3.20	2.50	2.29			
		- 		Computer &	z Software		1					
Mech	0.00	0.00	0.00	0.50	0.50	0.34	1.00	1.00	1.02			
CS	0.00	0.00	0.00	0.50	0.50	0.38	25.00	25.00	25.90			
EC	0.00	0.00	0.00	0.30	0.25	0.23	1.50	1.50	1.01			
IT	1.00	1.00	0.00	0.30	0.25	0.25	2.50	2.50	0.62			
Civil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Chemical	4.50	4.00	3.64	0.00	0.00	0.00	0.00	0.00	0.00			
Total	5.50	5.00	3.64	1.60	1.50	1.20	30.00	30.00	28.55			
				Maintenance	e & Spares							
Mech	0.50	0.50	0.23	1.00	1.00	0.86	3.00	2.50	2.30			
CS	1.00	1.00	0.25	1.00	1.00	0.95	3.50	3.00	2.99			

EC	1.00	1.00	0.11	1.00	0.75	0.58	3.00	2.50	2.28
IT	0.30	0.25	0.85	0.00	0.00 0.00		0.00	0.00	0.00
Civil	0.50	0.50	0.75	0.30	0.25 0.60 0		0.50	0.50	0.45
Chemical	0.75	0.75	1.39	0.00	0.00	0.00	0.50	0.50	0.41
Total	4.05	4.00	3.58	3.30	3.00 2.99		10.50	9.00	8.43
Overall Total	577.43	574.00	562.79	488.73	486.50	474.84	556.63	550.50	544.40
Infrastructure Built up		20.00	18.24		8.00	7.74		9.00	8.51
Grand Total	577.43	594.00	581.03	488.73	494.50	482.58	556.63	559.50	552.91

Budget for the Year 2015-16										
		DEPARTMENTS								
Head	Mech         CS         EC         IT         Civil         Chemical         Others									
Library	0.50	0.50	0.25	0.25	0.75	0.5	0.75	3.50		
Lab Equipment	1.5	3.50	1.50	0.75	0.50	10.00	1.50	19.25		
Lab Consumable	1.25	1.30	0.60	0.25	0.15	0.25	0.15	3.95		
Salary	170.0	151.00	90.0 0	11.00	76.00	21.00	54.00	573.00		
R&D	7.50	2.00	1.00	0.50	0.50	0.50	0.00	12.00		
Training & Travel	3.00	3.00	1.00	0.50	0.50	0.00	0.00	8.00		
Computer & Software	0.50	1.50	0.50	0.50	0.00	1.00	0.00	4.00		
Maintenance & Spares	0.75	1.50	1.25	0.50	0.75	1.00	0.50	6.25		
Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total	185.0	164.30	96.1	14.25	79.15	34.25	56.9	629.95		

Budget for the Year 2016-17						
EXPENDITURES HEAD (Deptwise)	Proposed Budget	Approved Budget				
Library						
Mech	0.6	0.55				
CS	0.6	0.55				
EC	0.3	0.25				
IT	0.3	0.25				
Civil	0.9	0.8				
Chemical	0.6	0.55				
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Others	0.9	0.8				
Sub Total (A)	4.2	3.75				
Lab Equipment						
Mech	1.75	1.6				
CS	3.75	3.5				
EC	1.75	1.6				
IT	1	0.75				
Civil	0.75	0.6				
Chemical	10.5	9.5				
Others	1.75	1.25				
Sub Total (B)	21.25	18.8				
Lab Co	nsumable					
Mech	1.5	1.25				
CS	1.5	1.25				
EC	0.75	0.6				
IT	0.4	0.25				
Civil	0.25	0.2				
Chemical	0.4	0.35				
Others	0.25	0.2				
Sub Total (C)	5.05	4.1				
Teaching and Non-7	<b>Feaching Staff Salaries</b>					
Mech	180	175				
CS	160	155				
EC	100	95				
IT	15	13				
Civil	80	78				
Chemical	25	24				
ESH ( & Others)	60	59				
Sub Total (D)	620	599				
R	& D					
Mech	8	7.75				
CS	2.5	2.25				
EC	1.5	1.25				
IT	0.75	0.5				
Civil	0.75	0.6				
Chemical	0.75	0.6				
Others	0	0				
Sub Total ( E )	14.25	12.95				
Trainin	g & Travel					
Mech	5	4.75				
CS	5	4.8				
EC	1.5	1.25				
IT	0.75	0.5				
Civil	0.6	0.5				

Chemical	0	0
Others	0	0
Sub Total (F)	12.85	11.8
Сотр	ıter & Software	
Mech	0.75	0.6
CS	2	1.75
EC	0.75	0.6
IT	0.75	0.6
Civil	0	0
Chemical	1.25	1
Others	0	0
Sub Total (G)	5.5	4.55
Mainte	enance & Spares	
Mech	1	0.9
CS	1.75	1.6
EC	1.5	1.4
IT	0.75	0.6
Civil	1	0.9
Chemical	1.25	1.1
Others	0.75	0.6
Sub Total (H)	8	7.1
Total (A to H)	691.1	662.05

## **3.2.2** Is there a provision in the institution to provide seed money to the faculty for research? If so, specify the amount disbursed and the percentage of the faculty that has availed the facility in the last four years?

No. The faculty members are given awards for the paper publication in international & national journal with good impact factor.

### **3.2.3** What are the financial provisions made available to support student research projects by students?

The college management always encourages the students by supporting in all aspects to carry small projects in the college laboratories by permitting to purchase raw materials, instruments and equipments etc., For any innovative and useful project / model prepared by the students the college management supports to raise funds from the Research and Development budget based on the recommendation of department project committee. TA and DA will be paid to the students for their paper presentations in prestigious institutes like IITs, NITs and University campus.

Full/ partial financial support is made available to students to develop innovative projects. Also financial assistance is provided for the students participating in the project contest across the country. The glorious achievement of college societies like SAE-BAZA and similar departmental clubs in the college are successfully functioning due to ample financial support by the institute.

## 3.2.4 How does the various departments/units/staff of the institute interact in undertaking inter-disciplinary research? Cite examples of successful endeavors and challenges faced in organizing interdisciplinary research.

The college Faculty with the help of R&D committee takes on inter-disciplinary research. The Staff members and the students who are concerned in interdisciplinary research will interact with members of other department and discuss the technical feasibility to take time to time suggestions from the departments. It helps the researchers to complete their task in specific time. Example: Engagement of faculty members from ECE, ME and CSE department in ongoing research in the field of ROBOTICS under e Yantra IIT Mumbai Program & SAE BAJA.



e-Yantra

#### गो कार्ट कॉम्पीटिशन में शहर के युवाओं को सफलता

कोयंबटूर में हुआ था चैंपियनशिप का फाइनल



Go Kart

edri uno के स्टूडेंट्स निकेश दे से लेकर टेकिकनत के बार्ट के स्टूडेंट्स निकेश के स्टूड प्रांत के सांकि लाट है है। सीकत सोवालटों जॉफ वर् प्रार्थ नेविलम उन तो किसियों स्टूडेट के किस नेवलन के कर के सिकेश का कहल को संबंध में किसने कर स्टूडेट स्टूड की साम का कहल को संबिद में सामेजित के स्टूडेट स्टूड की साम का कहला को स्ट्री क्योंकिस में किस्का की साम का स्ट्रार्स के स्ट्रीम ने प्रताई कर सीचल की साम का स्ट्रार्स के स्ट्रीम ने प्रताई कर सीचल की लिया था।

फाइनल राउंड में दूसरा पुरस्कार कोथंबयूर में आयोजित गो-कार्ट कॉम्पीटिशन के फाइनत राउंड में इंसी इंस्टोरयूख ऑफ साइंस एंड टेकोलॉजी की वे दोरों ने हिस्सा लिया शा इमसे से एक टोन को डिजाइलि अतार्ड मिला है। वहीं दूसरी दोम ने ओजरऑल परणमेंम म दूसरा स्थान हासिल किया है। राष्ट्रीय तरत की इस प्रतियोगित में देशार के 90 कोलेजों की टीम ने भाग लिया था।

वेहतरीन डिजाइनिंग के लिए पहला अवॉर्ड आईआईएसटी की मैकेनिकल इंजीनियरिंग डियाटर्गेट की वे टीमें जिवल्पय में बर्फवर के स्वर्म में शामिल हुई थी। जिवलपट टीम के केटन मिलन पटेन व अन्युवय ये के केटन आयोध सिंह थे। अन्युवय को केहतरीन डिजाइमिंग के लिए एडला अपटीं मिला। वार्री जिल्लास्त्र को कोहतर्पान परफॉमेंस के आधार पर दूसरा नेशनल अवॉर्ड मिला।



BAJA





**3D** Printer



**3.2.5** How does the institution ensure optimal use of various equipment and research facilities of the institution by its staff and students?

All the departments are provided with basic laboratories and infrastructure to carry out basic research in addition to that advanced lab equipment is proposed to purchase in each department and in each laboratory based on the type of research projects. The labs and other research facilities of the institution are always kept open for both students and faculty members beyond the official working hours. Our central library with central computational facility is provided with 43 Mbps shared internet connectivity, which is kept openly accessible. Students can always utilize the lab equipments and internet facility beyond the working hours. Library facilities and its conducive environment encourage and motivate the staff and students to take a step forward to pursue research in their relevant field. The Institute has a well-stocked library which includes latest syllabi as well as reference books of all relevant subjects and disciplines and the institute is always eager to purchase new edition of books every year. All users have been provided password to access the e-journals and e-books online.

### **3.2.6** Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facility? If 'yes' give details.

Yes. The institute has signed MOUs with some industries and other agencies for Promoting training, research and extension activities in technical education.

**Robotics Lab:** Robotics Lab was established in 2016 to train the students and the faculty in the field of advancement in Robotics and the training programs are conducted by eYantra of IITB, Bombay under MHRD Program.



IBM Lab



Robotics Lab



Figure 32 Research Lab's

## **3.2.7** Enumerate the support provided to the faculty in securing research funds from various funding agencies, industry and other organizations. Provide details of ongoing and completed projects and grants received during the last four years.

The institute has several senior faculty members with long experiences in research activities. These senior faculty members guide other faculty members in preparing the research proposals properly. They advise them in the areas of research which is more suitable. Subsequently the research proposals are sent to various funding agencies for their considerations.

- The college organizes various faculty development programs/seminars/workshops for enhancing their research oriented attempts. IIST provides financial support to publish research papers in International journals.
- The College encourages the faculty to involve research projects and provide motivational incentives by awarding cash prizes and enhancing credentials for promotions.
- The college also provides the necessary infrastructure and technological support needed for research activities.
- > The institute receives special funding from MPCST, DST and AICTE for conducting seminars, workshop and research project etc.

- Workshop on Breakthrough Energy Technologies and Challenges for Sustainable Development got Grant of Rs.64000 /- from M.P. Counsil of Science & Technology, Govt.of India, Bhopal.
- M.P. Counsil of Science & Technology, Govt.of India, Bhopal sanctioned Rs.60000 /- to conduct National Seminar on "Green Techno-Economical Approaches in Development of Smart City: Role of Science & Technology".
- eYantra IIT Mumbai MHRD Program sanctioned 41160/- to conduct workshop on Fire Bird Robot under eYantra Robotic Lab.

#### **3.3 Research Facilities**

### **3.3.1** What are the research facilities available to the students and research scholars within the campus?

College promotes various provisions to the faculty members and the students for carrying out the research activities. Also the Research and Development cell in college extends full support for researchers by delivering prosperous ideas on current research topics / areas. The details of research facilities available within the campus are as follows:

- Presence of qualified and experienced faculty members guide the researchers to promote research work.
- > Availability of well-built laboratory, infrastructure to do experiments / projects.
- Laboratories with updated research oriented facilities and periodically calibrated equipment helps to bring out an analysis and project accurately.
- ➢ High speed Wi-Fi facilities are made available.
- Financial assistance has been rendered for publishing the papers in a peer reviewed journals and for developing the experimental setups for the innovative / socially relevant project work.
- Availability of central library which helps to serve researchers with wide knowledge of subject by providing free access of journals, magazines and e books for research activity.

## **3.3.2** What are the institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers especially in the new and emerging areas of research?

User friendly infrastructural facilities are available in the campus with hi-end library, Canteen, incampus Boys and Girls hostel, Guest room, 24 hours security, well equipped laboratories, Girls' common room, lavatory etc. A separate Research and Development Cell has been established with a Professor as Head to facilitate research and promote research culture among the students and faculty. Attempts are on to invite and involve industries in the state and outside for financial support. The faculty and students regularly visit the industries to get acquainted with industrial problems. Institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers are:

- Encouraging faculty and students to attend research programmes, workshop, seminars, and conferences conducted in the Institute and at other organizations. Institute provides registration fee, conveyance, on-duty leave for attending such programmes.
- Encouraging faculty members to organize research workshop, seminars, Conferences, with funding internally and from AICTE/UGC/DST/DRDO.
- ➤ The library of the institute is enriched with wide range of books and various national and international journals. Online journals are also accessible to the researchers.
- High bandwidth Internet facility along with Wi-Fi connectivity is provided in the campus to the faculty and students for carrying research works.

As per the curriculum issued by the affiliating University the basic infrastructure is available for the under graduate and post graduate students. As the strength of students increases in the institution, Management itself procures new equipment's as per the requirements and also submits the proposal to the AICTE/UGC under different available schemes. All these equipments and lab facilities are used for research in the new and emerging areas of research.

**3.3.3** Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facilities?? If 'yes', what are the instruments / facilities created during the last four years.

No

**3.3.4** What are the research facilities made available to the students and research scholars outside the campus / other research laboratories?

Name of the research lab visited	Details
ALTTC BSNL, Indore Advance course of Employability Enhancement Training	Employability Enhancement Training Program (EETP) for 3rd Year B.E. (ECE) students is being conducted under AICTE – BSNL MoU. The objective of this program is to provide competency based employability enhancement skills and hands-on skill training through BSNL Training Centers. Five students of 3rd year B.E. (ECE) are presently undergoing this program. It is being conducted on every Monday by Bharat Sanchar Nigam Ltd. At Advance Level Telecom Training Center (ALTTC), Indore. This programme commenced w.e.f 15th July, 2015 for duration of 18 months.
E-Yantra "Robotics Lab"	An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical

#### Table 31 List of research laboratories

	outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded
	systems and Robotics. Also, helps in better performance at
	Robotics competitions such as the e-Yantra Robotics
	Competition with trainings done at IIST campus.
IBM Academic Initiative Lab	Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide. Extensive expertise, teaching assets, and community resources to develop world-class curricula. No-charge access to IBM software, hardware, technology, and tools. Extended Bluemix-trial access for qualifying courses through the Academic Initiative for Cloud offer. Skill-building opportunities ranging from IBM and ecosystem events to student competitions. The Academic Initiative offers a wide range of professionally developed course ware to help teach students using IBM and open-source products and technologies. This course ware listing is organized by teaching topics that align with academic curricula. An IBM Academic Initiative lab is started to handle and implement IBM AI program

### **3.3.5** Provide details on the library/ information resource center or any other facilities available specifically for the researchers?

The college has an information resource centers (Library Centre) to cater to the needs of researchers. The facilities are:

A central library and every department have a departmental library, all of which are well stocked with books and journals on state of the art technologies and new frontiers of research. Books are regularly procured for the libraries and e-journals are subscribed regularly. A large collection of e-books are also available in our digital library.

High performance Personal computers with high speed internet access in the Library.

Carpet area of library (in m2)	: 1500 M2
Reading space (in m2)	: 800 M2
Number of seats in reading space	: 200
Number of users (issue book) per day	: 120
Number of users (reading space) per day	: 100
Timings: During working day, weekend, and vacation	: 09:00 AM to 08:00 PM
Number of library staff	: 07
Number of library staff with a degree in Library Management	: 04
Computerization for search, indexing, issue/return records Bar-codir	ng used : Y (ERP)
Library services on Internet/Intranet INDEST or other similar memb	bership archives: Y (DelNet) /
ASME	

Digital Library Availability of digital library content

: Yes (7 Courses, 900 e-Books)

Availability of an exclusive server	: Yes
Availability over Intranet/Internet	: Yes
Availability of exclusive space/room	: Yes (With 45 Computers)
Number of users per day	: 30

#### Table 32 Library Expenditure in last four year

Year	Expenditure					
	Book	Magazines/journals (for hard	Magazines/journals (for soft	nts, if		
		copy subscription)	copy subscription)	any		
2012-2013	1029752	96585	250021			
2013-2014	824593	132650	12700			
2014-2015	113945	167685	12700			
2015-2016	350000	205524	165254			

## 3.3.6 What are the collaborative researches facilities developed/ created by the research institutes in the college? For ex. Laboratories, library, instruments, computers, new technology etc.

Efforts are being made to create collaborative research facilities in the college campus. The following infrastructure exists in the college, which are being utilized effectively by the faculty and students from time to time.

- 1. All the Departmental Laboratories.
- 2. Library and e-Learning contents.
- 3. Computers over intranet & internet facility.

The College has MOU's with different industries and foresees to have a tie up with research institutes for collaborative research in the near future.

S. No.	Name of the Programme	Description
1	AICTE sponsored Program "Employability Enhancement Training Program(EETP) with BSNL	Employability Enhancement Training Program (EETP) for 3rd Year B.E. (ECE) students are being conducted under AICTE – BSNL MoU. The objective of this program is to provide competency based employability enhancement skills and hands-on skill training through BSNL Training Centers. Five students of 3rd year B.E. (ECE) are presently undergoing this program. It is being conducted on every Monday by Bharat Sanchar Nigam Ltd. At Advance Level Telecom Training Center (ALTTC), Indore. This programme commenced w.e.f 15th July, 2015 for duration of 18 months
		Virtual Lab is an initiative of Human Resource Development
2	Establishment of Virtual Labs	(MHRD) under the National mission on education through Information and Communication Technology (ICT). Objective

		of the virtual lab is providing remote access to labs in various disciplines of science and engineering. This would help the students in learning advanced concepts through remote experimentation. This will provide a complete learning management system where students can avail various tools for learning including additional web resources such as video lectures, animated demonstrations and self evaluation tests. For conducting the above listed programmes, various committees comprising of members from faculty and students are assigned.		
3	E-Yantra "Robotics Lab"	An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded systems and Robotics. Also, helps in better performance at Robotics competitions such as the e-Yantra Robotics Competition with trainings done at IIST campus.		
4	EC Council Academia, USA	The association aims to deliver information and security skills to improve career and economic opportunities. The program offered at IIST is Certified Ethical Hacker (for students of IT, CS & EC), it incorporates a 40 hour training module at IIST. IIST is the only training partner for the program in Indore		
5	IBM Academic Initiative	Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide. Extensive expertise, teaching assets, and community resources to develop world-class curricula. No-charge access to IBM software, hardware, technology, and tools. Extended Bluemix-trial access for qualifying courses through the Academic Initiative for Cloud offer. Skill-building opportunities ranging from IBM and ecosystem events to student competitions. The Academic Initiative offers a wide range of professionally developed course ware to help teach students using IBM and open-source products and technologies. This course ware listing is organized by teaching topics that align with academic curricula. An IBM Academic Initiative lab is started to handle and implement IBM AI program		
	NASSCOM Global	It improves the Industry readiness of students who want to		
6	Business Foundation Skills	start a career in BPM companies. The program is of 160 hour		
	Skills in IT (FSIT) courses	recognized IIST as NASSCOM training center in Indore		

#### **3.4 Research Publications and Awards**

#### 3.4.1 Highlight the major research achievements of the staff and students in terms of

> Patents obtained and filed (process and product) Nil

- > Original research contributing to product improvement Nil
- > Research studies or surveys benefiting the community or improving the services Nil
- > Research inputs contributing to new initiatives and social development Nil

## 3.4.2 Does the Institute publish or partner in publication of research journal(s)? If 'yes', indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?

We are planning to publish one research journal from our institute under R&D Cell.

#### **3.4.3** Give details of publications by the faculty and students:

- Publication per faculty
- Number of papers published by faculty and students in peer reviewed journals (national / international)
- Number of publications listed in International Database (for Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

S. No.	Dept.	Number of publications	Monograph	No of papers published	Book chapter	Books	Books Edited	ISBN/ISSN numbers	Citation Index	SNIP	SJR	Impact Factor	h-index
1	CSE	78	-	78	-	-							
2	ECE	50	-	50	-	-							
3	IT	85	-	85	-	-							
4	ME	57	-	54	-	03			Refer	Annex	ure IV		
5	CE	37	-	35	-	02							
6	CM	23	-	23	-	-							
7	ESH	52	-	50	-	02							

#### Table 33 Summary of Publication

#### 3.4.4 Provide details (if any) of

> Research awards received by the faculty

S.No.	Name of faculty	Given By	Name of the award	Year
1.	Ms. Richa Jain (Mathematics Department)	International Young Scientist Congress at MRCPS Indore.	Young Scientist award	2015-16

#### Recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally

- Dr. K.K. Gupta: Member of editorial board for the International Journal of Energy and Power Engineering, USA.
- Dr. A. P. Singh: Member of technical committee for IASCIT International Association of Computer science and Information technology.
- Dr. A. P. Singh: Member of editorial board Reviewer in Elsevier in Acta-Aeronautical journal.
- Dr. A. P. Singh: Member of editorial board of International Journal of application of Engineering and Technology.
- Dr. A. P. Singh: Member of technical committee for APCBEES Asia-Pacific Chemical, Biological & Environmental Engineering Society.
- Dr. A. P. Singh: Member of technical Body in IAENG International Association of Engineers.
- Dr. A. P. Singh: Reviewer of International Journal of Chemical Engineering and applications.
- Dr. A. P. Singh: Editorial Board Member of International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014).
- Dr. A. P. Singh: Member, SAE India.
- Mr. K. P. Tiwari : Chair Person, ISHRAE Institute of Excellent- ISHRAE.
- Mr. K. P. Tiwari : Member, SAE India.
- Mrs. Neha Gupta: Editorial Board Member of AICIT(the international association for information, cultural, human and industry technology.
- Mrs. Samatha Singh as a Peer reviewer in Environmental Progress international journal.
- Dr. Shilpa Tripathi as reviewer in Journals of Institution of Engineers (Kolkata) taken up by Springer.
- Dr. Saurabh Jain: Member of Project review and supervisory group for the national mission on education through MHRD / NMEICT for Virtual Lab.
- Dr. Niharika Shivhare: Editorial Board Member of International Journal of Engineering Science and Research Technology.
- Dr. Niharika Shivhare: Editorial Board Member of International Journal of Engineering Science

and Management.

• Dr. Niharika Shivhare: Editorial Board Member of Global Journal of Engineering Science and Researches.

S.No.	Name of Faculty	National Committee	Membership No.
		Indian Geotechnical Society	LM442
1	Mr. Utkarsh Jain	ICACI	LM15.30
		INSTITUTE OF ENGINEER	AM1601574
2	Mr. Lalitesh Sinha	Indian Water resources Society (IWRS)	SCM-2014- 1015/INDORE
3	Mr. Shailendra Singh	Indian Geotechnical Society	445
4	Mr. Manish K Nimoriya	Indian Geotechnical Society	446
4	wii. Wallish K Milloriya	Indian Water Works Association	SM00900
5	Mr. Anand Mantri	ISTE	Life Time Member

Incentives given to faculty for receiving state, national and international recognitions for research contributions. Nil.

#### **3.5 Consultancy**

#### 3.5.1 Give details of the systems and strategies for establishing institute-industry interface?

#### Table 34 Strategies for establishing institute-industry interface

S.No.	Who initiates		Nature of interaction	When it is initiated	
1	Training and Placement Cell	•	For arranging Value Added Programs by Industry experts.	Throughout the year	
			Students Placement		
2	Heads of the Departments	•	Industrial Visits Guest lectures and Industrial training by industry experts	During the semester	
3	Students (in consultation with HODs and Training and Placement)	•	Implant Training and Internship	During vacation period	

The Training and Placement Cell ensures that the institution maintains symbiotic relationship with multiple industries across diverse segments. Meetings with the industry personnel result in signing of MoUs and accreditation by the industries and training and consultancy services. Faculty members also establish industry institute relationship during industrial visits and internship training programmes.

S. No.	Industry Name	Date of MOU	Departm ent	Objective of MoU's	Outcome of MoU's
1	EC-Council	30/06/2015	IT	To provide practical working knowledge in Ethical Hacking and web security	Skillfulness of students in Information Security helped them to get web security jobs.
2	BSNL	25 <sup>th</sup> June 2015	EC	To provide Vocational Training for students in Telecom sector and to get exposure to latest technologies in telecom industry.	Students got good exposure to latest telecom technologies and tools used in industry.
3	Wadhwani foundation	26 April 2015	ME	Development of Entrepreneurship Ecosystem at the instiute	Studentsgotknowledgehowtobecome Entrepreneur
4	Porwal Auto Component Ltd Pithampur	5 Jan 2015	ME	Training and Consultancy	Students got good exposure to latest technologies and tools used in industry.
5	Khanwalkar Industries	06 Feb 2015	ME	Training and Consultancy	Students got good exposure to latest technologies and tools used in industry.

#### The following MoU's Sign with industry are as follow:

### **3.5.2** What is the stated policy of the institution to promote consultancy? How is the available expertise advocated and publicized?

The institute is running undergraduate programs and Post graduate programmes in various disciplines of engineering & Management. During the initial years of the institute the thrust has been on providing quality teaching and make students employable. The demography of faculty strength in various departments varies from young to senior level professors with specializations. The institute allows consultancy works to be carried with outside agencies and industries to provide solution to industrial problems through sharing of expertise.

- Training & Placement cell explores the possibility of collaboration during its interaction with various industries.
- The institution always authorities interaction interact with the local people and business establishments to educate them about expertise available in the college for consultancy services.

### **3.5.3** How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?

Faculty members are always encouraged by reducing the academic and administrative work load while executing consultancy works without any limitation. Institute encourages the faculty members to visit industries to supervise the project work carried out by the students in industries and find certain possibilities to ascertain any consultancy/collaboration activities. All the labs of all the

departments are made available to industry members by extending the working hours of laboratories for carrying out consultancy services.

### **3.5.4** List the broad areas and major consultancy services provided by the institution and the revenue generated during the last four years.

Nil

### **3.5.5** What is the policy of the institution in sharing the income generated through consultancy (staff involved: Institution) and its use for institutional development?

The revenue generated is shared between the Institution and staff members in the ratio 60:40. in some cases, the total amount is shared among staff members only.

#### 3.6 Extension Activities and Institutional Social Responsibility (ISR)

## **3.6.1** How does the institution promote institution-neighborhood community network and student engagement, contributing to good citizenship, service orientation and holistic development of students?

The institution promotes institution-neighborhood-community network and student engagement, contributing to good citizenship, service orientation and holistic development of students regularly by arranging different social activities within and outside the campus through the following activities. Some of these are listed below:

- Annual Blood Donation Camp.
- Spoken English classes regularly.
- Skill Development programmes.
- Blood Donation Camp.
- ➢ Plantation.
- Health (General, Dental, Etc.).
- Self Employment Programme.
- Intercollegiate competition such as Kabbadi, Basket ball and cricket tournament for pre secondary students.

Blood donation camp: The College organizes a blood donation camp every year in collaboration with NACO & Lioness Club. This created a sense of social awareness among students.

Fund Collections through NFCH: The NFCH organizes various fund collections for various social causes such as helping underprivileged societies. It also conducts essay competitions during events such as World Communal Harmony Day<sup>II</sup>.

Conduct of intercollegiate competitions: All departments within the institution have formed student societies both in technical and cultural domains .These societies are regularly conducting events on a massive scale with participation across various institutions. Competitions based on certain extension activities are conducted and the winners are suitably awarded with certificates, cash and trophies. This provides a platform for students to compete with their counterparts.

Conducting anti-ragging drives: In order to curb the menace of ragging, an Anti-ragging committee comprising of senior professors under the leadership of Director has been set up which has declared the institute as a ragging free campus.

Mentorship classes for weak students: In order to promote student linkages and involvement, a mentorship programme is conducted for difficult subjects. Under this programme, top notch students of the institute conduct lectures for weak students. This builds up a sentiment of selfless service and leadership skills within the student community at large.

Distribution of Amenities to underprivileged societies: Students are also encouraged to take up assignments such as distribution of used clothes, medicines etc to poor sections of the society and teaching poor students etc free of cost. This develops a sense of sharing and enhances task management skills.

The institute is conscious of its role in campus-community connection, well-being of its neighborhood and has initiated a number of community development activities.

### **3.6.2** What is the Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles?

To track student involvement in various social activities, The Institute has established a system of faculty members as mentors for each 20/30 students to keep records of their participation in such activities. Further at the end of the semester, such data is compiled at HoDs level and in consultation with Dean; they are consider for marks as a part of sessional.

### **3.6.3** How does the institution solicit stakeholder perception on the overall performance and quality of the institution?

Stakeholders such as Students, Parents, faculty members, college, University and the society at large are critical elements of the education system that decide the overall performance and quality of the institution. For smooth functioning of the institute and to cater to the competitive environment, it is mandatory that certain processes be laid down in order to establish effective linkages between these elements, thereby contributing to the overall improvement in the existing system. In order to address these issues, following steps are undertaken at the institute level:

- Certain forms and formats have been designed to collect feedbacks from the stakeholders. This includes Alumni feedback form, Graduate exit form, Parents feedback form, Employers feedback form etc.
- The feedback is also collected from the companies (who recruit the students through campus placements) is being discussed in the meetings of Training and Placement (T & P) department and shortcomings are addressed.
- > All other forms are also being filled up in an identical manner.
- Additional, Other assessment mechanisms such as Placement survey, Project assessment survey, Technical survey, Result survey, PDP survey are also carried out simultaneously.
- In order to improve quality, each department of the institute conducts one guest lecture per month by an expert from industry or academia.
- Furthermore, National/International conference and Faculty Development Programme (FDP) are being organized annually.

#### Students

- > We value the opinions and needs of our students.
- One students of each class is nominated as Representative. He / She communicate student's requirements and problems to the respective teacher/faculty advisor/ head of department/ Principal.
- Suggestion / Complaint box is placed at various places on the campus which are accessible to students.
- Students have the freedom to approach the Director during working hours without prior appointment.

#### Parents

- Faculty advisor/Class coordinator/ Head of Department/ Principal interact with guardians regularly.
- They are informed about their wards academic performance and attendance records through meetings, letters or phone calls.
- > Direct interaction of the guardians with the HoD is also encouraged.
- Opinion of parents is considered with respect to various aspects such as planning of industrial visits, cultural programmes etc. are valued.
- > During interactions with the parents, parent feedback forms are being filled up.

Parents of any student are allowed to meet the teachers/Class Coordinators and Director on any day of the week at any time to make any suggestions or complaints.

#### Staff

- We have regular staff meetings to keep the staff updated about changes and developments of the institute.
- > Most of the decisions are taken only after consultation with the staff during staff meeting.

#### Alumni

- > We have an established alumni Association with a Professor In-Charge.
- The association organizes meetings and has regular formal and informal interactions wherein any alumnus is free to give their suggestions.
- Every year, an Alumni meet is conducted during which Alumni feedback forms are being filled up. Any suggestions given by the Alumni are analyzed and suitably implemented.

## 3.6.4 How does the institution plan and organize its extension and outreach programmes? Providing the budgetary details for last four years, list the major extension and outreach programmes and their impact on the overall development of students.

- Every academic year the list of extension and outreach programmes are planned and executed.
- ▶ We organize health awareness, tree plantation, blood donations, yoga meditation etc.
- These programs help our students to enrich their body and mind, inculcate the spirit of service towards society. For this purpose ample of funds are spent and specific budget allocation is carried out.
- Some of the outreach and extension activities and their impact on the overall development of students have been elaborated in section 3.6.1.
- > Expenses are listed below for few social programs:

Central Budget, Approval & Expenditure Statement										
		2014-15		2013-14				2012-13		
Head	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure	
				Libra	ary					
Mech	0.55	0.51	0.51	1.3	1.29	1.29	2	1.84	1.84	
CS	0.50	0.5	0.5	2.5	2.43	2.43	1.5	1.01	1.01	
EC	0.50	0.33	0.33	1	0.87	0.87	1.5	1.41	1.41	
IT	0.12	0.08	0.08	0.5	0.46	0.46	0.15	0.11	0.11	
Civil	0.15	0.12	0.12	1.2	1.19	1.19	0.75	0.66	0.66	
Chemical	0.15	0.14	0.14	1.2	1.08	1.08	0.4	0.39	0.39	
Others	1.00	0.82	0.24	1.2	1.18	0.93	5	4.87	4.85	
Total	2.97	2.50	1.92	8. <i>90</i>	8.5	8.25	11.30	10.5	10.3	
				Lab Equi	ipment					
Mech	0.55	0.50	0.12	0.55	0.50	0.28	2.50	2.50	2.02	
CS	0.00	0.00	0.00	0.27	0.25	0.13	4.20	4.00	3.88	
EC	0.50	0.50	0.00	1.20	1.00	0.00	21.00	20.00	20.90	
IT	1.54	1.50	1.23	0.00	0.00	0.00	0.23	0.20	0.00	
Civil	2.12	2.00	1.78	0.50	0.50	0.40	0.45	0.40	0.20	
Chemical	11.00	11.00	10.36	2.00	1.75	3.01	0.45	0.40	0.13	
Others	2.50	2.50	2.70	0.00	0.00	0.00				
Total	18.21	18.00	16.19	4.52	4.00	3.82	28.83	27.50	27.13	
				Lab Cons	umable					
Mech	1.30	1.00	0.48	0.53	0.50	0.46	1.00	1.00	1.85	
CS	1.25	1.00	0.52	0.78	0.75	0.51	2.10	2.00	1.95	
EC	0.50	0.50	0.23	0.50	0.50	0.31	2.10	2.00	1.83	
IT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Civil	0.00	0.00	0.00	0.00	0.00	0.00	1.50	1.25	0.75	
Chemical	0.00	0.00	0.00	0.25	0.25	0.31	1.00	0.75	0.38	
Others										
Total	3.05	2.50	1.55	2.06	2.00	1.59	7.70	7.00	6.76	
	1		Teaching	and Non-Tea	aching Staff S	alaries		1	1	
Mech	155.00	155.00	153.24	135	135.00	129.39	120.00	120.00	121.62	

#### Table 35 Budget for Social Events

CS	140.00	140.00	138.77	110	110.00	105.64	100.00	100.00	120.89
EC	85.00	85.00	84.59	80	80.00	84.67	100.00	100.00	105.47
IT	10.00	10.00	8.36	25	25.00	24.10	45.00	45.00	38.68
Civil	70.00	70.00	68.17	55	55.00	45.28	35.00	35.00	7.88
Chemical	20.00	20.00	20.23	10	10.00	7.79	10.00	10.00	6.19
ESH	50.00	50.00	50.97	45	45.00	53.11	40.00	40.00	46.43
Total	530.00	530.00	524.32	460	460.00	449.98	450.00	450.00	447.15
	•			R &	D				
Mech	7.00	6.50	6.81	3.70	3.50	3.40	4.50	4.00	3.81
CS	1.50	1.25	1.21	1.00	1.00	0.85	1.00	1.00	0.88
EC	0.50	0.50	0.58	0.50	0.45	0.40	1.10	1.00	1.11
IT	0.25	0.25	0.13	0.05	0.05	0.06	4.00	4.00	4.30
Civil	0.25	0.25	0.00	0.00	0.00	0.00	3.00	3.00	2.59
Chemical	0.25	0.25	0.00	0.00	0.00	0.00	1.50	1.00	1.10
Total	9.75	9.00	8.73	5.25	5.00	4.71	15.10	14.00	13.79
		1		Training &	k Travel		1	1	
Mech	1.30	1.00	0.78	1.30	1.00	0.66	1.00	0.80	0.62
CS	1.30	1.00	0.85	1.00	0.90	0.73	1.00	0.75	0.66
EC	1.30	1.00	0.37	0.60	0.50	0.45	0.70	0.50	0.62
IT	0.00	0.00	0.08	0.20	0.10	0.46	0.50	0.45	0.39
Civil	0.00	0.00	0.15	-	0.00	0.00	-	0.00	0.00
Chemical	0.00	0.00	0.63	-	0.00	0.00	-	0.00	0.00
Total	3.90	3.00	2.86	3.10	2.50	2.30	3.20	2.50	2.29
		- 		Computer &	z Software		1		
Mech	0.00	0.00	0.00	0.50	0.50	0.34	1.00	1.00	1.02
CS	0.00	0.00	0.00	0.50	0.50	0.38	25.00	25.00	25.90
EC	0.00	0.00	0.00	0.30	0.25	0.23	1.50	1.50	1.01
IT	1.00	1.00	0.00	0.30	0.25	0.25	2.50	2.50	0.62
Civil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemical	4.50	4.00	3.64	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.50	5.00	3.64	1.60	1.50	1.20	30.00	30.00	28.55
				Maintenance	e & Spares				
Mech	0.50	0.50	0.23	1.00	1.00	0.86	3.00	2.50	2.30
CS	1.00	1.00	0.25	1.00	1.00	0.95	3.50	3.00	2.99

EC	1.00	1.00	0.11	1.00	0.75	0.58	3.00	2.50	2.28
IT	0.30	0.25	0.85	0.00	0.00	0.00	0.00	0.00	0.00
Civil	0.50	0.50	0.75	0.30	0.25	0.60	0.50	0.50	0.45
Chemical	0.75	0.75	1.39	0.00	0.00	0.00	0.50	0.50	0.41
Total	4.05	4.00	3.58	3.30	3.00	2.99	10.50	9.00	8.43
Overall Total	577.43	574.00	562.79	488.73	486.50	474.84	556.63	550.50	544.40
Infrastructure Built up		20.00	18.24		8.00	7.74		9.00	8.51
Grand Total	577.43	594.00	581.03	488.73	494.50	482.58	556.63	559.50	552.91

Budget for the Year 2015-16								
		DEPARTMENTS						
Head	Mech	CS	EC	IT	Civil	Chemical	Others	Total
Library	0.50	0.50	0.25	0.25	0.75	0.5	0.75	3.50
Lab Equipment	1.5	3.50	1.50	0.75	0.50	10.00	1.50	19.25
Lab Consumable	1.25	1.30	0.60	0.25	0.15	0.25	0.15	3.95
Salary	170.0	151.00	90.0 0	11.00	76.00	21.00	54.00	573.00
R&D	7.50	2.00	1.00	0.50	0.50	0.50	0.00	12.00
Training & Travel	3.00	3.00	1.00	0.50	0.50	0.00	0.00	8.00
Computer & Software	0.50	1.50	0.50	0.50	0.00	1.00	0.00	4.00
Maintenance & Spares	0.75	1.50	1.25	0.50	0.75	1.00	0.50	6.25
Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	185.0	164.30	96.1	14.25	79.15	34.25	56.9	629.95

Budget for the Year 2016-17							
EXPENDITURES HEAD (Deptwise)	Proposed Budget	Approved Budget					
Library							
Mech	0.6	0.55					
CS	0.6	0.55					
EC	0.3	0.25					
IT	0.3	0.25					
Civil	0.9	0.8					

Chemical	0.6	0.55				
Others	0.9	0.8				
Sub Total (A)	4.2	3.75				
Lab E	quipment					
Mech	1.75	1.6				
CS	3.75	3.5				
EC	1.75	1.6				
IT	1	0.75				
Civil	0.75	0.6				
Chemical	10.5	9.5				
Others	1.75	1.25				
Sub Total (B)	21.25	18.8				
Lab Co	nsumable					
Mech	1.5	1.25				
CS	1.5	1.25				
EC	0.75	0.6				
IT	0.4	0.25				
Civil	0.25	0.2				
Chemical	0.4	0.35				
Others	0.25	0.2				
Sub Total (C)	5.05	4.1				
Teaching and Non-Teaching Staff Salaries						
Mech	180	175				
CS	160	155				
EC	100	95				
IT	15	13				
Civil	80	78				
Chemical	25	24				
ESH ( & Others)	60	59				
Sub Total (D)	620	599				
R	& D					
Mech	8	7.75				
CS	2.5	2.25				
EC	1.5	1.25				
IT	0.75	0.5				
Civil	0.75	0.6				
Chemical	0.75	0.6				
Others	0	0				
Sub Total ( E )	14.25	12.95				
Trainin	g & Travel					
Mech	5	4.75				
CS	5	4.8				
EC	1.5	1.25				
IT	0.75	0.5				
Civil	0.6	0.5				

Chemical	0	0
Others	0	0
Sub Total (F)	12.85	11.8
Comp	outer & Software	
Mech	0.75	0.6
CS	2	1.75
EC	0.75	0.6
IT	0.75	0.6
Civil	0	0
Chemical	1.25	1
Others	0	0
Sub Total (G)	5.5	4.55
Maint	tenance & Spares	
Mech	1	0.9
CS	1.75	1.6
EC	1.5	1.4
IT	0.75	0.6
Civil	1	0.9
Chemical	1.25	1.1
Others	0.75	0.6
Sub Total (H)	8	7.1
Total ( A to H)	691.1	662.05

## 3.6.5 How does the institution promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?

Mostly, such participation is encouraged through the mandatory community work requirement which is an academic requirement under new CBCS Scheme. As an effort to stimulate social consciousness among students, the Institute encourages student participation in NSS.

## **3.6.6** Give details on social surveys, research or extension work (if any) undertaken by the college to ensure social justice and empower students from under-privileged and vulnerable sections of society?

- ➤ The extension activities organized by the institution sensitizes students with respect to critical issues concerning the society and environment such as poverty, social injustice, gender bias, pollution evils and the corrective measures to counter them. This makes them aware of their roles to be played in the society. Hence, all these extension activities groom their personality and enable them to take part in nation building process.
- Each engineering department has a technical society. These societies conduct regular technical symposia/festivals at departmental level.

- These extension activities boost the overall confidence of students and inculcate values at large. These activities also instill a sense of independent leadership and develop team building skills.
- In order to encourage participation and volunteer ship in these extension activities, students are awarded with certificates.
- College offers opportunities for personality development through training and placement cell.

## **3.6.7 Reflecting on objectives and expected outcomes of the extension activities organized by the institution, comment on how they complement students' academic learning experience and specify the values and skills inculcated.**

Engineers are the backbone of the country. They must know the weaknesses and strengths of our society. Furthermore, they should know as to what reforms should be made to evolve a better society.

#### 1. Objectives of the extension activities

Extension activities conducted by the institute always imbibe academic learning experience, values and skills not only in students but faculty too. These activities refresh the environment of the institute as well. The college is an equal opportunity institution established to provide knowledge and quality education to all sections of society. It aims to maintain modern outlook with contemporary developments without compromising moral values. To provide knowledge and quality based education to the students by inculcating moral values, scientific temper and employing state of the art technologies. It aims to pursue excellence towards creating manpower with high degree of intellectual, professional and cultural development to meet the national and global challenges.

#### 2. Outcomes of the extension activities

The results of participation in the various socially relevant activities have resulted in inculcating the feeling of being socially awakened citizens in the students. The students who have been a part of this process have been spreading awareness in the institution and motivating other students as well to stand tall for the cause of social upliftment.

Extension activities complement student's academic learning experience and inculcated the values and skills. Such programme gives value in:

- Leadership qualities.
- ➢ Health and hygiene.
- ➢ National Integration.
- ➢ Adventure.

- ➢ Social service.
- ➢ Ecology and environmental protection.

## **3.6.8** How does the institution ensure the involvement of the community in its reach out activities and contribute to the community development? Detail on the initiatives of the institution that encourage community participation in its activities?

The institute takes the help of elder and influential people like village head, members of gram panchayat to ensure the involvement of local population in its community development activities. To win the confidence of local population the institute organizes various awareness programs like free dental & healthcare camps, Eye checkup camps, Village cleaning drives etc.

### **3.6.9** Give details on the constructive relationships forged (if any) with other institutions of the locality for working on various outreach and extension activities.

Informal relationship with the office bearers of various societies of the institute and prominent senior citizens of nearby villages have been established in a cordial manner for successfully working on various outreach and extension activities of the institutes. However no formal relationship in form of MoU, agreement etc has been forged between two parties.

### **3.6.10** Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.

The institution has consistently provided extension services to the society.

#### **3.7** Collaboration

# 3.7.1 How does the institution collaborate and interact with research laboratories, institutes and industry for research activities. Cite examples and benefits accrued of the initiatives – collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.

The institution collaborates and interacts with research laboratories, institutions of repute and industry for research activities at two levels-

At Institute Level through formal MOUs with such organization, engagement of professionals for conducting lectures/ seminars/ workshops/ symposiums and at individual faculty level through informal/ personal liaison basis with individual academia/ professional from institutions. In both the processes sharing of knowledge with an interest of creating research orientation, sharing of lab facilities and equipments do take place, for example: usage of virtual lab set up of IIT Delhi, conduct of eYantra workshop by IIT- Bombay in EC Department (Nodal center for such programs funded by MHRD).The following collaborations are as:

- > IIT Madras Quality Enhancement in Engineering Education (QEEE).
- ➢ IIT Mumbai Spoken Tutorial.

- ➢ IIT Mumbai e Yantra Robotics Lab.
- ➢ IIT Delhi Virtual Lab.
- ► EMC<sup>2</sup> Center for Academic Excellence.
- Visual Paradigm, Hong Kong Association.
- ► EC Council Academia, USA.
- ➢ IBM Academic Initiative.
- NASSCOM Global Business Foundation Skills (GBFS) & Foundation Skills in IT (FSIT) courses.

The benefits accrued of such initiatives by the institute have been satisfying in terms of summer internship opportunities for our students in industry and research labs. Additionally inculcation of research attitude and motivation of doing research, exposure to emerging trends in respective domain of technology, are intangible benefits for orientation of students and faculty minds.

The institute organizes various interactive sessions with experts of industry and other research organizations by:

- > In plant training and industrial visits for students.
- The Research & Development cell, Career guidance Cell, Entrepreneur Development Cell NEN interacts with research laboratories, institutes and industries for research activities. And each department organizes seminars, workshops, conferences, to create research interest.

## **3.7.2** Provide details on the MoUs/collaborative arrangements (if any) with institutions of national importance/other universities/ industries/Corporate (Corporate entities) etc. and how they have contributed to the development of the institution.

The institute has signed MoU/ maintains informal professional relationship with the following companies/ institutions for issues related with training, placement, guest lectures, participation in technical events, assistance in developing training facilities, FDP etc.

Value added course	Coordinating Department	Objectives	Outcomes
IIT Madras Quality Enhancement in Engineering Education (QEEE)	Mechanical Engineering Department	To provide expert lectures to students on academic subjects from IIT professors for Quality Enhancement in Engineering Education	Understanding the core concepts of various engineering field and learn content beyond syllabus
Visual Paradigm, Hong Kong Association	Computer Science & Engineering Department	To Learn Software Modeling Tools	Used tools for Project Activities
IBM Academic Initiative.	Computer Science & Engineering	New laboratory establishment with IBM tools and Learn Software Modeling Tools	Exposure with latest IBM software tools & Used tools for Project Activities.

	Department		
NASSCOM	Computer Science & Engineering Department	Industry Ready Engineers	Bridge the Industry and Academic Gaps
IIT Mumbai Spoken Tutorial	Electronics & Communication Department	To pass on the knowledge of technology and free and open source software (FOSS) to the millions in our countrymen who lack opportunities and/or access to learn any software.	To get Elementary knowledge for a particular course.
Virtual Lab	EHS Department	To provide online access to various practical experiments on academic syllabus	The Virtual lab program is to enthuse students to conduct experiments by arousing their curiosity and it presents a unique opportunity to boost the quality of education, deepen understanding, and provide the necessary practical skills to students through cost effective outreach.
IIT Mumbai E-Yantra	Electronics & Communication Department	To learn application of embedded system and provide solution to real world problem.	Understand the Robotics programming and concept of controller, sensors etc.
EMC <sup>2</sup> Center for Academic Excellence	Computer Science & Engineering Department	To enhance knowledge of current trends in data science.	Students got aware about different certifications.
EC Council Academia, USA	Information Technology Department	To get knowledge of ethical hacking	Students Learn about hacking principals and prepared for certification.
BSNL	Electronics & Communication Department	To provide Vocational Training for students in Telecom sector and to get exposure to latest technologies in telecom industry.	Students got good exposure to latest telecom technologies and tools used in industry.

Due to the MOUs/collaborations with the industry, the institution has benefitted with the developments in improvement of the training facilities for students, increased number of placement, visit of more number of eminent professionals from industry.

3.7.3 Give details (if any) on the industry-institution-community interactions that have contributed to the establishment / creation/up-gradation of academic facilities, student and staff support, infrastructure facilities of the institution viz. laboratories / library/ new technology/placement services etc.

The institute often interacts with industry people through industrial visits, seminars/ Guest Lectures, workshops, conferences and placement. Though our institute cannot change the syllabus on its own, the college takes the value edit Courses like personality development, Java, C, C++, C# language, SQL Server, Linux, MATLAB, etc. keeping in mind the need of the industry. Apart from this the institute has conducted various training programmes on regular basis.

The institution encourages establishing the interaction between institution and industries. The following are the details of activities which are contributed to the establishment as well as upgradation of academic ambience in the college by the industries.

Each department signs Memorandum of Understanding with various industries. The experts from these industries regularly visit the college to interact with faculty members and students.

The latest technologies and industrial needs are clearly explained to the students through lectures and industrial visits.

The students and faculty members are encouraged to go for internship during the summer and winter vacations. The participants of these internships are sharing their experience with other students and the faculty in the college.

Value added courses are being taught by the various industrial persons to the students during the summer and winter vacation.

S. No	Name of institute/ industries/ corporate	Nature of activity	Contribution towards institution development
1	NASSCOM	Industry and Institute Tie-up for Training	Students Training on two NASSCOM courses like GBFS "Global Business for Foundation Skills" and FSIT "Foundation skills in Information Technology"
2	IBM Academic Initiative Program	Industry and Institute Tie-up for Academic Development	Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide. Extensive expertise, teaching assets, and community resources to develop world-class curricula. No-charge access to IBM software, hardware, technology, and tools. Extended Bluemix-trial access for qualifying courses through the Academic Initiative for Cloud offerDiscounted pricing on selected fee-based offerings. Skill-building opportunities ranging from IBM and ecosystem events to student competitions The Academic Initiative offers a wide range of professionally developed courseware to help you teach students using IBM and open-source products and technologies. This courseware listing is organized by teaching topics that align with academic curricula. An IBM Academic Initiative lab is started to handle and implement IBM AI program
3	Visual Paradigm	Visual paradigm Hongkong for academic partnership.	Under this agreement we can download and use all the software modeling and software design tools free of cost. We are the very first institute in the state of Madhya Pradesh and among very few in India to have this collaboration. Visual Paradigm's software has been adopted by many organizations in the worldwide, including Fortune 500 and Fortune 1000 companies. Faculties are getting knowledge, hands-on experience on the technologies and software applications that are used worldwide.
4	ERP and Google Classroom:	Automation of academic activities	The department is completely automated for all academic activities through ERP (Webguru) and Google Classroom. These systems are blended learning platform for us to simplify creating, distributing and grading assignments in

#### Table 36 Details of Industry-Institution Interactions

			a paperless way. ERP is designed to help teachers create and collect paperless assignments, including time-saving features like the ability to automatically make a copy for each student.
5	EMC Center of Excellence	Academic partnership	Our academic partnership with EMC Center of Excellence for EMC's Academic Alliance program for training programs and collaboration to conduct curriculum-based education on technology topics such as virtualization, cloud computing, big data analytics, and information storage and management. The global program is geared towards arming students with the knowledge necessary to differentiate themselves in the job market and improve their competitive advantage.
6	EC Council Academia, USA	Academic Partner	EC Council Academia, USA: The association aims to deliver information and security skills to improve career and economic opportunities. The program offered at IIST is Certified Ethical Hacker (for students of IT, CS & EC). IIST is the only training partner for the program in Indore.
7	IIT Bombay- Spoken Tutorial	Tie-up forSpoken Tutorial	IIT Bombay- Spoken Tutorial: The Spoken Tutorial project is the initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India. The use of spoken tutorials to popularize software development and its use will be coordinated through this website. Objective is to pass on the knowledge of technology and free and open source software (FOSS) through the website to the millions in our countrymen who lack opportunities and/or access to learn any software.
8	IIT Madras Quality Enhancement in Engineering Education (QEEE)	Quality Improvement Program	QEEE program uses real time and synchronous technology to allow for an integration of superior external scholastic inputs into current pedagogical practices. QEEE has got Live Classes wherein IIT faculty delivers live lecture classes to participating colleges. It also includes Course pack of supplement study material with lecture notes, live class videos, discussion forums, assessment and evaluation tools to serve as a reference material for QEEE courses. Live Labs are conducted to provide virtual hands-on experience to students on experiments undertaken remotely. It creates an opportunity to work on a real lab experiment tailored to suit their syllabus and curriculum.
9	IIT Mumbai E- Yantra	Hands-on Training andRobotics Competition	IIT Mumbai E-Yantra: An initiative by IIT Bombay that aims to create the next generation of embedded systems engineers with a practical outlook to help provide practical solutions to some of the real world problems. It aims to spread education in embedded systems and Robotics. Also, helps in better performance at Robotics competitions such as the e-Yantra Robotics Competition with trainings done at IIST campus.

3.7.4 Highlighting the names of eminent scientists / participants, who contributed to the events, provide details of national and international conferences organized by the college during the last four years.

S. No	Eminent scientists & professors	Designation and Company	Date
2.	Dr. Ashesh Tiwari	Institute of Engineering & Technology and Honorary Secretary IEI, ILC.	Nov 2013
3.	Dr. P.K. Chande	Ex Group Director, Truba Group, Ex Director MNIT.	Nov 2013
4.	Dr. K.A. Subramanyam	Professor, I. I. T. Delhi	Nov 2013
5.	Dr. M.P.S. Chawla,	SGSITS, Indore	Nov 2013
6.	Dr. Santhosh sahu	Professor, I.I.T. Indore	Nov 2013
7.	Dr. DK.Mishra	Professor, SAIMS, Indore	06 Nov 2012
8.	Dr. K.A. Subramanyam	Professor, IIT, Delhi	Nov 2013
9.	Dr. P.K. Chande	Ex Group Director Truba Group, Ex Director MNIT.	Nov 2013
10.	Dr. M.P.S. Chawla,	Professor, SGSITS, Indore	Nov 2013
11.	Dr. Santhosh sahu	Professor, I.I.T. Indore	Nov 2013
12.	Mr. Mustafa Hasan Abrar	BSNL, Bhopal	17/09/2015
13.	Mr. Virendra Patidar	BSNL, Indore	3/02/016
14.	Mr. Viresh Nayak	Scientific Officer BARC Mumbai	24/02/2016
15.	Mr Veeresh Nayak	Scientific Officer BARC Mumbai	16/10/14
16.	Dr. Krishna Lala, Sr. Project Manager	IIT Bombay	10/2/2015
17.	Mr. Surendra Yadav	Scientific Officer RRCAT, Indore	29/11/2013
18.	Dr. Vaibhav Neema	IET DAVV, Indore	25/3/14
19.	Dr. Ram Bilas Pachori	IIT, Indore	13/03/13
20.	Dr. Vaibhav Neema	IET DAVV, Indore	12/4/2013
21.	Dr. R.K. Shriwastava	Professor S.G.S.I.T.S.	2 <sup>nd</sup> August 2013
22.	Mrs. Vandana Tare	Professor S.G.S.I.T.S.	29 <sup>th</sup> March 2014
23.	Dr. S.P. Chourasia,	Professor, Deptt. Of Chemical Engineering, MNIT, Jaipur (Rajasthan)	4 <sup>th</sup> Feb,16
24.	Dr.V.K.Shrivastava	Ex DeanR &D, IIT Delhi	25 <sup>th</sup> Nov,2014
25.	Dr.L.M.Kukreja	Sr. Scientist, RRCAT, Indore (M.P)	25 <sup>th</sup> July,2014

#### Table 37 List of Eminent scientists & professors

Waste & Biomass Valorization: Potential, Issues & Challenges" (12-13 September 2014)

#### List of eminent Speakers

- 1. Mr. S.P.Gautam, Former Chairman, Central Pollution Control Board
- 2. Dr. V.P. Thergaonkar, Ex Scientist NEERI, Nagpur, Managing Director, Enviro Techno Consult Private Ltd, Nagpur
- 3. Mr. Dharmendra M. Ramteke, Sr. Manager (HRD), Rashtriya Chemicals & Fertilizer, Mumbai
- 4. Dr. Devendra Deshmukh, Department of Mechanical Engineering, IIT Indore
- 5. Mr. B.D.Dalwadi, Chief Executive Officer, Bharuch Enviro Infrastructure Ltd., (Waste management company) Ankleshwar, Gujarat
- 6. Mr. Sanjay Kapoor, Tata International Ltd., Solid waste management in tanneries, Dewas

7. Mrs. Radha Pandey, M.P. Waste management project: An integrated approach in hazardous material/waste management

National Workshop On "Breakthrough Energy Technologies and Challenges for Sustainable Development" (29-30 October, 2015)

#### List of eminent Speakers

- 1. Mr. Sudesh Sharma, Addl. Chief Engg. CP & CC Directorate, NPCIL Mumbai
- 2. Dr. S Suresh, Prof. Deptt. Of Chemical Engineering MANIT Bhopal
- 3. Mr. Ankit Gupta, Consultant at Power Trading Corporation India Ltd.
- 4. Prof. D.K.Sharma, Centre for energy studies, IIT Delhi
- 5. Mr.Manideep Saxena, Senior Manager KWATT Solution Pvt. Ltd.
- 6. Dr. C. Mukharjee, Scientist R.R.Centre for Advanced Technology, Indore

#### National Seminar on

"Green techno-economic approaches in development of smart city: Role of science & technology" 17-18 Nov, 2016

#### List of eminent Speakers

- 1. Sh. Himanshu Tilwankar, Senior management professional-Environmental management expert
- 2. Sh. Syed Asad Ali Warsi, Director, Eco Pro Environment Solution
- 3. Dr. Yogendra Saxena, Scientist, Central Pollution Control Board
- 4. Dr. Prashant Baredar, Associate Professor, Energy Department, MANT, Bhopal
- 5. Dr. Gunwant Joshi, Chief Chemist, M.P. Pollution Ciontrol Board
- 6. Mr. Sumit Gupta, Founder & CEO, Pragya Solar, Noida

### 3.7.5 How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List out the activities and beneficiaries and cite examples (if any) of the established linkages that enhanced and/or facilitated -

Around 6-8 MOUs have formally resulted out of various linkages / collaboration of the institute with educational education /Industrial organizations.

- Curriculum development/enrichment Not Applicable.
- Internship/ On-the-job training Opportunity for summer internship has increased substantially.

#### > Summer placement

100% of student from B.E & MBA is able to undergo industrial training during their summer vacation.

Faculty exchange and professional development As no faculty could move on faculty exchange program however many faculty visited local industrial setup to enhance their practical expertise.

#### > Research

The institute is able to regularly organize workshops/ seminars/ guest lecture to promote research activities.

> Consultancy

Nil

#### > Extension

Nil

#### > Publication

Linkages with academia from institutions of repute are certainly encouraging, motivating faculty members and students in producing papers and presenting / publishing them in conferences / journals.

#### Student Placement

Table 56 Students Flacement Detail in fast four year
--

Cauraa	No. Of Students Placed from respective passed out batches				
Course	2012-13	2013-14	2014-15	2015-16	
B.E	99	126	262	360	

- > Twinning programmes Nil.
- Introduction of new courses Nil.
- Student exchange Nil.

### **3.7.6** Detail on the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/ collaborations.

The institute is trying to established linkages with reputed educational institutions (India/Abroad), research labs and employing industries, in a systemic planned manner. In order to do so necessary policy formulations have taken places with regard to issues like Industry interactions, Consultancy, Collaborations, research publications by faculty etc. As far as establishment and implementation of such policy initiatives is concerned, it is moving in the right direction with gradual pace. Satisfactory functioning of corporate relations and placement centre, Institute Industry Interaction Cell are some of the high lights in this regard.

Any other relevant information regarding Research, Consultancy and Extension which the college would like to include.

## CRITERION IV INFRASTRUCTURE AND LEARNING RESOURCES

#### CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

#### **4.1 Physical Facilities**

### **4.1.1** What is the policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

The institution abides by the regulations of UGC / AICTE / RGPV in all aspects relating to the creation and enhancement of infrastructure and other facilities. Good and modern infrastructure will definitely facilitate the better teaching learning process. The institution has developed good infrastructure like highly equipped laboratories, library with reading room, canteen, transport facility, auditorium enough parking, playgrounds, separate hostels for girls and boys with generator facility, internet with Wi-Fi connection within the College campus and in hostel premises in a lush green campus. In order to meet the needs of the stakeholders, the Management Committee meets once a year to plan the academic and administrative activities of the college. Besides, as and when the need arises, budget for the enhancement of infrastructure is proposed and passed through resolutions in the Governing Body Meeting.

The college has an extensive Infrastructure spread over 55 acres comprising of Academic Buildings, Departments, Lecture halls, Air condition Auditorium, Food outlets, student Residences, faculty and staff quarters, Guest House, sport fields, roads, power supply systems, RO-Purified water supply, selvage disposal Network etc. For civil maintenance as well as the supervision of new construction, Electrical Maintenance including Back-up generation by Diesel Generator Telecom and Data network (ISDN & Optical Fibre) is taken care by specialized units. A security section supervises the maintenance of Law & order on the campus and vicinity. Annual Maintenance for academic infrastructures including computing facility UPS and air-conditioning (facility management at Institute level) Annual maintenance contract or on-call basis maintenance service is affected for critical level laboratory equipment. Many of the critical equipment are procured with 3 years warranty. Assistant Engineer has the responsibility to maintain the Institute campus under the supervision of Dean. Assistant Estate Engineer coordinates and oversees the functions of the buildings, water supply and electrical supply.

- Class rooms and laboratories in adequate numbers are well designed to maintain the ambience for an effective teaching and learning process.
- The management constantly evaluates the existing facilities and takes steps to improve them (construction of additional build up area in recent past years confirms the intention).
- > The college strives to build infrastructure facilities for research activities.
- All purchases are carried out in systematic manner by calling for quotations by purchase committee meeting giving full technical specification.

- The institution has OHP and LCD projectors, smart-class room's audio-visual rooms, and Wi-Fi/ campus wide intranet as teaching tools for an effective learning with improved quality.
- Realizing the need of the competitive job market, the institute regularly conducts review of value added courses, skill enhancement programs and enrichment courses, etc and creates new facilities from time to time e.g. Creation of Robotics Lab under eYantra Program procurement of high end core engineering software etc.

#### 4.1.2 Detail the facilities available for



Transportation



ATM in Campus





Workshop



Staff rooms



Girls Hostel



Figure 33 Detail the facilities available in campus

## a) Curricular and co-curricular activities – classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, Animal house, specialized facilities and equipment for teaching, learning and research etc.

College regularly conducts a number of technical events. Each engineering department has its own technical society. In addition, the college also has so many other clubs. The technical societies conduct regular workshop, seminar etc. An Inter college Annual Technical Festival is organized in the college every year. The Technical event includes activities such as technical quizzes, debates on technical subjects, robotics competition etc. The students are encouraged to participate in technical events. The students participating in such events are given financial support by the college in terms of registration fees, travel and staying expenses. In the recent past, the college students have won many prizes in such technical festivals.

**Class rooms:** Our College has spacious class rooms with LCD projector with sound system, proper light arrangement and ventilation.

**Technology Enabled learning facility:** The College has ICT Classrooms where the provision of OHPs, Multimedia learning, Wi-Fi connectivity and internet access is given.

**Seminar Hall:** The College has various seminar halls. These halls are regularly used for conducting seminars at the college, state and national level. The students are regularly promoted for active involvement in paper presentations, group discussions etc.

**Tutorial rooms:** Tutorial rooms are there in college campus for special remedial classes for weak and needy students.
**Laboratories/Workshops:** The College has well equipped laboratories, each of them are equipped with state of the art laboratory equipment. These labs are also utilized for students to do their practicals and projects.

### Specialized Facilities and equipment's available for teaching, learning and research:

To promote teaching and learning College has facilities like LCD projectors, OHP's, smart class rooms and also audio visual equipment through which the remote workshops can be conducted. The college is having a digital library with internet which is being effectively used by the students for their research activity.



Mechanical Engineering Department Lab



Robotics Lab (International Robotics Event)



Seminar Hall



Auditorium



Class Room

b) Extra –curricular activities – sports, outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.

The College is encouraging and providing facilities for students to participate in games. Dean student Welfare supported by a team of faculty members and sports officer, looks after all cultural, sports and extracurricular activities of the college. The college is also having team which is actively under taking social welfare activities like blood donation.

**Sports:** The College has always created a niche for itself in the field of sports. The college has since long times, been participating in various inter institution, state level tournaments. In sports, our college provides facilities for both indoor and outdoor games to the students.

**Outdoor Games:** A spacious play ground is available for outdoor games like Cricket, Football, Volleyball, Basketball, Badminton etc.





Figure 34 Outdoor Games - Basketball, Football, etc

**Indoor Games:** Facilities for the indoor games like Badminton, Table Tennis, Chess, Carrom etc, are provided to students in the college campus.

A large number of sports activities are organized in the college aiding the students to display their talent in sports activities.



Figure 35 Indoor Games - Table Tennis

Table 39 Details of department of physical education

S. No.	Name of the Area	Plinth Area in Sq. Mtrs
1	Table Tennis Halls	10X120 Mtrs <sup>2</sup>
2	Badminton Indoor	8x8 mtrs <sup>2</sup>
3	Gymnasium hall	8X3 Mtrs <sup>2</sup>

4	Department Room	20X20 feet
5	Store Room	10X10 feet
6	Play-Ground Consists of 400mtrs Athletic Track, Volleyball,Beach Volleyball, Netball Courts, Long-Jump, Shot-put, Discuss Throw Pits Football, throw ball, tenni ground and lawn tennis courts, and Cricket fields	50,000 Sq. Mtrs

S No	Name Of the Facility	Availability for Usage	No. of students Usage
1	Table Tennis Boards	06	30
2	Badminton Indoor	01	30
3	Gymnasium Hall	01	30
4	Volley Ball courts	02	30
5	Throw Ball	02	30
6	Football	02	15
7	Cricket	02	12
8	Tennicoit Outdoor	01	30
9	200 mts Athletics track	01	30
10	Badminton Court Outdoor	04	20
11	Hockey	01	16

#### Table 40 List of Equipment in the Gymnasium

S. No	List of Equipment in the Gymnasium
1	Multipurpose Bench
2	Steel Dumbbell – 50Kg
3	Bench Press
4	Seated Chest Press
5	Dumbbells/Plate Rack

**Seminar Hall:** The College is having a modern, well equipped acoustic seminar hall for conference and seminars. The seating capacity of the hall is about 150.



Figure 36 Snap of Seminar Hall

**Cultural Activities**: The students are organizing & participating in many cultural activities. Every year college organizes an Annual cultural Function where the students participate with zeal in many cultural activities. It is an event which reeks out the hidden talents of students but not in technical aspect rather the arty part comes to the fore. Some of the events include face painting, mehendi, singing, dancing, collage making, t-shirt painting, pot painting, rangoli making.





#### Figure 37 Glimpses of Culture Activities

**Public speaking communication skills development:** Personality development programs are run by the college which involves various activities like public speaking and communication skills development etc. Besides this the college faculty also keeps enriching the students with the art of communicative skills.

Instructional Area		
Particular	No.	Area in SQM
Class Room/tutorial room	40	3001
Laboratory	30	2920
Computer Centre (including 14 labs)	3	1611
Drawing Hall	2	296
Library (including E- Library, Reading room)	1	1115
Seminar Hall	3	480
Work shop	2	724
Administrative area		
Director Office (including board room, pantry, director cabin, office, students section)	1	345
HOD cabins	6	178
Administration Office	1	209
Accounts section	1	100
Faculty rooms	7	425
Central store	1	56
Housekeeping	1	10
Examination control room	1	78
Placement/SDC Office	1	234
Transport office	1	49
Maintenance	1	10

#### Table 41 Details of Infrastructure

Security	1	10
Amenities Area		
Toilets	6	336
Cafeteria	1	358
First Aid & Sick room	1	14
Auditorium	2	590
Boys common room	1	100
Girls Common room	1	100
Circulation Area (including staircases, common area		6095
Other Area		
Staff Flats (including Principal Flat)	1	1455
Guest House	1	353
Canteen	1	700
Indoor games	1	583
Boys Hostel	1	2012
Girls Hostel	1	1218

4.1.3 How does the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution / campus and indicate the existing physical infrastructure and the future planned expansions if any).

- Our institution is continuously planning to improve the infrastructure for the academic growth as per the AICTE and RGPV, BHOPAL norms. To keep pace with the changing needs and requirements, additional infrastructures are being added from time to time.
- Infrastructure is the key factor for over all academic development and growth. College emphasizes on optimum utilization of its infrastructure.
- > The basic infrastructure facilities are optimally utilized as per the annual academic calendar.
- The college building is provided for conduction of various examinations viz university exams, CA, CS, IBPS, Vyapam (Bhopal), Railway Recruitment exams, MPPSC Exam various banking personnel recruitment exams and interview etc. facilities are available for approximate 1600 students for offline exam and 350 students for online Exam.
- Seminar hall, Auditorium and audio visual facilities are used for seminars, workshops, staff meetings, students" induction program, training and placement, and various other programs throughout the year.
- Open space on ground floor is fully utilized for cultural activities and social programs like 15th August, Garba, Janmashtami etc.

- The outdoor and indoor sports facilities are optimally utilized in annual sports of college and for practice of university, state level and national level sports.
- > Canteen facility is available for students and staff during college hours.
- Laboratories are well equipped and utilized by UG (BE) and PG (ME, M.Tech.) students as per academic calendar.
- The classes for UG and PG students are well equipped with modern teaching facility viz Pearson LCD, OHP and smart board.
- ➤ In the last four years, new class rooms and labs facilities/buildings have been constructed/as well as renovated

Master Plan of the Institution / campus and indicate the existing physical infrastructure and the future planned expansions (**Refer Annexure III**)

# **4.1.4** How does the institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?

The institute ensures that infrastructure facilities are made available for students with physical disabilities. For physical disable students, it is ensured that they don't have any physical obstruction. The institution is committed to accommodate them on the ground-floor, especially front-seating arrangement, comfortable furniture, attendant facility. They are provided classes with ramp facility. The needs of the physically challenged students are fulfilled by the supporting staff. The students are given extra attention during the college terminal examinations as well as the final examinations. They are helped by providing the seats on the ground floor.

They are allowed to get their transport in the campus. College has strong sense of responsibility inculcated both in faculty and staff to support & provide disabled-friendly environment.

## 4.1.5 Give details on the residential facility and various provisions available within them:

#### Hostel Facility – Accommodation available

- Institute has own well furnished boys and girls hostel with canteen facility.
- Institute has well furnished boys and girl's hostel with 24\*7 Internet facilities.
- Institute provides bus facility to the hostler's conveyance facility from college to Indore every day.
- Television, news papers and library facility also available for hostlers in night time.
- Regular health check up facility to all the hostlers.

Hostels	No. of rooms	No. of students accommodated
Hostel for Boys	42	79
Hostel for Girls	32	40



Figure 38 Boys & Girls Hostel Facility

#### > Recreational facilities, gymnasium, yoga center, etc.

Gymnasium as well as indoor and outdoor sports facilities available.

S. No	List of Equipment in the Gymnasium
1	Multipurpose Bench
2	Steel Dumbbell – 50Kg
3	Bench Press
4	Seated Chest Press
5	Dumbbells/Plate Rack

#### > Computer facility including access to internet in hostel

The campus is Wi–Fi enabled; hostels are well connected with Internet access point for individual subscription.

#### Facilities for medical emergencies

- Doctor visits Institute two days a week.
- Well-equipped ambulance is exclusively available within the campus for 24\*7 in case of emergencies.
- Institute has MOU with New Minesh Hospital, Rau located at 3 km away for emergency medical care.
- Well equipped medical room.

#### Library facility in the hostels

The central library is open from 9:00 am to 8:00 pm on weekdays and up to 6:00 pm on weekends.





#### Internet and Wi-Fi facility

The internet connectivity in the campus is 43 Mbps and Wi – Fi facility is available in whole campus.

#### > Recreational facility-common room with audio-visual equipments

Yes. There are common rooms with audio visual equipments for both boys and girls hostels.

#### > Available residential facility for the staff and occupancy

We have guest house for staff members in college to facilitate any requirement of stay in view of official work/ for stay of visiting guest. Also there are 14 faculty quarters within the campus.

#### Constant supply of safe drinking water

The institution is well equipped with water treatment plant with the capacity of 250 LPH from M/S AquaPuro equipments of the following specifications.

S. No.	Item Description
1	Raw water feed pump
	Model no: Kilosskar Mini 28
	Motor Rating- 0.5 HP
	Inlet/Outlet- 1" NB
2	Pressure sand filter (FRP)
	Model No. PSF 844 MPV
	Dia: 200 mm- Height: - 1120 mm
3	Activated carbon filter (FRP)
	Model no. ACF 844 MPV
	Dia- 200 mm- Height- 1120 mm
4	Micro cartridge filter- MOC- Poly Propylene

#### Table 42 Detail water treatment plant

	Porosity- 5 micron- 20" Long	
5	Reverse Osmosis unit with membrane technology	
	Piping- PVC for low pressure/ SS for high pressure	
6	UV system	
7	Total number of coolers located at various locations of the campus- 22	
	Working condition: Excellent	
	Cooler capacity: Average 100 lit	

# ➢ Security

- The security services are having been outsourced at the campus to M/s. Lean on Monarch Security systems services. The functioning of the security agency is monitoring by the admin manager through our security In-charge.
- Security agencies provide the trained security guards, gun man and supervisor with 30 numbers.
- Look after the construction and other materials which lying in the campus.
- Every occurrence of any incident/ accident within the premises noticed by security guard is formed to the Admin. Officer.
- Monitors deployment and alertness of security guard at different locations.
- Entry/Exit records on main gate maintain by the security guards.
- Keep the effective contact with the security agencies to avoid any unwanted activities in the campus.
- Security guards perform the duties day and night shifts.
- CCTV Cameras are installed in various Places in the campus.

# 4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus?

#### Arrangement for emergency medical care

- 1. Doctor visits Institute two days a week.
- 2. Well-equipped ambulance is exclusively available within the campus for 24\*7 in case of emergencies.
- 3. Institute has MOU with New Minesh Hospital, Rau located at 3 km away for emergency medical care.

4. Well equipped medical room.

## Availability of first-aid unit

- > First aid kits are available at
  - Every department has First aid box with all necessary medicines and equipment which is check by every department time to time. And also First aid kits are available at Director Office, Administration dept, Boy's Hostel, Girl's Hostels, Ambulance vehicle and Security Office.
  - The institute has two sick rooms.
  - All the necessary medicines, minor surgical items are available in sick rooms.
  - The sick room's location is accessible for every person in the campus easily.
  - Telephone facility is available in sick room for providing the quick assistance to the patient from outside world.

## Ambulance facility for all students and staff

• The institute has its own Ambulance facility for all students and staff members with fully equipped medical instruments and first Aid facility on campus.

## **Blood bank**

- 1. Choithram Hospital: 0731-4206750, 2362491.
- 2. Gurjar Hospital: 0731-2363716-18.
- 3. Unique Hospital: 0731-2799681, 2, 3.

4.1.7 Give details of the Common Facilities available on the campus –spaces for special units like IQAC, Grievance Redressal unit, Women's Cell, Counseling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc.

S. No.	Facilities	Status
1	Space for IQAC	Available
2	Grievance Redressal unit	Available
3	Women's Cell	Available
4	Counseling and Career Guidance	Available
5	Placement Unit	Available
6	Health Centre	Available
7	Canteen	Available

#### Table 43 Details of the Common Facilities

8	Recreational spaces for staff and students	Available
9	Safe drinking water facility	Available
10	Auditorium	Available

#### Canteen

- Shail campus has a well designed and fully developed canteen. It caters for refreshment and meals requirements of the students and the staff.
- The canteen is maintained in a hygienic condition through regular housekeeping and the pest control.
- The canteen also serves as the Mess for Boy's and Girl's hostel.
- The canteen is run by a contractor but stringent control is exercised on the quality and cost of the eatables and beverages by the Administration.





Figure 39 Canteen

#### Safe drinking water facility

The institution is well equipped with water treatment plant with the capacity of 250 LPH from M/S AquaPuro equipments of the following specifications.

S. No.	Item Description
1	Raw water feed pump
	Model no: Kilosskar Mini 28
	Motor Rating- 0.5 HP
	Inlet/Outlet- 1" NB
2	Pressure sand filter (FRP)
	Model No. PSF 844 MPV
	Dia: 200 mm- Height: - 1120 mm
3	Activated carbon filter (FRP)
	Model no. ACF 844 MPV
	Dia- 200 mm- Height- 1120 mm
4	Micro cartridge filter- MOC- Poly Propylene
	Porosity- 5 micron- 20" Long
5	Reverse Osmosis unit with membrane technology
	Piping- PVC for low pressure/ SS for high pressure
6	UV system

7	Total number of coolers located at various locations of the campus- 22
	Working condition: Excellent
	Cooler capacity: Average 100 lit

Placement Unit Placement Officer: Faculty Coordinators:

Mr. Aishwary Mendke One from each department

#### Functions of the Placement & Training Cell:

- 1. To plan, schedule and conduct the placement drive for final year students.
- 2. To establish a relationship with companies that visit for recruitment.
- 3. To provide training program for all students so as to make them prepared for the placement process.
- 4. To attract core companies to the campus.
- 5. To provide students with journals, magazines, newspapers etc through the college library to make them aware of job opportunities abroad and in public sector units.

02

- 6. Spread awareness about different career opportunities pertaining to the different branches of Engineering.
- 7. To conduct workshops, lectures, seminars on higher education and career opportunities.
- 8. Provide coaching for competitive examinations.

#### Infrastructure and Facilities available in the placement cell:

Number of interview rooms:	03
Number of GD rooms:	03
Number of chambers for HR personnel:	03
Number of guest rooms for HR personnel:	04

# Members of Placement Cell:

Full-time Officers.	02
Full-time Trainers:	03
Office staff:	02
Student Volunteers attached to placement cell:	02

#### The Institute has created the following facilities for career guidance:

- Full time Placement Officer.
- On campus training for placements.
- Companies are invited for presentation and conduct campus placements.

• Guidance for preparing for GRE and GATE.

S. No.	Course / Activity	Status of the Course	Level at which it is offered	Duration	Resource persons
1	English	Co-Academics	First Year	One Semester	Internal
2	<b>Communication Skills</b>	Curricular	First Year	One Semester	Internal
3	Aptitude Training	Co-Academics	Seventh Semester	One Semester	Internal
4	Personality Development	Co-Academics	Seventh Semester	One Semester	Internal
5	GATE Coaching	Co-Academics	Seventh Semester	One Semester	Internal
6	Workshops	Co-Academics	All Semesters	One/Two Days	Internal & External
7	Guest Lectures	Co-Academics	All Semesters	One/Two Hours	External

# The following are the programs conducted by the Placement & training cell for improving the skills of the students:

S. No.	Activity	Year	Duration
26.	Career Orientation Seminar	3rd and 4th Year Students	Once in Semester for 2 hours
27.	Aptitude classes	2nd, 3rd and 4th Year students	1 to 2 hour per week
28.	TCS Preparation Classes	4th Year Students	1 to 2 hour per week
29.	C/C++ Program Classes	4th Year Students	1 hour per week
30.	Technical Subjects Classes	4th Year Students	2 hour per week
31.	GATE Classes	4th Year Students	2 hour per week

# 4.2 Library as a Learning Resource

# 4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes, the library has an advisory committee which advises it on the betterment of its facilities & functions. The composition is as given below:

Fable 44 Library	Advisory	Committee
------------------	----------	-----------

S.No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Rajeev Vishwakarma	Dean Computer Science & Engineering	Coordinator
2.	Mr. K.P. Tiwari	Asst. Professor, Mechanical Engineering	Member
3.	Mr. Ulhas Kothari	Asst. Professor( Electronics & Communication Engineering)	Member
4.	Mr. Manish Nimoriya	Asst. Professor, Civil Engineering	Member
5.	Mr. Ranjeet Osari	Asst. Professor, Computer Science	Member

6.	Mr. Ankur Nahar	Asst. Professor, Information Technology	Member
7.	Ms. Namrata Kaushal	Asst. Professor, Engineering Science	Member

#### The following significant initiatives have been implemented.

- > Students are issued ID cards with barcode.
- > Expansion of space for books and seating.
- Increased the number of titles and volumes.
- ➢ Introduction of e-journal facilities.
- ➢ ICT learning resources.
- Functioning of the Digital Library.

#### 4.2.2 Provide details of the following:

> Total area of the library (in Sq. Mts.)

 $1500 \text{ M}^2$ 

Total seating capacity

200

Working hours (on working days, on holidays, before examination days, during examination days, during vacation)

The central library is open from 9:00 am to 8:00 pm on weekdays and up to 4:00 pm on weekends.

Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)

Attached Layout of Library Refer Annexure III

# 4.2.3 How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during the last four years.

Requirements for new books and journals are raised from various departments from time to time. Different publisher's representative visit library from time to time with latest list of publication /catalogues to promote the current titles of books / journals. The concerned department faculty members recommendation from the HoD, forward the list to be procured before the commencement of the semester which is vetted by the library advisory committee and then

formally approved by the Director for procurement action. Further library has its own annual budget which is approved by management before commencement of new academic session. The number of new books and journals procured yearly during the last 04 years is placed below:-

Year	Number of new titles added	Number of new editions added	Number of new volumes added
2012-2013	47	47	2413
2013-2014	60	55	872
2014-2015	53	53	229
2015-2016	87	87	804

Details		2015-16	2014-15	2013-14	2012-13
Science	As soft copy	00	00	00	00
	As hard copy	10	20	17	12
Engg. and Tech.	As soft copy	03	02	03	01
	As hard copy	100	80	56	58

Year		Expenditure			
	Book	Magazines/journals (for hard	Magazines/journals (for	nts, if	
		copy subscription)	soft copy subscription)	any	
2012-2013	1029752	96585	250021		
2013-2014	824593	132650	12700		
2014-2015	113945	167685	12700		
2015-2016	350000	205524	165254		

	2012-13		2013-14		2014-15		2015-16	
Library Holding	Number	Total	Number	Total	Number	Total	Numbor	Total
	Number	Cost	Inumber	Cost	Inumber	Cost	Inumber	Cost
Text Books	3746	1029752	2532	824593	287	113945	961	350000
Reference Books	107	18521	3	2308	10	5500	32	25965
Journal /	70	80565	73	122500	100	180500	110	205524
Periodicals	70	80505	15	133300	100	180300	110	203324
e-resources	03	264435	01	11500	01	11500	03	165254

#### **Digital Library**

Availability of digital library content Availability of an exclusive server Availability over Intranet/Internet Availability of exclusive space/room Number of users per day : Yes (7 Courses, 900 e-Books)

- : Yes
- : Yes
- : Yes (With 45 Computers)
- : 30

**4.2.4** Provide details on the ICT and other tools deployed to provide maximum access to the library collection?

> OPAC

ERP

> Electronic Resource Management package for e-journals

(Y) ASME, J-Gate, DELNET

> Federated searching tools to search articles in multiple databases

ERP

Library Website

http://111.118.251.21/library & Public access http://111.118.251.21/library

> In-house/remote access to e-publications

http://192.168.0.18/library/ & Public access http://111.118.251.21/library

Library automation

Yes

> Total number of computers for public access

45

> Total numbers of printers for public access

Network Printer-01

#### Internet band width/ speed

2mbps 10 mbps 1 gb (GB) 43 Mbps

# > Institutional Repository

No

#### Content management system for e-learning

e Library Portal

> Participation in Resource sharing networks/consortia (like Inflibnet)

No

#### 4.2.5 Provide details on the following items:

Average number of walk-ins

120 -150 per day

Average number of books issued/returned

120-150

> Ratio of library books to students enrolled

1:20

> Average number of books added during last three years

1905

> Number of information literacy trainings organized

Yes

> Details of "weeding out" of books and other materials

Yes

#### 4.2.6 Give details of the specialized services provided by the library

#### > Manuscripts

There are 344 UG/PG project reports available in the library.

> Reference

There is a separate reference book section. There are separate reference sections for competitive Exam books, Back Volumes and question banks.

### > Reprography

- Reprography facility is available in the library for the benefit of users.
- Students can take the photo copy of the material with minimal cost.

#### ILL (Inter Library Loan Service)

No

### > Information deployment and notification (Information Deployment and Notification)

Yes

#### > Download

Users can access and download the full text of e-resources.

### > Printing

Printing facility is available for the users to take printouts.

### Reading list/ Bibliography compilation

Reading list/ Bibliography compilation by subject specialist are periodically done by the library on request by the users.

#### > In-house/remote access to e-resources

A well equipped Digital Library with 45 Computers with internet connectivity is housed in the Central Library for access to e-publication, course file knowledge sharing, PDP lecturers, NPTEL Video Lecture, Photo Gallery etc.

#### User Orientation and awareness

Orientation is given to the I<sup>st</sup> year students (fresher's) of the Institute by the Library Staff, at the beginning of every year

### Assistance in searching Databases One dedicated staff member is entrusted with the job of assisting and arching the databases.

# > INFLIBNET/IUC facilities

No

# **4.2.7** Enumerate on the support provided by the Library staff to the students and teachers of the college.

Helpful library staff is also accessible to help students and teachers in finding the books. They keep the library noise free so that serious studies could be carried out in the library. The staff provides the list of catalogues of various publishers to teachers so that new and relevant books can be purchased for library. The students are helped by the library staff to access the books they desire. The supporting staff is always on its toes to help the staff as well as the students in the library.

# **4.2.8** What are the special facilities offered by the library to the visually/physically challenged persons? Give details.

As per university norms the required facilities will be provided to visually/ physically challenged person. So far such students have not taken admissions.

**4.2.9** Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analyzed and used for further improvement of the library services?)

The college installed suggestion Box. Every month the suggestions are deliberated by advisory committee and acted upon. Quarterly an interactive session is held by advisory committee with students to get feedback for improving the library services. In the beginning of the session the students are taken to the library by their teachers and shown respective books regarding their subjects. Any suggestions given by new students are also sent to the advisory committee for action.

# 4.3 IT Infrastructure

# 4.3.1. Give details on the computing facility available (hardware and software) at the institution.

Number of computers with Configuration (provide actual number with exact configuration of each available system).

S.No.	Configuration	No of Systems
1	Intel Core i3 3220 3.0GHz, 4 GB RAM, 500 GB	220
	Hard Disk, 16" LED, Keyboard, Mouse	230
2	Intel Pentium G645 2.93 GHz, 4 GB RAM, 500 GB	120
2	Hard Disk, 16" LED, Keyboard, Mouse	120
2	Intel Core2Duo 2.93 GHz, 2 GB RAM, 320 GB Hard	300
3	Disk, 15.6 LCD, Keyboard, Mouse	300
4	Intel Pentium –D 3.0 GHz, 512 MB RAM, 80 GB	160
	Hard Disk, 15.6 LCD, Keyboard Mouse	100

#### Table 45 Number of computers with Configuration

#### Computer-student ratio.

- Bachelor of Engineering 1:6
- Master of Engineering 1:4

#### > Stand alone facility

Printer, Photo copy, Fax, Phone

#### > LAN facility

• Speed :

- Backbone:
- Backbone Speed:
- Network connectivity Redundancy:
- Core Switch:

• Edge Switch:

- CISCO Layer 3 3560 Nil
- Topology: Star

# > Wi-Fi facility

User Based Roaming Facility all over the Campus.

# Licensed software

S.No.	License Software Name	Department
1	Microsoft Campus Agrrement (All Microsoft Softwares)	CS/IT/ SGI Campus
2	MSDN Academic Allianze	CS/IT/ SGI Campus
3	Windows 7 Base License	SGI Campus
4	Microsoft Windows XP	SGI Campus
5	Microsoft Windows 2003 Enterprise Server / Standard Server	SGI Campus
6	Turbo C++ Suite	CS/IT
7	Oracle 9i Database	CS/IT
8	Oracle Application Server 10 G	CS/IT
9	ANSI C	CS/IT
10	SCO Unix	CS/IT
11	Rockwell Automation 2007	EC
12	RX Logic	EC
13	KEIL Development Tool	EC
14	Xilinx (7.1 i)	EC
15	Modelsim (5.5 e)	EC
16	Target 3001	EC
17	ECG Simulator	EC
18	Microwind	EC
19	NI LAB View	EC
20	MATLAB 2010B	EC
21	CADFEKO	EC
22	SCADA Software	EC
23	Circuit Desgin, Simulation & PCB Design Software	EC
24	Tinapro	EC
25	ETNL Language Lab	First Year
26	NX6	ME
27	Solid Edage	ME
28	Ansys 12.1	ME
29	AutoCad 2016	ME
30	CHEMCAD	Chemical
31	IBM SPSS	MBA
32	Quickheal Admin Console Antivirus	SGI Campus

### > Number of nodes/ computers with Internet facility

100%

## > Any Other

# **4.3.2** Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?

There is a centrally air conditioned central computing facility of capacity of around 810 machines. Including dedicated internet lab with 30 machines for students only (operating from 9:00 a.m – 5:00 p.m). On the whole, more than 810 PC/ Laptops are deployed in the institute being evenly distributed among various departments. They are integrated through campus wide intranet with access to internet is to all. These labs are utilized for conduct of lab sessions for students from various classes. Also faculty & staff utilize these facilities during lean period in addition to dedicated facility created for at their desktop.

# **4.3.3** What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

- > To increase the bandwidth of internet facility to 100Mbps.
- To deploy e-governance throughout the institution through expansion of Information Management System and to create paperless office, using cloud computing technology.
- > To convert all classrooms into smart and hi-tech class rooms.
- > To develop e-learning facilities, digitization of resources of the faculty.
- To develop multimedia based animations/ ppt based educational modules for the various courses for better understanding of concepts and fundamentals.
- To provide video conferencing within the campus this is already available through Skype / hangouts.

**4.3.4** Provide details on the provision made in the annual budget for procurement, up gradation, deployment and maintenance of the computers and their accessories in the institution (Year wise for last four years)

	Central Budget, Approval & Expenditure Statement								
		2014-15			2013-14		2012-13		
Head	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure
				Libra	ary				
Mech	0.55	0.51	0.51	1.3	1.29	1.29	2	1.84	1.84
CS	0.50	0.5	0.5	2.5	2.43	2.43	1.5	1.01	1.01
EC	0.50	0.33	0.33	1	0.87	0.87	1.5	1.41	1.41
IT	0.12	0.08	0.08	0.5	0.46	0.46	0.15	0.11	0.11
Civil	0.15	0.12	0.12	1.2	1.19	1.19	0.75	0.66	0.66
Chemical	0.15	0.14	0.14	1.2	1.08	1.08	0.4	0.39	0.39
Others	1.00	0.82	0.24	1.2	1.18	0.93	5	4.87	4.85
Total	2.97	2.50	1.92	8.90	8.5	8.25	11.30	10.5	10.3
	-		·	Lab Equi	ipment				
Mech	0.55	0.50	0.12	0.55	0.50	0.28	2.50	2.50	2.02
CS	0.00	0.00	0.00	0.27	0.25	0.13	4.20	4.00	3.88
EC	0.50	0.50	0.00	1.20	1.00	0.00	21.00	20.00	20.90
IT	1.54	1.50	1.23	0.00	0.00	0.00	0.23	0.20	0.00
Civil	2.12	2.00	1.78	0.50	0.50	0.40	0.45	0.40	0.20
Chemical	11.00	11.00	10.36	2.00	1.75	3.01	0.45	0.40	0.13
Others	2.50	2.50	2.70	0.00	0.00	0.00			
Total	18.21	18.00	16.19	4.52	4.00	3.82	28.83	27.50	27.13
				Lab Cons	umable	L	1	L	L
Mech	1.30	1.00	0.48	0.53	0.50	0.46	1.00	1.00	1.85
CS	1.25	1.00	0.52	0.78	0.75	0.51	2.10	2.00	1.95
EC	0.50	0.50	0.23	0.50	0.50	0.31	2.10	2.00	1.83
IT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civil	0.00	0.00	0.00	0.00	0.00	0.00	1.50	1.25	0.75
Chemical	0.00	0.00	0.00	0.25	0.25	0.31	1.00	0.75	0.38
Others									
Total	3.05	2.50	1.55	2.06	2.00	1.59	7.70	7.00	6.76
	·	I	Teaching	and Non-Tea	hching Staff S	alaries	I	I	I
Mech	155.00	155.00	153.24	135	135.00	129.39	120.00	120.00	121.62

#### Table 46 IT Infrastructure Budget detail

CS	140.00	140.00	138.77	110	110.00	105.64	100.00	100.00	120.89
EC	85.00	85.00	84.59	80	80.00	84.67	100.00	100.00	105.47
IT	10.00	10.00	8.36	25	25.00	24.10	45.00	45.00	38.68
Civil	70.00	70.00	68.17	55	55.00	45.28	35.00	35.00	7.88
Chemical	20.00	20.00	20.23	10	10.00	7.79	10.00	10.00	6.19
ESH	50.00	50.00	50.97	45	45.00	53.11	40.00	40.00	46.43
Total	530.00	530.00	524.32	460	460.00	449.98	450.00	450.00	447.15
				R &	D				
Mech	7.00	6.50	6.81	3.70	3.50	3.40	4.50	4.00	3.81
CS	1.50	1.25	1.21	1.00	1.00	0.85	1.00	1.00	0.88
EC	0.50	0.50	0.58	0.50	0.45	0.40	1.10	1.00	1.11
IT	0.25	0.25	0.13	0.05	0.05	0.06	4.00	4.00	4.30
Civil	0.25	0.25	0.00	0.00	0.00	0.00	3.00	3.00	2.59
Chemical	0.25	0.25	0.00	0.00	0.00	0.00	1.50	1.00	1.10
Total	9.75	9.00	8.73	5.25	5.00	4.71	15.10	14.00	13.79
				Training &	k Travel				
Mech	1.30	1.00	0.78	1.30	1.00	0.66	1.00	0.80	0.62
CS	1.30	1.00	0.85	1.00	0.90	0.73	1.00	0.75	0.66
EC	1.30	1.00	0.37	0.60	0.50	0.45	0.70	0.50	0.62
IT	0.00	0.00	0.08	0.20	0.10	0.46	0.50	0.45	0.39
Civil	0.00	0.00	0.15	-	0.00	0.00	-	0.00	0.00
Chemical	0.00	0.00	0.63	-	0.00	0.00	-	0.00	0.00
Total	3.90	3.00	2.86	3.10	2.50	2.30	3.20	2.50	2.29
			•	Computer &	z Software				
Mech	0.00	0.00	0.00	0.50	0.50	0.34	1.00	1.00	1.02
CS	0.00	0.00	0.00	0.50	0.50	0.38	25.00	25.00	25.90
EC	0.00	0.00	0.00	0.30	0.25	0.23	1.50	1.50	1.01
IT	1.00	1.00	0.00	0.30	0.25	0.25	2.50	2.50	0.62
Civil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chemical	4.50	4.00	3.64	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.50	5.00	3.64	1.60	1.50	1.20	30.00	30.00	28.55
				Maintenance	e & Spares				
Mech	0.50	0.50	0.23	1.00	1.00	0.86	3.00	2.50	2.30

CS	1.00	1.00	0.25	1.00	1.00	0.95	3.50	3.00	2.99
EC	1.00	1.00	0.11	1.00	0.75	0.58	3.00	2.50	2.28
IT	0.30	0.25	0.85	0.00	0.00	0.00	0.00	0.00	0.00
Civil	0.50	0.50	0.75	0.30	0.25	0.60	0.50	0.50	0.45
Chemical	0.75	0.75	1.39	0.00	0.00	0.00	0.50	0.50	0.41
Total	4.05	4.00	3.58	3.30	3.00	2.99	10.50	9.00	8.43
Overall Total	577.43	574.00	562.79	488.73	486.50	474.84	556.63	550.50	544.40
Infrastructure Built up		20.00	18.24		8.00	7.74		9.00	8.51
Grand Total	577.43	594.00	581.03	488.73	494.50	482.58	556.63	559.50	552.91

Budget for the Year 2015-16										
		DEPARTMENTS								
Head	Mech CS EC IT Civil Chemical Others T									
Library	0.50	0.50	0.25	0.25	0.75	0.5	0.75	3.50		
Lab Equipment	1.5	3.50	1.50	0.75	0.50	10.00	1.50	19.25		
Lab Consumable	1.25	1.30	0.60	0.25	0.15	0.25	0.15	3.95		
Salary	170.0	151.00	90.0 0	11.00	76.00	21.00	54.00	573.00		
R&D	7.50	2.00	1.00	0.50	0.50	0.50	0.00	12.00		
Training & Travel	3.00	3.00	1.00	0.50	0.50	0.00	0.00	8.00		
Computer & Software	0.50	1.50	0.50	0.50	0.00	1.00	0.00	4.00		
Maintenance & Spares	0.75	1.50	1.25	0.50	0.75	1.00	0.50	6.25		
Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total	185.0	164.30	96.1	14.25	79.15	34.25	56.9	629.95		

Budget for the Year 2016-17									
EXPENDITURES HEAD (Deptwise)	Proposed Budget	Approved Budget							
Library									
Mech	0.6	0.55							
CS	0.6	0.55							
EC	0.3	0.25							
IT	0.3	0.25							
Civil	0.9	0.8							
Chemical	0.6	0.55							
Others	0.9	0.8							
Sub Total (A)	4.2	3.75							
Lab E	quipment								
Mech	1.75	1.6							
CS	3.75	3.5							
EC	1.75	1.6							
IT	1	0.75							
Civil	0.75	0.6							
Chemical	10.5	9.5							
Others	1.75	1.25							
Sub Total (B)	21.25	18.8							
Lab Co	onsumable								
Mech	1.5	1.25							
CS	1.5	1.25							
EC	0.75	0.6							
IT	0.4	0.25							
Civil	0.25	0.2							
Chemical	0.4	0.35							
Others	0.25	0.2							
Sub Total (C)	5.05	4.1							
Teaching and Non-	Teaching Staff Salaries								
Mech	180	175							
CS	160	155							
EC	100	95							
IT	15	13							
Civil	80	78							
Chemical	25	24							
ESH ( & Others)	60	59							
Sub Total (D)	620	599							
R	& D								
Mech	8	7.75							
CS	2.5	2.25							
EC	1.5	1.25							
IT	0.75	0.5							

Civil	0.75	0.6
Chemical	0.75	0.6
Others	0	0
Sub Total ( E )	14.25	12.95
Trai	ining & Travel	
Mech	5	4.75
CS	5	4.8
EC	1.5	1.25
IT	0.75	0.5
Civil	0.6	0.5
Chemical	0	0
Others	0	0
Sub Total (F)	12.85	11.8
Comp	uter & Software	
Mech	0.75	0.6
CS	2	1.75
EC	0.75	0.6
IT	0.75	0.6
Civil	0	0
Chemical	1.25	1
Others	0	0
Sub Total (G)	5.5	4.55
Maint	enance & Spares	
Mech	1	0.9
CS	1.75	1.6
EC	1.5	1.4
IT	0.75	0.6
Civil	1	0.9
Chemical	1.25	1.1
Others	0.75	0.6
Sub Total (H)	8	7.1
Total (A to H)	691.1	662.05

# **4.3.5** How does the institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students?

- > The individual department develops their course materials through power point presentation & animated videos for use in their lectures.
- Scheduling of smart class rooms for students in whichever department it is available.
- ➢ Audio-visual learning approach.
- Softcopy of many learning resources, lecture materials, e-books are provided to students.

- Orientation programs are offered to the nonteaching staff members with respect to computers.
- > Internet facility is available to access journal in the campus.
- > Students are allowed to use their laptop inside the college.
- ➤ An exclusive Language Laboratory functioning to improve the oral and written communication of the students and faculty.
- Digital library is functioning as a separate section of central library for the effective usage of e-materials, e-journals by the students and faculty.
- A workshop is being conducted for faculty and students to make use of the various Google tools for their teaching and learning process.
- For every subject, power point presentation is being prepared by the faculty and it is used for taking classes in interactive way.
- Class rooms are equipped with LCD Projector, Screen, Audio, Video and Internet facilities.
- ▶ Hostels are equipped with Wi-Fi Facility to access e-journals and internet access.

4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching - learning resources, independent learning, ICT enabled classrooms / learning spaces etc.) by the institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.

The following facilities are provided by the institution to kindle the self learning skills of the students and make the role of the teacher as a facilitator.

Self-learning mode and modules

- ▶ Library, Digital Library, Web-based courses with NPTEL, CDs.
- Seminars /Webinars.
- > Assignments.
- ➢ Quiz.
- Value added technical courses.
- Model based & Live demonstration.
- Animated Videos.

- $\succ$  E-tutorials.
- Spoken Tutorials.
- Online self learning tutorials websites.

### Some of the self learning websites are given below

1. http://ww.w3schools.com ( HTML , CSS , JavaScript, jQuery, AJAX, JSON, PHP, SQL, ASP, VBScript, ASP.NET, XML, Web Services )

2. http://www.programr.com (Java, C++, PHP, Python, C#, Ruby, Python, Android, iOS, J2EE, JS, AJAX, FLASH, SQL )

- 3. http://codingbat.com (Java, Python)
- 4. http://codepad.org ( C,C++, Perl, Python, Ruby, PHP, TCL )
- 5. http://writecodeonline.com (PHP, Java Script )
- 6. http://code.google.com/apis/ajax/playground/#size\_restriction (Java Script)
- 7. http://tinkerbin.com (HTML, CSS, Java Script)
- 8. http://sqlfiddle.com (MySQL, Oracle, SQL Server queries)
- 9. http://www.coderun.com (PHP, C#, Java Script)
- 10. http://web.mit.edu/(ECE Courses)
- 11. https://www.open2study.com/courses(ECE Courses)
- 12. http://www.open-electronics.org/(ECE Courses)
- 13. http://www.electrical4u.com/(EEE Courses)

14. http://www.learnerstv.com/ (Engineering Graphics, Engineering Thermodynamics, Engineering Material and Metallurgy, Strenth of Materials, Thermal Engineering, CAM, Design of Machines, Dynamics of Machinery)

15. http://www.cosmolearning.com (Manufacturing Technology)

- 16. http://mechanical-engineering.in (Kinematics of Machinery)
- 17. http://ocw.mit.edu (Composite Material)

18. http://academicearth.org (Finite Element Analysis)

19. http://www.softechweb.com (Design of Transmission System)

20. http://freevideolectures.com (Engineering Mechanics, Environmental Science and Engineering)

21. http://www.enggpedia.com (Strength of Materials)

22. http://www.cise.ufl.edu (Remote sensing & GIS)

### Learning beyond syllabus contents and modules

The College identifies certain broad requirements of the students beyond the curriculum to enable them excel in the competitive environment. The College has provided the following avenues for learning beyond the syllabus content.

- ➢ Industrial Visits.
- ➢ In plant Training.
- > Participation in the inter-institutional competitions.
- Custom designed training to the students by experts/Training Institutes.
- ➢ Internet facility.
- ▶ E- Journal facility in Digital library.
- ➢ Referring articles.
- > Presenting papers.
- ➢ Knowledge Sharing Mail's by Director.

#### Flexibility in academics with scope for self-learning

Self-learning is promoted in the College by creating facilities under various modes. The following are the various modes for self-learning:

- > NPTEL, Library, Seminars hours are provided in the Time Table itself.
- More number of electives is offered.
- Students are encouraged to participate in various conferences, symposium conducted inside and outside the department.

Value added courses are provided in the latest trends. The students can opt the course based on their interest.

# The program planned weekly time table and facilities in such a way that the students have space and time to explore and implement their ideas.

- Computer Lab with well equipped and internet facility opened 24X7 for students.
- Department library with sufficient number of volumes on core and application areas, technology awareness journals are opened during college working hours.
- Digital library is provided in central library where students can access all kinds of ejournals. Two afternoons in a week are planned to keep the faculty available for the students to explore their ideas.

Many e-learning material, e-books, journal and magazines are collected and made available to the students at the Institute Library to help the students to build the habit of self-learning. Moreover, provision of Internet in the hostels is facilitated to help the students to learn beyond what is taught in the classroom. Periodic seminars are also created to encourage the student to know about newly published papers and journals.

S.No.	Flexibility	Specification
1	Flexibility in academics with scope for self- learning	<ol> <li>It is compulsory for every student to carry out project work which expresses his/her creative talents and prepare for his future career.</li> <li>The course curriculum includes "Short Term industrial/Research experience" of 2 weeks duration in order to get experience from Industry, Research Laboratories or Institutions of comparable repute.</li> <li>Every Programme provides "Seminar course where students learn and practice essential writing and presentation skills and attend seminars by reputed engineers and scientists' .They also present seminars.</li> <li>Students are generally encouraged to attend seminars workshops conducted by reputed Industries/Institutions outside the Institute.</li> </ol>
	Flexibility in academics	1) UG students can study PG courses as electives.
2	with provisions for	2) Students can study courses of other departments as
_	advanced level and	electives.
	reading courses	

#### Table 47 Flexibility in academics with scope for self-learning

**4.3.7** Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?

- > National Knowledge Network connectivity is not available in College.
- ▶ However college has Internet bandwidth (of 43 MBPS).

# 4.4 Maintenance of Campus Facilities

4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities (substantiate your statements by providing details of budget allocated during last four years)?

- a. Building
- **b.** Furniture
- c. Equipment
- d. Computers
- e. Vehicles
- f. Any other

Table 48 Detail	of Budget for	Last four years
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Central Budget, Approval & Expenditure Statement									
		2014-15		2013-14			2012-13		
Head	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure	Budget Proposed	Approved Budget	Expenditure
				Libra	ary				
Mech	0.55	0.51	0.51	1.3	1.29	1.29	2	1.84	1.84
CS	0.50	0.5	0.5	2.5	2.43	2.43	1.5	1.01	1.01
EC	0.50	0.33	0.33	1	0.87	0.87	1.5	1.41	1.41
IT	0.12	0.08	0.08	0.5	0.46	0.46	0.15	0.11	0.11
Civil	0.15	0.12	0.12	1.2	1.19	1.19	0.75	0.66	0.66
Chemical	0.15	0.14	0.14	1.2	1.08	1.08	0.4	0.39	0.39
Others	1.00	0.82	0.24	1.2	1.18	0.93	5	4.87	4.85
Total	2.97	2.50	1.92	8.90	8.5	8.25	11.30	10.5	10.3
				Lab Equi	ipment				
Mech	0.55	0.50	0.12	0.55	0.50	0.28	2.50	2.50	2.02
CS	0.00	0.00	0.00	0.27	0.25	0.13	4.20	4.00	3.88
EC	0.50	0.50	0.00	1.20	1.00	0.00	21.00	20.00	20.90
IT	1.54	1.50	1.23	0.00	0.00	0.00	0.23	0.20	0.00
Civil	2.12	2.00	1.78	0.50	0.50	0.40	0.45	0.40	0.20
Chemical	11.00	11.00	10.36	2.00	1.75	3.01	0.45	0.40	0.13

Others	2.50	2.50	2.70	0.00	0.00	0.00			
Total	18.21	18.00	16.19	4.52	4.00	3.82	28.83	27.50	27.13
				Lab Cons	umable				
Mech	1.30	1.00	0.48	0.53	0.50	0.46	1.00	1.00	1.85
CS	1.25	1.00	0.52	0.78	0.75	0.51	2.10	2.00	1.95
EC	0.50	0.50	0.23	0.50	0.50	0.31	2.10	2.00	1.83
IT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civil	0.00	0.00	0.00	0.00	0.00	0.00	1.50	1.25	0.75
Chemical	0.00	0.00	0.00	0.25	0.25	0.31	1.00	0.75	0.38
Others									
Total	3.05	2.50	1.55	2.06	2.00	1.59	7.70	7.00	6.76
	Teaching and Non-Teaching Staff Salaries								
Mech	155.00	155.00	153.24	135	135.00	129.39	120.00	120.00	121.62
CS	140.00	140.00	138.77	110	110.00	105.64	100.00	100.00	120.89
EC	85.00	85.00	84.59	80	80.00	84.67	100.00	100.00	105.47
IT	10.00	10.00	8.36	25	25.00	24.10	45.00	45.00	38.68
Civil	70.00	70.00	68.17	55	55.00	45.28	35.00	35.00	7.88
Chemical	20.00	20.00	20.23	10	10.00	7.79	10.00	10.00	6.19
ESH	50.00	50.00	50.97	45	45.00	53.11	40.00	40.00	46.43
Total	530.00	530.00	524.32	460	460.00	449.98	450.00	450.00	447.15
				R &	D				
Mech	7.00	6.50	6.81	3.70	3.50	3.40	4.50	4.00	3.81
CS	1.50	1.25	1.21	1.00	1.00	0.85	1.00	1.00	0.88
EC	0.50	0.50	0.58	0.50	0.45	0.40	1.10	1.00	1.11
IT	0.25	0.25	0.13	0.05	0.05	0.06	4.00	4.00	4.30
Civil	0.25	0.25	0.00	0.00	0.00	0.00	3.00	3.00	2.59
Chemical	0.25	0.25	0.00	0.00	0.00	0.00	1.50	1.00	1.10
Total	9.75	9.00	8.73	5.25	5.00	4.71	15.10	14.00	13.79
	Training & Travel								
Mech	1.30	1.00	0.78	1.30	1.00	0.66	1.00	0.80	0.62
CS	1.30	1.00	0.85	1.00	0.90	0.73	1.00	0.75	0.66
EC	1.30	1.00	0.37	0.60	0.50	0.45	0.70	0.50	0.62
IT	0.00	0.00	0.08	0.20	0.10	0.46	0.50	0.45	0.39

Civil	0.00	0.00	0.15	-	0.00	0.00	-	0.00	0.00	
Chemical	0.00	0.00	0.63	-	0.00	0.00	-	0.00	0.00	
Total	3.90	3.00	2.86	3.10	2.50	2.30	3.20	2.50	2.29	
	Computer & Software									
Mech	0.00	0.00	0.00	0.50	0.50	0.34	1.00	1.00	1.02	
CS	0.00	0.00	0.00	0.50	0.50	0.38	25.00	25.00	25.90	
EC	0.00	0.00	0.00	0.30	0.25	0.23	1.50	1.50	1.01	
IT	1.00	1.00	0.00	0.30	0.25	0.25	2.50	2.50	0.62	
Civil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Chemical	4.50	4.00	3.64	0.00	0.00	0.00	0.00	0.00	0.00	
Total	5.50	5.00	3.64	1.60	1.50	1.20	30.00	30.00	28.55	
Maintenance & Spares										
Mech	0.50	0.50	0.23	1.00	1.00	0.86	3.00	2.50	2.30	
CS	1.00	1.00	0.25	1.00	1.00	0.95	3.50	3.00	2.99	
EC	1.00	1.00	0.11	1.00	0.75	0.58	3.00	2.50	2.28	
IT	0.30	0.25	0.85	0.00	0.00	0.00	0.00	0.00	0.00	
Civil	0.50	0.50	0.75	0.30	0.25	0.60	0.50	0.50	0.45	
Chemical	0.75	0.75	1.39	0.00	0.00	0.00	0.50	0.50	0.41	
Total	4.05	4.00	3.58	3.30	3.00	2.99	10.50	9.00	8.43	
Overall Total	577.43	574.00	562.79	488.73	486.50	474.84	556.63	550.50	544.40	
Infrastructure Built up		20.00	18.24		8.00	7.74		9.00	8.51	
Grand Total	577.43	594.00	581.03	488.73	494.50	482.58	556.63	559.50	552.91	

Budget for the Year 2015-16								
	DEPARTMENTS							
Head	Mech	CS	EC	IT	Civil	Chemical	Others	Total
Library	0.50	0.50	0.25	0.25	0.75	0.5	0.75	3.50
Lab Equipment	1.5	3.50	1.50	0.75	0.50	10.00	1.50	19.25
Lab Consumable	1.25	1.30	0.60	0.25	0.15	0.25	0.15	3.95
Salary	170.0	151.00	90.0 0	11.00	76.00	21.00	54.00	573.00
R&D	7.50	2.00	1.00	0.50	0.50	0.50	0.00	12.00

Training & Travel	3.00	3.00	1.00	0.50	0.50	0.00	0.00	8.00
Computer & Software	0.50	1.50	0.50	0.50	0.00	1.00	0.00	4.00
Maintenance & Spares	0.75	1.50	1.25	0.50	0.75	1.00	0.50	6.25
Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	185.0	164.30	96.1	14.25	79.15	34.25	56.9	629.95

Budget for the Year 2016-17								
EXPENDITURES HEAD (Deptwise)	Proposed Budget	Approved Budget						
Library								
Mech	0.6	0.55						
CS	0.6	0.55						
EC	0.3	0.25						
IT	0.3	0.25						
Civil	0.9	0.8						
Chemical	0.6	0.55						
Others	0.9	0.8						
Sub Total (A)	4.2	3.75						
Lab F	Equipment							
Mech	1.75	1.6						
CS	3.75	3.5						
EC	1.75	1.6						
IT	1	0.75						
Civil	0.75	0.6						
Chemical	10.5	9.5						
Others	1.75	1.25						
Sub Total (B)	21.25	18.8						
Lab C	onsumable							
Mech	1.5	1.25						
CS	1.5	1.25						
EC	0.75	0.6						
IT	0.4	0.25						
Civil	0.25	0.2						
Chemical	0.4	0.35						
Others	0.25	0.2						
Sub Total (C)	5.05	4.1						
Teaching and Non-Teaching Staff Salaries								
Mech	180	175						

CS	160	155						
EC	100	95						
IT	15	13						
Civil	80	78						
Chemical	25	24						
ESH ( & Others)	60	59						
Sub Total (D)	620	599						
R & D								
Mech	8	7.75						
CS	2.5	2.25						
EC	1.5	1.25						
IT	0.75	0.5						
Civil	0.75	0.6						
Chemical	0.75	0.6						
Others	0	0						
Sub Total (E)	14.25	12.95						
Train	ning & Travel							
Mech	5	4.75						
CS	5	4.8						
EC	1.5	1.25						
IT	0.75	0.5						
Civil	0.6	0.5						
Chemical	0	0						
Others	0	0						
Sub Total (F)	12.85	11.8						
Compu	ıter & Software							
Mech	0.75	0.6						
CS	2	1.75						
EC	0.75	0.6						
IT	0.75	0.6						
Civil	0	0						
Chemical	1.25	1						
Others	0	0						
Sub Total (G)	5.5	4.55						
Mainte	nance & Spares							
Mech	1	0.9						
CS	1.75	1.6						
EC	1.5	1.4						
IT	0.75	0.6						
Civil	1	0.9						
Chemical	1.25	1.1						
Others	0.75	0.6						
Sub Total (H)	8	7.1						
Total (A to H)	691.1	662.05						

# 4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?

The college has an extensive Infrastructure spread over 55 acres comprising of Academic Buildings, Departments, Lecture halls, Air condition Auditorium, Food outlets, student Residences, faculty and staff quarters, Guest House, sport fields, roads, power supply systems, RO-Purified water supply, selvage disposal Network etc. For civil maintenance as well as the supervision of new construction, Electrical Maintenance including Back-up generation by Diesel Generator Telecom and Data network (ISDN & Optical Fibre) is taken care by specialized units. A security section supervises the maintenance of Law & order on the campus and vicinity. Annual Maintenance for academic infrastructures including computing facility UPS and airconditioning (facility management at Institute level) Annual maintenance contract or on-call basis maintenance service is affected for critical level laboratory equipment. Many of the critical equipment are procured with 3 years warranty. Assistant Engineer has the responsibility to maintain the Institute campus under the supervision of Dean. Assistant Estate Engineer coordinates and oversees the functions of the buildings, water supply and electrical supply.

- Separate departments are available for maintaining and repairing Electrical lines and equipment, buildings & Civil works Transport and computing services maintenance.
- Lab equipments are serviced by the concerned manufacturers and service personnel/ lab technicians of departments.
- > Wherever necessary Annual Maintenance Scheme (AMC) is also made use.
- Lastly, there is dedicated team of personnel of all kind of maintenance staff on the payroll of the institute.
- The stock verification is done to identify the nonworking equipment and suggest necessary replacements.
- Regular cleaning and up keeping the equipment is overseen by the faculty member who is the in-charge of the laboratories.

#### **Campus Security Section:**

- The security services are having been outsourced at the campus to M/s. Lean on Monarch Security systems services. The functioning of the security agency is monitoring by the admin manager through our security In-charge.
- Security agencies provide the trained security guards, gun man and supervisor with 30 numbers.
- > Look after the construction and other materials which lying in the campus.
- > Every occurrence of any incident/ accident within the premises noticed by
security guard is formed to the Admin. Officer.

- > Monitors deployment and alertness of security guard at different locations.
- > Entry/Exit records on main gate maintain by the security guards.
- Keep the effective contact with the security agencies to avoid any unwanted activities in the campus.
- Security guards perform the duties day and night shifts.

### 4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/ instruments?

The calibration of equipment is taken up by each department as prescribed in the user manual. Selected quotations from various companies for equipment in all departments are based on good quality .Damaged equipment are replaced by new equipment.

### 4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?

- Generators, Power supply units and Power backups (UPS) are kept under separate area to prevent any damages due to unintended interference by anybody irresponsible.
- > Proper information is displayed for each machine and other equipments in the laboratories for the sake of safety operation.
- During the power cuts, electrical supply is ensured in the campus by the operations of generators. Restoration time: 3 mins. Also voltage stabilizers are provided to majority electrical equipments to stabilize the voltage fluctuation.
- To ensure constant water supply in house ground water supply duty treated by RO plant is kept in the institute to provide portable drinking water to students and faculty members.

#### **Electricity:**

As a self-sufficient campus the entire energy requirements are under own control of the Institute. The Institute is an HT consumer getting supply from M.P PASCHIM KSHETRA VIDYUT VITARAN CO. LTD at 33 KV by UG cable/as a high priority expresses Feeder and is exempt from load shedding interruptions. The current maximum load demand is of the order of 300 KVA while the total connected load is estimated at 210Kw at substantially unity power factor. The 50 acre Campus is served by one substation having one transformers of 900 KVA. The Internal distribution to various units of the campus such as Hostel, Academic Buildings, and Residential area is entirely by underground LT cabling. As a backup to the Electricity Board supply due to unforeseen reasons beyond institute's control, 1 Diesel Generator of 250 KVA capacity is

available for serving essential load such as computer centre, Library, Academic and Administration Buildings. etc. The entire Electrical Installation is maintained in house under the supervision of coordinator – Electrical maintenance. The Campus roads are also having energy efficient lighting. The entire installation is annually checked by the statutory authority of Electrical Inspector for safety, reliability and Earthing etc. The average Electrical consumption of the campus is around 47572 KWh (A.Y. 2014-15) units over one calendar year with hostels being significant part of the overall load.

#### Power backup

Generator facility-Manufacturer- Kirloskar Green Capacity: 250 KVA Condition: Excellent working condition can give back up facility for 24 hours continuously.

#### Water Supply Details:

The institution is well equipped with water treatment plant with the capacity of 250 LPH from M/S AquaPuro equipments of the following specifications.

S. No.	Item Description
1	Raw water feed pump
	Model no: Kilosskar Mini 28
	Motor Rating- 0.5 HP
	Inlet/Outlet- 1" NB
2	Pressure sand filter (FRP)
	Model No. PSF 844 MPV
	Dia: 200 mm- Height: - 1120 mm
3	Activated carbon filter (FRP)
	Model no. ACF 844 MPV
	Dia- 200 mm- Height- 1120 mm
4	Micro cartridge filter- MOC- Poly Propylene
	Porosity- 5 micron- 20" Long
5	Reverse Osmosis unit with membrane technology
	Piping- PVC for low pressure/ SS for high pressure
6	UV system
7	Total number of coolers located at various locations of the campus- 22
	Working condition: Excellent
	Cooler capacity: Average 100 lit

Any other relevant information regarding Infrastructure and Learning Resources which the college would like to include.

# CRITERION V STUDENT SUPPORT AND PROGRESSION

#### CRITERION V: STUDENT SUPPORT AND PROGRESSION

#### 5.1 Student Mentoring and Support

# 5.1.1 Does the institution publish its updated prospectus/handbook annually? If 'yes', what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

The prospectus is published every year before the start of the academic session. The goals and objectives of the college are made known to all the stakeholders through the college prospectus. The prospectus gives updated information about the UG/PG courses offered. Each prospectus is given to each applicant along with the application form at the time of admission. It provides sufficient information for any applicant to opt for any course at the college.

#### The following information is highlighted in the prospectus:

- Vision & Mission of the college.
- ➢ Courses offered.
- ➢ Honors acquired.
- ▶ Laboratories, Library and ambient facilities.
- Innovative Practices.
- Photo gallery.
- Prominent Recruiters

Every semester, various co-curricular and extracurricular activities like special lectures, workshops carried by various departments and clubs are highlighted with photographs in the News letter which are quarterly released.

To nurture skills of the students in arts and culture, college magazine which is published every academic year bears articles, poems and other contributions of the students and the faculty. The details of prizes won by the students in paper presentation, project display, etc. and the articles submitted by the students on the topics like literature, science and facts are highlighted.

Magazines are distributed to each and every student at the end of the academic year. The emagazine will be posted in the college weblink for an easy accessibility.

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2   indoreinstitute.com/list/	E1 6	Q Search		+ n	9
Visited 🐨 Getting Started 🎦 Web Slice Gallery 🐨 Class Attandance 🖑 JUIT					
		Contact Us   Alumni Stories   Aca	demic Calender		
About IIST - Collaborations Courses - Admis	isions - Campus News Faculty Student Developr	nent Cell Placement - Student Life - I	Facilities 👻		
Soumitra journey's from an average student to a Star Employee at leading Multi- national	Workshop on 'e-Yantra Robotic Lab' (IIT-Bombay) in IIST II JULY 21, 2016	The owner of www.facebook.com has configured their website improperty. To your information from being stolen. Fin not connected to this website.	o protect efox has		
May 10, 2016 Akash Garg from IIST gets		This site uses HTTP Strict Transport Sec (HSTS) to specify that Firefox only conn securely. As a result, it is not possible t exceptions for this certificate	urity ect to it o add an		
placed with Genpact and looks forward to a bright future!!	IIST receives NBA accreditation	Learn more			
MAY 10, 2016	JULY 15, 2016	Go Back			
"My 4 Golden Years @ IIST" Aditya Patnakar remembers his time spent at IIST and how from	TCS Talent Acquisition Team at				
a young college it has transformed into the best college of the city	IIST II JUNE 10, 2016				
MAY 10, 2016	Algal Photo Bioreactor by				
"Believe in yourself, work hard" says Shraddha	of IIST II			~	
MAN 3, 2016	JUNE 28, 2016				

#### **Commitment & Accountability:**

The goals and objectives of the college are made known to all the stake holders through the college prospectus. The college is committed to raise the academic level of the students from rural area and to transform them in to multifaceted personality. The objective is to ensure various systematic academic and non academic activities. Social responsibility is inculcated through various clubs.

Commitment and accountability of the institution and department are also viable to the public and the stakeholders by the external certifications like ISO 9001: 2008 and National Board of Accreditation (N.B.A.), New Delhi.

# 5.1.2 Specify the type, number and amount of institutional scholarships / free ships given to the students during the last four years and whether the financial aid was available and disbursed on time?

Institution spends significant amounts for the benefit of students in the form of scholarship and free ships. Students are also admitted under the tuition fee waiver (TFW) scheme.

. . . . ....

Engineer	ring	Sports Sc.	holarship Plan 2016	-17	
	Timing	Category	Criteria	Scholarship	Value (INR)
	Admission	Participation in Class XII or XI with minimum score of 50%	Open National (India level) team	Hostel & Tuition Fee	144,000
	Admission	Participation in Class XII	Open State team	50% Hostel & 50% Tuition Fee	72,000
1st Year	Admission	Participation in Class XII	If in top 3 of individual game or top 2 in team game of School National, KV National, SGFI	50% Hostel & 50% Tuition Fee	72,000
	Admission	Participation in Class XII	If participated in School National, KV National, SGFI	25% Hostel & 25% Tuition Fee	36,000
	Later	In 2nd 3rd and 4th year if a student particpate in the university team (RGPV/ DAVV)		25% of tuition fee	15,000
and 4th Year	Later	In 2nd 3rd and 4th year if a student particpate in the state team		50% of tuition fee	30,000
	Later	In 2nd 3rd and 4th year if a student particpate in the national team		100% waiver on tuition fee	60,000

#### Scholarship Plan at Institute Level

	Proposed Scholarship Plan (2016-17)				
Sc	Scholarship Plan for First Year Engineering				
	Branch wise scholarship - BE First year Scholarship				
PCM %	First ye		First year Scholarship		
slab/MD	EC,Mech	EC,Mech,Chem,Civil			
Board)	% of		PCM %	% of	
boaruj	Tuition	Amount	slab(MP	Tuition	Amount
	fees		Board)	fees	
90-100	100%	60,000	90-100	100%	60,000
80-89.99	60%	36,000	85-89.99	<b>60%</b>	36,000
70-79.99	50%	30,000	80-84.99	40%	24,000
		2nd, 3rd	& 4th Ye	ar Schola	arship
CGPA of 8 and 25% 15,000 25% 15,000 above					15,000
* Benefit of scholarship is to be given to the students of CBSE & ICSE board who scored 5% less marks in PCM in each % slab.					
* Govt.	Scholarship 4	- Approx. 30,0 5,000 to SC & S	00 to OBC 8 ST Students	k Minority,	Approx.

Figure 40 Scholarship plan at Institute Level for Year 2016-17

Details	2015-16	2014-15	2013-14	2012-13
Total Amount Rs	1774465	1214200	113250	540100

The scholarship schemes offered by Department of Social Welfare Govt. of India are also available for students belonging to SC/ST and OBC categories.

Details		2015-16	2014-15	2013-14	2012-13
	SC	1168700	1135050	1242450	1531475
Category	ST	80600	74650	265100	109175
	OBC	10200240	11464700	14470790	10628000
	Minority	0	1258000	235000	335000
Total Ar	nount Rs	11449540	13931400	16213340	12603650

Table 49 Scholarship by Department of Social Welfare Govt. of India

### 5.1.3 What percentage of students receives financial assistance from state government, central government and other national agencies?

Around 451 of the students of the college get benefited from these scholarships sponsored by the government in the form of fee reimbursement.

Deta	ils	2015-	16	2014	-15	2013	8-14	2012	2-13
		Count	%	Count	%	Count	%	Count	%
	SC	28		28		36		64	
Category	ST	02	<b>2</b> 004	02	••••	6	<b>2</b> 004	04	<b>2</b> 4 6 4
	OBC	363	28%	408	29%	500	30%	369	24%
	Minority	58		49		09		14	
Total		451		487		551		451	

#### Table 50 Percentage of students receives financial assistance

#### 5.1.4 What are the specific support services/facilities available for?

#### > Students from SC/ST, OBC and economically weaker sections

The institution works with the mission of imparting holistic education to economically weaker sections of the society. The students who belong to SC, ST and OBC are identified and are given state government and the University sponsored scholarships. The College provides proper guidance and assistance to the students in the application process and follows up with the concerned office until the final approval of the scholarships is received.

#### Students with physical disabilities

There is a reservation for students belonging to physically challenged category as per rules and regulations of Madhya Pradesh Government. Their requirements and needs are given special care and attention. The infrastructure of the college is also well-planned to accommodate the physically challenged people by providing the ground floor facilities.

#### Overseas students

The AICTE does not allow private engineering college to admit NRI students as a routine matter.

#### > Students to participate in various competitions/National and International

Students are encouraged with incentives to take part in extra and co-curricular events conducted by other institutions also. The college supports the students by arranging practice and training sessions inside the campus. The transport facility for the students is also provided. Additional classes are also organized to compensate their absence for

regular classes due to participation in extracurricular events. Special guidance by the respective faculty is also ensured to augment their academic performance. Necessary learning materials and books are provided to complement their educational values.

#### > Medical assistance to students: health centre, health insurance etc.

Several medical camps like, eye camp, dental check-up camp and blood donation camp are organized periodically by various clubs of our college. College is having linkage with hospitals in Rau, Indore. Ambulance is available in the college for 24 hours to meet the medical emergencies of residents of the campus.

#### > Organizing coaching classes for competitive exams

The institution supports students beyond their syllabus by arranging special training programs, soft skill training programs for students on a regular basis, by the internal and external experts which benefits them in campus recruitment and also in exams like CAT, GRE and TOFEL etc. The students are motivated and guided by faculty members for appearing at exams like GATE, IES etc. Question banks and study materials for GRE, TOEFL, GATE and CAT are made available in the library.

#### > Skill development (spoken English, computer literacy, etc.,)

The College stresses the need for better communication skills. The language lab and communication skills lab have been incorporated in the curriculum itself. The college has a well-furnished computer laboratory duly installed with the necessary software. Classes are regularly arranged for the students to develop their logical, numerical ability and problem solving skills in addition the communication skill. The college has a well-designed grooming program conducted by Training and Placement Cell for students to bridge the gap between academics and industrial requirements.

#### Support for "slow learners"

- Every faculty act as a mentor for a group of slow learners.
- Regular counseling hours are conducted to identify their difficulties, to counsel and to motivate them.
- Remedial courses are conducted.
- Supplementary materials are provided.

### > Exposures of students to other institution of higher learning/ corporate/business house etc.

• Participation of students in Technical/ Cultural Fest, paper poster presentation in conferences and seminars of other institution.

- In-plant training/ Industrial visits and projects in other institutions.
- Participation in extracurricular activities like debates, Quiz and hands on training like workshops organized by other institutions.
- Student participation in cultural, TV and radio shows.
- Final semester projects in reputed research institutes and industries.
- Webinar lecture series

#### Publication of student magazines

A yearly college magazine UTKARSH is published with the active participation of the students. Students are given responsibilities of collecting and compiling articles. It provides a platform for students to show their talent and recognize their achievements.

### **5.1.5** Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.

In view of the worldwide shortage of jobs leading to unemployment problems, Entrepreneurship Development Cell (EDC) & National Entrepreneurship Network (NEN) were established with the object of promoting specialized knowledge in the field of entrepreneurship development. The cell organizes various programs regarding entrepreneurship development. A total of 150 students participated in various programs conducted under the two cells, details are given below.

S. No.	Title	Date	Objective	Outcome
1	Entrepreneur Educators Program NEN (Prof Atul Bharat & Prof Rakhi)	14-16 July 2016	Faculty development program	To develop faculties to run different curriculum in institute.
2	Entrepreneurship course module WFNEN (Ms. Marlina Ramchandaran)	26/09/2016	Launch course module for students	To improve the skill and to provide learning towards skill development
3	Leveraging Entrepreneurs BY IEN X	01/10/2016	Talk Series	To provide solutions to problems faced by aspiring entrepreneurs by connecting them to mentors.
4	E Leader Workshop at IIT Indore	13-14 /10/2016	Workshop	To provide overview to student E –leaders how to run activities in College E cell

S. No.	Name of Student	Batch	Company detail	Post
1.	Mr. Amit Porwal	2005-2009	Expert Village Media Technologies	Managing Director
2.	Mr. Sachin Dhanotiya	2005-2009	GWB IT Solutions	Managing Director
3.	Mr. Vivek Gupta	2005-2009	Conative IT Solutions	Managing Director

4.	Mr. Tarun Naliya & Jaytesh Barange	2005-2009	Spiral Infotech	Managing Director
5.	Mr. Jayant Asodkar	2008-2012	Strennus IT Solutions	Managing Director
6.	Mr Prashant Patel	2008-2012	Creatoweb design Pvt. Ltd.	Managing Director
7.	Mr Tikendra Maitry	2004-2008	Techinfini Solution Pvt. Ltd.	Managing Director
8.	Mr. Devendra Kushwah	2006-2010	Avkonics India Pvt. Ltd.	Managing Director
9.	Mr. Ankit M Vyas	2004-2008	Monetary Solution Pvt Ltd.	Managing Director
10.	Mr. Shashank Chourey	2004-2008	India Infotech Pvt. Ltd.	Managing Director
11.	Abbas Hussain	2007-2011	Taheri Construction	owner
12.	Tushar Manglani	2008-2012	Shri sai car deals	co-owner
13.	Mayank Lambhate	2012-2016	Study marvel	owner
14.	Soma Sharma	2012-2016	study marvel	co-owner
15.	Yogesh Raghuwanshi	2008-2012	Aswmegh electrical infrastructure pvt ltd	owner



Student Leader 1	84.4	
Name: Adarsh Pahare	Student Leader 2	
Phone: +01062023Ennc	Name: Kamal Tripatha	
Fmall adapt astronomic for	Phone:+919039399984	
Contact Details of Institute Partner's Manageme	Email: kamal.tripathi@indoreinstitute.com	
Name: Mr. Oscar Reeves	Name: Dr. Jou Banislos	
Designation: Secretary	Designation: Director	
Phone: +919827050095/07314010510	Phone: +010644034441 (0334 +01055	
Email: or@indoreinstitute.com	Emplified America (%)	
Name: Marina Ramohandran Designation: Regional Manager Phone: +91 9893058643		
Email: marlina@nenglobal.org		
Institute Head	NEN, SED Director	
Name: Dr. Joy Banerjee Designation: Director Dese: 26/04/2016 DIRECTOR Real: PLORE Standard Real: PLORE (MP)	A HA Name: Augus Ahmed Delignation: Divictor SED, NEN Date: 02-04-2016	
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North No. 3 & A. EOIZ Industrial Area Whithfuld, Bangatore - 560066 L + 91 80 3307 1000	www.sathaani.fareferior.com	



Figure 41 E Cell Activities

5.1.6 Enumerate the policies and strategies of the institution which promote participation of students in extracurricular and co curricular activities such as sports, games, Quiz competitions, debate and discussions, cultural activities etc.

- > additional academic support, flexibility in examinations
- > special dietary requirements, sports uniform and materials
- $\succ$  any other

The institution is committed to encourage students for participating in various extracurricular activities by ensuring consistent encouragement and motivation. The necessary facilities are provided and adequate funds are allotted. The sports and cultural committees supervise the extracurricular activities. The students who participate in the sports activities or other extracurricular/ co- curricular activities are provided with extra classes so that the time they have given in for the various activities can be compensated for. In general the participation of students has gone up over the years after departmental/ institute level format has been introduced. Various advantages in the form of hostel facility and medical facility are provided to these students. Travel, food and refreshment expenses are also borne by the college. They are given additional support and facilitated by the teachers even in odd hours.

# 5.1.7 Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIR- NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central /State services, Defense, Civil Services, etc.

Students who are interested and willing to appear at various competitive examinations are helped by the teachers in matters of study materials and counseling for the right strategies. Students are allowed to have access to library and to refer the books related to entrance test. E- Library facility is also available.

S. No	Batch	No. of Students Qualified TOEFL/ GATE/CAT
1	2012-13	11
2	2013-14	9
3	2014-15	10
4	2015-16	12

Table 52 Number of students qualified in various competitive exams

### 5.1.8 What type of counseling services are made available to the students (academic, personal, career, psycho-social etc.)

College takes immense effort for student's self development in various aspects in terms of providing academic, personal, career and medical counseling and psycho-social counseling.

#### Academic Counseling

Each coordinator notes down every class students' performance. Faculty advisors consolidate the results. Head of the department monitors the results and puts forward the same to the Head of the

Institution. Slow learners are identified by the subject handling faculty and they conduct special coaching class for them with much care as per time table framed.

#### Mentoring

The faculty advisors monitor all the academic, co-curricular, extracurricular and social activities throughout the period of course completion of the individual student. When every student stirs any problems inside the classroom and college campus activities, they are advised to seek counseling from the faculty to resolve their problems and connect their unbiased activities. The students are also provided with supplemental learning materials (such as video lectures, quick reference sheets, extra tutorial sheets, lecture notes prepared by faculty etc.,) relevant to their area of interests, to make learning outside the classroom. The Institution schedules a special counseling hour in a week and allots a faculty for the group of students, to interact with each student to persuade them politely to study well.

To synchronize the first year B.E, students from various disciplines / circumstances to learn engineering/technological problems, the following strategies are implemented.

- Orientation program is conducted to know about engineering education, college system and university norms.
- Seven day Bridge course is organized to bridge the basic concepts in English, Mathematics, Physics and Chemistry to engineering.
- Special language classes are conducted for other medium students to acquire proficiency in English.
- Lateral entry students are coached in mathematics and analytical subjects to enhance their learning ability.

#### **Psycho-Social Counseling**

Guidance and Counseling Cell is functions for the betterment of lives of the members in the Institute. Guidance and Counseling Cell of the institute assists the students to manage their difficulties and transform them to be optimists. The students are availing this facility for their betterment in all spheres of life. Psychological evaluation of each member is carried out to improve the personal, professional and social life.

### The Guidance and Counseling Cell is proactive in addressing the following issues of a person.

- > Build up relationships.
- Bring out a person's creativity and self-expression.
- ➤ Learn to prioritize personal needs.

- ➢ Find paths to self-discovery and inner happiness.
- ➢ Medical Counseling.



Cummins Scholarship

The Institute conducts and organizes health care oriented programs for student welfare, such as Master Health Checkup, Eye care and Eye donation camp, Dental Camp, Blood donation Camp, AIDS awareness Camp, through various clubs. Trekking and other mental relief activities are also organized.

5.1.9 Does the institution have a structured mechanism for career guidance and placement of its students? If 'yes', detail on the services provided to help students identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the programmes).

The Institution has a separate Training and Placement (T&P) Cell, Career Guidance Cell for placement and higher studies related activities. The Training and Placement Cell extends its service to the students in placement training activities, organizes special lecture and inviting great technical experts to enhance their knowledge. Each placement class is monitored by a placement coordinator of the respective discipline.

The Career Guidance Cell coordinates the students who are passionate for the higher studies and provides different technical training to face the competitive exams like GRE, GMAT, CAT and GATE examination.

Interested students are guided by the faculty members and necessary learning materials are provided through central / department library. Students are given practice to face online examinations.

**PLACEMENT & TRAINING CELL** Placement Officer: Faculty Coordinators:

Mr. Aishwary Mendke One from each department

#### Functions of the Placement & Training Cell:

- 1. To plan, schedule and conduct the placement drive for final year students.
- 2. To establish a relationship with companies that visit for recruitment.
- 3. To provide training program for all students so as to make them prepared for the placement process.
- 4. To attract core companies to the campus.
- 5. To provide students with journals, magazines, newspapers etc through the college library to make them aware of job opportunities abroad and in public sector units.
- 6. Spread awareness about different career opportunities pertaining to the different branches of Engineering.
- 7. To conduct workshops, lectures, seminars on higher education and career opportunities.
- 8. Provide coaching for competitive examinations.

#### Infrastructure and Facilities available in the placement cell:

Number of interview rooms:	03
Number of GD rooms:	03
Number of chambers for HR personnel:	03
Number of guest rooms for HR personnel:	04

#### **Members of Placement Cell:**

Full-time Officers:	02
Full-time Trainers:	03
Office staff:	02
Student Volunteers attached to placement cell:	02

#### The Institute has created the following facilities for career guidance:

- Full time Placement Officer.
- On campus training for placements.
- Companies are invited for presentation and conduct campus placements.
- Guidance for preparing for GRE and GATE.

S. No.	Course / Activity	Status of the	Level at which it	Duration	Resource
		Course	is offered	Duration	persons
1	English	Co-Academics	First Year	One Semester	Internal
2	<b>Communication Skills</b>	Curricular	First Year	One Semester	Internal
3	Aptitude Training	Co-Academics	Seventh Semester	One Semester	Internal
4	Personality	Co Acadomica	Seventh Semester	One Semester	Intornal
	Development	Co-Academics		One Semester	Internar
5	GATE Coaching	Co-Academics	Seventh Semester	One Semester	Internal
					Internal
6	Workshops	Co-Academics	All Semesters	One/Two Days	&
					External
7	Guest Lectures	Co-Academics	All Semesters	One/Two Hours	External

The following are the programs conducted by the Placement & training cell for improving the skills of the students:

S. No.	Activity	Year	Duration
7.	Career Orientation Seminar	3rd and 4th Year Students	Once in Semester for 2 hours
8.	Aptitude classes	2nd, 3rd and 4th Year students	1 to 2 hour per week
9.	TCS Preparation Classes	4th Year Students	1 to 2 hour per week
10.	C/C++ Program Classes	4th Year Students	1 hour per week
11.	Technical Subjects Classes	4th Year Students	2 hour per week
12.	GATE Classes	4th Year Students	2 hour per week

From first year onwards skills development classes are conducted for students during working days for two hours in a week. They are motivated to communicate effectively through group discussion. The students' skills are periodically evaluated by conducting self-analyzing tests.

Third year students are engaged to work out aptitude problems. Skills related to logical reasoning, verbal and non-verbal reasoning are gained by them through regular practice. Peer groups are formed to discuss / solve leading companies' model placement question papers.

Final year students are grouped among themselves to discuss technical subjects and fundamentals of their respective disciplines. Faculties also refresh the subject wise basic concepts during placement hours.

The Training and Placement Cell organizes online aptitude tests. Mock and stress interviews are conducted once in a month to face the interview.

S. No.	Year	Number of students placed
1	2015-16	360
2	2014-15	262
3	2013-14	126
4	2012-13	99

Table 53 Percentage of Placement in Last four Years

### 5.1.10 Does the institution have a student grievance redressal cell? If yes, list (if any) the grievances reported and redressed during the last four years.

Yes, the College has students' Grievance Redressal Cell. It is functioning under the supervision of senior professor's in-charge.

A Grievance Redressal Cell formed in the institute addresses the grievances through parents and student's feedback, the cell actively corrects the difficulties.

S.No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Coordinator
2.	Dr.K.K.Gupta	Dean, Mechanical Engineering	Member
3.	Dr.Rajeev Vishwakama	Dean, Computer Science & Engineering	Member
4.	Mr. Gajendra Dubey	Dy. Registrar	Member
5.	Mr. Rajesh Tiwari	Counselor (SDC)	Member
6.	Dr. Sourabh Jain	Dean, Engineering Science & Humanities	Member
7.	Ms. Neha Gupta	HOD, Information Technology	Member
8.	Ms. Samatha Singh	HOD, Chemical Engineering	Member

 Table 54 Members of Grievances and Redressal Committee

The students can send their grievances through mail (principal@indoreinstitute.com) /phone to Head of the department/Head of the institute/Management. Any student can meet Head of the institute in person to reveal their issues any time.

The Cell receives suggestions from students through suggestion boxes which are kept in various locations in campus.

The student's Grievance Redressal Cell receives some of suggestions for the academic improvement of college, based on some issues received and redressed during last four years.

#### Student's valuable Grievances received and Redressed by the institute

S. No.	Grievances Reported		Grievances Redressed
1	Extension of library timings		Library facilities are extended till 8'O clock
1	Extension of norary unnings		for student access
2	Requirement of Updated	latest	Updated latest software's version in all
Δ	Software		department laboratories with new computers

2	Need of Projector and computer in	Classes with Computer, projector and OHP
5	class rooms	facilities provided

The suggestive measures given by the students are also considered for both academic and nonacademic developmental processes.

### 5.1.11 what are the institutional provisions for resolving issues pertaining to sexual harassment?

Under the supervision of a senior women faculty much care is bestowed upon the girl students and it ensures safe transport facilities, ambient for working women faculty. As on date no such case of sexual harassment has been reported in the institute because of the strict discipline and gender sensitivity. Women Development Cell guards the girls' students with values.

S.No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Parimeeta Chanchani	Professor, Engineering Science & Humanities	Coordinator
2.	Mrs.Namrata Kaushal	Asso. Professor, Engineering Science & Humanities	Member
3.	Ms. Neha Gupta	HOD, Information Technology	Member
4.	Ms. Kriti Vishwakarma	Admin Manger, Admin Office	Member
5.	Psychologist	Dr. Supriya Dongre	Member

#### Table 55 Members of Sexual Harassment Committee

### **5.1.12** Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Anti-ragging Squad and Committee are actively functioning in order to prevent ragging from the students.

#### Table 56 Members of Anti Ranging Committee

S. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Rajeev Vishwakarma	Dean Computer Science & Engineering	Coordinator
2.	Dr.Parimeeta Chanchani	Professor, Engineering Science & Humanities	Member
3.	Dr.Keshav Patidar	Dean, Electronics & Communication Engineering	Member
4.	Dr. Saurabh Jain	Dean, Engineering Science &Humanities	Member
5.	Dr. K.K.Gupta	Dean, Mechanical Engineering	Member

6.	Mr. Anil Khandekar	HOD, Computer Science & Engineering	Member
7.	Mr. O. P. Singh	Asst. Professor, Mechanical Engineering	Member
8.	Mr.K.P.Tiwari	Asst. Professor, Mechanical Engineering	Member
9.	Mr. Utkash Jain	Asst. Professor, Civil Engineering	Member
10.	Mrs. Neha Gupta	HOD, Information Technology	Member
11.	Mr. Shravan Namdev	Asst. Professor, Electronics & Communication Engineering	Member
12.	Mr.Anand Mantri	Asst. Professor, Electronics & Communication Engineering	Member
13.	Ms. Namrata Kaushal	Asso. Professor, Engineering Science & Humanities	Member
14.	Mr. Ashutosh Shrivastava	Dy. Manager Admin	Member
15.	Mr.Prakash Choudhary	Asst. Professor & Executive to Director	Member
16.	Mr. Gajendra Dubey	Dy. Registrar	Member
17.	Mr. Rajesh Tiwari	Counselor (SDC)	Member
18.	Mr. Anil Kumar	Asso. Professor, Computer Science & Engineering	Member
19.	Mrs. Sarika Devikar	Girls Hostel	Member
20.	Mr. Majhar Shaikh	Sports Officer	Member

#### 5.1.13 Enumerate the welfare schemes made available to students by the institution.

Institute assists to obtain educational loans from banks and other financial sources. The Institute provides all necessary documents for availing such loans/aids.

#### Support of Students participating in various competitions/conferences all over India

Guidance, training and support are provided to the students to participate in competitions and present papers in conferences and seminars. The students can avail On-Duty leave to participate in such events and are also allowed to write the missed periodical tests in such cases. The college encourages participation in events with the financial assistant for registration fees, part of travel expenses and other support like accommodation to students.

#### Health Centre

Emergency health care facilities are available including duty doctors, medical dispensary unit and emergency care vehicles at college and hostel campus.

#### **Skill Development (Spoken English, Computer Literacy)**

The Institute makes a structural systemic provision by incorporating into the curriculum, to enhance the soft skills, language courses in English for the B.E Programme, in this aspects institute conducts PDP classes. The Institute provides career counseling, soft skills development, career-path Identification, Value Added Courses and Orientation programmes by professionals and industrial experts. And it provides skills in multiple languages, technical aptitude and training for competitive exams.

Apart from this the students are encouraged to develop their skills and make them "Industry Ready Engineers" with all covered activities such as Industrial visit, Internship, In-plant Training and consultancy services to the industries and society.

# 5.1.14 Does the institution have a registered Alumni Association? If 'yes', what are its activities and major contributions for institutional, academic and infrastructure development?

Yes, Institute has Alumni Association and a committed Alumni Coordinator to arrange Alumni Meets at regular intervals every year.

- The association is arranging special lecture. For every year, each department invites Alumnus working in different technical areas and other areas are invited to share information for betterment of the younger generations and such functions are arranged every year by all the departments.
- The college gets fruitful suggestions and feedbacks from the alumni for the improvement of academics and infrastructure developments through the informal interaction at Alumni meets. They share their experiences and memories in the college with the students. These enable our present students' minds to be aware of future involvement.
- Alumni helps in doing the research activities, academic projects/project assistance from various funding agencies, providing advanced laboratory facilities and also arrange placement opportunities for the present students for their better career.
- > The Institute has strong support of alumnus and well established network.

S.No.	Name of The Faculty Members	Designation	Responsibility
1	Dr. Saurabh Jain	Dean, Engineering Science	Coordinator
2.	Mr. T.S. Arora	Asst. Professor, CSE	Member
3	Mr. Gajendra Dubey	Asst. Registrar	Member
4.	Mr. Rajesh Tiwari	Head, Student Grievances Cell	Member

#### Table 57 Members of Alumni Association Committee

5.	Mr.K.P.Tiwari	Asst. Professor, ME	Member
6.	Dr. Irfan Mansuri	Asst. Professor, Applied science	Member
7.	Mr. Utkarsh Jain	HOD, Civil Engineering	Member
8.	Mr. Nitin Rathore	Assistant Professor, CSE	Member
9.	Mr. Anand Mantri	Assistant Professor, ECE	Member
10.	Ms. Priyanka Potghan	Asst. Professor, ME	Member

#### **5.2 Student Progression**

### **5.2.1** Providing the percentage of students progressing to higher education or employment (for the last four batches) highlights the trends observed.

The students are well trained to enhance the soft skills during the course by the Training and Placement cell (TAP) and the Career Guidance Cell of the Institution gives guidance for the interested students to pursue higher studies. The percentages of students' progression to higher education or employment for the last four batches are listed below.

Table 58 Percentage of students progressing to higher education or employment

Item	2015-16	2014-15	2013-14	2012-13
Number of students who obtained jobs as per the record of placement office	360	262	126	99
Number of students who found employment otherwise at the end of the final year	12	8	7	9

The continuous effort of the Institution increases the employability of the student. Besides, interested students are also motivated to pursue higher studies in reputed Institutions / Universities.

5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years (cohort wise/batch wise as stipulated by the university)? Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district.

The details of the programme wise pass percentage and completion rate for the last four years are furnished below.

Department	Batch	Course	Overall percentage of pass	Completion rate
	2008-12	$(\mathbf{U}\mathbf{G})$	100	85.0
CSE	2009-13	(U.U) B F	97.5	77.0
	2010-14	D.L.	100	91.0

Table 59 Details of the programme wise pass percentage and completion rate

	2011-15		99	87.0
	2008-12		100	85.1
ECE	2009-13	(U.G)	100	90.2
ECE	2010-14	B.E.	100	88.8
	2011-15		99.02	92.1
	2008-12		97	88
IT	2009-13	(U.G)	100	94
11	2010-14	B.E.	97	87
	2011-15		97.8	84
	2008-12		99.15	87.9
ME	2009-13	(U.G)	100	85.61
NIE	2010-14	B.E.	99.08	87.8
	2011-15		96.22	82.2
	2008-12		NA	NA
CE	2009-13	(U.G)	NA	NA
CL	2010-14	B.E.	NA	NA
	2011-15		NA	NA
	2008-12		NA	NA
CM	2009-13	(U.G)	NA	NA
CIVI	2010-14	B.E.	NA	NA
	2011-15		NA	NA

### **5.2.3** How does the institution facilitate student progression to higher level of education and / or towards employment?

The institution facilitates the students to higher level of education and employment by providing group career sessions by senior faculty members. The institution motivates the students for higher study and research by providing special support and extra care for their preparation for GATE, CAT, GRE or any other competitive examinations. Special aptitude, soft skill and technical skill classes are arranged by the institution for the students to groom them in industry standard. Moreover, by conducting seminars and guest lectures by academicians from prestigious universities and also from highly experienced personnel from industry the college instills competitive spirit among the students. The training programmes, motivational talks, discussions and lecturers instill confidence to students to grab good job opportunities.

IIST has tied up with The Princeton Review, USA for hands on training of students for Higher Studies in foreign countries. The objectives of the MoU are to encourage the bright students of IIST to pursue Post Graduation aboard. Also, it aims to promote training activities for the IIST students. IIST & the Princeton Review will conduct seminars on current trends & developments in the area of Higher Education.



Figure 42 MoU Princeton Review, USA

### 5.2.4 Enumerate the special support provided to students who are at risk of failure and drop out?

The Institution has so far reported limited dropout rate with 3.5 % and 0 % in the under graduate courses and post graduate courses respectively. After identifying the facts, the measures are taken correspondingly to minimize the drop out through special attention, moral support and counseling, etc.

- Students with poor academic performance are identified and counseled by the respective course coordinator.
- Slow learners and under achievers are identified by the faculty advisor and special coaching classes are arranged for them after working hours.
- Subject experts impart training to the drop outs and transform them into achievers.
- Management also extends a moral and financial support to the students who tend to break the course due to financial problems.

		2012-13		2013-14		2014-15		2015-16	
S. No.	Program	Total Enrolled	No .of Drop outs						
1	B.E	540	24	505	15	353	21	429	04
2	M.E	09	0	13	0	03	0	06	0

Table 60 Drop Outs Students in Last Four Years

3	M.B.A.	05	0	0	0	0	0	0	0
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#### **5.3 Student Participation and Activities**

### **5.3.1** List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar.

**Tech Fest successfully conducted.** Approx 800 students participated in different events as organized (Dept. level). 50 students were involved in Project Exhibition (Institute level). Out of 20 projects received 15 projects (including 5 projects of I Year) were finally demonstrated by students

**Annual Cultural Fest-** Annual Techno Cultural fest was successfully organized. 1500+ students have participated in different events organized at dept/ Institute level.

**Inter college Competition:** The Institute promotes participation of students in technical and cultural events of other institution in the region.

**Annual Sports:** Students as well as faculty of the institute participated in various games like cricket, football, volley ball, lawn tennis, carom, badminton, chess etc.

**Sports and games** are essentials components of human resource development, holding to promote good health, comradeship and spirit of healthy competition, which in turn, has positive and deep impact on the holistic development of the personality of the youth who is a potential source of energy, enthusiasm and inspiration for development, progress and prosperity of the nation. Coaching facilities are provided to the selected students (selected by conducting the selection trials of various games). Specialized coaches are appointed to train the students going to participate in various Events, All India Tournaments. Well qualified sports instructors are regularly instruct the students.

#### **Sports Facilities Available in Shail Campus**

Shail Group of Institutions is proud to have a huge play grounds for various exciting games such as Football, Handball, Cricket, Lawn Tennis, Volleyball, Kho Kho, Basketball etc.

#### List of facilities available Indoor & Outdoor Games:-

**Indoor Games:** - Table Tennis, Badminton, Karate, Judo, Chess, Carom, Exercise Room with weights.

**Outdoor Games:** - Athletics, Football, Cricket, Basketball, Volleyball, Lawn Tennis, Handball, Kho-Kho, Softball, Baseball, Kabaddi.

#### **Projects under Development:-**

Multi Purpose Sports Hall, Gymnasium and Swimming Pool are under Construction.

S.No	Name/Designation	Qualifications
1	Mr. Majhar Khan Shaikh Physical Education Teacher	B.A, B.P.Ed., M.P.Ed.
2	Mr. Surendra Piwal (Ground Man)	10th Pass & Practically Knowledge in All Ground

#### Details of department of physical education

S. No.	Name of the Area	Plinth Area in Sq. Mtrs
1	Table Tennis Halls	10X120 Mtrs <sup>2</sup>
2	Badminton Indoor	8x8 mtrs <sup>2</sup>
3	Gymnasium hall	8X3 Mtrs <sup>2</sup>
4	Department Room	20X20 feet
5	Store Room	10X10 feet
6	Play-Ground Consists of 400mtrs Athletic Track, Volleyball,Beach Volleyball, Netball Courts, Long-Jump, Shot-put, Discuss Throw Pits Football, throw ball, tenni ground and lawn tennis courts, and Cricket fields	50,000 Sq. Mtrs

#### **Physical Department Equipment Details**

S No	Name Of the Facility	Availability for Usage	No. of students Usage
1	Table Tennis Boards	06	30
2	Badminton Indoor	01	30
3	Gymnasium Hall	01	30
4	Volley Ball courts	02	30
5	Throw Ball	02	30
6	Football	02	15
7	Cricket	02	12
8	Tennicoit Outdoor	01	30
9	200 mts Athletics track	01	30
10	Badminton Court Outdoor	04	20
11	Hockey	01	16

#### List of equipment

S. No	List of Equipment in the Gymnasium
1	Multipurpose Bench
2	Steel Dumbbell – 50Kg
3	Bench Press
4	Seated Chest Press
5	Dumbbells/Plate Rack

#### List of the players those are played at State/University Level 2015-16

<b>S</b> .	Game	Name	Branch	Indore Nodal	Description
No.				Team	
				Position	
01.	Basketball	Momin Khan	EC 4 <sup>th</sup> year	Semi Final	State Level
02.	Handball	Vicky Kushwah	PIEMR 2 <sup>nd</sup> year	Semi Final	University Level
03.	Chess	G. Kameshwar Sharma	CM 4 <sup>th</sup> year	Winner	Inter nodal State level tournament JLN College of technology Riwa
04.	Badminton	Piyush Bobade	CM 3 <sup>rd</sup> year	Winner	Team was Winner in State Level Inter Nodal Badminton Tournament, and Piyush Bobade Participated for RGPV, in Inter University team for Badminton Tournament held at RGPV, Bhopal.
05.	Swimming	Aman Shekhawat	CS 2 <sup>nd</sup> year	Silver medal 200m. breast stroke	Aman Shekhawat state Organizer – IES Group Of institution, Bhopal 4 <sup>th</sup> position in states
06.	Football	Satyam Mandle	Civil 4 <sup>th year</sup>	Runner up	Satyam Mandle state tournament winner organize by MIT Indore
07.	Football	Abhyuday S.	Civil 4 <sup>th</sup> year	Runner up	Abhyuday S. state tournament winner organize by MIT Indore
08.	Lown Tennis	Paras kadam	ME 3 <sup>rd</sup> year	Winner	Team was Winner in State Level Inter Nodal Badminton Tournament. and Paras Kadam Participated for RGPV, in Inter University team for Badminton Tournament held at RGPV, Bhopal.
09.	Tackwondo	Himanshu Pipariya	ME 3 <sup>rd</sup> year	Gold Medal	Himanshu Pipariya Won, GOLD Medal In (58 Kg. Weight category) Indore Nodal State level Taekwondo Championship held at SGSITS Indore and also selected for RGPV Inter University held on Satyabama university,
10.	Tackwondo	Nikhil Dhanwade	ME 4 <sup>th</sup> year	Gold Medal	Nikhil Dhanwade Won, GOLD Medal In (62 Kg. Weight category) Indore Nodal State level Taekwondo Championship held at SGSITS Indore and also selected for RGPV Inter University held on Satyabama university,
11.	Volleyball	Prerna Adbol	EC 4 <sup>th</sup> year	Semi Final	Inter nodal State level tournament Rajiv Gandhi College Bhopal
12.	Volleyball	Vaishali Phate	EC 4 <sup>th</sup> year	Semi Final	Inter nodal State level tournament Rajiv Gandhi College Bhopal
13.	Table Tennis	Purwa Kushwah (G)	Cs 1 <sup>st</sup> year	Semi Final	Dadaji Institute of science and Technology

#### List of the players who have played at <u>State</u>/University Level 2014-15

S.	Game	Name	Branch	Description	Tournament
No					Date
					(State Level)
1	Basketball (M)	Momin Khan	EC- 3 <sup>rd</sup> year	Team was Runner in State Level Inter Nodal	10/09/2014
				Basketball Tournament held at Oriantal	То
				University, Bhopal.	12/09/2014

2	Basketball (W)	Saloni Rathore	EC- 3 <sup>rd</sup> year	Team was Runner in State Level Inter Nodal	10/09/2014
				Basketball Tournament held at Oriantal	То
				University, Bhopal.Saloni Rathore Represented	12/09/2014
				RGPV, University team for Basketball	
				Tournament which held on Pune University,	
				Maharastra.	
3	Volleyball (W)	Vaishali Phate	EC-3 <sup>rd</sup> year	Indore Nodal Volleyball Team was Winner in	30/09/14
	• • •	Vaishali Thakur	EC-3 <sup>rd</sup> year	State Level Tournament which held on	То
				Radharaman College, Bhopal. Vaishali Phate	02/10/2014
				has Selected RGPV University Tournament held	
				LNIPE, Gwalior.	
4	Baseball (M)	RupeshChoudhar	ME-4 <sup>th</sup> year	Indore Nodal Baseball Team was Runner in State	20/10/2014
		y	EC-4 <sup>th</sup> year	level Tournament held at LNCT College,	То
		Shubham Dubey	EC-4 <sup>th</sup> year	Bhopal. Shubham Dubey, Mayank Shrivas &	21/10/2014
		Ashish Nagar	Civil-1 <sup>st</sup>	Ajay Shrivastav has Represented RGPV All	
		Mayank Shrivas	year	India Inter university held on Chandigarh	
		Vinesh Goad	ME-1 <sup>st</sup> year	University, Chandigarh.	
		Ajay Shrivastav	ME-3 <sup>rd</sup> year		
5	Power Lifting (M)	Rajat Sharma	ME-4 <sup>th</sup> year	Rajat Sharma (83 Kg. Wight Category)Won the	28/11/2014
		Sourabh	ME-4 <sup>th</sup> year	GOLD Medal in State Level Tournament. Team	То
		Gayakwad	ME-4 <sup>th</sup> year	was Winner in State level Power Lifting	30/11/2014
		Gourav Chawray	EC-3 <sup>rd</sup> year	Championship held at TIT College of Pharmacy	
		Vaibhav Yadav	EC-3 <sup>rd</sup> year	(BHEL), Bhopal.Rajat Sharma have Selected	
		Sambhavaditya	EC-3 <sup>rd</sup> year	RGPV, All IndiaInter university Team.	
		Sharma			
		Subham Tripathi			
6	Softball (M)	RupeshChoudhar	ME-4 <sup>th</sup> year	Indore Nodal Baseball Team was Runner in State	16/11/2014
		y	EC-4 <sup>th</sup> year	level Tournament held at LNCT College,	То
		Shubham Dubey	EC-4 <sup>th</sup> year	Bhopal. Rupesh Choudhry & Subham Dubey	17/11/2014
		Ashish Nagar	ME-1 <sup>st</sup> year	Participated in RGPV team session 2014-15.	
		Vinesh Goad	-	_	
7	Football (M)	Momin Khan	EC-3 <sup>rd</sup> year	Football Team was Wiiner In indore nodal	30/10/2014
			-	tournament held at MIT College, Indore.	То
				-	2//11/2014

#### List of the players who have played at State Level 2013-14

S.	Game	Name	Branch	Description	Tournament
No				_	Date
					(State Level)
1	Basketball (W)	Saloni Rathore	EC- 3 <sup>rd</sup> year	Team was Runner in State Level Inter	09/09/2013
				Nodal Basketball Tournament held at	То
				I.E.S. College Bhopal and Mr.	10/09/2013
				Sukhdev Bamboriya (Sports Officer,	
				IIST-2) was coach of the IndoreNodal	
				Team.Saloni Rathore Represented	
				RGPV, University team for Basketball	
				Tournament which held on KIIT,	
				Bhuwneshwar, Odisha.	

2	Volleyball (W)	Vaishali Phate	EC-2 <sup>nd</sup> year	Indore Nodal Volleyball Team was	27/09/2013
				Winner in State Level Tournament	То
				which held on Hitkarni College of	28/09/2013
				Engineering Jabalpur. Vaishali Phate	
				has Represented RGPV University	
				Tournament held at KIITBhubaneswar	
				Odisha.	
3	Tennis (M)	Aman Arora	EC -4 <sup>th</sup> year	Team was Winner in State Level Inter	18/09/2013
				Nodal Lawn Tennis Tournament held at	
				Mittal Institute, Bhopal and Mr.	
				Sukhdev Bamboriya (Sports Officer,	
				IIST-2) was coach of the Indore Nodal	
				Team.Aman Arora has Represented	
				RGPV, Inter University team for Tennis	
				Tournament held at KIITBhuwneshwar	
				University, Odisha.	
4	Baseball (M)	Brijendra Richariya	EC-3 <sup>rd</sup> year	Indore Nodal Baseball Team was	29/09/2013
		Shubham Dubey	EC-3 <sup>rd</sup> year	Runner in State level Tournament held	То
		Ujjawal Mane	EC-3 <sup>rd</sup> year	at LNCT College, Bhopal.Shubham	30/09/2013
		Sagar Bhoge	EC-3 <sup>rd</sup> year	Dubey, has Represented RGPV All	
				India Inter university held on	
			4h	Chandigarh University, Chandigarh.	
5	Baseball (W)	Monika Soni	EC-4 <sup>th</sup> year	Indore Nodal Baseball Team was	29/09/2013
				Runner in State level Tournament held	То
				at LNCT College, Bhopal.RGPV All	30/09/2013
				India Inter university held on	
				Chandigarh University, Chandigarh.	
6	Power Lifting (M)	Suyog Jain	EC-4 <sup>th</sup> year	Suyog Jain (65 Kg. Wight	05/01/2014
				Category)Won the GOLD Medal in	То
				State Level Tournament. Team was	07/01/2014
				Winner in State level Power Lifting	
				Championship held at TIT College of	
				Pharmacy (BHEL), Bhopal.Suyog Jain	
				has Selected RGPV, All IndiaInter	
				university I ournament will be held on	
7		Duiton due D'altant	EC 2 <sup>rd</sup>	Anunra University, Visaknapatnam.	02/12/2012
/	Solidali (M)	Brijendra Kichariya	EC-3 year $EC 2^{rd}$	Indore Nodal Softball Leam Was	U3/12/2013
		Ashish Negar	EC-5 year $EC 2^{rd}$ was	Autor of the state level 1 ournament held	$10 \\ 04/12/2012$
		Ashish Nagai Mayank Gablot	EC-5 year $EC_{4}^{\text{th}}$ year	at LINCT College, Bhopar.Shubham	04/12/2013
			LC-4 year	Represented RGPV All India Inter	
				university Tournament held on Acharya	
				Nagariuna University Guntur	
8	Softhall (W)	Monika Soni	EC-4 <sup>th</sup> year	Indore Nodal Softball Team was	03/12/2013
0		Navotana Modi	EC-4th vear	Runner in State level Tournament held	Το
				at LNCT College Bhonal RGPV All	04/12/2013
				India Inter university Tournament held	01/12/2015
				on Acharva Nagariuna University	
				Guntur.	
		1	1		

List of the players those are player	d at State/University Level 2012-13
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S. No	Game	Name	Branch	Description
1	Basketball	Saloni Rathore	EC 2 <sup>nd</sup>	Team was Runner in State Level Inter Nodal Basketball
	(M & W )	Pranjal Yadav	Year	Tournament held at I.E.S. College Bhopal and Mr.
			EC 2nd	Sukhdev Bamboriya (Sports Officer, IIST-2) was coach
			Year	of the Indore Nodal Team.
2	Volleyball	Vaishali Phate	EC-1 <sup>st</sup> Year	Team was Winner in State Level Inter Nodal Volleyball
	(M & W)	Vaishli Thakur	EC-1 <sup>st</sup> Year	Tournament held at JEC, CollegeJabalpur. And Ms.
				Nagma Sultana (Sports Officer, IIST) was Coach of the
				Indore Nodal Team. Vaishali Phate and Vaishli Thakur
				were selected in RGPV, University team for Volleyball
				Tournament held at Jaipur University Rajasthan.
3	Kyaking/	Ayush Sethiya	EC- 3rd year	Team was Winner in State Level Inter Nodal
	Kanoing			Kyaking/Canoeing Tournament held at College Bhopal.
				AyushSethiya, was selected in RGPV, University team
				for Kyaking/Kanoing Tournament held at Chandigad.
4	Lawn Tennis	Deepak Soliwal	EC 3 <sup>rd</sup> Year	Team was Winner in State Level Inter Nodal Lawn
		Manvendra	EC 3 <sup>rd</sup> Year	Tennis Tournament held at IPS College, Gwalior.
		Narvariya		
5	Hockey	Banarashi Das	EC 3 <sup>rd</sup> Year	Team was Winner in State Level Inter Nodal Hockey
		Gupta		Tournament held at LNCTCollege, Bhopal.Banarashi
				Das Gupta Was Selected in RGPV, University team for
				Hockey Tournament held at Rajasthan University.
6	Baseball (M)	Shubham Dubey	EC-2 <sup>nd</sup> Year	Team was Runner in State Level Inter Nodal Baseball
				Tournament held at L.N.C.T. College, Bhopal.Shubham
				Dubey Participated in RGPV, (University) Team for All
				India Inter University Baseball Tournament held at
				Dehli.
7	Swimming	Ayush Sethiya	EC- 3rd year	Team was Winner in State Level Inter Nodal Swimming
				Tournament held at Sagar Institute, Bhopal.
8	Handball (M)	Pratik Khatri	EC 1 <sup>st</sup> Year	Team was Winner in State Level Inter Nodal Handball
-	(112)			Tournament held at SGSITS College, Indore and Mr.
				Sukhdev Bamboriya (Sports Officer, IIST-2) was
				Manager of the Indore Nodal Team.
9	Power	Suyog Jain	EC-3 <sup>rd</sup> Year	Suyog JainWon the GOLD Medal in State Level
	Lifting			Tournament. Team was Winner in State Level Inter
	Ŭ			Nodal Power Lifting Tournament held at UIT. Bhopal.

#### **IIST Youth Club (IISTYC)**

The IISTYC is introduced in the campus for conducting student activities at IIST for the holistic development of the students of the institute. The activities conducted under the IISTYC are definitely helps the students to educate, entertains and overall development. The IISTYC members to organize the cultural and social events like annual day function, cultural events, technical fests, various departmental events and other spontaneous activities to maintain high

levels of enthusiasm and team integration.

Various activities are organized by the sub-bodies called Clubs that cater to the needs of each aspect of the society and life. IIST clubs / committees include:

S. No	Club	President	Secretary
1	Photography Club	Abhijeet yadav (9630953056)	Mayank Lambhate
2	Music Club	Himanshu Sharma (8871596562)	Shrayash Joshi
3	Dance Club	A k Akshara (8817121602)	Ritika Singh
4	Art Club	Rupesh Damanwar (602685894)	Tarjani Pagare
5	Drama Club	Shakti Prateek (9754264010)	Sakshi Joshi
6	Movie Making	Amaan Sarwar (8602220693)	Aman Sharma

#### Table 61 IIST clubs / committees

#### Photography Club









Figure 43 Glimpses of Photography Club

#### Music Club









Figure 44 Glimpses of Music Club

Dance Club









Figure 45 Glimpses of Dance Club

#### Art Club



Figure 46 Glimpses of Art Club

### The following are the list of Activity that have visited our campus for placements during the previous three years

Table 6	52 List	of Act	ivities ir	1 Last	Four	Year

Year	Name of the activity	Date/Month/ Year	Participation details if any
	Independence Day	15 <sup>th</sup> August 14	Parents & Students
	Blood Donation Camp in association with NACO & Lioness club	9 <sup>th</sup> October14	Faculty, Staff & Students
	Reliance Indian College Basketball League	10 <sup>th</sup> Oct to 28 <sup>th</sup> Nov14	Faculty , Staff & Students
	Indore Nodal for Indore Collegiate Tennis tournament (Men & Women) RGPV university	15 <sup>th</sup> Oct to 16 <sup>th</sup> Oct 14	Inter college Students
	Workshop on Embedded system	29 <sup>th</sup> & 30 <sup>th</sup> Oct 14	Inter College Students
2014-15	Shail Trophy	10 <sup>th</sup> Nov to 12 <sup>th</sup> Nov 2014	Students
	Shail Foundation Day	20 <sup>th</sup> November14	Students
	National Conference "Game Changer" Corporate Social Responsibility	5 & 6 <sup>th</sup> Dec 14	Faculty, Staff & Students
	Health Check UP Camp	20 <sup>th</sup> Jan2015	Faculty, Staff & Students
	Republic Day	26 <sup>th</sup> Jan 2015	Faculty, Staff & Students
	E Yantra IIT Mumbai	9 <sup>th</sup> Feb 2015	Principals of all Technical Colleges
	Baja 2015	18 <sup>th</sup> to 24 Feb 2015	Students

	Baja HR meet	23 <sup>rd</sup> to 24 <sup>th</sup> Feb 2015	Students
	Annual Sports Athletics / Basketball / Cricket / Football / Table tennis / Volley ball	24 to 25 Feb 2015	Students (Boys & Girls)
	Annual Function	27 <sup>th</sup> Feb 2015	Students
	Techagaaz 2K15	25 & 26 Feb 2015	Students
	Virtual lab workshop	26 – 27 March 2015	Students
	E Yantra workshop IIT Mumbai	17 <sup>th</sup> & 18 <sup>th</sup> April 2015	Students
	Career Seminar	13 <sup>th</sup> June2015	Mentors & Students
	Mozilla "Firefox"	26 July2015	Faculty & Students
	Independence Day	15 <sup>th</sup> August2015	Faculty, Staff & Students
	Annual Sports	17 & 18 <sup>th</sup> Sept 2015	Students
	Technoid 2K15	18 <sup>th</sup> & 19 <sup>th</sup> Sept 2015	Students
	Robotics	18 <sup>th</sup> & 19 <sup>th</sup> Sept2015	Faculty, Staff & Students
	BIG DATA & Hadoop	18 <sup>th</sup> & 19 <sup>th</sup> Sept2015	Students
	CSR "We Care We Share"	4 <sup>th</sup> October2013	Faculty, Staff & Students
	Shail Trophy	21 <sup>st</sup> to 26 <sup>th</sup> October2013	Students
	Shail Foundation Day	20 <sup>th</sup> November2013	Faculty, Staff & Students
	Republic Day	26 <sup>th</sup> January2014	Faculty, Staff & Students
	TechnoHoli	6 & 7 <sup>th</sup> March2014	Students
	"Dazzle" Annual Function	29 <sup>th</sup> March2014	Faculty, Staff & Students
2013-14	Rubella Vaccination	16 <sup>th</sup> & 17 <sup>th</sup> April 2014	Girls student & Female Faculty
	Seminar "Cyber Crime" By IG Varun Kapoor	22 <sup>nd</sup> April2014	Faculty, Staff & Students
	Cancer Awareness	27 <sup>th</sup> June2014	Faculty, Staff & Students
	CSR "Renewable Energy" Save & Recycle Paper: Today's practice & Tomorrows Perspective. (National Conference)	8 <sup>th</sup> May2014	Faculty , Staff & Students
	Open House (PTM)	10 <sup>th</sup> May2014	Parents & Students
	Independence Day	15 <sup>th</sup> August 2012	Faculty, Staff & Students
	Thaam Lo Hariyaali in association with Naiduniya	24 <sup>th</sup> August 2012	Faculty, Staff & Students
	Shail Foundation Day	20 <sup>th</sup> November 2013	Faculty, Staff & Students
2012-13	SGI Olympic	4 <sup>th</sup> Jan to 8 <sup>th</sup> Jan 2013	Faculty, Staff & Students
2012-13	Republic Day	26 <sup>th</sup> Jan 2013	Faculty, Staff & Students
	Dazzle "Annual Function"	09 Feb 2013	Faculty, Staff & Students
	Baja 2015	14 <sup>th</sup> Feb to 19 <sup>th</sup> Feb 2013	Faculty, Staff & Students
	Baja HR meet	17 <sup>th</sup> to 19 <sup>th</sup> Feb 2013	Students

# **5.3.2** Furnish the details of major student achievements in co curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years.

The college provides opportunity for the students to participate in all types of co-curricular, extra-curricular and cultural activities at various levels. Every year more than 500 students participated in various activities like paper presentation, quiz, project contest, sports and games, singing, dance and drawing competitions.

The major achievements of students are tabulated.

#### Table 63 Major achievements of students

S.No	Name of Student	Award For
1.	AKSHAY BAJAJ	BEING AWARDED BY A CERTIFICATE OF EXCELLENCE, A PAY-CHEQUE OF RS 10,000/- AND A PRE-PLACEMENT OFFER FROM THE ONE OF THE PIONEER IN THE INDUSTRY OF ROBOTICS, A-SET TRAINING AND RESEARCH INSTITUTE.
2.	SEEMANT DESHPANDE	WON BRONZE MEDAL FOR POINT LIFTING, SENIOR CATEGORY, SILVER MEDAL IN STATE KICK BOXING CHAMPIONSHIP, AND RECENTLY WON BRONZE MEDAL AT NATIONAL LEVEL IN KICK BOXING
3.	VAGISH JAISWAL	ALL INDIA CODE-VITA TOPPERS
4.	PRATIK BHAGWAT	ALL INDIA CODE-VITA TOPPERS
5.	SATWIK POLISETTY	WON 20,000 RS BICYCLE AWARD FOR SUCCESSFULLY FINISHING THE RIDE IN INDORE CYCLOTHON 2015.
6.	SATWIK POLISETTY	MIT KUMBHATHON (60,000 CASH REWARD IN TEAM)
7.	MADHURI JAIN, ARNAB DAS AND KSHITIJ SHARMA	2ND PRIZE IN ANDROID COMPETITION HELD AT IIT INDORE, FEB 2013.
8.	MUDASSIR RAHMAN , AJIT SINGH NAROLIYA & AJENDRA MISHRA	WERE IN BEST TOP 10 TEAM OUT OF 300 TEAMS ALL OVER THE INDIA IN RGPV CODE COMPETITION (CODE FORCE) HELD AT BHOPAL, JAN 2012.
9.	SHAKTI PRATEEK(CSE)	1 <sup>ST</sup> PRIZE FOR THE MOTION IN DEBATE AT IIST
10.	YASMIN KHAN(CSE)	1 <sup>ST</sup> PRIZE AGAINST THE MOTION IN DEBATE AT IIST
11.	ASHISH PATIDAR(CSE)	2 <sup>ND</sup> PRIZE FOR THE MOTION IN DEBATE AT IIST
12.	SHOBHANA JHA(CSE)	CONSOLATION PRIZE AGAINST THE MOTION IN DEBATE AT IIST
13.	ADA KHAN(CSE)	CONSOLATION PRIZE AGAINST THE MOTION IN DEBATE AT IIST
14.	MAYUR RAJWANI(CSE)	CONSOLATION PRIZE FOR THE MOTION IN DEBATE AT IIST

#### **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

S.No	Name of Student	Given By	Name of the award	Year
1	Soma Sharma & Mayank lambhate	Mobil10X	India's Top mobile applications	2016
2	Soma Sharma & Mayank lambhate	Jaipuria University	Won first price for Mobile Application development	2016
3.	Soma Sharma & Mayank lambhate	Hackothon	Entrepreneurship concepts	2015
4.	Soma Sharma & Mayank lambhate	CitriX	Techfest (coding)	2015
5.	Vaibhav Puranik	SDBCT	Blind coding champion	2014
6	Gaurav Goyal & Arjun Kaushal	IIT-D	<b>Robotics Competition</b>	2014
7.	Shambhavi mahodaya	IIT-J	Tech-fest	2013
8.	Nistha Gaur	Truba Bhopal	Best paper publication	2013

#### DEPARTMENT OF INFORMATION TECHNOLOGY

#### DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

- 1. Mr. Shubham Mandloi, Ms. Vaishali Patidar & Mr. Madhusudah Kalwa Got RGPV Chancellor Scholarship for year 2014 & 2015.
- 2. Under QEEE Program following students got the certificate for successfully participated in the module Time Domain Analysis of first and second order system delivered by Professor Tushar Jain, IIT Mandi & Convolution time & frequency domain analysis delivered by Professor Devendra Jalihal IIT Madras.
- 3. Ayush Sethia, Banarasi Das Gupta, Navotna Modi, Pranjal Yadav, Rohit Chaturvedi Infrasonic Biological Earthquake Monitoring Station selected for first phase of Texas instruments innovation challenge India analog design contest 2014.
- 4. Arun Kumar R., Harsh Dani, Shashwat Bhargava, Aditya Mujumdar, Kunjan Dhoble Pick Trace and Place Autonomous Robot selected for first phase for Texas instruments innovation challenge India analog design contest 2014.
- 5. Srishti Kothiya Battery charging through paints selected for first phase of ELECRAMA 2014.

S No.	Name of the Students	Event	Prize
1.	Shikha Rajput	IIT Bombay	15th Position All India
2.	Shrishti Jain	IIT Bombay	15th Position All India
3.	Vaibhav Yadav	Body Building	State Nodal 2nd
4.	Suyog Jain	Body Building (M) (Bestphysique)	Gold Medal
5.	Vaishali Phate & Vaishali Thakur	Volleyball	Winner
6.	Vaibhav Yadav Sambhavaditya Sharma	Power Lifting (M)	Winner

	Subham Tripathi		
7.	Ujjawal Mane	Quiz Competition	2000/- Runner Up
8.	Saloni Rathore	Basketball (W)	Runner
9.	Vaishali Phate	Volleyball	Winner
10.	Aman Arora	Tennis (M)	Winner
11.	Vaishali Phate & Vaishali Thakur	Volleyball (M & W )	Winner
12.	Ayush Sethiya	Kyaking/ Kanoing	Winner
13.	Deepak Soliwal Manvendra Narvariya	Lawn Tennis	Winner
14.	Banarashi Das Gupta	Hockey	Winner
15.	Ayush Sethiya	Swimming	Winner
16.	Suyog Jain	Power Lifting	Gold Medal

#### DEPARTMENT OF MECHANICAL ENGINEERING

- BAJA 2016: Department Team VIJAYRATH consisting of 25 students won PRIDE OF INDORE AWARD and got Prize of Rs. 100,000/- in The SAE Event.
- GO KART Main event 2015: Department Team VIJAYRATH ranked at 2<sup>ND</sup> position out of 90 teams participated and won Rs. 5000 Cash (Oct'15, UIET Chandigarh).

S.NO.	Student Name / team	Year	Organizing Agency	Events / Competition
1	Team vijayrahth	2014	SAE INDIA	BAJA Participation virtual in Qualified the round
2	Speed of sultan	2014	SAE INDIA	GO- KART virtual Participation in Qualified the round
3	Team vijayrahth	2013	SAE INDIA	BAJA Participation virtual in Qualified the round
4	Speed of sultan	2013	SAE INDIA	GO-KART virtual Participation in Qualified the round
5	Team vijayrahth	2013	SAE INDIA	BAJA Participation virtual in Qualified the round
6	Team vijayrahth	2012	SAE INDIA	BAJA Participation virtual in Qualified the round
7	Speed of sultan	2012	SAE INDIA	GO- KART virtual Participation in Qualified the round
8	Team vijayrahth	2012	SAE INDIA	BAJA Participation virtual in Qualified the round

S.No.	Student Name / team	Year	Organized by	Events / Competition	Prize
1.	Shubham Dalal	2012-13	RGPV Bhopal	EXAM	University top
2.	Shubham Dalal	2013-14	RGPV Bhopal	EXAM	University top
3.	Sourabh Gayakwad, Rajat Gupta	2013-14	Shail group	Group dance compotation	2 <sup>nd</sup> prize
4.	Prithavi sisodiya	2013-14	Shail group	Singing competition	1 st prize

5.	Vishnu nair	2013-14	Shail group	Extempore	2 <sup>nd</sup> prize
6.	Gaurav patel	2013-14	Shail group	Poster making Competition	2 <sup>nd</sup> prize
7.	Rajat Kumar Malviya	2013-14	Shail group	Solo dance Competition	1 st prize
8.	Shubham raghuwanshi ,vipin rathod and prashant patidar	2013-14	CDGI, indore	Auto junkies	2 <sup>nd</sup> prize
9.	Team vijayrahth	2014	SAE INDIA	BAJA Participation virtual	Got 11 <sup>th</sup> position of ALL INDIA
10.	Speed of sultan	2014	SAE INDIA	GO- KART virtual	Got 2 <sup>nd</sup> position
11.	Aakash agarwal	2013-14	IIT Bombay	Reform nation	15 <sup>th</sup> position
12.	Vishnu Nair,satish rai,sushil verma,sawan gurjar,shruti jain	2013-14	Eco friendly green vehicle "the recovery"	ELECRAMA 2014 Bangalore	Grant listed and financial grant amount of up to Rs.50000/
13.	Bhagyshree Bhujade and team	2014-15	SAIT, Indore	Drama (Techno chill)	First prize
14.	Himanshu Pipariya	2014-15	International Taekwondo competition	sports	Represented RGPV university
15.	Rupesh Choudry	2014-15	Soft ball & Base ball	sports	RGPV university captain
16.	Ayushi Dogre	2014-15	Athletics Championship	sports	Represented RGPV university
17.	Mr.Saket Bihari Panday & Antim Rewapati	2015-16	MIST, Indore	Paper presentation	1 st prize

#### DEPARTMENT OF CHEMICAL ENGINEERING

- a Ms. Tashmeer khan scored 9.56 SGPA in VII Semester
- b Ms. Shreyanshi Gupta scored 9.88 SGPA in V Semester
- c Ms. Shreyanshi Gupta awarded Excellency Certificate for Spoken English from IIT Madras under the Quality Enhancement of Engineering Education Program, an initiative by MHRD, Govt. of India
- d Tashmeer khan achieved runner up position in shot-put
- e Md. Rizwan sheikh participated in Nodal Inter college cricket tournament.
- f G. Kameshwar represented college in Nodal inter college chess tournament.
- g Mr. Santosh Bhandari represented college in Nodal inter college Swimming competition.
- h Mr. Aviket Patel & team won 1st position in Nodal Inter college Football tournament.
- i Mr. Avi Vishwakarma selected among 60 NCC cadets for basic Mountaineering
course for 26 days.

j Mr. Aviket patel Participated in Indore District football team

S. No.	Year	Event	Participated	Remark
1	2016	Ujjain Simhastha -2016	Tashmeer Khan, Rishabh Gupta, Nikhil Soni, Deeksha Dhomne, Jyoti Raikwar Diwakar Patel	Solid waste management

SUNDAY TIMES OF INDIA, INDORE FEBRUARY 14, 2016



5400 स्टूडेंद्स में से शहर की रचना का चयन



आईआईएसटी को मिला प्राइड ऑफ डंदौर प्राइड ऑफ इंदौर का अवॉर्ड आईआईएसटी (नंबर 55) की टीम को दिया गया। यह अवॉर्ड टीम को ओवरऑल और हर राउंड में बेहतर परफॉर्मेंस और डिसिप्लीन के लिए दिया गया। महिंद्र एंड महिंद्रा के एग्जीक्युटिव डायरेक्टर डॉ. पवन गोयनका, एसएई इंटरनेशनल युएसए के एडवाइजर मुरली अय्यैर, नेट्रिप के सीईओ संजय बंधोपाध्याय और को-कनवीनर मुकेश तिवारी ने विनर्स को अवॉर्ड दिए। ई-बाहा कैटेगरी में दियोगिरी इंजीनियरिंग कॉलेज. औरंगाबाद (नंबर 161) चैम्पियन रहो। देखें @ पेज 15

Figure 47 Students Achievements

# 5.3.3 How does the college seek and use data and feedback from its graduates and employers, to improve the performance and quality of the institutional provisions?

- > The college collects the feedback from graduates in various ways like exit survey, employer survey and through alumni survey etc.
- The feedbacks are analyzed by the Programme Assessment Cell and the suggestions are forwarded to Departmental Advisory Board. Based on the feedback responses, the

Departmental Advisory Board takes adequate measures to improve the academic and non-academic related problems, enrichment of teaching learning process, developing faculty-student relationship, improve training and placement activities.

In addition to this, informal feedbacks are obtained from the participants of leader's talk, campus placement companies, alumni, employers, community, academic peers, industry and parents.

# 5.3.4 How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material? List the publications/ materials brought out by the students during the previous four academic sessions.

Students are given the required motivation and conceptual help for preparing technical papers at National level paper presentation contests. Departments encourage the students to prepare and display the working models during the project expo. College conducts technical paper presentation contests, for the students and encourages all the students to participate in conferences & technical fest to present their research & innovative thinking. The students are involved in various committee formed for organizing conference, workshop, guest lectures at institution & departmental level.

The College encourages its students to publish materials like college magazine; Newsletters etc. The students are motivated to express their talent in the form of articles, paintings. The college magazine provides a platform to bring out their hidden talents.

# 5.3.5 Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.

- A system of class Representatives (2 students per 60) is working fine for handling issues related with student affairs.
- Additionally, the institute has a number of students committees formed for particular purpose/ events from time to time over academic year. They are:-
  - Anti-ragging committee.
  - Hostellers mess committee.
  - Students' co-ordination committee for cultural events sports & games.
  - Discipline committee.
    - Placement coordinators
- The formation and composition of the above students committees is need based and generally, each committee consists of about five to ten students from senior batches, having good organizational / managerial capabilities to assist in smooth conduct of

various events / functions. These students committees are funded by the Institute on as required basis.

Over and above, all the departments have departmental societies with student's members to conduct co-curricular, extracurricular activities at department level.

# 5.3.6 Give details of various academic and administrative bodies that have student representatives on them.

The college has various academic and administrative bodies for the students to represent their thoughts, opinions and suggestions for the development of Institution. The important academic and administrative bodies those have student representatives are given below:

- Class Committee.
- Department Associations (for Professional bodies).
- ➢ Women Development Cell (WDC).
- ➤ Training and Placement Cell (TPC).
- Entrepreneurship Development Cell (EDC).

$\succ$	Hostel/Mess Committee.
$\triangleright$	Photography Club.
$\triangleright$	Sport Committee.
$\rightarrow$	Music Club.
$\blacktriangleright$	Dance Club.
$\rightarrow$	Art Club.
$\blacktriangleright$	Drama Club.
$\blacktriangleright$	Movie Making Club.
$\blacktriangleright$	Robotics Club.

# **5.3.7** How does the institution network and collaborate with the Alumni and former faculty of the Institution.

### Interaction with the alumni is done through

- > Conducting periodical alumni meetings at Institute level.
- > Inviting to give special lectures/ mentoring session.
- ➢ Inviting for placement awareness programmes.
- College technical/ cultural festival organized annually.

### The college collaborates with the former faculty by

- Inviting to department functions.
- Inviting to give guest lectures.
- > Annual National conference organized by the Institute.

# Any other relevant information regarding Student Support and Progression which the college would like to include.

The goals, objectives, events and activities of the college are brought to the knowledge of all the stakeholders through the prospectus and magazines. The commitment and accountability of the institution is ensured by the external certifications of ISO 9001:2008 and National Board of Accreditation, respectively. The institution provides financial support in time to the economically weaker and academically sound students in the form of various scholarships.

The skill development of the students is ensured by conducting Value added courses in respective disciplines and programming languages. Experts in respective fields are invited to share their knowledge and experience through Department associations. Technical forums like Symposiums, Conferences, etc. are regularly organized to update the knowledge of both faculty members and students. The Entrepreneurship Development Cell and Career Guidance Cell facilitate the entrepreneurial skills and inculcate the interest for higher education among the students with precise planning and execution. The institution also encourages active participation of the students in sports for physical fitness and several coalitions for societal contributions.

The Institute takes immense care in the development of students' skills and personality traits to acquire clear vision and set a right goal in their career. All the students are identified, trained separately according to their desires and skills in order to get their dream job through Training and Placement Cell.

During the period of study they have a provision to disclose their grievances to Head of the department/Head of the Institution/Management. Grievances Redressal cell is taking intense care to eradicate the issues and provide solution for the suggestions made by the students. Anti ragging committee performs its duty in order to prevent ragging against students. Women

Welfare Committee and Women Development Cell protects all girl students from the issues related to sexual harassment. Alumni Association plays major role in synchronizing the budding engineers' outlook to the real world with share their experience and motivation to their younger generation.

In the nut shell, the overall performance of the students is improved by various measures taken by the Institution. The academic performance and the scope for higher education are well progressed through the Career Guidance Cell. The exposure provided by the Industry Institute Partnership Cell makes the students adapt the industrial environment comfortably. Thus by implanting interpersonal skills in the students, the Training and Placement Cell arranges better job-orders in various core companies too.

# CRITERION VI GOVERNANCE, LEADERSHIP AND MANAGEMENT

# **CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT**

# 6.1 Institutional Vision and Leadership

6.1.1 State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc.?

### Institute Vision

To be a nationally recognized institution of excellence in technical education and produce competent professionals capable of making valuable contribution to the society.

### **Institute Mission**

- To promote academic growth by offering state-of-the-art undergraduate and postgraduate programmes.
- > To undertake collaborative projects which offer opportunities for interaction with academia and industry.
- To develop intellectually capable human potential who are creative, ethical and gifted leaders.

# DISTINCTIVE CHARACTERISTICS OF MISSION

- Our college provides academic ambience through inspiration, fosters enthusiasm and motivation so as to realize challenging and rewarding career pathways to students.
- Our unwavering commitment to quality education and experiential learning ensures that our students develop the abilities for critical thinking and evaluation of issues; they are trained to translate concepts and theoretical knowledge into real time situations.
- Besides these, our students are molded to be socially aware and become responsible good human being, to make effective contributions towards societal transformation and nation building.

# 6.1.2 What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?

The Quality Policy of Indore Institute of Science & Technology, Indore is given below.

# **Quality Policy**

"We at Indore Institute of Science & Technology, Indore are committed to provide Quality Education through proper Resource Management".

Role of Top Management, Principal and Faculty in Design and Implementation of Quality Policy and Plans are mentioned below.

## **Top Management**

The management is keen in imparting quality education to the students" community and showing every commitment in ensuring the quality education in the institution. The management regularly attends the meetings of Governing body, Departmental Advisory Committee, Programme Assessment Committee, Placement, Parents-Teachers, Students, HR Connect and the alumni and arrives with future strategies. Through the lot of inputs and based on that, they implement the quality plan to ensure better academic environment. Inspire of different kinds of evaluating criteria, the management bestows concentration upon the current development of the college with emphasis upon academic and sports performances.

### Principal

Principal convenes meeting with Heads of respective departments, First year coordinator, Placement Officer and Office Manager once in a week of every month. All sorts of academic, placement, co and extra-curricular activities of the students are discussed at length. Planned activities will be carried out in due course.

In the meeting, the Principal conveys the steps to be taken to implement the quality policy and plan.

# HoD

The departmental faculty meeting will be conducted once in forth-night to view and review all academic and other departmental activities. The Internal Assessment, attendance, placement training programme, extracurricular and co-curricular activities of all the students are discussed. The portion completion of all the subjects and laboratories will be clarified by HoD from the respective faculty in-charge of the subjects and laboratories. The internal assessment test performance of students and their monthly attendance percentage will be discussed. Students suggest there needs to the HoD. He deals with the existing activities and finds improvement in students" performance and department.

### Faculty

The willingness for subject handling will be obtained from each and every faculty for the forthcoming semester. They should prepare lesson plan, objective plan for the subject(s), lecture notes in hand written format, PPT slide-show based upon modern teaching methodology. They should submit these to HoD before the reopening date of the semester. Class tests to evaluate the student's performance for the allocation of internal mark for the student, Creative-based and programmatic assignments will be also given.

## **Duties and Responsibilities of Faculty In-charge for Laboratory**

The Faculty In-Charge is responsible to HOD of Department for Following

- 1. Is responsible to maintain stock register & service register of the laboratory.
- 2. Creating and Implementing New Exercises over University Syllabus requirements.
- 3. Is responsible for Monitoring the proper utilization and upkeep of Lab Equipment.
- 4. Is responsible for Preparing / Updating the Lab Manual.
- 5. Assist External Examiner to conduct the Final Lab Exam, if detailed as Internal Examiner.

#### **Duties and Responsibilities of Laboratory Assistant**

- 1. The Laboratory In charge (Lab I/C) is responsible for the safety, upkeep of all the equipment in room as listed in the inventory for the room.
- 2. The Lab I/C should maintain the following documents:
  - a. The inventory of the laboratory.
  - b. Layout.
  - c. Room Time Table.
  - d. Organization Chart.
  - e. Log Book for daily usage.
  - f. Complaint Register.
  - g. Lab Manuals.
  - h. List of Experiments.
- 3. The Lab I/C should ensure proper discipline at laboratories by ensuring the following:.
  - a. No bags or eatables are to be allowed into the lab.
  - b. Excess talking/unnecessary movement of the students is avoided.
  - c. Chairs are in proper position at the time of leaving.
- 4. Equipment is switched off or made inactive as per authorized procedure before leaving.
- 5. All fans/ lights wherever not needed are in OFF condition.
- 6. Room and equipment are maintained neat and clean at all times.

- 7. Assist the class teachers in the laboratory proceedings.
- 8. Suitable motivation boards and list of experiments are displayed.
- 9. Lab I/C should be conversant with all the lab experiments and exercises.
- 10. Lab I/C should be conversant with the key, location, locking procedure of the room, emergency procedures in case of fire, accident etc.

#### **Duties and Responsibilities of Subject Teacher for Laboratory**

- 1. The Subject Teacher for Laboratory, in consultation with Subject Teacher for the corresponding theory subject and teachers for the same subject but for other sections, is responsible for preparing the list of experiments, as prescribed by RGPV.
- 2. In addition, supplementary problems are to be developed for skill development and concept understanding.
- 3. The teacher should be thorough with the experiments designed.
- 4. The problems should be made known to the students well in advance for their preparation.
- 5. Ensure attendance is taken as per the procedure and seating is done as per the order.
- 6. Teacher should make sure that observation book is maintained by every student.
- 7. At periodic intervals, teacher should ensure that the records are maintained neatly by all students. The experiments/programs listed in the syllabus should mandatorily be described in the record books.
- 8. Assist students in case of queries.
- 9. Prepare and update the lab manuals continuously.
- 10. Internal assessment is done as per IIST regulations. This may include continuous assessment and/or lab exams at the end.
- 11. Sessional marks are handed over to the respective departments by due date.
- 12. As an Internal Examiner, assist the External Examiner for the conduct of university lab exam.

### 6.1.3 What is the involvement of the leadership in ensuring:

## 1. The policy statements and action plans for fulfillment of the stated mission

### Mission:

The Management is fulfilling our envisaged vision on the following lines:

- To promote academic growth by offering state-of-the-art undergraduate and postgraduate programmes.
- To undertake collaborative projects which offer opportunities for interaction with academia and industry.
- To develop intellectually capable human potential who are creative, ethical and gifted leaders.
  - Class Room / Lecture Halls with wide space, Ventilation, Fans, Tube Lights.
  - Modern benches and desks for comfortable sitting.
  - Providing the Lecture Hall with LCD Projector for PPT presentation and OHP Projector for Transparent Sheet printed concepts presentation.
  - Chart Display inside the Class/ Labs Room.
  - Well Advanced Equipment / Tools / Machines prescribed to conduct the Practical Classes.
  - Laboratory / Workshop / Machine Shop with ambience and infrastructure to gain practical knowledge.
  - Giving safety-based Uniform / Coats / Shoes / Gloves / Spectacles to students to wear while doing experiments.
  - Well experienced professors with doctorate degrees to teach.
  - Central Library facilities with numerous volumes of books, magazines, national and international with Digital Library facility in addition to the respective departmental library.
  - Library functioning hours from 09:00 a.m. to 08:00 p.m. for any reference to make use of books, magazines, journals and news papers.
  - Digital Library is also opened for online reference of reputed journals.
  - Conducting Knowledge Sharing Session / Mail for students.

- Conducting Knowledge Sharing Session for the faculty and the students through ISTE-Staff Chapter at separate seminar halls.
- Encouraging Faculty and Staff to take part in various Conferences, Seminars, Workshops and other training programmes.
- Industrial Visit.
- Students are encouraged to do Industry projects for their Main Project work submission.
- Inviting reputed eminent trainers to train the students to face interview to students are encouraged to undergo placement oriented training programmes to acquire technical, communicative, soft interpersonal skills.
- English Newspapers are distributed to the students for developing reading habit.
- Refresh course for fluency in English is conducted.
- Willing students are allowed to deliver extempore speech and to take part in debate, super memory power contests.
- Students are encouraged to take part in sports and tournament events. To bring out the latent talent they are participating in co curricular activities.
- To showcase skills, they are taking part in the extra-curricular activities. Inspiring students to be members of various clubs

# 2. Formulation of action plans for all operations and incorporation of the same into the institutional strategic plan

To implement the co-ordination-based day-to-day academic and non-academic activities, research and development and sports plans, decision making powers have been decentralized by deputing the faculty members as authorities like Academic Coordinator (UG and PG), Dean R&D Cell, Officer Training and Placement Cell, Coordinator University Examination Cell, Members Disciplinary Committee, Members Grievance Committee, Coordinator Alumni Association, Coordinator Industry Institution Interaction Cell, Coordinator Programme Assessment Cell etc. Each and every Departments / Placement / Clubs / Units of College has been instructed to plan to deal with the Academic and Non-Academic activities for the academic year to be made as useful for all stakeholders such as students and faculty. As a sequence, the scheduled plan of actions with the budget pertaining to the academic, placement, extra-curricular and sports are submitted to the Principal and Top Management for approval to implement them.

The review of last academic year activities and perspective plans for the forthcoming academic year are done to gain the continuous development at academic, non-academic and quality improvement processes.

The academic coordinators plan time table and other activities to be carried out during every semester period. The academic schedule for each and every semester is prepared with the details such as Reopening Date, Internal Assessment Test Periods, and Report Submission Periods etc.

Coordinators of Internal and University Examination Cells are periodically reviewing and planning for conducting the periodical tests and University examinations with the information through circulars to all.

Dean R&D Cell forms a committee with the members of all departments as department coordinators. The Internal and External level funding projects, programmes and other offers details will be circulated to all the faculty and students.

Officer TAP Cell arranges Placement Training Programmes and on and off campus for the students.

Members Disciplinary and Grievance Committee shows much care upon the students" welfare. The Grievance Redressal Committee functions in the College to counsel the students and resolve any problematic issues.

Coordinator Industry Institution Cell spotlights the MoUs to be made with various Industries to provide qualitative and quantitative industries-oriented knowledge to the students.

The Programme Assessment Cell provides the world class technical education to the students.

### 3. Interaction with stakeholders

The College has maintained a periodic interaction with stakeholders as follows:

### Students

- The Management, Principal, HoD and Faculty members are interacting with the students.
- > Incorporating Students Feedback about Academic and College level.
- Keeping suggestion box at main places of College, Departments and Hostels to post their suggestions for the development of College activities and its" improvements so as to rectify the grievances.

### **Faculty and Staff**

The Principal and Top Management interact with the faculty members through HoD"s Meetings, Management-Faculty Meetings, etc. The management welcomes the suggestion of the staff members for the institutional development.

### **Employers – Industries**

The Institution – Industry Partnership committee is functioning inside the College campus to follow the industry based standardization.

### Alumni

The periodical meetings are organized every year by inviting the Alumni to provide suggestions for further enhancements like academic, non-academic, placement training levels for the institutional growth and students" welfare and promotion of their studies.

### Parents

- > Conducting Parents Meeting at department Levels.
- > Inviting Parents to all the academic-based specific functions.
- > Collecting feedback to rate the functionalities of the College and Department.

### Human Resource - Training Officers

Conducting Periodic HR Connect Meet to have a healthy Institute- Industry Interaction for the purpose of providing recent technical and corporateoriented training to the students for their placement purpose.

### **Professional Bodies**

The Professional Bodies are functioning in the College under the coordination of corresponding departments.

# 4. Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders

Infrastructure and facility requirement of the college are identified through the various research inputs and consultation with the stake holders like students, faculty and employee, etc and based on the need analysis they are provided.

- Internal funds for the R&D based activities if any faculty or whole department is willing to implement any technical / social / survey projects.
- Fund to organize FDP / Conference / Workshop / Seminars / Competitions / Exhibitions.
- Concession in Tuition Fee / Residential Fee by identifying the Student's achievement in Academic / Sports / Family Annual Income through their Parent's profession.
- Research related equipment Procurement: The Management supports the faculty in procuring equipment for their research oriented processes. The available and existing laboratory equipment is also permitted by the management to be used by the faculty and students for their research.

### 5. Reinforcing the culture of excellence

The Shail Group of Institutions/ Governing body/ Top management enriches the quality education for reinforcing the culture of excellence.

As a result, the college achieved culture of excellence and the details are given below.

- > All UG Courses are permanently affiliated to RGPV University.
- CSE and EC UG Courses are accredited by National Board of Accreditation, New Delhi.
- ▶ ISO 9001:2008 Certification.
- > University Ranks are obtained by students in the university examinations.

### 6. Champion organizational change

The college functions with Vision, Mission and Quality Policy for the welfare of both staff and students. All the members from top level management to students take much effort to make this institution as a top level institution through the continual review processes in academic, non-academic, research, sports and services. The Principal interacts with HoDs, Placement Officers and students periodically to offer high tech education and top most placement.

HoD interacts with the department faculty, staff and students to identify the needs and plan of actions to be carried out forward the departmental activities. Research and Development Cell is functioning as a backbone of this institution. The vast spacious Central Library is functioning with huge volumes of books, magazines, back volumes and varieties of News Papers along with Digital Library facilities. The College provides residential facilities to both boys and girls inside the college premises. MoUs with leading industries like Oracle, Microsoft, IBM, etc. are established.

The College offers 6 UG courses like B.E. in Civil, Mechanical, Chemical, Electronics and Communication, Information Technology, Computer Science and Engineering and 3 PG courses in Mechanical, Computer Science & Engineering and Electronics and Communication Engineering department and also M.B.A. present.

During the Academic Year 2012-13, 2013-14 and 2014-15 only 3 UG Courses such as B.E. in Mechanical, Electronics and Communication, Computer Science and Engineering had been accredited by National Board of Accreditation, New Delhi.

During the academic year 2015-16, the Departments like Electronics and Communication and Computer Science and Engineering are reaccredited by National Board of Accreditation, New Delhi.

All UG Courses are also permanently affiliated to RGPV / AICTE. Professional Societies and NPTEL Video Courses to improve technical and soft skills of the students. Social and service clubs are functioning with the staff and students membership to promote Extra and Co-curricular activities.

# 6.1.4 What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?

The procedure adopted by the institution to monitor & evaluate policies & plans of the institution for effective implementation from time to time, is

- Assessment of performance of the institute in activities/ process/event conducted by external agencies like university end semester examination, on/ off campus annual placements drives, degree of participation of persona of eminence with their quality papers in national/ international conference organized by the institute etc.
- Informal monitoring of general perception among academia regarding effectiveness and usefulness of any policy/ plan introduced by leadership.
- > Feedback from stakeholders like students, parents, employers, alumni etc.
- Through voluntarily participation in quality audit by reputed external agencies like ISO, NBA, and NAAC.

# 6.1.5 Give details of the academic leadership provided to the faculty by the top management?

The decision making power is delegated to all members of faculty under various committee along with their regular activities. By this way, the academic leadership is provided to the faculty by the top management. This decentralization based responsibilities and authorities are provided for the betterment administration in the institution for the welfare of the students by implementing the action plans at academic, co-curricular, extra-curricular and other activities levels.

### The responsibilities and committee details are presented below:

#### Table 64 List of Committees for the academic year 2016-17

#### A. Academic Improvement & Monitoring Committee/ Students Attendance:

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. K. K. Gupta	Dean, Mechanical Engineering	Coordinator
2.	Dr. Rajeev Vishwakarma	Dean, Computer Science & Engineering	Member
3.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Member
4.	Dr. Saurabh Jain	Dean, Engineering Science & Humanities	Member
5.	Mr. Utkash Jain	HOD, Civil Engineering	Member
6.	Ms. Samatha Singh	HOD, Chemical Engineering	Member
7.	Ms. Neha Gupta	HOD, Information Technology	Member

B. Discipline/Anti Ragging Committee:-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Rajeev Vishwakarma	Dean, Computer Science & Engineering	Coordinator
2.	Dr. Parimeeta Chanchani	Professor, EAS Department	Member
3.	Dr. K. K. Gupta	Dean, Mechanical Engineering	Member
4.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Member
5.	Dr. Saurabh Jain	Dean, Engineering Science & Humanities	Member
6.	Mr. K. Anil Kumar	Associate Professor, Computer Science & Engineering	Member
7.	Mr. Anil Khandekar	HOD, Computer Science & Engineering	Member
8.	Mr. O. P. Singh	Asst. Professor, Mechanical Engineering	Member
9.	Mr. K. P. Tiwari	Asst. Professor, Mechanical Engineering	Member
10.	Mr. Utkash Jain	HOD, Civil Engineering	Member
11.	Ms. Neha Gupta	HOD, Information Technology	Member
12.	Mr. Shravan Namdev	Asst. Professor, Electronics & Communication Engineering	Member
13.	Mr. Anand Mantri	Asst. Professor, Electronics & Communication Engineering	Member
14.	Dr. Namrata Kaushal	Asst. Professor, Engineering Science & Humanities	Member
15.	Mr. Ashutosh Shrivastava	Dy. Manager Admin	Member
16.	Mr. Prakash Choudhary	Asst. Professor & EA to Director	Member
17.	Mr. Gajendra Dubey	Dy. Registrar	Member
18.	Mr. Rajesh Tiwari	Counselor (SDC)	Member
19.	Mr. Majhar Shaikh	Sports Officer	Member
20.	Mrs. Sarika Devikar	Girls Hostel Warden	Member

C. Finance, Budget & Purchase Committee :-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. K.K. Gupta	Dean, Mechanical Engineering	Coordinator
2.	Dr. Rajeev Vishwakama	Dean, Computer Science & Engineering	Member
3.	Mr. Rajesh Bhandari	Accounts Manager, Account Department	Member
4.	Ms. Samatha Singh	HOD, Chemical Engineering	Member
5.	Ms. Neha Gupta	HOD, Information Technology	Member
6.	Mr. Murtaza Bohra	Purchase Officer	Member

#### D. Research & Consultancy:

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. A. P. Singh	Associate Professor, Mechanical Engineering	Coordinator
2.	Dr. Namarta Koushal	Associate Professor, Engineering Science & Humanities	Member
3.	Mr. Rakesh Thakur	Associate Professor, Mechanical Engineering	Member
4.	Mr. K. Anil Kumar	Associate Professor, Computer Science & Engineering	Member
5.	Mr. Virendra Singh	Associate Professor, Computer science & Engineering	Member
6.	Mr. Utkash Jain	HOD, Civil Engineering	Member
7.	Ms. Samatha Singh	HOD, Chemical Engineering	Member
8.	Mr. Akhilesh Chauhan	Asst. Professor, Information Technology	Member

E. Library Committee / e-Resources:-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. K.K. Gupta	Dean, Mechanical Engineering	Coordinator
2.	Dr. Namrata Kaushal	Associate Professor, Engineering Science & Humanities	Member
3.	Mr. K.P. Tiwari	Asst. Professor, Mechanical Engineering	Member
4.	Mr. Ulhas Kothari	Asst. Professor, Electronics & Communication Engineering	Member
5.	Mr. Manish Nimoriya	Asst. Professor, Civil Engineering	Member
6.	Mr. Ranjeet Osari	Asst. Professor, Computer Science & Engineering	Member
7.	Mr. Ankur Nahar	Asst. Professor, Information Technology	Member

F. Hostel Management:-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Mr. O.P. Singh	Asst. Professor, Mechanical Engineering Faculty Warden	Coordinator
2.	Mr. Prakash Choudhary	Asst. Professor, & EA to Director, Faculty Warden	Member
3.	Ms. Kriti Vishwakarma	Admin & HR Manager	Member
4.	Mr. Ashutosh Shrivastava	Dy. Manager Admin	Member
5.	Mr. Manoj Tiwari	Hostel Warden (Boys)	Member
6.	Ms. Sarika Divekar	Hostel Warden (Girls)	Member

### G. Grievances & Readdressal Committee:

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Coordinator

2.	Dr. K.K. Gupta	Dean, Mechanical Engineering	Member
3.	Dr. Rajeev Vishwakama	Dean, Computer Science & Engineering	Member
4.	Dr. Sourabh Jain	Dean, Engineering Science & Humanities	Member
5.	Ms. Samatha Singh	HOD, Chemical Engineering	Member
6.	Ms. Neha Gupta	HOD, Information Technology	Member
7.	Mr. Gajendra Dubey	Dy. Registrar	Member
8.	Mr. Rajesh Tiwari	Counselor (SDC)	Member

# H. PDP & Aptitude Training Committee :-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
	Dr. K. K. Gupta	Dean, Mechanical Engineering	Coordinator
А.	PDP Training		
1.	Mr. Kamal Madan	Senior PDP Trainer, SDP	Coordinator PDP
2.	Mr. Siddharth Jain	Asst. Professor, Computer Science & Engineering	Member
3.	Ms. Rupali Sharma Tiwari	Asst. Professor, Engineering Science & Humanities	Member
4.	Mr. Akhilesh Chauhan	Asst. Professor, Information Technology	Member
В.	Aptitude Training		
1.	Mr. Prakash Choudhary	Asst. Professor & EA to Director	Coordinator
2.	Ms. Neha Gupta	HOD, Information Technology	Member
3.	Mr. Ankit Jain	HOD, Electronic & communication Engineering	Member
4	Ms. Margi Patel	Asst. Professor, Computer Science & Engineering	Member
5.	Dr. Swati Singh	Asst. Professor, Engineering Science & Humanities	Member
6.	Mr. Ankur Nahar	Asst. Professor, Information Technology	Member
7.	Ms. Amrita Singh	Asst. Professor, Chemical Engineering	Member
8.	Ms. Akansha Vargis	Asst. Professor, Computer Science & Engineering	Member
9.	Ms. Swapnil Jain	Asst. Professor, Information Technology	Member
10	Mr. Piyush Vyas	Asst. Professor, Computer Science & Engineering	Member
11	Mr. Deepak Yadav	Asst. Professor, Electronics & Communication Engineering	Member
12.	Ms. Neha Choudhary	Asst. Professor, Electronics & Communication Engineering	Member

I. Sexual Harassment and Readdressal Committee / ICC

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Parimeeta Chanchani	Professor, Engineering Science & Humanities	Coordinator
2.	Dr. Namrata Kaushal	Associate Professor, Engineering Science & Humanities	Member
3.	Ms. Neha Gupta	HOD, Information Technology	Member
4.	Ms. Kriti Vishwakarma	Admin & HR Manager	Member
5.	Psychologist		
6.	Students		
7.	Students		

### J. Sports Committee :-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Coordinator
2.	Mr. O. P. Singh	Asst. Professor, Mechanical Engineering	Member

2.	Mr. K. P. Tiwari	Asst. Professor, Mechanical Engineering	Member
3.	Mr. Utkash Jain	HOD, Civil Engineering	Member
4.	Ms. Margi Patel	Asst. Professor, Computer Science & Engineering	Member
5.	Mr. Majhar Shaikh	Sports Officer	Member

### K. NBA/ NAAC Accreditation & Academic Autonomy / Private University :-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Brig. G. P. Chattopadhyay	Adviser	Coordinator
2.	Dr. K. K. Gupta	Dean, Mechanical Engineering	Member
3.	Dr. Rajeev Vishwakarma	Dean, Computer Science & Engineering	Member
4.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Member
5.	Dr. A. P. Singh	Associate Professor, Mechanical Engineering	Member
6.	Mr. Ankit Jain	HOD Electronics & Communication Engineering	Member
7.	Mr. K. Anil Kumar	Associate Professor, CSE	Member
8.	Ms. Samatha Singh	HOD, Chemical Engineering	Member
9.	Ms. Neha Gupta	HOD, Information Technology	Member
10.	Mr. Utkarsh Jain	HOD, Civil Engineering	Member

#### Other Committee:-

	1. Transport Committee:		
Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Rajeev Vishwakarma	Dean, Computer Science & Engineering	Coordinator
2.	Mr. K. P. Tiwari	Asst. Professor, Mechanical Engineering	Member
3.	Mr. Aman Tiwari	Asst. Professor, Civil Engineering	Member
4.	Mr. Akhilesh Mishra	Asst. Professor, Mechanical Engineering	Member
5.	Ms. Neha Gupta	HOD, Information Technology	Member
6.	Ms. Kriti Vishwakarma	Admin & HR Manager	Member
7.	Mr. Gajendra Dubey	Dy. Registrar	Member
8.	Mr. Ashutosh Shrivastava	Dy. Manager Admin	Member
9.	Mr. Viabhav Wath	Transport In charge	Member

#### 2. Tech Fest & Cultural Committee :-

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Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Parimeeta Chanchani	Professor, Engineering Science & Humanities	Coordinator
2.	Dr. A. P. Singh	Associate. Professor, Mechanical Engineering	Member
3.	Ms. Samatha Singh	HOD, Chemical Engineering	Member
4.	Ms. Neha Gupta	HOD, Information Technology	Member
5.	Mr. Ankit Jain	HOD, Electronics & Communication Engineering	Member
6.	Mr. K. Anil Kumar	Associate Professor, Computer Science & Engineering	Member
7.	Ms. Margi Patel	Asst. Professor, Computer Science & Engineering	Member
8.	Mr. Piyush Vyas	Asst. Professor, Computer Science & Engineering	Member
9	Mr. Nitin Rathore	Asst. Professor, Computer Science & Engineering	Member
10.	Mr. Akhilesh Chauhan	Asst. Professor, Information & Technology	Member
11.	Ms. Amrita Pahadiya	Asst. Professor, Electronics & Communication Engineering	Member
12	Mr. Shailendra Singh	Asst. Professor, Civil Engineering	Member
13.	Ms. Amrita Singh	Asst. Professor, Chemical Engineering	Member

### 3. Training and Placement Committee :-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Coordinator
2.	Mr. Anil Khandekar	HOD, Computer Science & Engineering	Member
2.	Mr. Anand Mantri	Asst. Professor, Electronics & Communication Engineering	Member
3.	Mr. Aishwerya Mendke	Manager – Corporate Relations	Member
4.	Mr. Pradeep Baniya	Asst. Professor, Computer Science & Engineering	Member
5.	Mrs. Rupali Sharma Tiwari	Asst. Professor, Engineering Science & Humanities	Member
6.	Mr. Aditya Nagdia	Asst. Professor, Information Technology	Member
7.	Mr. Vishal Chandel	Asst. Professor, Computer Science & Engineering	Member
8.	Ms. Arshia Khan	Asst. Professor, Chemical Engineering	Member
9.	Mr. Rajeev Gupta	Asst. Professor, Mechanical Engineering	Member

4. Continuing Education & Staff Development:-

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Dr. Parimeeta Chanchani	Professor, Engineering Science & Humanities	Coordinator
2.	Dr. K. K. Gupta	Dean, Mechanical Engineering	Member
3.	Dr. Rajeev Vishwakama	Dean, Computer Science & Engineering	Member
4.	Dr. Keshav Patidar	Dean, Electronics & Communication Engineering	Member
5.	Dr. Saurabh Jain	Dean, Engineering Science & Humanities	Member
6.	Mr. K. Anil Kumar	Associate Professor, Computer Science & Engineering	Member
7.	Mr. Rakesh Thakur	Associate. Professor, Mechanical Engineering	Member
8.	Mr. Aishwerya Mendke	Manager – Corporate Relations	Member

5. Pre		ess & Media Management-	
Sr. No.	Name of The Faculty Members	Designation	Responsibility
1.	Mr. Sunil Vivrekar	Manager Marketing	Coordinator
2.	Mr. Aishwerya Mendke	Manager – Corporate Relations	Member
3.	Ms. Neha Gupta	HOD, Information Technology	Member
4.	Ms. Margi Patel	Asst. Professor, Computer Science & Engineering	Member
5.	Mr. Kamal Madan	Senior PDP Trainer, SDC	Member

### 6. Alumni Association Committee

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1	Dr. Saurabh Jain	Dean, Engineering Science & Humanities	Coordinator
2.	Mr. T. S. Arora	Asst. Professor, Computer Science & Engineering	Member
3	Mr. Gajendra Dubey	Dy. Registrar	Member
4.	Dr. Irfan Mansuri	Associate Professor, Engineering Science & Humanities	Member
5.	Mr. Rajesh Tiwari	Counselor (SDC)	Member
6.	Mr. K. P. Tiwari	Asst. Professor, Mechanical Engineering	Member
7.	Mr. Utkarsh Jain	HOD, Civil Engineering	Member
8.	Mr. Nitin Rathore	Assistant Professor, Computer Science & Engineering	Member
9.	Mr. Aishwerya Mendke	Manager – Corporate Relations	Member
10.	Mr. Anand Mantri	Asst. Professor, Electronics and Communication Engineering	Member
11.	Mr. Shantanu Ray	Asst. Professor, Mechanical Engineering	Member

7.	ERP Committee:	

Sr. No.	Name of The Faculty Members	Designation	Responsibility
1	Ms. Neha Gupta	HOD, Information Technology	Coordinator
2.	Mr. K. Anil Kumar	Associate Professor, Computer Science & Engineering	Member
3	Mr. Anil Khandekar	HOD, Computer Science & Engineering	Member
4.	Mr. Virendra Singh	Associate Professor, Computer science	Member
5.	Mr. Ankit Jain	HOD, Electronics & Communication Engineering	Member
6.	Mr. Ankur Nahar	Asst. Professor, Computer Science & Engineering	Member
7.	Mr. Akhilesh Chouhan	Asst. Professor, Information Technology	Member
8.	Mr. Gajendra Dubey	Dy. Registrar	Member
9.	Mr. Nilesh Naik	System Administrator	Member
10.	Mr. Navin Choudhari	System Administrator	Member

### 6.1.6 How does the college groom leadership at various levels?

Management grooms the leadership at various levels by way of assigning different kinds of activities to the employees at different cadre as well as encouraging the staff and students for organizing challenging events in and out the College campus by relying their leadership. Management of the college instructs the head of each department to encourage the faculty, staff and students of the respective department to take part in implementing activities and organizing functions through Department Association, College, Cells and Clubs.

Students Level: To insist Team Leadership on Students, they have been encouraged to be members of various social clubs, non-social clubs and department association. Students are permitted to take the role of office bearers, to execute and to organize association activities themselves so as to expose their responsibilities and duty consciousness. To encourage students to visit various Industries / Corporates / Companies / Factories / Shops / Mills, which provide opportunities for gaining knowledge at the technical and administrative levels.

Faculty and Staff Levels: The core and additional responsibilities and committee-based works are provided to the faculty members. The plan of actions is framed by various committees to contribute the committee-based services in academic, non-academic, placement and research levels.

The hours of a week are allocated for subjects, laboratories, placement, aptitude, seminars, library, communication, internet accessibility and sports.

The Dean and coordinators of the Research Committee concentrate on research-oriented progresses to encourage the staff and students to help in their research activities by sponsoring fund to procure equipment and components. The Top Management offers sponsorship permitting the staff and students to utilize the laboratory facilities for their internal / external research processes.

Both the Teaching and Non-teaching members act as members of various clubs / units of institution. They are fully permitted to organize any event for the benefits of faculty and the students who strive for the development of the institution.

Faculty – Roles	Students – Roles
College:	College:
Dean	Magazine Committee Member
Accreditation Coordinator	Sports In-charge
Autonomous Coordinator	Clubs / Cells:
NBA / NAAC Coordinator	President
Disciplinary Committee	Secretary
Grievance and Redressal Committee Member	Treasurer
Club / Cell Member	Executive Member
Co-curricular Activity Member	Hostel In-charge.
Extra-curricular Activity Member	Training and Placement Member
Hostel In-charge	
Web-Portal In-charge	
Department:	Department:
Dean	Class Representative.
HoD	Department Association
Mentor	President
Lab In-charge	Secretary
Internal Assessment Test Coordinator	Treasurer
NBA / NAAC Coordinator	Executive Member
Placement Coordinator	
Research & Development Coordinator	
Department Library In-charge	
Admission Coordinator	
Research & Development:	Research & Development:
Dean	Student Member
Department Coordinator	
Hostels:	Hostels:
Warden	Representative
Associate Warden	Mess-Committee Member
	Clean & Neatness Committee Member
Training and Placement:	Training and Placement:
Officer	Student Representative
Executive Member	Placement Volunteer
Placement Coordinator	
Alumni Coordinator	

# 6.1.7 How does the college delegate authority and provide operational autonomy to the departments / units of the institution and work towards decentralized governance system?

The college delegates authority and provides operational autonomy to the department / units of the institution. Thus the works are governed through decentralized systemic way.

The authority-based activities are decentralized for the well performance of everything. The works are alienated at Principal in entire institute level and Deans at departmental level.

The Director is responsible for the institutional-based academic and nonacademic activities. He coordinates with Heads of various Departments, I Year Coordinator, Training and Placement Officers, Coordinators of University Examination Cell, Coordinators of Admission Cell, Coordinators of various Clubs, Manager of College Office, Transport Supervisor and Officers of Campus.

The Dean is responsible for sanctioning leave to department staff and students. He deputes the coordinators for taking care of Internal Assessment Examinations, Department Association, Placement, Research and Development, In-charge for Department Library, Coordinator for Enterprise Resource Planning, In-charges for Laboratories, Advisors for all Classes.

Institute is having its own Academic Calendar. It consists Commencement and End Dates of Semester Coaching Period, Schedule for conducting Internal Assessment Tests - I & II, Department Faculty Meeting, Guest Lectures, Seminar, Workshop and Conferences.

The Coordinators of Internal Assessment Tests conduct the tests periodically for all students of the department. They prepare the schedule for submitting Question Papers to them, Circular to Staff and Students. After conducting each test as per schedule, the answer scripts are submitted to the concerned subject in-charge immediately. They also maintain the Attendance Sheet with Students and Invigilators Signatures along with Absentees List.

The Association Coordinator is deputed for organizing the programmes such as Guest Lectures, Seminars and Workshops related to recent trends and advancements of the concerned specialization of the course for satisfying student's expectation in technical and non-technical levels.



The Department Placement Coordinator concerts in identifying the placement oriented training programmes to be provided to the students in year wise and arranging placement-interviews for pre-final and final year students.

The Laboratory In-charges take care of the Equipment of the corresponding Laboratory, Budget Allotment for procuring Hardware Equipment, purchase of Software and other console devices according to the revised syllabus of University to conduct all the experiments by using them properly.

Class coordinator take care of class students and monitor the class activities such as Students" Attendance, Discipline Maintenance, Internal Assessment Test and redressing the grievances and providing facilities according the needs and requirements submitted by the students.

# 6.1.8 Does the college promote a culture of participative management? If 'yes', indicate the levels of participative\ management.

Yes, the Institute promotes a culture of participative management which enables faculty, staff and students to voice their opinions and suggestions including constructive criticism in day to day functioning of the institute.

All academic and administrative activities are decentralized and operational management decisions are taken based on discussion and deliberations in Director's meetings with Dean, HoD, Functional Head, department meetings of HoD with Faculty, and various committee meetings comprises of faculty/ staff & students. Minutes of such meetings are recorded and issued to all concerned.

This culture of participative management empowers members with freedom to express their opinions, assess pros & cons of a decision being taken for improvement and even while meeting the requirements. Participative management allows collaboration & cooperation between departments and functionaries thereby improves the quality of accomplishment of task ahead.

# **6.2 Strategy Development and Deployment**

# 6.2.1 Does the Institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?

# **Quality Objectives**

IIST is engaged in imparting quality education. It constantly strives towards achieving high standards of teaching. The objectives of the Quality policy of the institution are as follows:

- 1. To Plan and Implement Innovative Teaching & Learning Processes.
- 2. To Provide Quality Education matching with futuristic trends in Engineering & Technology.
- 3. To develop the college into a global institute of learning and research of academic excellence.
- 4. To Strive at establishing an effective Quality Management System ensuring continual improvement.
- 5. To train and develop human resources by encouraging faculty to work as a team and to update their knowledge and skills continually to match the needs of Industry.

# Developed

The Quality policy is developed by the Top Management People for the main reason to develop the quality policy is to empower the academic activities and satisfy the requirements of students, parents and society. It is developed by the Top Management in consultation with the stakeholders like Alumni, Parents and Students etc.

## Driven

The institution is committed to impart quality education to the students enabling them to develop their good attitude and professional competency in the market.

### The quality policy is driven by

- a. Providing excellent infrastructure facilities.
- b. Promoting value based quality education with ethical values.
- c. Encouraging to tie up with MoUs.
- d. Facilitating for creating employability skill for all students.
- e. Provision for utilizing library and computer facilities.
- f. Appointing Highly Qualified and Experienced Faculty Members.
- g. Preparing them fit for any job mentally and physically through academic and sports activities.

### Deployed

The Director and the head of the department continuously monitor the teaching learning process for carrying out the systems effectively.

### It can be deployed in the areas of

- 1. Implementing the policies in Academic growth.
- 2. Conducting Examinations rigidly.
- 3. Creating learning environment among the students.
- 4. Encouraging a faculty to upgrade their latest technology.

### Reviewed

Review of the quality is done during the ISO Auditing, NBA Auditing and Governing Body meeting. In that meeting the overall performance of the institution is reviewed and necessary steps are taken by the management.

The feedback from the students, parents and suggestions made by the faculty are tabled for reviewing the quality policy. Grievance redressal cell is also formed for reviewing the quality policy. It is helpful for the future action plan of the institution.

# 6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.

Yes. The Institute has a perspective plan for development.

It is developed by Director, Dean & HoDs of various departments under the broad guidance of governing body.

The following is the journey of the institutions.

#### Table 65 Journey of the institutions

Year	Milestones (Achievements of the College)		
2003	B.E Computer Science & Engineering (CSE-60)		
	B.E Electronics & Communication Engineering (ECE-60)		
	B.E. Electronics & Instrumentation (EI-60)		
	B.E Mechanical Engineering (ME-60)		
	Affiliated to R.G.P.V. University, Bhopal		
2004	Increase in intake in B.E. CSE (60 to 90)		
	Increase in intake in B.E. ECE (60 to 90)		
	Increase in intake in B.E. ME (60 to 90)		
	Obtained ISO: 9001: 2000		
2007	B.E Information Technology (IT-60)		
2009	Increase in intake in B.E. CSE (90 to 120)		
	Increase in intake in B.E. ECE (90 to 120)		
	Increase in intake in B.E. ME (90 to 120)		
	Start PG Course in ME with 18 Seat in Machine Design		
	PG Course in ECE with 18 Seat in Digital Communication		
	PG Course in CSE with 18 Seat in Computer Science & Engineering		
	Obtained ISO: 9001: 2000		
2012	B.E Chemical Engineering (CM-60)		
	B.E. Civil Engineering (CE-60)		
	NBA Accreditation of EC, CSE & ME For Two Year		
2013	Increase in intake in B.E. CSE (120 to 180)		
	Increase in intake in B.E. ME (120 to 180)		
2014	Increase in intake in B.E. ME (180 to 240)		
2015	Increase in intake in B.E. CSE (180 to 240)		

2016	Decrease in intake in B.E, Computer Engineering (60 to 0)
	NBA Accreditation of EC & CSE For Two Year

### **Short Term Goals**

- 1. To achieve maximum number of University Ranks in each Academic Year.
- 2. To make the campus environment as green and chemical free.
- 3. To motivate the faculty to involve in industry-based processes.
- 4. To maintain effective website with all academic information to be viewed by students, staff and outside people on on-line.
- 5. To obtain NBA and NAAC Accreditation.

# Long Term Goals

- 1. To promote quality research projects for its" local implementation and use.
- 2. To start multi-purpose resource centre and research with various technologies.
- 3. To establish new centers in the emerging fields.
- 4. To obtain Autonomous & establish the Deemed to be University Status.

# The institution has a perspective plans which are considered in the following aspects:

- 1. Introducing training from 1st year onwards by the industry experts.
- 2. Implementing a smart class room environment in all class rooms.
- 3. Enhancing research facilities in all engineering departments.
- 4. Enriching the value education programmes.
- 5. Expanding social service schemes for service learning.
- 6. Establishing a need based programmes.
- 7. Establishing Centre of Excellence in all departments.

# 6.2.3 Describe the internal organizational structure and decision making processes.

The Internal organization structure is specified as follows.



# **6.2.4** Give a broad description of the quality improvement strategies of the institution for each of the following

### 1. Teaching & Learning

Academic Calendar – The academic calendar includes the details pertaining to the schedule of tests, assignments, start and end of semester examinations. All departments have separate academic calendar which furnishes information on aspects such as schedule of important activities like workshops, guest lecture and industrial visits, etc.

**Effective Curriculum Planning** – Based on the academic calendar each subject handling faculty prepares lesson plan and question bank. Also the concerned faculty prepares and submits the required study material to the HoD for the corrections and improvement in their respective subjects.

**Continuous Evaluation (Tests / Assignments)** – Internal Assessment test is conducted periodically by the department examination cell. Questions are set by the subject handling faculty members. They are reviewed by any senior faculty member along with the HoD. Faculty distributes the valued answer scripts and briefs the performance of the students. After examination the class coordinator prepares the consolidated mark list of all the students and the mark list are display. For slow learners special classes are conducted for the required subjects.

For laboratory programmes, the experiments are explained by the faculty prior to the laboratory-based implementation using the equipment of the respective laboratory according to the experiment by the students and evaluate the students" observation and performance of the students and conduct a viva-voce for each experiment. The faculty of the concerned subjects enters student's assessment details for each of the theory and laboratory classes. Minimum two assignments are given for the students to understand the subject well.

**Attendance Monitoring** - The percentage of the attendance for each course and the overall percentage of attendance are continuously calculated once in a month. Those who have shortage of attendance are intimated personally and it is brought to the notice of the parents over phone or through letters.

**Tutorial Classes and Remedial Class -** Tutorial classes are conducted on subjects given in the syllabi to all students by concerned faculty. Provision of Tutorial classes is given in time-table. The remedial classes for regular students are conducted by the faculty on need basis. Special coaching classes are conducted for slow learners.

**Mentoring System** – To monitor the student discipline, and give guidance related to both academic and non-academic activities, a faculty coordinator for each class is assigned. Also mentor is allocated for each student in the ratio of 1:20. If faculty members found any discrepancies in the student's activities they will immediately inform to the HoD.

**Feedback Analysis process** – Feedback is obtained from alumni during alumni association meetings and also during visit of alumni to the institution. Student's feedback about their subject handling faculty is collected from all students once in a semester. Feedback is collected from both the students and their parents at the end of every semester about the execution of college and the department. Department Level Parents'' meeting is held during which the parents express their suggestions for improvement of facilities in the college and hostel. Feedbacks from employers/Industries are obtained in a standard format through questionnaire. Comments are analyzed and discussed and suggestions are given for the improvement in teaching performance if required.

**Students Centric Learning and Self Planning Process** – Electives are provided to the students in different subjects and selected as per one's own liking and interest. Student can choose electives as per university norms. The students are expected to choose advanced topics related to the subject matter of each course and make a presentation of their learning which enhance the self-learning and communication skills. In order to get exposed to the industrial practices a series of lectures by industry experts are arranged. Students read the English and Hindi news papers to update their current knowledge and develop the habit of reading.

**Creation of Need Based Facilities and Infrastructure** - The students has to present any Technical paper in various conferences / symposium and attend workshops / seminars conducted by other institutions. There is Wi-Fi facility to the students and the faculty to update and to be familiar with the current knowledge. Internet laboratories are

functioning for accessibility of internet by all the students for their self learning. In order to learn the concepts beyond the syllabus, the various facilities are activated like NPTEL, Digital Library, and Video Lectures etc.

**Appointing Qualified and Experienced Faculty** – The institution has appointed well qualified faculty members as per the AICTE and RGPV University Norms. Faculty for both teaching and non-teaching required for each department is advertised in a national paper, thoroughly check their resume and call for interview in the ratio 1:5. Highly qualified academicians are appointed for conducting an interview. Preferably select the experienced faculty in that field.

# 2. Research & Development

Research is one of the important activities of the college. The management has to endorse faculty participation in research by

- To create awareness and opportunities in Research and Development among the students & faculty.
- To create interest and atmosphere among the staff members to take up Research projects and improve their knowledge, skills and qualifications by registering Ph.Ds.
- > To motivate the faculty members in the area of their specialization.
- ➢ To encourage staff members and students to publish technical papers for publishing in National and reputed International Conferences/Journals.
- To encourage faculty members of all the disciplines in engineering/science /humanities in R&D activities for their professional growth.
- To assist for applying and getting funds for conducting Seminar/Workshop/FDP from various available funding agencies.
- To maintain and disseminate current information about relevant research policy areas and initiatives in government, in the professions and in relevant industries, including external funding opportunities.
- To develop strategies to foster research collaborations within the faculty, across faculty and institutes, and with agencies outside the college.
- > To work with various departments to establish and develop faculty research priorities on interdisciplinary areas.
- To interact with industry, government, professions and the wider community on all research matters promote faculty research activities to external stakeholders.

To coordinate faculty level workshops and staff development activities on research-related issues.

### **R&D** Initiative

### **Initiatives for Students**

- Students are encouraged to participate in workshops, seminars, paper presentation and project display competitions.
- > They are motivated to undertake both in house and industry based projects.
- Guest lectures, workshops and industrial visits are regularly arranged to focus on thrust areas.
- Financial assistance is provided for publishing the paper in a peer reviewed journal.
- Financial assistance for developing the experimental setups for the innovative/socially relevant project work.

### **Initiatives for Faculty**

- Financial assistance in terms of registration fees, TA/DA, etc for participation in National & International conferences (India and Abroad), Workshops, Seminars, FDP, etc.
- > Faculty members are sponsored for pursuing higher studies.
- > Incentives for publishing papers in refereed impact factor journals.
- Faculty members are encouraged for interacting with the outside world such as chairing technical session/invitation as keynote speaker in National/International Conferences, Seminar, Workshop and Guest lecture.
- Management extends full support for the fund required for procuring facilities to do the research.

### 3. Community engagement

Various units of the college organize outreach programs to enable the students to respond to the larger issues of society by adopting villages. Staff and students are actively involved in community services such as blood donation camp, AIDS awareness, Clean and Green Indore, cloth donation, Tobacco free and avoid plastics awareness campaigan.

### 4. Human resource management

- The institution has a mechanism of notification of regular posts and conductivity interviews. It recruits faculty members (both teaching and non-teaching) base on the guideline provided by the affiliated university. Adequate number of qualified faculty is appointed through the procedure of open advertisement.
- The faculty members are placed and treated well and they work with entire job satisfaction.
- Arranging various orientation programmes for both teaching and non-teaching faculty for upgrading their skills in the latest technology.
- Incentives are given to the faculty for presenting a paper in a reputed journal International Conference and National Conference.
- ➤ The institution has provided a 2 month salary for maternity period □ □ of women faculty members.

# 5. Industry interaction

The institution is emphases upon career development of the students. This can be achieved by establishing a good relationship with industry.

The different kinds of activities which are followed are given below.

- Arranging Industrial visits, In-plant Training and Intern-ship Programme to the students, for getting the knowledge in industrial environment.
- Providing a training programme by the experts from industry to know the practical environment in an industry.
- Conducting seminars for creating more numbers of entrepreneurs in engineering and technological field.
- Conducting a training programme through T & P Cell to all students from first semester onwards.
- Signed MoU with Industry to develop activities in institute with their member companies, through promote such activities like Industrial Visit, In-plant Training, and Internship; send industrial experts to institute as resource person, etc.

6.2.5 How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?

The following are the different ways for passing the information to the top management and stake holders, to review the activities of the institution.

- ➤ The Head of the institution reviews the college activities and ensures that the adequate information is passed to the top management and stakeholders through the issues discussed in the Governing body meeting conducted once in a year.
- Revising the quality objectives and department objectives, Analysis of students" performance in the university examination, discussion on arrear status of all departments, Training and placement activities, R&D activities, budget allocation and requirements of each department are discussed in Governing body meeting.
- Twice in each year the institute collects feedback from the students about their subject handling faculty and makes decisions about it for further improvements.
- At the end of every semester the students and their parents submit the feedback about the college and the department. If any grievances are mentioned discussion was done to identify the problems and resolve them.
- Parents Teacher meeting is conducted to discuss performance and further improvement of the student's education.
- Regular meeting is arranged with the faculty and students for the necessary improvements in various aspects.
- Review the suggestions received through the suggestion boxes from the students and faculty.
- > Reviewed the valuable points received from the Guest of Honor and Chief Guests.

# 6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?

The management supports involvement of the staff in improving the effectiveness and efficiency of the institutional processes by decentralizing the power and activities to in-charges of department, units, clubs and cells for the overall growth of the college. As a participative management, it has formed various committees for academic and non-academic related activities.

The initial work performance and decision making powers have been decentralized by deputing the faculty members as authorities like Faculty Members in Governing body, Academic Coordinator (UG and PG), Head of the Departments, Dean R&D Cell, Officer Training and Placement Cell, Coordinator University Examination Cell, Coordinators Internal Examination Cell, Members Disciplinary Committee, Members of Grievance Committee, Coordinator Alumni Association, Coordinator Industry Institution Interaction Cell, Programme Assessment Cell and Departmental Advisory Committee etc.

Apart from academic service, Professional Societies and NPTEL Video Courses are also functioning in the college to improve technical and soft skills of the students with coordinator(s) for each and every society. Social and service clubs are also functioning with the staff and students" membership to promote extra, co-curricular and social services-based activities.

The following programmes are organized for the welfare of both staff and students through the Department associations, Social and Non-social clubs.

- Cognitive, Pedagogy and Motivational Training programmes.
- FDP, Seminars, Workshops, Conferences, Symposia, Technical and Non-Technical Exhibition.
- Cultural Programmes and Competition at Engineering Colleges, Polytechnic Colleges and Schools level.
- Social-welfare and Awareness Programmes.

Organizing these kinds of programmes provide a great platform for staff and students to enhance their efficiency while they involve in such activities.

The Initiatives for encouraging and supporting the faculty are set forth by the management as follows:

Financial assistance in terms of registration fees, TA/DA, etc for participation in National & International conferences (India and Abroad), Workshops, Seminars, FDP, etc.

# In the following way the management helps for the development of faculty and their educational qualification.

- > Offering incentives for publishing papers in refereed impact factor journals.
- Offering incentives for research grant from external funding agencies of Govt. of India and abroad.
- Providing On-duty permission to take part as jury for technical sessions, keynote speaker in National/International Conferences and as resource person in Seminar, Workshop, Guest lecture, etc.
- Sponsoring fund for In-house Projects, Research works and funded projects to procure equipment and essential things.
- Deputing Research and Development Coordinator through Research and Development Cell to help the faculty and students in any kind of research-oriented activities.

# 6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.

The Management body always insists on the members of college to implement the perspective plan of actions in quality, academic and nonacademic levels. Various resolutions are made by this body every year for the continual processes in qualitative and quantitative processes in both educational and society level upliftment for the students community and the society.

# The following resolutions made by the Management body in the past year and the details are as follows:

S. No.	Resolution made by the Management Council	Status of Implementation
1	College can apply for 2(f) status.	19/8/2016
2	College can apply for Autonomous	Autonomous proposal has been ready soon
3	College can apply for NAAC	SSR of NAAC has been submitted.
4	Faculty and Students may submit R&D proposals to get fund internally or externally.	Various R&D funding proposals have been applied to different kinds of funding agencies.
5	Faculty may go for higher studies.	Faculty members are currently pursuing Ph.D. in Part Time basis.
6	Department can also involve in Training and Placement activities.	HoDs and Faculty members are also involving in placement activities in association with Training and Placement Cell.
7	Application for reaccreditation of B.E (ME, CSE & ECE) to be submitted to NBA, New Delhi.	NBA accreditation got for EC & CSE and awaiting onsite inspection by expert committee of NBA for ME.
8	Efforts to be taken to introduce foreign languages like Japanese, French.	Institute has taken initiative to teach foreign languages like French.
9	e- Learning can be put to use widely.	Digital Learning and ICT tools
10	Well placed alumni can be invited to address the students.	Well Placed Alumni's are invited to address the students about present industrial scenario and preparation for employment.

**6.2.8** Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If 'yes', what are the efforts made by the institution in obtaining autonomy?
Yes. The affiliating university makes a provision for according the status of autonomy to an affiliated institution

## 6.2.9 How does the Institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder relationship?

The institution ensures that grievances / complaints are promptly attended to and resolved effectively with a mechanism to analyze the nature of grievances for promoting better stakeholder relationship.

- > The Suggestions Boxes are placed in all the important places inside the College Campus.
- The Complaints or grievances registered by Students / Staff / Parents through the boxes are periodically monitored and redressed by the HoDs and Director.
- The problems / events are sorted as early as possible according to the intensity of the problem for remedial action to be taken to solve problems.
- > The compliances / suggestions are analyzed whether that is a common or personal one.
- ➢ If it is a common / general compliance or suggestion, the Director and the management with the respective committee discuss themselves to take the action to solve the problem.
- If it is a personal or persons-based compliant, the initial enquiry is usually made by the respective committee members with the persons who are all involved in the events / compliances. The necessary corrective and preventive actions are suggested by the committee and reported to the Director. The Director intimates the events and actions taken regarding the events to the management.
- The action-report related to the events will be given to the persons displayed in the College Main Notice Board for others" notice and alarming.

Some of the complaints received through suggestion boxes and action taken for the same are presented in the following table.

S. No.	Suggestions	Action Taken
1	The Bus Routes extension to rural areas also.	The Bus Routes are extended according the request to the specific areas mentioned in the suggestion.

## **6.2.10** During the last four years, had there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?

No. There had no instances of court cases filed by and against the institute.

## 6.2.11 Does the Institution have a mechanism for analyzing student feedback on institutional performance? If 'yes', what was the outcome and response of the institution to such an effort?

Yes. The institute has a clearly set and defined mechanism for obtaining the feedback from the students to improve the performance and quality of the institutional provisions. Periodical formal/informal feedbacks, Exit feedback, Alumni feedback, industry feedback are collected regarding teaching learning process and other aspects of College functioning. The suggestions obtained from the feedback are considered by the management, and all viable solutions are implemented.

Mentor Committee Meetings are held every month, in which students can address their problems. Steps are taken by the institution/department to solve their issues. Student's feedback are collected and analyzed every semester and corrective measures are taken by Director & Deans. We also conduct parent-teachers meeting and feedback is collected from parents at the end of every semester. Mentors are allotted to all students for counseling and mentor records are maintained by the coordinator students 'welfare. Parents can contact the Mentor faculty staff to know any detail about their wards.

#### **6.3 Faculty Empowerment Strategies**

### **6.3.1** What are the efforts made by the institution to enhance the professional development of its teaching and non teaching staff?

Efforts taken by the institution to enhance the professional development to both teaching and non teaching staff such as:

- Institution has taken many efforts to enhance the professional development of its teaching and non teaching staff members by encouraging their higher studies, attending the training programmes such as FDP and Pedagogy for betterment of their job.
- Tough Subjects are analyzed and training programmes are given to the faculty members to whom the subjects are allocated through experts.
- All the faculties are encouraged to pursue their higher studies. In all Departments, more than 20% of the faculties are pursuing their Ph.D. and the remaining faculties are encouraged to register their Ph.D.
- Existing faculties are encouraged to attend the FDP programme hosted by the institution and also other institutions for both theoretical and practical subject. Expenses will be taken care by the institution.
- All the staff members are encouraged to attend industrial training programmes depending on their discipline like Mission 10X.

- They are also encouraged to conduct any type of programme for problematic subjects. Financial assistance will be provided by the management to conduct those programmes. Faculties from various colleges can participate in these programmes to enhance relationship between the faculties which improves the development in their profession.
- Non-teaching staffs are encouraged to attend various hands on training both internally and externally to get awareness of the new technologies, tools, machineries etc.
- Faculties are also encouraged to apply for proposal for conducting various programmes for various funding organizations and also for project.
- The institution is providing On-Duty, Fund for In-House Project, Registration Fee for National / International Conferences / Workshops.

# 6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?

Following strategies are adopted by the institute for empowerment of faculty through the roles they perform as well as training/ re-training:-

A.

- A young faculty do hand holding with a senior faculty and asked to teach a subject of his choice/ strength. Further he is guided to make lesson plan, schedule of lectures, course file, animations, PPT slides as teaching tools before the commencement of class.
- > During the semester his teaching is monitored, corrected if required by the senior faculty.
- > Generally he is less loaded with administrative load, other mentoring of student.

#### B.

Upon completion of 4-5 yrs of teaching experience, he is asked to get involve with research work along with teaching assignments. They are encouraged to pursue Ph.D from reputed university.

#### C.

- On completion of 6-10 yrs. Of teaching / research experience, they are gradually intended in to administrative activities also.
- On the whole faculty are systematically groomed, empower to play a bigger role over the span of their career.

6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.

There is the system to evaluate Faculty members for appraising them and to ensure that information on multiple activities for further appreciation and notification.

The following major details are collected from each faculty through the appraisal form.

- Academic Performance.
- > Attendance & Pass Percentage of both theory and practical courses.
- Seminars/Conferences/Workshops attended.
- > Details of the seminars, Conferences and Workshops attended.
- Publication Details.
- Details of Book published and National/Inter National journals published for the academic year.
- Research and Development activities.
- > Details of number of proposals, projects sent to various sponsoring funding agencies.
- ► Leadership/ Strength & Weakness.
- > Details of individual's Leadership qualities, strengths and weaknesses.
- > Contribution to the Department and College.

All these information are collected from the faculty and submitted to the Head of Department. HoD will evaluate the individual appraisal form and submit it to the Director. After the Director's evaluation, it will be submitted to the Management.

- Students Mentoring.
- Students mentoring system process is also concerned for appraising the faculty.

## 6.3.4 What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?

The Top Management will review the performance appraisal submitted by the faculty members and take decisions based on the HoD and Director's recommendation.

> The Management plays an active role in the performance appraisal of the faculty.

- The Faculty Self Appraisal Form is reviewed by the Director, which is usually recommended by the HoD of the concerned faculty. If any deviation is found in the appraisal, identified faculty will be counseled for improving the performance in academic and other aspects.
- The students" feedbacks are collected once a semester with 5 points rating system such as 5 - Excellent, 4 - Very Good, 3 - Good, 2 - Satisfactory and 1 - Poor.
- The faculty, who secure less than 3 rating point, will be counseled by Director with an advice to the faculty to attend any Faculty Development Programme related to his/her allotted subject(s) and specialization(s). If it recurs in a repeated way, ie. Securing less than 3 points rating by the same faculty, an oral warning / caution note will be given to the faculty by the Director.
- > Based on the report necessary corrective measures are made.
- The management encourages the faculty members to voluntarily involve themselves in the development of their qualification by applying for higher students and professional improvement by attending various training programmes.

## 6.3.5 What are the welfare schemes available for teaching and non teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

Realizing that satisfied employee is an asset for the institution and can make the college a productive place, the management has put several welfare measures in place for the teaching as well as Non-Teaching Staff them besides the salary package.

#### Such provisions are listed below:-

- ► PF.
- ➢ Life Insurance for self.
- Subsided Lunch.
- ➢ Free transportation.
- ➢ Financial support for higher studies.
- Support for up gradation of knowledge through QIP/ conferences/ workshops.
- Maternity leaves for female staff.
- Subsided accommodation within campus.
- Need based interest free festival loan.

- Such schemes are applicable to 100% of employees and people
- > Avail some of them all the time as well as when required/ needed by the individual.

### 6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?

#### The College takes effort to retain eminent faculty members by

- > Providing salary as per AICTE Norms.
- Providing incentive for Book Publication by faculty.
- > Providing Conveyance, EPF to different cadre.
- Deputing faculty in prestigious roles as Dean, Coordinator, Convener and Member of various Committee and Chapters.
- Appreciating the faculty members with medals and awards offered their services more than 10 years for this institution.
- ➢ Giving cash awards for best result producing faculty.
- Encouraging the staff with financial support by contributing registration fee for attending various National and International conferences / workshops.
- Providing On-duty permission to the faculty to do their research works and full support for using the laboratory facilities also for their research works.
- Providing authority to the faculty with responsibility in administration and committee oriented processes.
- > Providing monetary incentives to staff members who completed their Ph.D.
- Giving concession in workload allotment for the faculty who involve in the research and funding projects works to contribute their work more in their research and project-based work for its" successful completion.
- Allowing the faculty members to avail summer and winter vacation.

#### 6.4 Financial Management and Resource Mobilization

## **6.4.1** What is the institutional mechanism to monitor effective and efficient use of available financial resources?

The college has a perfect mechanism to monitor an effective and efficient use of financial resources.

The management of the college has constituted a Budget Committee to monitor the utilization of financial resources. This body comprises Director and Heads of departments as members. The management maintains a detailed discussion with Budget Committee members to analyze every stage of needs and utilization of financial resources. The financial resources are utilized for the following heads like salary, transport, library, administration, department, hostel and maintenance expenses.

Every academic year Director calls for budget proposals from all the departments. The budget proposal is prepared by HoD in consultation with the lab in charges. The budget proposal is prepared based on the academic requirements. The prepared budget is submitted in the budget meeting and all the department budgets will be discussed. Each and every budget is thoroughly analyzed and essentially discussed before the approval by the management. All the activities related to sanction and utilization of financial resources are monitored by Budget Committee. The management takes everything into account for allocating and utilizing the budget.

At the time of delivery of ordered items by the companies, the quality and quantity are checked and verified by the concerned incharges and HoD against the order copy. The concerned department takes the responsibility of maintaining the accounts and documentation. Further, the details of all the materials / articles are entered in stock register and a stock is being maintained. The accounts of the institution are subject to audit by internal and external auditors. Internal audit is conducted periodically and any discrepancy identified is brought to the notice of the Director. Budget is reviewed by the management and Director. Whenever any deviation occurs in the budget, respective HoDs have to address the issue and give justification for the subsequent approval. In the above mechanism, the institution monitors and maintains the available financial resources.

### 6.4.2 What are the institutional mechanisms for internal and external audit? When was the last audit done and what are the major audit objections? Provide the details on compliance.

The college has an effectual mechanism for auditing the accounts. The accounts of the college are audited by chartered accountant regularly as per the Government rules. The institution is having qualified practicing charted accountant **Mr. Kumar Vijay Gupta Faridabad** as an external auditor and a full time qualified internal auditor for auditing the accounts of the college. The internal auditor checks the receipts with fee receipts and payments with vouchers and relevant supporting documents. The internal auditor ensures that all payments are duly

authorized. The external auditor conducts statutory audit at the end of financial year. After the audit, the report is sent to the Management for review. The college is controlling and utilizing its financial resources for effective functioning.

The last audit was done on 6/5/2016 and no objection certificate was obtained from the auditor.

6.4.3 What are the major sources of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus available with Institutions, if any.

- > The major source of resource is Students fees collected in various heads of accounts.
- Further, to augment the resources, every department is encouraged to do consultancy projects for Industries.
- > Any shortfall for capital expenditure is met by term borrowings from commercial banks.
- ➢ For AICTE, UGC and other sponsored projects; eligible amount is reimbursed by the corresponding agencies on production of audited expenditure statements.

## 6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).

The institution organizes workshops and conferences and the expenditure for the conduct of these workshops and conferences is met by the grants received from various funding agencies.

### 6.5 Internal Quality Assurance System (IQAS)

#### 6.5.1 Internal Quality Assurance Cell (IQAC)

# a. Has the institution established an Internal Quality Assurance Cell (IQAC)? .6 If 'yes', what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?

The College has not yet formally established an Internal Quality Assurance Cell and is in the process of formulating the same. . However the college has various mechanisms by which quality is assured in every aspect of functioning of the college.

## **b.** How many decisions of the IQAC have been approved by the management / authorities for implementation and how many of them were actually implemented?

-NA-

c. Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.

-NA-

d. How do students and alumni contribute to the effective functioning of the IQAC?

-NA-

e. How does the IQAC communicate and engage staff from different constituents of the institution?

-NA-

6.5.2 Does the institution have an integrated framework for Quality assurance of the academic and administrative activities? If 'yes', give details on its operationalisation.

Yes

The details are given below:

Table 66 Detail of Quality assurance of the academic	ic and administrative activities
--	----------------------------------

Name of the cell	Constitution of	Objectives	Functions	Outcome	
/ committee	the cell (members)	of the cell	T uneutons	Outcome	
Academic monitoring committee	Deans of a Department, members drawn from engineering departments and one member from Science &Humanities departments.	To maintain course files & monitor Academic activities effectively for enhancing the teaching learning processOnce in a semester audit of course files, Academic activities, preparing and reporting the findings of audit and forward the report to deans for Corrective measures.		Advance planning and preparation by teachers as to teaching methods and course materials. Tracking of students performance in Cycle tests and unit tests	
Program Assessment Committee	ram Dean, HOD, ment Professors/ Senior nittee Faculty members To enhance the quality of teaching –learning process and attainment of Program Educational Objectives (PEO)		Formulation and attainment of PEO and Program Outcomes (PO) through direct and indirect assessments	Improvement in Student performance; enhancement of Infrastructure facilities; improvement in placement; better progression to higher studies and entrepreneurship	
Department advisory Committee	Department advisory CommitteeDirector, dean, HOD, Professors/ Senior Faculty members, alumni, Parents, Students and Industry representativeTo aim at stakeholders satisfaction To promote quality R & D activities		To redefine PEO and POs as when deemed fit To modify the mode of teaching as fitting to the needs of the students. Enhance the quality of students projects and faculty research	Better performance of students in assessment process In depth learning of courses Real time projects with social relevance	

6.5.3 Does the institution provide training to its staff for effective implementation of the Quality assurance procedures? If 'yes', give details enumerating its impact.

Yes, the college is providing training to the faculty for effective implementation of the quality assurance procedures. The newly inducted faculty members are given training ISO and NBA quality procedure being followed in the institution. In this training programme the systematic way of ensuring quality assurance procedure through ISO and NBA are explained in detail by both internal and external experts. The institution quality policy also explained to the member of faculty. The faculty member are maintained in the records of the respective subjects and other administrative activities as per the norms. Internal quality audit are conducted regularly to ensure the effective implementation of quality assurance procedure. The short coming if any, are brought to the notice of the concern faculty to their HoD"s.

# 6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If 'yes', how are the outcomes used to improve the institutional activities?

Yes, the college is undertaking academic audit and other external reviews of the academic provisions to improve the institutional activities.

The academic auditing is carried out by internal member and external member like ISO, NBA audit team, etc.

#### **Internal Academic Audit:**

Internal academic audit is carried out by team of dean's and senior professors. This team reviews the academic calendar, total teaching days, internal assessment test schedule, submission of question paper for internal test, verification of sample answer books, allotment of internal marks based on the marks secured by the students, faculty time table, lesson plan and lecture notes of faculty members, laboratory plan. The internal audit report submitted to the Director based on the observations by the internal audit team, the concerned faculty members is counseled by the Director.

#### **External Audit:**

The ISO / NBA surveillance audit by the external auditors, inspection team from affiliating university and AICTE for periodically review the academic provisions. The outcome of the internal and external audit report helps the institutions to identify the areas of the improvement. The faculty members also deputed for various training programme to improve their teaching and learning capabilities. Training also provided to the faculty members based on the outcome of the review committee.

### 6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?

The institution is affiliated to the RGPV University, Bhopal and approved by AICTE, New Delhi. For maintaining the internal quality, the institution is following the procedures framed by the external authorities such as RGPV University, ISO and National Board of Accreditation. The senior faculty members are trained to know about the quality management systems and

procedures from the external agency. Yearly, the internal quality audits are being conducted to ensure the implementation of internal quality system. Every year, the ISO audits of surveillance and compliance have been conducted and the necessary corrective actions have been carried out. The observations given by National Board of Accreditation are taken into action for improving the internal quality. Besides, feedback from students, faculty, alumni and industry people are collected and the healthy suggestions are considered for improvement of the internal quality.

## 6.5.6 What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

The major thrust of the institutional mechanism is to review the teaching – learning process which is the back bone of any educational institution. The following are the tools that are used for continuous reviewing the teaching – learning process:

- 1. Academic Monitoring Constituted by Senior faculty the committee audits every semester the process of course content delivery the details of which is maintained in a course file by every faculty. This audit ensures that the teacher is well prepared in advance for teaching a course and plans various methods and strategies for effective teaching and evaluation
- 2. **Program Assessment Committee** –Constituted by Dean's and senior professors of the department –This committee is responsible for formulating the Program Educational Objectives and Program Outcomes and attainment of the same. the outcome is better performance of students in the learning process and enhancing infrastructure facilities and in depth understanding of the subjects
- 3. **Department Advisory Committee** –Constituted by the Director, Dean, HoD, Senior Professors, Alumni, parents and Industry representative This committee has the authority to analyze the and redefine PEOs and POs when deemed fit The outcome is better progression of students to employment, higher studies and entrepreneurship

### 6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?

The institution communicates its quality assurance policies to the internal and external stakeholders through college prospectus, calendars, brochures, publicity, alumni meets, HR interaction programmes, e-mails, college website, newsletter, magazine, newspaper, college notice boards and display boards at various places in the college.

#### Any other relevant information regarding Governance Leadership and Management which the college would like to include.

The institution has defined vision and mission statements. The top management, Director, Dean, HoD and faculty members are working together for the achievement of quality policy. For the improvement of leadership qualities of students, various associations and clubs are functioning in the college.

The structured mechanism for quality policies were framed with the support of alumni, external stakeholders, industry people and internal stakeholders. An effective internal and external audit system is maintained, and the system comprises of trained internal quality auditors and various external audit authorities for regular verification of academic and administrative activities. Training programs are arranged regularly for the faculty members for effective implementation of teaching and learning system.

# CRITERIA VII INNOVATIONS AND BEST PRACTICES

### CRITERIA VII: INNOVATIONS AND BEST PRACTICES

### 7.1 Environment Consciousness

#### 7.1.1 Does the Institute conduct a Green Audit of its campus and facilities?

The College has not formally opted for a Green Audit. But taking cognisant of the need for a eco- friendly campus, trees have been planted all over the campus. The vehicle parking area is endowed with fully grown lush trees and a well maintained stretch of lawn with a lining of palm trees and bushes that add the scenic beauty of the college. These not only add to the frontage of the college but also contribute to carbon neutrality of the environment. The reception lobby greets the visitors with soothing freshness of flowery plants and lawn. Eco-friendly initiatives are taken in many ways as possible. The campus is free of plastic materials .Repeated instructions are issued from the management to avoid plastics and blowing horn is also strictly prohibited inside the campus. More Number of trees have been planted along the path ways in the campus. This keeps the campus green, shady and cool. Lot of expenditure is incurred to make the campus eco-friendly.

Opting for Green Audit or Energy Audit is on the near future agenda of the college.



Figure 49 Green Campus

#### 7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?

#### **1.** Energy conservation

Energy conservation means that "Efficient Utilization of Energy" to create awareness among the staff and students by providing the energy saving posters like "Save Energy – Save the Globe", "Switch off Fans & Lights when not in use", "Electricity saved is electricity generated". In all class rooms, staff rooms, labs etc., these quoted posters are pasted. Thus awareness among the students about the conservation of energy resources is created. We use ENERGYSTAR qualified computers, printers, fax machines, scanners and other equipment's which are used for the energy conservation. Regular instruction and monitoring are done for the usage of water by students and staff. Waste water from the college campus is treated and it is reused for plants to reduce the water consumption.

#### **2.** Use of renewable energy

Solar energy is available in abundance but it is not used properly. If at all this energy is used, the energy crisis will not be a primary issue in the developing countries like India. Though we have sufficient technologies in solar technology, our people are not still aware of it. In our college, Girls and boys hostels of the Institute are equipped by solar water heating system of 250 liter and 500 liter capacity respectively.



Figure 50 Solar Water Heater in Campus

#### 3. Water harvesting

Rain water collected around institute premises is fed into a rain water harvesting tank to preserve the underground water. The Institute possesses four tube wells at various locations and they all are water harvested to raise the water table.

#### 4. Check dam construction

No.

#### 5. Efforts for Carbon neutrality

The institute at its own level has taken up certain preventive measures to check the emission of carbon-dioxide. The Institute has made arrangements for parking the vehicles of the students in the Institute Parking. This helps in keeping the campus clean. The dead leaves and the waste papers are not allowed to be put on fire. The leaves are buried in the soil itself and the papers are disposed off. Institute has been constantly encouraging for public transports and institute buses rather than to use personal vehicles.

#### 6. Plantation

A lot of expenditure is incurred to keep the environment green. For this purpose, Institute supports its staff very whole heartedly for plantation related activities. The trees are planted every year.

#### 7. Hazardous waste management

- ➢ Waste separation at sources.
- > Separated solid wastes are dumped outside campus.

#### 8. e-waste management

E-waste like computers, printers and laboratory waste are properly disposed through auctioning approved vendors.

#### 7.2 Innovations

## 7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the college.

#### 1. Staff & Students knowledge Mail's

The knowledge sharing facility is available not only for faculty but also for the students once in a month. Director share the recent techniques to the faculties of the other departments. Sharing knowledge creates original thinking.



Figure 51 Knowledge Sharing Initiative by Director

#### 2. Students' Internship

Learning is a continuous process not only for the students and but also for the faculty members. New technologies are implemented in all the fields now a day. In order to update the new technologies and to overcome the problems during implementation, Students are permitted to go to the various companies frequently. Due to internship students are able to gain more knowledge in that particular field and also it helps the students to understand the subject more practical than theoretical.

#### 3. Human Resource (HR) Connect

HR connect meeting is arranged frequently. It comprises HRs of various companies, Management Personalities, Director, Members of Placement Cell, and Heads of various departments, senior faculty members and students. In the meeting HRs will explain about what they expect from the students after graduation and asked to train the students as a global competitor. According to the suggestions given by the HRs the students are prepared well with verbal communications, Aptitude, Group discussion and Personal interview by the placement cell. HR connects heralds the advancement of job getting.

#### 4. Counseling

Counseling is a process of providing professional assistance and guiding for solving personal and psychological problems. Change is the only thing that never changes. Whenever a person enters into a new environment he or she may suffer due to the change in atmosphere such as new place, new people etc, that may leads sometimes to depression. In order to overcome these depression and even personal problems counseling is given to get relief from their issues.

#### 5. Entrepreneurship Development Cell

The student members are provided with entrepreneurial training through the various guest lecturers delivered by experts and entrepreneurs from industries. Entrepreneurship Awareness Programs and Skill Development programs are also organized to motivate and focus their interest on Entrepreneurship.

Over a period of years, the institute has introduced innovative measures which have created a positive impact on the overall functioning of the college. They are:

- Creation of additional technical facilities in the departments on year on year basis e.g. Robotics Lab, CAD/ CAM Lab in CE/ ME dept., Android Lab in CSE dept., Proposed Apple Lab in IT dept, Microsoft IT Academy etc.
- Conduct of value added courses/ beyond curriculum courses to make students industry ready.
- Encouragement & support to students for appearing and doing well in competitive exams like GATE, GRE, GMAT, CAT etc. for higher studies.

- > Financial rewards for university rank holders and class toppers in the institute.
- Conduct of extra and co-curricular activities at two level (departmental & institute level), leading to high percentage of participation of students.
- > Introduction of annual project contest/ competition at institute level.
- > Availability of library and lab facilities during extended hours
- > Installation of audio- video teaching aids in all classrooms.
- > Encouragement to faculty for doing research.
- Recognition and Financial Rewards for publication of papers in journals with high impact factor.

#### 7.3 Best Practices

7.3.1 Elaborate on any two best practices in the given format at page no. 98, which have contributed to the achievement of the Institutional Objectives and/or contributed to the Quality improvement of the core activities of the college.

#### **Best Practice-1**

#### **Academic Monitoring Committee**

The college Academic Committee meetings are a part of Office of Institutional Effectiveness and Student Success Initiatives. Academic Monitoring Committee (AMC) and Program Assessment Committee (PAC) provides college-wide leadership and coordination for assessment activities which include program review, annual planning and evaluation of instructional programs and a wide variety of student learning outcome assessment activities.

 Table 67 Academic Monitoring Committee - College level committee structure

Convener	Director	
Joint Convener	Senior Professor	
Member	All Heads and Senior faculty members	
Input	Members from Alumni, Employers, Industrial	
	experts, and Professional bodies.	

Table 68 Program Assessment Committee - Department level committee structure

Convener	Dean of the department
Coordinator	Head of Department
Member	Senior faculty members
Input	Members from Alumni, Employers, Industrial

experts, and Professional bodies.

Table 69 Detail of Best Practice-1 in term of Goal, The Context, The Practice, evidence of Success etc

Title of the Practice	Academic Monitoring Committee	
	Indore Institute of Science & Technology College generates	
	proficient and talented engineers from various departments every year. In order to enrich the attributes of the students, the Academic Monitoring Committee (AMC) and Program	
Goal	Assessment Committee (PAC) has been established in IIST, comprising members of different fields lead by the Director. The suggestion given by the PAC, are discussed in the AMC meetings and necessary corrections are initiated. The main objective of the cell is to analyze all the performance details of	
	the students of each and every department and submit it to the	
	Academic Monitoring committee to promote the students level to	
	the next stage of development.	
	This Academic Monitoring Committee and Program Assessment	
	Committee analyzes and guides the students. It directly involves itself in the development, implementation, analysis of assessment activities, number of specific benefits and results	
	The importance of establishing this committee is to correlate the	
The Context	industrial experience to the academic experience. A well	
	designed assessment can encourage active learning, especially	
	when the assessment delivery is innovative and engaging. Peer	
	and self-assessment can foster a number of skills such as	
	reflection, critical thinking and self-awareness – as well as	
	Assessment is an angine for effective learning. This stands as an	
	enormous knowledge pool for those who are in need of it. This	
	committee generally gets feedback from the IIST passed out	
	students about their difficulties in the job and the correlations	
	with the gathered information, the field oriented knowledge and	
	difficulties will be delivered to the students to meet their own	
	demands in their near future. This committee provides	
The Practice	performance through regular interactions seminars and projects	
	It improves the decision making and problem solving skills of	
	the students. Accessing this committee leads to collect details of	
	employment opportunities in public and private sector units and	
	guidance for preparation of competitive examinations. This helps	
	the students to face the interviews and tackle the tedious	
	situations in the working environment.	
	• Improvement of students performance in placements	
Evidence of Success	• A feedback given by the recruited companies is helpful is ensure that the students have improved interpersonal skills	

	such as confidence, maturity and decision making in the job environment and thus utilizing their opportunity in the creative manner.	
	• The students are able to cultivate adaptability and creativity in the dynamic world and gain exposure to the real world problems and issues.	
	• It helps to improve the communication level of the students.	
	• The critical analytical subjects felt by the students are taken into consideration by the senior faculty members in the department.	
	• Conducting surveys like alumni, professional bodies and employer with IIST students, faculty for research and assessment purposes. Seeking data to complete external surveys help us to improve the college and department level of activities.	
Problems Encountered and Resources Required	• The most important resource required is the technical support from various industries, core companies and other fundamental needs and the part of other side internal resources required like e-resources.	
	• Identifying the actual Strength & Weakness of resources, facilities and services.	
	Name of the Director : Dr. Joy Banerjee	
	Name of the Institution : Indore Institute of Science &	
	City · Rau Indore	
<b>Contact Details</b>	Pin code : 453331	
	Work phone: 0731-4010520. 4010555	
	Fax : 0731-4010502	
	Website: Email : www.indoreinstitute.com	



Figure 52 Best Practice 1 Flow chart

#### **Best Practice-2**

## Enhancing Skills of the Students & Faculty by Providing In-House Trainings and Workshops.

Title of the Prostice	Enhancing Skills of the Students & Faculty by Providing In-	
The of the Fractice	House Trainings and Workshops.	
	The Institute annually organizes Workshop, In House Training and Faculty development programs for promoting Students, teachers and staff member's quality through a three pronged strategy that aims at personal, profession and holistic development of teachers & students.	
	Teachers facilitating their role as educators and mentors and responsible for grooming the future citizens with right knowledge, attitude and skills.	
Goal	<ul> <li>Faculty Objectives:</li> <li>To update their knowledge</li> <li>To inculcate professional ethics</li> <li>To promote technical expertise</li> <li>To orient them towards quality research</li> <li>To enhance their effectiveness in content designing and delivery</li> <li>To sensitize them towards social responsibilities</li> </ul>	
	Student Objectives:	

Table 70 Detail of Best Practice-2 in term of Goal, The Context, The Practice, evidence of Success etc

	• To enhance soft skills among students,	
	• To instill technical competence and	
	To inculcate employability skill	
The Context	The institute is working with an aim to making it a center of excellence. Students from different level and background need training to improve their technical as well as employability skills. Considering these requirements, the institute provides all facilities to them to achieve their career goals and to inculcate leadership into them. Education at present is undergoing tremendous change that demands from the faculty a need to update and keep abreast of the latest developments. The institutions are therefore keen to provide professional development to faculty. But the reality is that professional development for teachers is often disconnected from the educational objectives of the programs – even though the support provided may be in response to specific requests received from faculty. Thus a well-designed professional development program needs to be an outcome of a collaborative reflection on the quality of teaching and learning that is aligned with university values, identity and faculty expectations.	
	The Institution offers Spoken English practice classes to all students of first year (UG). Aptitude classes are held for all third year and final year UG students. These classes are being handled by the faculty of English and Communication Skills, PDP trainer to strengthen their communication skill in English. Practice on Online Placement Test is periodically conducted to enhance aptitude, mental ability and reasoning skills of the students to make them capable to acquire employment. The Placement Cell of the institute arranges preplacement training by conducting group discussion and mock-interviews.	
The Practice	Faculty development program is conducted every year. The 2-3 days faculty development program includes workshops, interactive sessions and motivational lectures from eminent persons on topics like Effective teaching processes, Qualities of good teacher, Interpersonal Effectiveness, Art of Living , etc. which acquaint the teachers with updated Teaching –Learning Practices and also the need for cultivating right attitude apart from instilling a research aptitude for promoting personal and professional effectiveness.	
	The college also conducts Guest lectures, National and International conferences and workshops to gather the best of academic and industry perspectives on current topics. Faculties & students are also benefits from regular workshops/guest lecturers / conferences etc.	

	The positive outcomes of these programs are reflected through the various initiatives taken by the faculty and the Director towards a relevant, enriched and holistic teaching -learning process.	
	The evidence of success is also seen in achieving the targets/benchmarks/distinctions mentioned below:	
	• NBA accreditation for ECE & CSE.	
	• Industry relevant curriculum with thrust on employability skills.	
Evidence of Success	• Word of mouth publicity through successful Alumni.	
	• Better placement records.	
	• Enhanced reputation among academicians networked through regular conduct of seminars/guest lectures.	
	• High pass percentage least cases of dropouts.	
	• The College has emerged as a trusted name for discipline & value based /holistic education.	
	• Better performance in national level competitive exams like GATE.	
Problems Encountered and Resources Required	Being a self-financed college the financial constraints in implementation/adoption of high quality Teaching – Learning and Evaluation processes & resources pose a major challenge. The institute management nonetheless has given the faculty enrichment its due priority, releasing the critical significance of Faculty Development Programs, Workshop and Training in achieving its vision. However, in spite of constraints, departments have carried out FDPs, Workshop & training program on regular basis. Apart from financial challenges, availability of adequate time, human resources and infrastructural facilities are the other limitations	
Contact Details	Name of the Director : Dr. Joy Banerjee Name of the Institution : Indore Institute of Science & Technology City : Rau, Indore Pin code : 453331 Work phone: 0731-4010520. 4010555 Fax : 0731-4010502 Website: Email : www.indoreinstitute.com	

# PART C EVALUATION REPORTS (ER1–ER7) OF THE DEPARTMENTS

### ER 1 COMPUTER SCIENCE & ENGINEERING

- 1. Name of the department: Computer Science & Engineering
- 2. Year of Establishment: 2003
- Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.):
   UG Bachelor of Engineering, Computer Science & Engineering PG- Master of Engineering, Computer science and Engineering
- 4. Names of Interdisciplinary courses and the departments/units involved:

S. No.	Semester	Subject	Department Involved
1	Ι	Engineering Chemistry	Applied Science
2	Ι	Engineering Mechanics	Civil & Mechanical
3	Ι	Engineering graphics	Mechanical Engineering
4	II	Engineering Physics	Applied Science
5	II	Communication Skill	Applied Science
6	II	Engineering Mathematics I	Applied Science
7	III	Engineering Mathematics II	Applied Science
8	IV	Engineering Mathematics III	Applied Science

- 5. Annual/ semester/choice based credit system (programme wise): 2003 to 2010 -Non Grading System; 2010 to 2015 Grading System
  2015 onwards-CBCS (Choice Based Credit System)
- 6. Participation of the department in the courses offered by other departments:

S. No.	Semester	Subject	Department Involved
1	III	Computer system organization	ECE
2	III	JAVA	Civil, Mechanical and Chemical Engg.
3	V	RDMS	Mechanical Engineering
4	IV	.Net	Civil and Mech. Engg.
5	IV	MS Office	Chemical .Engg.

- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL

### **9.** Number of teaching posts:

Designation	Numbers
Professor	01
Associate Professor	02
Assistant Professor	22

## 10. Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

Name	Qualification	Designation	Specialization	Experi ence	No. of P.hd Guided Student
Dr. Rajeev Vishwakarma	Phd	Professor & Dean	Software Engineering, OOAD, Aspect Oriented Software Development, CMMI, Software Process	29 Years	3
Mr. Anil Khandekar	M.E. / M. Tech.	HOD, Associate Professor	Data Base management system, Software engineering	12 Years	NIL
Mr. K. Anil Kumar	M. Tech.,(Ph. D)	Associate Professor	Software engineering and Wireless Sensor Networks	12 Years	0
Mr. Titu singh Arora	M.E. / M. Tech.	Assistant Professor	Software Engineering	12 Years	NIL
Mr. Virendra Singh	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	5 Year 8 Months	NIL
Ms. Margi Patel	M.E	Assistant Professor	Software Engineering	10 Years	NIL
Mr. Nitin Rathore	M.E	Assistant Professor	Information Security	10 Years	NIL
Mr. Nitesh Rastogi	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	9 Year 11 Months	NIL
Mr. Vishal Chandel	M.E. / M. Tech.	Assistant Professor	Information Security	7 Year 4 Month	NIL
Mr. Ranjeet Kumar osari	M.E. / M. Tech.	Assistant Professor	Information Security	6 Year	NIL
Ms. Neha Raja Panwar	M.E.	Assistant Professor	Computer Science & Engineering	4 Year 10 Months	NIL
Mr. Chetan K. Sule	M.E	Assistant Professor	Assistant Professor Wireless Networking 4		NIL
Ms. Chanchal Bansal	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	7 Years 11 Months	NIL
Ms. Poorva Shukla	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	5 year 6months	NIL
Ms. Akanksha Varghese	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	4 Years 3 Months	NIL
Mr. Deepak Vishwakarma	M.E	Assistant Professor	Computer Science & Engineering	4 Years 3Months	NIL
Mr. Rakesh Jain	B.E.	Assistant Professor	Mobile adhoc network	5 year 3 month	NIL
Mr. Pradeep Baniya	M.E	Assistant Professor	Computer Science & Engineering	8 Year 8 Month	NIL
Mr. Siddharth Jain	M.Tech	Assistant Professor	Software Engineering	6 Year 10 Month	NIL
Ms. Geetika Batra	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	3 Years 10 Months	NIL

Ms. Neha Jain	M.E.	Assistant Professor	Computer Science & Engineering	5 Year 8 Month	NIL
Ms. Swapnil Jain	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	4year 5 Month	NIL
Mr. Bhupendra Ramani	M.E. / M. Tech.	Assistant Professor	Computer Science & Engineering	7 year 5 month	NIL
Ms. Lalitha Bargadiya	M.E. / M. Tech.	Assistant Professor	computer science & engineering	7 years	NIL
Ms. Nidhi Nigam	M.E. / M. Tech.	Assistant Professor	Software Engineering	6 Years 8 months	NIL

- **11.** List of senior faculty visiting: NIL
- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- **13.** Student-Teacher Ratio: 20:1
- **14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 07 & Administrative staff: 02
- 15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

Name	Qualification	Designation	Year of Passing UG	Year of Passing PG
Dr. Rajeev Vishwakarma	Phd	Professor & Dean	1987	2001
Mr. Anil Khandekar	M.E. / M. Tech.	HOD, Associate Professor	2003	2005
Mr. K. Anil Kumar	M. Tech.,(Ph. D)	Associate Professor	2003	2009
Mr. Titu singh Arora	M.E. / M. Tech.	Assistant Professor	2005	2012
Mr. Virendra Singh	M.E. / M. Tech.	Assistant Professor	2008	2010
Ms. Margi Patel	M.E	Assistant Professor	2006	2012
Mr. Nitin Rathore	M.E	Assistant Professor	2006	2013
Mr. Nitesh Rastogi	M.E. / M. Tech.	Assistant Professor	2006	2008
Mr. Vishal Chandel	M.E. / M. Tech.	Assistant Professor	2008	2015
Mr. Ranjeet Kumar osari	M.E. / M. Tech.	Assistant Professor	2007	2010
Ms. Neha Raja Panwar	M.E.	Assistant Professor	2011	2015
Mr. Chetan K. Sule	M.E	Assistant Professor	2011	2016
Ms. Chanchal Bansal	M.E. / M. Tech.	Assistant Professor	2008	2014
Ms. Poorva Shukla	M.E. / M. Tech.	Assistant Professor	2009	2013
Ms. Akanksha Varghese	M.E. / M. Tech.	Assistant Professor	2011	2014
Mr. Deepak Vishwakarma	M.E	Assistant Professor	2012	2016
Mr. Rakesh Jain	B.E.	Assistant Professor	2010	2016
Mr. Pradeep Baniya	M.E	Assistant Professor	2007	2013
Mr. Siddharth Jain	M.Tech	Assistant Professor	2009	2014

Ms. Geetika Batra	M.E. / M. Tech.	Assistant Professor	2010	2014
Ms. Neha Jain	M.E.	Assistant Professor	2010	2016
Ms. Swapnil Jain	M.E. / M. Tech.	Assistant Professor	2011	2016
Mr. Bhupendra Ramani	M.E. / M. Tech.	Assistant Professor	2008	2016
Ms. Lalitha Bargadiya	M.E. / M. Tech.	Assistant Professor	2006	2011
Ms. Nidhi Nigam	M.E. / M. Tech.	Assistant Professor	2009	2014

**16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received :

Name of the Faculty	Year	Name of the company	Research Project Title
Dr. Rajeev Vishwakarma	2014-2017	IBM, USA	IBM Rational Unified Process and CMMI Compliance
		Smart draw USA	Developing Business Modelling Notations using Smart draw
		Visual Paradigm Hongkong	Enhancing Modelling Capabilities of System Modelling Language

- **17.** Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL
- 18. Research Centre /facility recognized by the University : NIL
- **19.** Publications:
  - a. Publication per faculty
    - Number of papers published in peer reviewed journals (national / international) by faculty and students
  - b. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
    - Monographs
    - Chapter in Books
    - Books Edited
    - Books with ISBN/ISSN numbers with details of publishers
    - Citation Index
    - SNIP
    - SJR
    - Impact factor
    - h-index

		No. Of Journal Publication up to AY				
Name of the Faculty	Designation	2015-16				
		2012-13	2013-14	2014-15	2015-16	
DR. D.S.RAO	Professor	0	4	0	0	
DR. RAJEEV VISHWKARMA	Professor	0	0	0	1	
K ANIL KUMAR	Associate Prof.	0	1	1	11	
MR.ANIL KHANDEKAR	Associate Prof.	5	4	1	4	
T. S. ARORA	Asst. Prof	0	2	0	1	
MARGI PATEL	Asst. Prof	4	1	1	4	
NITIN RATHORE	Asst. Prof	2	1	2	1	
NITESH RASTOGI	Asst. Prof	0	0	2	1	
RANJEET OSARI	Asst. Prof	0	0	1	0	
CHANCHAL BANSAL	Asst. Prof	0	0	2	0	
POORVA SHUKLA	Asst. Prof	0	0	0	1	
AKANKSHA VARGHESE	Asst. Prof	0	0	0	1	
NEHA RAJA PAWAR	Asst. Prof	1	3	0	1	
VISHAL CHANDEL	Asst. Prof	0	1	0	0	
CHETAN KU SULE	Asst. Prof	0	1	0	0	
KRUPI PATEL	Asst. Prof	0	0	2	0	
RAJEEV RAMAN	Asst. Prof	0	0	1	0	
RAKESH JAIN	Asst. Prof	1	0	1	0	
DEEPAK VISHWAKARMA	Asst. Prof	0	0	1	0	
LALITA BARGADIYA	Asst. Prof	2	4	0	0	

NAME	NAME OF NATIONAL/INTERNATIONAL	TITLE OF PUBLICATION
	JOURNAL/CONFERENCE	
	INTERNATIONAL JOURNAL OF	IMPROVING REAL TIME PERFORMANCE FOR
	MATHEMATICAL ARCHIVE (IJMA)	HDTV APPLICATIONS
	INTERNATIONAL JOURNAL OF	ANALYSIS OF IMAGE SEGMENTATION
	MATHEMATICAL ARCHIVE-4(9), 2013, 1-8	THROUGH EDGE DETECTORS
DR.D.S.RAU	INTERNATIONAL JOURNAL OF	MORPHOLOGICAL ALGORITHMS FOR IMAGE
	MATHEMATICAL ARCHIVE (IJMA)	ENHANCEMENT
	INTERNATIONAL JOURNAL OF	SIX SIGMA IMPLEMENTATION IN SOFTWARE
	MATHEMATICAL ARCHIVE (IJMA)	COMPANIES USING DTS
DR.RAJEEV	INTERNATIONAL JOURNAL OF	A REVIEW PAPER ON ENERGY CONSUMPTION
VISHWAKA	ENGINEERING SCIENCES & RESEARCH	AND RELIABILITY OF WSN USING GENETIC
RMA	TECHNOLOGY IJESRT	AND PSO ALGORITHM FOR MOBILE SINK
	INTERNATIONAL JOURNAL OF	COMPARATIVE ANALYSIS OF IMAGE
	ELECTRONICS COMMUNICATION AND	SEGMENTATION ALCODITUMS
ANIT	COMPUTER ENGINEERING IJECCE	SEGMENTATION ALGORITHMS
ANIL		REVIEW ON E-WASTE CRISIS AND E-WASTE
R R	NATIONAL CONFERENCE RSTES-2013	MANAGEMENT FOR BETTERMENT OF SOCIO-
		ENVIRONMENTAL HABITAT
	NATIONAL CONFERENCE PSTES 2013	COST ESTIMATION METHODS FOR SOFTWARE
	MATIONAL CONTERENCE REFES-2015	DEVELOPMENT

	NATIONAL JOURNAL PERPIEX JOURNAL	REVIEW ON E-WASTE CRISIS AND E-WASTE MANAGEMENT FOR BETTERMENT OF SOCIO- ENVIRONMENTAL HABITAT
	INTERNATIONAL CONFERENCE ADET- 2013	GAIT RECOGNITION THROUGH TEMPORAL CONSISTENCE
	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	MORPHOLOGICAL ALGORITHMS FOR IMAGE ENHANCEMENT
	INTERNATIONAL JOURNAL OF EMERGING TECHNOLOGY AND ADVANCED ENGINEERING	THE DETECTION AND VISUALIZATION OF BRAIN TUMORS ON T2-WEIGHTED MRI
	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	SIX SIGMA IMPLEMENTATION IN SOFTWARE COMPANIES USING DTS
	INTERNATIONAL JOURNAL OF EMERGING TECHNOLOGY AND ADVANCED ENGINEERING	IMAGES USING MULTIPARAMETER FEATURE BLOCKS
	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET
	INTERNATIONAL JOURNAL OF COMPUTER APPLICATION	ANN CLASSIFIER FOR HUMAN IDENTIFICATION USING PCA FEATURE AND GAIT ENERGY IMAGE
	INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY IJESRT	A SURVEY PAPER ON HUMAN GAIT RECOGNITION USING PCA & NEURAL NETWORK
	INTERNATIONAL JOURNAL OF TECHNOLOGY RESEARCH AND APPLICATIONS	A SURVEY ON VARIOUS TECHNIQUES TO SECURE IMAGES USING VARIOUS METHODS LIKE STEGNOGRAPHY WATERMARKING AND CRYPTOGRAPHY
	INTERNATIONAL JOURNAL OF TECHNICAL RESEARCH AND APPLICATIONS	VISUALIZATION OF 3D VIEW OF DETECTED BRAIN TUMOR AND CALCULATION OF ITS VOLUME
	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	SIX SIGMA IMPLEMENTATION IN SOFTWARE COMPANIES USING DTS
T. S. ARORA	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	IMPROVING REAL TIME PERFORMANCE FOR HDTV APPLICATIONS
	INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY IJESRT	SURVEY PAPER ON KNUCKLE BASED RECOGNITION USING GABOR TRANSFORM & NEURAL NETWORK
	NATIONAL CONFERENCE ON "RECENT TRENDS IN SCIENCE AND TECHNOLOGY" AT JNTUH, COLLEGE OF ENGINEERING, NACHUPALLY, KARIMNAGAR.	INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR NETWO RK FOR HIGH QUALITY DATA TRANSMISSION
K ANIL KUMAR	INTERNATIONAL JOURNAL ON APPLIED ENGINEERING RESEARCH	"INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR NETWORK FOR HIGH QUALITY DATA TRANSMISSION",
	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH AND APPLICATIONS (IJERA).	"INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR NETWORK FOR HIGH QUALITY DATA TRANSMISSION"
	INTERNATIONAL CONGRESS ON INFORMATION AND COMMUNICATION TECHNOLOGY, (ICICT- 2015)	"CONGESTION CONTROL IN HETEROGENEOUS WIRELESS SENSOR NETWORKS FOR HIGH QUALITY DATA TRANSMISSION"

	ACCEPTED TO PUBLISH	CONGESTION CONTROL IN HETEROGENEOUS
	SPRINGERADVANCES IN INTELLIGENT	WIRELESS SENSOR NETWORKS FOR HIGH
	SYSTEMS AND COMPUTING (AISC).	<b>OUALITY DATA TRANSMISSION</b>
	INTERNATIONAL JOURNAL OF RESEARCH	
	IN COMPUTER APPLICATIONS AND	"A SURVEY PAPER ON SECURITY MECHANISM
	ROBOTICS	OF WIRELESS SENSOR NETWORK"
	INTERNATIONAL IOURNAL OF RESEARCH	
	IN COMPLITER APPLICATIONS AND	"A NEW MAC PROTOCOL IN WIRELESS SENSOR
	ROBOTICS	NETWORKS FOR ENERGY PRESERVING"
	INTERNATIONAL RESEARCH JOURNAL OF	A SURVET PAPER ON SECURITT PROTOCOLS
	ENGINEERING AND TECHNOLOGT (IRJET)	OF WIKELESS SENSOR NET WORKS
	INTERNATIONAL CONFERENCE ON	INTERFERENCE MINIMIZATION PROTOCOL IN
	INNOVATIONS IN COMPUTER SCIENCE	HETEROGENEOUS WIRELESS SENSOR
	AND INFORMATION TECHNOLOGY	NETWORK FOR HIGH QUALITY DATA
	(ICICSIT-2015)	TRANSMISSION
	INTERNATIONAL CONFERENCE ON ICT	INTERFERENCE MINIMIZATION PROTOCOL IN
	FOR INTELLIGENT SYSTEMS (ICTIS –	HETEROGENEOUS WIRELESS SENSOR
	2015), AHMEDABAD, GUJARAT, INDIA	NETWORKS FOR MILITARY APPLICATIONS
	ACCEPTED TO PUBLISH BY SPRINGER,	"INTERFERENCE MINIMIZATION PROTOCOL IN
	SMART INNOVATION, SYSTEMS AND	HETEROGENEOUS WIRELESS SENSOR
	TECHNOLOGIES (SIST- VERLAG	NETWORKS FOR MILITARY APPLICATIONS"
	GERMANY)[SCOPUS INDEXED]	
		MULTIPATH INTERFERENCE MINIMIZATION IN
	ICCCE 2016	HETEROGENEOUS WIRELESS SENSOR
		NETWORKS FOR RELIABLE DATA TRANSFER
	NATIONAL CONFERENCE ON "COMPUTER	
	APPLICATIONS IN ENGINEERING:	
	EMERGING TRENDS & TECHNOLOGIES,	PROTOCOL SURVEY IN WIRELESS NETWROKS
	ORGANIZED BY INSTITUTE OF	
	ENGINEERS"	
	INTERNATIONAL CONFERENCE ON	
	ADVANCES& DEVELOPMENT IN	GAIT RECOGNITION THROUGH TEMPORAL
	ENGINEERING& TECHNOLOGY (ICADET-	CONSISTENCE
	2013)	
	JOURNAL OF INFORMATION,	
	KNOWLEDGE AND RESEARCH IN	OVERVIEW AND APPLICATIONS OF MOBILE
	COMPUTER ENGINEERING,	
		MOBILE AD HOC NETWORKING (MANET)
	INTERNATIONAL JOURNAL OF SCIENCE	ROUTING PROTOCOL EVALUATION
	AND RESEARCH (IJSR), INDIA ONLINE	CONSIDERATIONS
		CONSIDERATIONS
	"ICRD-ETS - 2013" HELD AT G.K.BHARAD	OVERVIEW AND APPLICATIONS OF MOBILE
	INSTITUTE OF ENGINEERING, RAJKOT,	ADHOC NETWORK
MADCI	INDIA.	
MAKUI DATEI	NATIONAL CONFERENCE ON "RECENT	
PATEL	ADVANCES IN MECHTRONICS,	REAL WORLD APPLICATIONS OF SWARM
	COMPUTING TECHNOLOGY &	INTELLIGENCE
	MANAGEMENT" (RAMCTM-2013)	
	ALL INDIA SEMINAR ON "COMPUTER	
	APPLICATIONS IN ENGINEERING -	SWADM INTELLIGENCE
	EMERGING TRENDS AND	5 WARWIN TELLIOENCE
	TECHNOLOGIES"(AICAEET)	
	NATIONAL SEMINAR ON "INFORMATION	PERFORMANCE EVALUATION OF
	TECHNOLOGY APPLICATIONS	PROACTIVE, REACTIVE & HYBRID PROTOCOLS
	STRATEGIES.ISSUES & CHALLENGES	IN ACMANET

	INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY(IJSRSET), IMPACT FACTOR 2.9, ONLINE ISSN : 2394-4099, VOLUME 1 ISSUE 5	APPLICATION FOR SECURING CREDENTIALS
	INTERNATIONAL JOURNAL OF TECHNOLOGY RESEARCH AND MANAGEMENT, ISSN(ONLINE) : 2348-9006, VOLUME 2 ISSUE 12, DECEMBER 2015	A SURVEY ON TECHNIQUES TO ENHANCE PERFORMANCE OF TCP DATA TYPE AND ITS VARIANTS FOR WIRELESS ADHOC NETWORK
	IARJSET, ISSN (ONLINE) 2393-8021, VOLUME 2, ISSUE 12, DECEMBER 2015	AN IMPLEMENTATION OF MODIFIED AODV PROTOCOL IN MANET FOR MITIGATION OF BLACKHOLE ATTACK WITH VARYING NODE DENSITIES,
	INTERNATIONAL JOURNAL OF EMERGING TRENDS & TECHNOLOGY IN COMPUTER SCIENCE (IJETTCS)	CERTAINTY BASED PRIVACY SERVICE MECHANISM ON KEY POLICY BEHAVIORAL BASED ENCRYPTION
	NATIONAL CONFERENCE ON RECENT ADVANCES IN COMPUTING TECHNOLOGY AT MALHOTRA GROUP OF INSTITUTION	TRUST ESTABLISHMENT IN AD-HOC NETWORK
	NATIONAL CONFERENCE ON "RECENT ADVANCES IN MECHTRONICS, COMPUTING TECHNOLOGY & MANAGEMENT"	SECURING AD-HOC NETWORK USING TRUST COMPUTING
NITIN	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE-4(9), 2013, 1-8	ANALYSIS OF IMAGE SEGMENTATION THROUGH EDGE DETECTORS
RATHORE	INTERNATIONAL JOURNAL OF SCIENTIFIC AND RESEARCH PUBLICATIONS (IJSRP), VOLUME 4, ISSUE 8	REVIEW ON BASIC CLUSTERING TECHNIQUES FOR HETEROGENEOUS WIRELESS SENSOR NETWORK
	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET
	IARJSET, ISSN (ONLINE) 2393-8021, VOLUME 2, ISSUE 12, DECEMBER 2015	AN IMPLEMENTATION OF MODIFIED AODV PROTOCOL IN MANET FOR MITIGATION OF BLACKHOLE ATTACK WITH VARYING NODE DENSITIES,
	INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN ELECTRICAL, ELECTRONICS AND INSTRUMENTATION ENGINEERING	PERFORMANCE EVALUATION OF CMMBCR METHOD TO IMPROVE BATTERY POWER AWARENESS IN AD HOC NETWORK
NITESH RASTOGI	INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN ELECTRICAL, ELECTRONICS AND INSTRUMENTATION ENGINEERING	PERFORMANCE EVALUATION OF UHCF USING TTL PROBING FOR PACKET SPOOFING DETECTION IN MANET
	INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY (IRJET)	A SURVEY ON IMAGE RETRIEVAL TECHNIQUES WITH FEATURE EXTRACTION
RANJEET OSARI	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET

CHANCHAL	NET-ITM-III	STENOGRAPHY :AN OVERVIEW
BANSAL	INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN EDUCATION & TECHNOLOGY (IJARET)	HANDWRITTEN NUMERAL RECOGNITION
POORVA SHUKLA	INTERNATIONAL YOUNG SCIENTIST CONGRESS	ENHANCED AODV THRESHOLD APPREHENSION AND LINK BREAKAGE MECHANISM FOR MANET
AKANKSHA VARGHESE	INTERNATIONAL JOURNAL OF ADVANCE RESEARCH IN COMPUTER SCIENCE AND MANAGEMENT STUDIES,VOLUME 4, ISSUE 2	IMAGE RETRIEVAL USING VECTOR OF LOCALLY AGGREGATED DESCRIPTORS
	INTERNATIONAL JOURNAL OF ADVANCED ENGINEERING SCIENCE & TECHNOLOGY (IJAEST)	SEARCH ENGINE OPTIMIZATION
	ALL INDIA SEMINAR ON "COMPUTER APPLICATIONS IN ENGINEERING: EMERGING TRENDS AND TECHNOLOGIES"	WEB SPIDER STRATEGIES FOR WEB PAGES
NEHA RAJA PAWAR	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	MORPHOLOGICAL ALGORITHMS FOR IMAGE ENHANCEMENT
	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	SENSING, FILTER AND PROCESSING (SFP) MODEL FOR ROBUST COOPERATIVE POSITION IDENTIFICATION IN MOBILE AD-HOC
	IEEE INTERNATIONAL CONFERENCE	FORECAST TECHNIQUE FOR IDENTIFYINGGEOGRAPHICAL LOCATION OF NODES IN MANETS
VISHAL CHANDEL	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	IMPROVING REAL TIME PERFORMANCE FOR HDTV APPLICATIONS
CHETAN KU SULE	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	IMPROVING REAL TIME PERFORMANCE FOR HDTV APPLICATIONS
KRUPI	ICIC	BINARY IMAGE STEGANOGRAPHY IN WAVELET DOMAIN
PATEL	RESEARCH ISSUES IN SOFT COMPUTING	IMAGE STEGANOGRAPHY IN TRANSFORM DOMAIN
RAJEEV RAMAN	INTERNATIONAL JOURNAL OF ENGINEERING TRENDS AND TECHNOLOGY IJETT	A SURVEY ON" ENERGY EFFICIENT AND SECURE INFRASTRUCTURE FOR MANET JAMMING ATTACK"
RAKESH	PARIPEX - INDIAN JOURNAL OF RESEARCH VOLUME: 2   ISSUE: 3   MARCH 2013	"A NEW ENERGY EFFICIENT RBNO MECHANISM FOR ON DEMAND ROUTING PROTOCOL IN MANET"
JAIN	NATIONAL CONFERENCE ON MODERN ADVANCES IN PHYSICS FOR INTERDISCIPLINARY DEVELOPMENTS	PERFORMANCE EVALUATION OF REGION BASED NODE ORGANIZATION (RBNO) LOCATION UPDATE SCHEME FOR MANET"

DEEPAK VISHWAKA RMA	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET
LALITA BARGADIY A	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY	A NEW IMPROVED APRIORI ALGORITHM FOR ASSOCIATION RULES MINING
	INTERNATIONAL CONFERENCE ON COMPUTERS & COMMUNICATION ICCC- 2012	EVOLUTION OF CONVENTIONAL GENETIC AND HYBRID GENETIC ALGORITHM FOR OPTIMIZATION OF TRAVELING SALESMAN PROBLEM
	INTERNATIONAL JOURNAL OF SOFTWARE & HARDWARE RESEARCH IN ENGINEERING, IJSHRE,	EVALUATION OF COMMUNICATION OVERHEAD AND ENERGY CONSUMPTION IN WIRELESS SENSOR NETWORK USING DIFFERENT CLUSTERING TECHNIQUES
	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY	AN ADVANCE ALGORITHM FOR ASSOCIATION RULES MINING: COMPARATIVE STUDY
	NATIONAL CONFERENCE ON COMPUTER SCIENCE AND INTELLIGENT SYSTEM, NCCSIS'13	PERFORMANCE ANALYSIS OF ROUTING PROTOCOL BASED ON FUZZY CLUSTERING TECHNIQUES FOR WIRELESS SENSOR NETWORK
	NATIONAL CONFERENCE ON "EMERGING TRENDS & APPLICATION IN MACHINE LEARNING (ETAML-13)	ANALYSIS OF COMMUNICATION OVERHEAD IN WIRELESS SENSOR NETWORK USING DIFFERENT CLUSTERING TECHNIQUES

20. Area of consultancy income: NIL

**21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

NIL

- 22. Student Projects:
  - Percentage of students who have done in-house projects including inter departmental / program:

BE Final year student have to do the major project in last two semesters and compulsory submit the project report to the department and university as per RGPV university guidelines.

BE III year student have to do the minor project in sixth semester and compulsory submit the project report to the department and university as per RGPV university guidelines.

• Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies 0%

#### 23. Awards / Recognitions received by faculty and students

### Awards received by faculty:

S.No.	Name of faculty	Given By	Name of the award	Year
1	Mr. Anil Khandekar	Srijan RGPV	Excellent Faculty	10/04/2016
2	Mr. Nitesh Rastogi	Srijan RGPV	Excellent Faculty	10/04/2016
3.	Ms. Swapnil Jain	Srijan RGPV	Excellent Faculty	10/04/2016

Award Received by students:

S.No	Name of Student	Award For		
15.	AKSHAY BAJAJ	BEING AWARDED BY A CERTIFICATE OF EXCELLENCE, A PAY-CHEQUE OF RS 10,000/- AND A PRE-PLACEMENT OFFER FROM THE ONE OF THE PIONEER IN THE INDUSTRY OF ROBOTICS, A-SET TRAINING AND RESEARCH INSTITUTE.		
16.	SEEMANT DESHPANDE	WON BRONZE MEDAL FOR POINT LIFTING, SENIOR CATEGORY, SILVER MEDAL IN STATE KICK BOXING CHAMPIONSHIP, AND RECENTLY WON BRONZE MEDAL AT NATIONAL LEVEL IN KICK BOXING		
17.	VAGISH JAISWAL	ALL INDIA CODE-VITA TOPPERS		
18.	PRATIK BHAGWAT	ALL INDIA CODE-VITA TOPPERS		
19.	SATWIK POLISETTY	WON 20,000 RS BICYCLE AWARD FOR SUCCESSFULLY FINISHING THE RIDE IN INDORE CYCLOTHON 2015.		
20.	SATWIK POLISETTY	MIT KUMBHATHON (60,000 CASH REWARD IN TEAM)		
21.	MADHURI JAIN, ARNAB DAS AND KSHITIJ SHARMA	2ND PRIZE IN ANDROID COMPETITION HELD AT IIT INDORE, FEB 2013.		
22.	MUDASSIR RAHMAN , AJIT SINGH NAROLIYA & AJENDRA MISHRA	WERE IN BEST TOP 10 TEAM OUT OF 300 TEAMS ALL OVER THE INDIA IN RGPV CODE COMPETITION (CODE FORCE) HELD AT BHOPAL, JAN 2012.		
23.	SHAKTI PRATEEK(CSE)	1 <sup>ST</sup> PRIZE FOR THE MOTION IN DEBATE AT IIST		
24.	YASMIN KHAN(CSE)	1 <sup>ST</sup> PRIZE AGAINST THE MOTION IN DEBATE AT IIST		
25.	ASHISH PATIDAR(CSE)	2 <sup>ND</sup> PRIZE FOR THE MOTION IN DEBATE AT IIST		
26.	SHOBHANA JHA(CSE)	CONSOLATION PRIZE AGAINST THE MOTION IN DEBATE AT IIST		
27.	ADA KHAN(CSE)	CONSOLATION PRIZE AGAINST THE MOTION IN DEBATE AT IIST		
28.	MAYUR RAJWANI(CSE)	CONSOLATION PRIZE FOR THE MOTION IN DEBATE AT IIST		

24. List of eminent academicians and scientists / visitors to the department:

S. No	Name of Expert Person	Designation and Company Details	Duration
1	Mr.Faisal	Mozilla -Community Head- Bhopal	20 March 2015
2	Mr.Pankaj Jain	Infosys	17 April 2015
3	Mr. Varun Kapoor	PRTS - IG -Police Dept. MP	22 April 2015
4	Mr. V. Sudarshan	Head ( Delivery Dept) Ideavate	22 May 2015
5	Mr Abhishel Kapoor	TCS	6 June 2015

6	Mr. Gaurav Gupta,	Sr. Project Manager, Intel, Bangalore	15 June 2015
7	Mr.Anil Pandey Mr.K Pradeep	MD, Prodyovidhi	13 July 2015
8	Mr.Gourav	TCS Orientation	20 Aug 2015
9	Mr.Shafique Patni	Mozilla Reps	6 Sept 2014
10	Mr. Jithu and Ms. Bindu	Flexus Infotech	Feb-27-28-2013
11	Mr. Jaffar	Appin Technology	April 2013
12	Mr. V. Sudarshan.	Head (Delivery Deptt) Ideavate	August 2013
13	Mr. James Malasmani	TCS	27-08-2013
14	Mr.Akram Khan	K.A.S.A	7-10-2013
15	Team Of Universal Informatics, Indore	Universal Informatics, Indore	18-10-2013 – 19-10-2013
16	Dr. Ashesh Tiwari	Institute of Engineering & Technology and Honorary Secretary IEI, ILC.	Nov 2013
17	Dr. P.K. Chande	Ex Group Director, Truba Group, Ex Director MNIT.	Nov 2013
18	Dr. K.A. Subramanyam	Professor, I. I. T. Delhi	Nov 2013
19	Dr. M.P.S. Chawla,	SGSITS, Indore	Nov 2013
20	Dr. Santhosh sahu	Professor, I.I.T. Indore	Nov 2013

25. Seminars/ Conferences/Workshops organized & the source of fundinga) National

C M-	Professional societies/	Name of Expert	Designation and	Date / month /
5.INO	Engineering Events	Person	Company Details	Year
1.	CSI Student Chapter	Dr. DK.Mishra	Professor, SAIMS, Indore	06 Nov 2012
2	Workshop on ANDROID	Mr. Jitu and Ms.	Technical Team, Flexus	27-28 Feb
2.	Workshop on ANDROID	Bindu	Infotech	-2013
3.	Ethical Hacking Seminar	Mr. Jaffar	Appin Technology	April 2013
4.	Two Days Technical Workshop for TCS	TCS Team	Team Of Universal Informatics, Indore	18-19 Oct, 2013
5.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	Dr. Ashesh Tiwari	Institute of Engineering & Technology And Honorary Secretary IEI, ILC.	Nov 2013
6.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	Dr. K.A. Subramanyam	Professor, IIT, Delhi	Nov 2013
7.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	Dr. P.K. Chande	Ex Group Director Truba Group, Ex Director MNIT.	Nov 2013
8.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	Dr. M.P.S. Chawla,	Professor, SGSITS, Indore	Nov 2013
9.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	Dr. Santhosh sahu	Professor, I.I.T. Indore	Nov 2013
10.	Developers Boot Camp (Mozilla)	Mr.Shafique Patni	Mozilla Reps	6 Sept 2014
#### **26.** Student profile program/course wise:

Name of the			Enrolled		Doce	
Course/programme (refer question no. 4)	Applications received	Selected	*M	*F	percentage	
BE(CSE) 2012-2016	By State Counselling	120	86	34	NA	
BE(CSE) 2013-2017	By State Counselling	169	89	80	NA	
BE(CSE) 2014-2018	By State Counselling	135	90	45	NA	
BE(CSE) 2015-2019	By State Counselling	223	148	75	NA	

**27.** Diversity of students

Name of the Course	% of students from the same state	% of students from other state	% of students from abroad
BE(CSE) 2012-2016	95 %	5%	0
BE(CSE) 2013-2017	92.97 %	07%	0
BE(CSE) 2014-2018	93.33 %	06%	0
BE(CSE) 2015-2019	97.96 %	02%	0

**28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Year	Number of Students	Name of Exam
2012-13	3+3	GATE+GRE
2013-14	2+3	GATE+GRE
2014-15	1+1	GATE+GRE
2015-16	1	GATE

**29.** Student Progression

Student prograssion	Against % enrolled					
Student progression	2012-2016	2011-2015	2010-2014	2009-2013		
UG to PG	NA	4	22	9		
PG to M.Phil.	-	-	-	-		
PG to Ph.D.	-	-	-	-		
Ph.D. to Post-Doctoral	-	-	-	-		
Employed						
Campus selection	69	59	27+31	33+16		
• Other than campus recruitment						
Entrepreneurship/Self-employment	NA	NA	NA	NA		

#### 30. Details of Infrastructural facilities

#### ➤ Library

- The resources available
- Titles: 4600 Volumes: 45797
- e- Journals: 2 journals/month subscription

• Print Journals: 65 journals/month subscription

Internet facilities for Staff & Students: Internet Connection in all Departmental Computer Labs & Staff Cabin
 ISP: Airtel 8 Mbps (1:1)
 ISP: RPNet 35 Mbps (1:1)
 43 Mbps

- Class rooms with ICT facility: Provided in every Classroom & Campus is enabled with Wi-Fi Facility to all the students and faculty.
- ➤ Laboratories:

Laboratory description in the curriculum	Equipment detail
Basic Computer Engg.	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Data Structures	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Computer Programming Java	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Object Oriented Technology	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Analysis & Design of Algorithms	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Computer Programming –IV Dot.Net	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Data Base Management System	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Computer Graphics & Multimedia	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Computer Programming V (Unix/Linux Lab.)	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Software Engineering & Project managements	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Computer Networking	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Advance Computer Architecture (ACA)	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Compiler Design	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Cloud Computing	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Soft Computing	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse
Web Engineering	Excellent-Intel Core i3 3220 3.30 GHz, Intel DH61 Motherboard, 4 GB DDR-III 1333 MHz RAM, 500 GB SATA Hard Disk, 16" LED Monitor, Keyboard, Mouse

**31.** Number of students receiving financial assistance from college, university, government or other agencies :

Details		2015-	-16	2014	-15	2013	-14	2012	-13
De	lans	Count	%	Count	%	Count	%	Count	%
	SC	28		28		36		64	
Catagory	ST	02	•	02	••••	6	<b>2</b> 004	04	
Category	OBC	363	28%	408	29%	500	30%	369	24%
	Minority	58		49		09		14	
Тс	otal	451		487		551		451	

**32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

Speaker	Event	Date
Mr. V. Sudarshan Head (Delivery Dept.) Ideavate.	Induction program	August 2013
Mr. James Malasmani(TCS)	Campus Placement Overview	27-08-2013
Mr. Rajesh Panjabi , Mr.Sanket Jain (TCS)	Software Testing, IT Trends and future scope	31-08-2013
Team Of Universal Informatics, Indore	2 Days Technical Workshop	18-10-2013 – 19-10-2013
Mr.Shafique Patni (Mozilla Reps)	Developers Boot Camp (Mozilla)	6 Sept 2014
Mr.Pankaj Jain(Infosys)	IT expert and its opportunity	17 April 2015
PRTS - IG (Police)	Cyber Security	22 April 2015
Mr. V. Sudarshan Head (Delivery Dept.) Ideavate	IBM Academic Initiative Lab	22 May 2015
Mr. Gaurav Gupta, Sr. Project Manager, Intel, Bangalore	Internet of Things	15 June 2015
Mr Abhishel Kapoor(TCS)	FDP on the topics-ERP, Access Control, Single Signon	6 June 2015
Mr.Anil Pandey Mr.K.Pradeep(MD,Prodyovidhi)	Intellectual Property Rights and patenting	13 July 2015
Mr.Gourav	TCS Orientation	20 Aug 2015

**33.** Teaching methods adopted to improve student learning

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced:

- > To make teaching effective, concepts are explained by charts and models wherever necessary.
- Certain topics are covered with orientation towards GATE & IES
- Some important basics and topics beyond syllabus are covered
- > Faculty are provide internet to prepare lecture notes

- Faculty are encouraged to attend seminars, conferences, workshop to enhance their skills so that the knowledge can be transferred in a better way.
- E-recourses, reference books are provided in the library
- LCD projector screens / Overhead projectors help the faculty to deliver interactive lectures and demonstrations of animations/ ppt slides/ lecture contents.
- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- SMART Class SMART boards are being used for teaching purposes.
- > Augmentation of conventional black board teaching by using audio-video aids.
- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.
- > Online availability of journals in the intranet for the project guidance.
- 34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm.

- ➤ We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.
- > We Promote Digital India and Ethical Hacking in this program.
- ➢ Conducting evening Classes for First year for C and C++
- **35.** SWOC analysis of the department and Future plans
- Strength :
  - Well defined work culture and academic hierarchy systems.
  - Excellent infrastructural facilitates to conduct hands on training
  - Dedicated student development cell
  - Motivation towards interdisciplinary and innovative research projects
  - Department emphasis on overall grooming of student (hand on practical's, industry visits, social responsibilities etc.)

- Regular visit eminent personality from industry and academics
- Highly modern digital class rooms
- Exclusive Tie-up with renowned organization like
  - 1. SSC-NASSCOM
  - 2. IBM Academic Initiative Lab
  - 3. NPTEL e-teaching
  - 4. Google Class Room
  - 5. QEEE by IIT Madras
  - 6. Virtual Lab IIT Delhi
  - 7. E-Yentra by IIT Bombay
  - 8. TCS Academic Interface Program
  - 9. EMC<sup>2</sup> Center For Academic Excellence
  - 10. Visual Paradigm
  - 11. MOOC
  - 12. Entrepreneur cell Initiatives and activates
- ✤ Weakness:
  - Limited industry funded projects and consultancy
  - Lack of Govt. sponsored research projects
  - Curriculum gaps with industry standards
- ✤ Opportunity:
  - Potential to develop and implement additional curriculum at UG and PG level
  - An effort for better research culture in the campus.
  - Improvement in effort for training and placement initiative programs for outside students
- ✤ Challenges:
  - Student motivation for doing research and publications
  - Lack of communication skills and exposure with technologies among the student community.
  - Due to receive average student admission quality, it is changing task to motivate in to research and technology based study approaches.
  - Need bridge the gaps between academia and industry by improving the collaborations between academic and industry bodies.

# ER 2 INFORMATION TECHNOLOGY

- 1. Name of the department: Information Technology
- **2.** Year of Establishment: 2007
- **3.** Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.) : UG Bachelor of Engineering, Information Technology
- 4. Names of Interdisciplinary courses and the departments/units involved: NIL
- Annual/ semester/choice based credit system (programme wise): 2004 to 2010 -Non Grading System; 2010 to 2015 Grading System 2015 onwards-CBCS (Choice Based Credit System)
- 6. Participation of the department in the courses offered by other departments: NIL
- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL
- **9.** Number of teaching posts:

Designation	Filled
Professor	01
Associate Professor	01
Assistant Professor	04

**10.** Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

Name	Qualification	Designation	Specializ ation	Experience	No. of P.hd Guided Student
Dr. Ashish Bansal	P.HD	Professor	Soft Computing	21 Years	3
Mrs. Neha Gupta	M.E, P.hd (Purse)	Associate Professor	IT	9 Years	NIL
Mr. Akhilesh Chauhan	M.E	Assistant Professor	IT	5 Years	NIL
Mrs. Alpana Meena	M. Tech	Assistant Professor	IT	7 Years	NIL
Mr. Ankur Nahar	M.E	Assistant Professor	CSE	2 Years	NIL
Mrs. Sheetal Chauhan	M.E	Assistant Professor	IT	3 Years	NIL

**11.** List of senior faculty visiting: NIL

- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- **13.** Student-Teacher Ratio: 20:1
- **14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 02
- 15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

Name	Qualification	Designation
Dr. Ashish Bansal	PhD	Professor
Mrs. Neha Gupta	M.E, P.hd (Purse)	Associate Professor
Mr. Akhilesh Chauhan	M.E	Assistant Professor
Mrs. Alpana Meena	M.Tech	Assistant Professor
Mr. Ankur Nahar	M.E	Assistant Professor
Mrs. Sheetal Chauhan	M.E	Assistant Professor

- **16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL
- **17.** Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL
- **18.** Research Centre /facility recognized by the University : NIL
- **19.** Publications:
  - a. Publication per faculty
    - Number of papers published in peer reviewed journals (national / international) by faculty and students
  - b. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database International Social Sciences Directory, EBSCO host, etc.)
    - Monographs
    - Chapter in Books
    - Books Edited
    - Books with ISBN/ISSN numbers with details of publishers
    - Citation Index
    - SNIP
    - SJR
    - Impact factor
    - h-index

S. No.	Name of the Faculty	Designation	No. Of Journal Publication up to AY 2015-16
1	Dr. Ashish Bansal	Prof.	22
2	Mrs. Neha Gupta	Asso. Prof	4
3	Mr. Akhilesh Chauhan	Asst. Prof	1
4	Mr. Piyush Vyas	Asst. Prof	1
5	Mr. Ankur Nahar	Asst. Prof	1
6	Mrs. Alpana Meena	Asst. Prof	1
7	Mr. Sheetal Chauhan	Asst. Prof	2

Name of the Faculty	Title of Paper	Detail of Journal
Dr. Ashish Bansal	Application of Back propagation Neural Network to generate fragmented watermarks and Full Watermark by Union	International Journal of Computer Science and Network Security (IJCSNS)", vol.8 No.10, October 2008 South Korea.
Dr. Ashish Bansal	Generating Watermark Image with Authentication using Full Cover Image and Back propagation Neural Network	International Journal of Soft Computing",3(6):443-450,2008 ISSN:1816-9503, Medwell Journals,2008.
Dr. Ashish Bansal	Watermarking using Neural Network and hiding the trained network within the cover image	Journal of Applied and theoretical Information Technology, (JATIT),vol.4 no. 8:663-671(ISSN:1992-8615),31 Aug 2008
Dr. Ashish Bansal	A novel approach using Full Counter propagation Network for watermarking (with improvements)	IEEE Journal of Information Forensics
Dr. Ashish Bansal	Robust Image watermarking systems in frequency domain using neural networks(with a novel extension for gray scale watermarks)	Varahmihir Journal of computer and information sciences",vol.2 no. 1 &2,(2007):137-142(ISSN-0973-3639) Jan-Dec 2007.
Dr. Ashish Bansal	Generating target watermark image with random matrices and fragmented watermarked cover image using Back propagation Neural Network"	Journal of Neural Network, Elsevier
Dr. Ashish Bansal	Digital watermarking Techniques and principles- An evolutionary approach	Asian Journal of Information Technology and Management, (10):1082-1087, 2006, Medwell.
Dr. Ashish Bansal	Application of genetic algorithm to optimize robustness and fidelity of watermarked images	International journal on computer science and engineering Vol.1(3),2009,239-242
Dr. Ashish Bansal	Application of FCNN in watermarking	International journal on computer science and engineering Vol.02,No.02,2010,289-296
Dr. Ashish Bansal	Identification of Brain tumors in 2D MRI Using automatic seeded region growing method	International Journal of Electronics Communication and Computer Engineering Volume -3 , Issue(1) NCRTCST,ISSN 2249-071X,2012
Dr. Ashish Bansal	Applicability of Back propagation Neural Network for Recruitment Data Mining	International Journal of Engineering Research and Technology (IJERT) ISSN: 2278-0181 Vol. 1 Issue 3, May-

		2012
Dr. Ashish Bansal	Comparison of K-means and Back propagation Data Mining Algorithms	International Journal of Computer Technology and Electronics Engineering (IJCTEE) Vol. 2,Issue 2,april 15,2012
Dr. Ashish Bansal	Preventing copyrights infringement of images by watermarking in transform domain using Full Counter propagation Neural Network	International Journal of Information Sciences and Techniques (IJIST) Vol, 2,No 6,November 2012
Dr. Ashish Bansal	Image Security achieved through watermarking survey based on spatial and transform domain techniques	International journal of computer science and its applications: vol 2:Issue 3 ISSN 2250-3765
Dr. Ashish Bansal	Robust Image watermarking systems in spatial domain using neural networks in color images	Varahmihir Journal of computer and information sciences Vol. 1,No 2, 2006,41-46 ISSN: 0973-3639
Dr. Ashish Bansal	Comparative study of TCP variants in wireless sensor networks	International journal of Research in engineering technology and management ISSN-2347-7539
Dr. Ashish Bansal	Performance comparison of TC variants for wireless sensor networks	International journal of science, engineering and technology research, vol3 issue 1 nov. 2014 pp 3018-3022
Dr. Ashish Bansal	Link Prediction in temporal mobile database	International journal of engineering research and applications. April -12-13, 2014
Dr. Ashish Bansal	Video Steganography using neural network methods	IJRAT(International Journal of research in Advent technology), E-IDDN-2321- 9637,2013
Dr. Ashish Bansal	A survey on web usage mining	IRP, Indore ,2013
Dr. Ashish Bansal	Image Search (Content Based Image Retrieval using Sobel's Edge Detection Technique)	International Journal of Scientific Research and Engineering Studies (IJSRES) Vol. 1 Issue -5 ,November, 2014,ISSN: 2349-8862
Dr. Ashish Bansal	Restraining color image forgery by watermarking in DCT domain with full counter propagation neural network	International Journal of advanced research in computer science vol. 3 No 7, Nov-Dec 2012 (Impact factor: 03.74)
Mrs. Neha Gupta	Artificial Neural Network	VSRD international journal of computer science and information technology volume 3,number 5,may 2013 ISSN 2231-2471
Mrs. Neha Gupta	Different aspect in mobile computing	Recent trends in Metronics and computing Technology and Management (RAMCTM-2013)JUNE 16 2013
Mrs. Neha Gupta	IROCS	International journal computer science and Information security (IJCSIS) july 2013
Mr. Akhilesh Chauhan	Satisfaction in buying Railway E- ticket: An Exploratory Study	International journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654

Mrs.Sheetal Chouhan	A Nobel Approach of Web Log Mining	Vol-II VSRD journal
Mrs.Sheetal Chouhan	Implementation of web access pattern Discovery	IJEACT Vol-II sep-2012
Ms.Mohini Kumrawat	Survey on energy efficient approach for wireless sensor network	June 2014 IJCSIT
Ms.Mohini Kumrawat Survey on clustering algorithm on WSN		April 2015 IJCSIT
Mr.Piyush Vyas	Methodology study of ARM	IJCA
Mr.Ankur Nahar	Improve congestion control technique using EIA	IJCSIT in 2104

• Conference Publication Details (National/ International)

S. No.	Name of the Faculty	Designation	No. Of Journal Publication up to AY 2015-16
1	Dr. Ashish Bansal	Prof.	28
2	Mrs. Neha Gupta	Asso. Prof	10
3	Mr. Akhilesh Chauhan	Asst. Prof	4
4	Mr. Piyush Vyas	Asst. Prof	1
5	Mr. Ankur Nahar	Asst. Prof	1
6	Mrs. Alpana Meena	Asst. Prof	1
7	Mr. Sheetal Chauhan	Asst. Prof	1
8	Ms. Mohini Kumrawat	Asst. Prof	1
9	Mr. Vivek Gupta	Asst. Prof	4
10	Mr. Sanket Gupta	Asst. Prof	1
11	Ms. Akansha Jain	Asst. Prof	1

Name of the Faculty	Title of the paper	Details of Conference
Dr. Ashish Bansal Network Security and Confidentiality with Digital Watermarking		IEEE International Conference on Digital Ecosystems and Technologies (IEEE DEST 2007), Cairns, Australia 325-328 (21-23 Feb 2007)
Dr. Ashish Bansal	Performance Comparison of watermarking techniques of various domains	IEEE International conference (IEEE- DEST2009), Istanbul, Turkey
Dr. Ashish Bansal	Digital Image Security in Network Transmission with high level of fidelity	IEEE (International Conference: IACC 09), Thapar Institute, Patiala.
Dr. Ashish Bansal	New method for Mining Sequential Patterns in Temporal Databases	International conference (GLOGIFT), RGPV, Bhopal ((M.P.), 27-30 Dec- 2005.
Dr. Ashish Bansal	Machine Learning Process, An approach to control wind energy generator through Neural Networks	International Conference on Wind Energy: Trends and Issues by NITTTR ,Bhopal,5-7 Jan-2006
Dr. Ashish Bansal	Application of ART network for benchmarking watermarking	National conference on "Advancement in soft computing and data mining" at

	applications	Technocrats Institute Of Technology (TIT),Bhopal,12 <sup>th</sup> Aug. 2008
Dr. Ashish Bansal	Study of advantages of Neural Networks over Conventional Microcontrollers in Process Control	National Conference on "Emerging Trends in Technology and Management-EMTECHMAN" by GLAITM, Mathura, 18-19 Feb – 2006.
Dr. Ashish Bansal	Goal Stack Planning for 2 handed robots	National Conference on "Emerging Trends in Technology Management- "EMTECHMAN" conducted by GLAITM ,Mathura,18-19 Feb-2006
Dr. Ashish Bansal	Digital Revolution and Watermarking Techniques	National Conference on "Engineering Applications and Network Security using Neural Networks and Fuzzy Logic MIT,Ujjain,16-18 Aug-2006 (published)
Dr. Ashish Bansal	Limitations of Digital Watermarks"	National Conference on "Engineering applications and Network Security using Neural Networks and Fuzzy Logic MIT, Ujjain, 16-18 Aug2006.
Dr. Ashish Bansal	Watermarking security framework for supply chain	National Seminar on "New paradigms in supply chain management ",Dec 15,2006,MIT,Ujjain,M.P
Dr. Ashish Bansal	Role of Information Technology in Physical Chemistry	National Conference , Govt. Science College, Ujjain, M.P.
Dr. Ashish Bansal	An algorithm of interface for effective conversion between Asynchronous to Synchronous data	National Conference in Pioneer Institute of professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Customization of sensitive association rules in data mining	National conference on computational intelligence in Pioneer Institute of Professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Application of ART network for authenticity application in digital watermarking	National conference on computational intelligence in Pioneer Institute of Professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Watermarked image correction with FCNN for enhancing watermarking performance	National conference on computational intelligence in Pioneer Institute of Professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Conceptual approach for deficiencies identification in using Full Counter Propagation Neural network for watermarking	National Conference on emerging technologies in electronics, mechanical and computer engineering, SHAIL group
Dr. Ashish Bansal	A Novel technique for watermarked Image Correction with Full Counter Propagation Network for enhancing the watermark performance	National Conference on software engineering and information security (Oct 23rd -24th ,2009) Acropolis institute of technology and research
Dr. Ashish Bansal	Location discovery in mobile wireless sensor networks	International conference on advanced computing and communication technologies (ICACCT-2012)
Dr. Ashish Bansal	Preventing IP and MAC spoofed attacks at source	International conference on advanced computer science and information technology (ICACSIT), Nagpur, 20th Jan,2013

Dr. Ashish Bansal	Application of soft computing technique for digital image correction	AICTE sponsored national conference on soft computing techniques in electrical engineering, SCTEE-09, 9-10 July, 2010
Dr. Ashish Bansal	Evolution in watermarked image correction with Full counter propagation neural network for enhancing the watermark performance	NCSEIS, 09
Dr. Ashish Bansal	Automatic construction of health image library using information retrieval techniques.	SSIBIG, 24 Jan 2014
Dr. Ashish Bansal	Online Attendance management system using RFID with object counter	ICRTET,OCT 2013
Dr. Ashish Bansal	Image security achieved through watermarking survey based on spatial and transform domain techniques	Proc. Of international conference on advanceds in electronics, electrical and computer science engineering –EEC 2012
. Dr. Ashish Bansa	A survey on Digital water marking Technique	National Conference on Emerging Practices in Management (19-20 February, 2016)
Dr. Ashish Bansa	A survey on Digital water marking Technique using soft computing	New Trends and Challenges in Computer Engineering and Technology– NTCCET 2016.
Mrs. Neha Gupta	SDRAM in Microcontroller based mobile system	ICT, Sir Padampat singhania university 2010 march Udaipur
Mrs. Neha Gupta	Mobility computing middleware	ICTD-SMT-2013 Ghaziabad
Mrs. Neha Gupta	Mobile computing in different layer	Gyan Sandhan national conference in Prestige Institute of science and technology
Mrs. Neha Gupta	Artificial intelligence and neural network	in International Conference on Control, Communication & Computer Technology (ICCCCT-2013) and Springer Series Editor - MATLAB Applications in Engineering and Technology
Mrs. Neha Gupta	Case study of artificial nural network	RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS
Mrs. Neha Gupta	Artificial intelligence and neural network	Emerging Technologies in Electronics, Mechanical and computer engineering (ETEMC)
Mrs. Neha Gupta	pregnental Yoga and Baby Centre	in computer Applications in Engineering: Emerging Trends and Technologies 22-23 November 2013
Mrs. Neha Gupta	GAIT recognition through temporal consistency	International association of information cultural human and industry technology , AICIT
Mrs.Neha Gupta	A survey on Digital water marking Technique	National Conference on Emerging Practices in Management (19-20 February, 2016)
Mrs.Neha Gupta	A survey on Digital water marking Technique using soft computing	NewTrendsandChallengesinComputerEngineeringandTechnology-NTCCET2016.
Mr. Akhilesh Chauhan	Negative Association Rule Mining	International Conference in Recent

through Particle Swarm Optimization		Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 at Thakur College of Science and Commerce, Mumbai
Mr. Akhilesh Chauhan	Comparative Optimization of Efficient Association Rule Mining through PSO and GA	ICMIRA-2013 proceedings in IEEE, at SMVDU Jammu,
Mr. Akhilesh Chauhan	Negative Association Rule Mining through Particle Swarm Optimization	International Journal of Computer Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012
Mr. Akhilesh Chauhan	Customer Satisfaction in buying Railway E-ticket: An Exploratory Study	International journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654
Mr. Sanket Gupta	RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS	in Bhopal present in April-13
Mrs.Sheetal Chouhan	Network Security	National Conference in MANIT, Bhopal
Ms.Akansha Jain	Effects of Impersonation Attack on MANET	Recent Sustainable Trends in engineering and science
Mrs.Alpanan Meena	new design of block cipher module using simple encryption techniques	national conference at BIST Bhopal 2011
Ms.Mohini Kumrawat	optimizing energy consumption in WSN through distributed weighted clustered algorithm	IEEE international conference 2015
Mr. Piyush Vyas	An efficient algorithm for ARM trough modified GA	IEEE NUICONE dec 2012

20. Area of consultancy income: NIL

**21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

S.No	Name	National committees	International Committees	Editorial Boards
1.	Mrs. Neha Gupta	-	-	AICIT(the international association for information, cultural, human and industry technology

22. Student Projects:

• Percentage of students who have done in-house projects including inter departmental / program:

The students of B.E final year are mandatorily required to submit the project, so 100% of final year students of B.E. course have done the projects.

• Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies

The students of B.E third year are mandatorily required to do industrial training, so 100% of third year students of B.E. course have done the projects.

23. Awards / Recognitions received by faculty and students

Awards received by faculty:

S.No.	Name of faculty	Given By	Name of the award	Year
1	Mr. Piyush Vyas	Srijan RGPV	Excellent Faculty	2015-16
2	Mrs.Neha Gupta	IIT QEEE	Quality Teacher	2015-16
3.	Mr.Aditya Nagdiya	IIT QEEE	Quality Teacher	2015-16
4.	Mr.Akhilesh Chauhan	IIT QEEE	Quality Teacher	2015-16

Award Received by students:

S.No	Name of Student	Given By	Name of the award	Year
1	Soma Sharma & Mayank lambhate	Mobil10X	India's Top mobile applications	2016
2	Soma Sharma & Mayank lambhate	Jaipuria University	Won first price for Mobile Application development	2016
3.	Soma Sharma & Mayank lambhate	Hackothon	Entrepreneurship concepts	2015
4.	Soma Sharma & Mayank lambhate	CitriX	Techfest (coding)	2015
5.	Vaibhav Puranik	SDBCT	Blind coding champion	2014
6	Gaurav Goyal & Arjun Kaushal	IIT-D	<b>Robotics Competition</b>	2014
7.	Shambhavi mahodaya	IIT-J	Tech-fest	2013
8.	Nistha Gaur	Truba Bhopal	Best paper publication	2013

24. List of eminent academicians and scientists / visitors to the department: NIL

25. Seminars/ Conferences/Workshops organized & the source of fundingb) National

S. No.	Resources person	Topic	Date
1.	Mr. Gaurav Gupta (Intel, Banglore)	Internet Of Things	15/6/15
2.	Mr. K.K Rathi, Microsoft technology ivengelist & IT consltant , gatwing pvt ltd. Ahmedabad	Microsoft Azure	26/11
3.	Rupesh Patel, senior trainer (Appin Knowledge, indore.)	Ethical Hacking and Security	10/04/2014
4.	Sumit Shukla, Trainer Tevesa Infotech, Delhi	Ethical Hacking and Security	5/03/2014

5.	Vikrant madhav shinde, Tecno commercial manager, apple, IOS University Lab	IOS University Lab	26-06/2015
6.	Dr. Sandhya Chintala, Global business foundation skills, FSIT (foundation skill in IT)	NAMCOM	30-07-2015
7.	Arindham paul, Director Startrite Engineer's pvt. Ltd, hydrabad	EC-Council, ethical hacking	30/05/2014
8.	Mr. Aditya Rai, CEO of study Metro, Indore	Foreign Education	12/03/2016
9.	Mr. Pankaj Jain, Senior Project Developer, Infosys, benglore	Future of IT Industry	17/04/2015
10.	Mr. Ujjwal Bhargava, Ubites technologies, indore	Latest Trend on going in IT space	07/08/2015
11.	Ms. Kriti Namdev, senior quality assurance analyst, waste management logistics, Indore	Software Testing	27/10/2015
12.	Mr. Aditya	Hadoop Platform & Training	18/9/15
13.	Mr.Hemant Vishwakarma	Android Workshop	19/9/15
14.	Mr. Vikas naidu	Unix Workshop	31/10/15
15.	Assain Shekh, HR-Manager Universal Infotech, Indore	HTML	18/04/2014
16.	Sagar wadhwani	Workshop by Google group	6-7/3/14
17.	Sagar wadhwani	Workshop by Google group	26/2/15

#### **26.** Student profile program/course wise:

Name of the	Applications received	Salaatad	Enrolled		Pass
Course/programme	Applications received	Selected	*M	*F	percentage
BE(IT) 2012-2016	By State Counseling	52	31	21	NA
BE(IT) 2013-2017	By State Counseling	16	09	07	NA
BE(IT) 2014-2018	By State Counseling	4	02	02	NA
BE(IT) 2015-2019	By State Counseling	30	17	13	NA

#### **27.** Diversity of students

Name of the Course	% of students from	% of students from	% of students
	the same state	other state	from abroad
BE(IT) 2012-2016	94.2%	5.8%	0
BE(IT) 2013-2017	100%	0%	0
BE(IT) 2014-2018	75%	25%	0
BE(IT) 2015-2019	100%	0%	0

**28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Year	Number of Students	Name of Exam
2012-13	0	-
2013-14	2	GATE

2014-15	2	GATE
2015-16	0	-

#### 29. Student Progression

Student prograssion	Against % enrolled			
Student progression	2012-2016	2011-2015	2010-2014	2009-2013
UG to PG	NA	18.6%	8.6%	4.5%
PG to M.Phil.	-	-	-	-
PG to Ph.D.	-	-	-	-
Ph.D. to Post-Doctoral	-	-	-	-
Employed				
Campus selection	71.7%	72.1%	41.3%	43.2%
Other than campus recruitment				
Entrepreneurship/Self-employment	NA	05%	12.4%	14.7%

#### **30.** Details of Infrastructural facilities

- ➤ Library
  - The resources available
  - Titles: 2254
  - e- Journals: 2 journals/month subscription
  - Print Journals: 6 journals/month subscription
- Internet facilities for Staff & Students: Internet Connection in all Departmental Computer Labs & Staff Cabin
   ISP: Airtel
   8 Mbps (1:1)

ISP: Airtei	8 MDps (1:1)
ISP: RPNet	35 Mbps (1:1)
=	43 Mbps

#### > Class rooms with ICT facility: Provided in every Classroom

#### ➤ Laboratories:

	Intel i3 3220, 3.06GHz
	4GB RAM
	500GB Hard Disk
Lab 1	Intel DH-61 Motherboard
	16" AOC LED Monitor
	Keyboard, Mouse
	Window 7Base License
	Intel Core2Duo, 2.93GHz
	2GB RAM
Lah 2	320GB Hard Disk
Lao 2	15.6" TFT monitor
	Keyboard, Mouse
	Window 7Base License

	Intel Pentium 2 <sup>nd</sup> generation G645, 2.90GHz Intel DH-61	
	chipset	
	4GB RAM	
Lab 3	500GB Hard Disk	
	16" AOC LED Monitor	
	Keyboard, Mouse	
Window 7Base License		

**31.** Number of students receiving financial assistance from college, university, government or other agencies :

Det	toile	2015	-16	2014	-15	2013	-14	2012	-13
De	lans	Count	%	Count	%	Count	%	Count	%
	SC	28		28		36		64	
Cotogory	ST	02	• • • •	02	• • • • •	6		04	
Category	OBC	363	28%	408	29%	500	30%	369	24%
	Minority	58		49		09		14	
To	otal	451		487		551		451	

**32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

S. No.	Resources person	Topic	Date
1.	Mr. Gaurav Gupta (Intel, Banglore)	Internet Of Things	15/6/15
2.	Mr. K.K Rathi, Microsoft technology ivengelist & IT consltant, gatwing pvt ltd. Ahmedabad	Microsoft Azure	26/11
3.	Rupesh Patel, senior trainer (Appin Knowledge, indore.)	Ethical Hacking and Security	10/04/2014
4.	Sumit Shukla, Trainer Tevesa Infotech, Delhi	Ethical Hacking and Security	5/03/2014
5.	Vikrant madhav shinde, Tecno commercial manager, apple, IOS University Lab	IOS University Lab	26-06/2015
6.	Dr. Sandhya Chintala, Global business foundation skills, FSIT (foundation skill in IT)	NAMCOM	30-07-2015
7.	Arindham paul, Director Startrite Engineer's pvt. Ltd, hydrabad	EC-Council, ethical hacking	30/05/2014
8.	Mr. Aditya Rai, CEO of study Metro, Indore	Foreign Education	12/03/2016
9.	Mr. Pankaj Jain, Senior Project Developer, Infosys, benglore	Future of IT Industry	17/04/2015
10.	Mr. Ujjwal Bhargava, Ubites technologies, indore	Latest Trend on going in IT space	07/08/2015
11.	Ms. Kriti Namdev, senior quality assurance analyst, waste management logistics, Indore	Software Testing	27/10/2015

12.	Mr. Aditya	Hadoop Platform & Training	18/9/15
13.	Mr.Hemant Vishwakarma	Android Workshop	19/9/15
14.	Mr. Vikas naidu	Unix Workshop	31/10/15
15.	Assain Shekh, HR-Manager Universal Infotech, Indore	HTML	18/04/2014
16.	Sagar wadhwani	Workshop by google group	6-7/3/14
17.	Sagar wadhwani	Workshop by google group	26/2/15

33. Teaching methods adopted to improve student learning

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced:

- > To make teaching effective, concepts are explained by charts and models wherever necessary.
- > Certain topics are covered with orientation towards GATE & IES
- Some important basics and topics beyond syllabus are covered
- Faculty are provide internet to prepare lecture notes
- Faculty are encouraged to attend seminars, conferences, workshop to enhance their skills so that the knowledge can be transferred in a better way.
- > E-recourses, reference books are provided in the library
- LCD projector screens / Overhead projectors help the faculty to deliver interactive lectures and demonstrations of animations/ ppt slides/ lecture contents.
- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- SMART Class SMART boards are being used for teaching purposes.
- > Augmentation of conventional black board teaching by using audio-video aids.
- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.
- > Online availability of journals in the intranet for the project guidance.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm.

- ➢ We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.
- > We Promote Digital India and Ethical Hacking in this program.
- Conducting evening Classes for First year for C and C++
- **35.** SWOC analysis of the department and Future plans
- Strength :
  - There exist very solid core information technology faculties which have expertise and potential to give new ideas in the field of information technology area.
  - These faculties are most commonly founding soft computing, networking and data base and software engineering
  - Classified work responsibilities defined.
  - Good placement percentage.
  - Good infrastructural facility to conduct hands on training for all students
  - There is solid student assistant management in department
  - Interdisciplinary and innovative projects by student
  - Department emphasis on overall grooming of student (hand on practical's, industry visits, social causes etc.)
  - Arranging expert talk and seminars from eminent personality from industry and academics.
  - Highly modern digital class rooms.
  - Long list of alumni students who are serving in leading industries at respectable positions.
- ✤ Weakness:
  - Lack of patents activity.
  - Lack in the industry projects or consultation though it may not apply to the department.
  - Intake of low rank student.
  - Absence of PG. course in this department.
  - Lack of research work, need to work towards the opening of student's chapters for the reputed societies like IEEE, ISTE etc.
- Opportunity:
  - A developing academic market for IT & entrepreneurship.

- There is potential to develop additional program in the area of post-graduation
- An effort for better research work
- Planning to open a research center in the field of software development and mobile applications. Looking to the infrastructure and facility we can have start software consultancy in-house/training house
- Funding to build core services and training programs for outside students

#### ✤ Challenges:

- To motivate students for pursuing a research career
- Lack of basic proficiency and technologies to work effectively and efficiently.
- Lack of incoming communication to IT when new projects are in conception stages.
- Faculty perceives that the quality of student has declined, thereby making it more difficult to provide research based study.
- Need to work toward the opening of student's Chapters for the reputed societies like IEEE, IJCTM, IJTRM, EUSRM, etc.

# ER 3 ELECTRONICS & COMMUNICATION ENGINEERING

- 1. Name of the department: Electronics & Communication Engineering
- 2. Year of Establishment: 2003
- **3.** Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.):

UG – Bachelor of Engineering, Electronics & Communication Engineering PG – Master of Engineering, Digital Communication

Program	Description
UG in Electronics & Communication Engineering	Started with 60 seats in 2003 Intake increased to 90 in 2004 Intake increased to 120 in 2009
PG in Digital Communication	Started with 18 seats in 2009

4. Names of Interdisciplinary courses and the departments/units involved: NIL

5. Annual/ semester/choice based credit system (programme wise): 2004 to 2010 -Non Grading System; 2010 to 2015 Grading System 2015 onwards-CBCS (Choice Based Credit System)

6. Participation of the department in the courses offered by other departments:

Department	Level	No of Subjects Taught
Computer Science Engineering	UG	06
Mechanical Engineering	UG	03
Information Technology	UG	04
Chemical Engineering	UG	03
Civil Engineering	UG	02

- 1. Computer Science Engineering: Analog and Digital Communication, Electronics Device & Circuit, Microprocessors & Microcontroller, Digital Circuit System, Fundamental of Electrical and Fundamental of Electronics.
- 2. Mechanical Engineering: Mechanical Measurement & Control, Fundamental of Electrical and Fundamental of Electronics.
- 3. Information Technology: Analog and Digital Communication, Electronics Device & Circuit, Fundamental of Electrical and Fundamental of Electronics.
- 4. Chemical Engineering: Software Lab based on MATLAB, Fundamental of Electrical and Fundamental of Electronics.

- 5. Civil Engineering: Fundamental of Electrical and Fundamental of Electronics.
- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL
- **9.** Number of teaching posts:

Designation	Filled
Professor	01
Associate Professor	01
Assistant Professor	19

10. Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

S.No	Name of the faculty member	Designat ion	Graduation, year of passing	Collage name & University	Joining Date	Area of Specialization
	Dr. Keshav	<b>D</b>	BE , 2000	Jivaji University MITS ,Gwalior	0/1/2011	Electrical & Electronics
1.	Patidar	Professor	ME, 2003	SGSITS , RGPV	2/1/2015	Power Electronics
			PhD , 2015	IIT, Indore		-
	Mrs.		B. Tech , 1993	JNTU Hyderabad		EC
2.	Balbhadrapatrun	Associate Professor	ME, 2009	IET , DAVV	6/8/2008	Digital Instrumentation
	i Harita		PhD , Pursuing	IET DAVV		-
	Mr. Ankit	Assistant	BE , 2008	IIST, RGPV	7/2/2000	EC
3.	Kumar Jain	Professor	ME, 2013	SVCE,RGPV	7/2/2009	VLSI Design
4.	Amrita	Assistant	BE ,2008	RIT, Indore, RGPV	10/3/2010	Electronic Instrumentation
	Pahadiya	Professor	ME, 2015	IET,DAVV		Digital Instrumentation
5	Mr. Anand	Assistant	BE, 2009-10	IIST, RGPV	10/2/2010	EC
5.	Mantri	Professor	ME , 2014	SSSITS , Sehore	10/3/2010	VLSI Design
	Mr. Devendra	Assistant	BE , 2003	JIT, RGPV		EC
6.	Singh Mandloi	Professor	ME , 2006	IET, DAVV	21/10/2010	Digital Instrumentation
			BE, 2003	IET, DAVV		EC
7.	Mrs. Sangeeta Solanki	Assistant Professor	ME, 2009	IET, DAVV	11/7/2011	Digital Communication
	Soluliki	110105501	Phd , Pursuing	IET, DAVV		Wi-Fi (EC)
	Ms. Neba	Assistant	BE, 2010	JDCT, Indore,		EC
8.	Choudhary	Choudhary Professor	M. Tech. , 2015	Truba College of Engineering, RGPV	4/8/2011	Digital Communication
9.	Mr. Shravan	Assistant	BE, 2010	RIT, Indore, RGPV	5/9/2011	EC

	Kumar Namdeo	Professor	ME , 2015	SDBCT, Indore, RGPV		Digital Communication
	Mr. Novonit	Assistant	BE ,2007	GEC Ujjain, RGPV		EC
10.	Palrecha	Professor	M. Tech 2009	IIT Gawahati	4/7/2013	Digital Signal Processing
11.	Mrs. Reeta	Assistant	BE , 2009	SSPM Kankavli, Mumbai	8/2/2012	Electronic Telecommunication
	Charde	Professor	ME, 2012	IIST Indore RGPV		Digital Communication
			BE , 2009	RGPV, Bhopal		EC
12.	Mr. Dhananjay	Assistant	ME, 2014	MANIT Bhopal	27/01/2014	Power Electronics
	Kumar	110105501	PhD Pursing	BITs Pilani		-
	Mr. Mahar	Assistant	BE, 2012	JIT Borawan, RGPV		Electrical & Electronics
13.	Karma	Professor	M. Tech , Pursuing	JIT Borawan, RGPV	1/2/2014	Power Electronics
14.	Mr. Ulhas	Assistant	BE , 2006	SGSITS, Indore ,RGPV	2/7/2012	Electrical & Electronics
	Kothan	FIDIESSOI	ME, 2010	IET, DAVV		Instrumentation
1.5	Mr. Rupesh	Assistant	BE , 2009	IETE Ne w Delhi	27/01/2015	EC
15.	Dutta	Professor	ME , 2012	Tezpur University	27/01/2015	Electronic Design & Technology
16	Ms. Aarti	Assistant	BE , 2010	SIMS, Indore, RGPV	25/08/2011	EC
10.	Yadav	Professor	ME , 2014	MIT, Ujjain RGPV	23/08/2011	Digital Communication
17	Mr. Atul Singh	Assistant	BE , 2010	PCST, Indore, RGPV	19/01/2015	EC
17.	Kushwah	Professor	M. Tech. ,2014	PCST, Indore, RGPV	19/01/2013	Digital Communication
18	Mr. Deepak	Assistant	BE , 2008	JIT Borawan , RGPV	19/01/2015	EC
10.	Yadav	Professor	ME , 2014	IET,DAVV	19/01/2013	Digital Communication
10	Mr. Sachin	Assistant	BE , 2008	JIT Borawan , RGPV	10/01/2015	EC
19.	Manglasheril	Professor	ME, 2012	SVITS, Indore ,RGPV	19/01/2013	Embedded System & VLSI Design
			BE,2012	AITR Indore		EC
20.	Mr. Neeraj Malviya	Asst. Professor	M. Tech, 2014	SGSITS Indore	22.02.2016	Microelectronics & VLSI
21		Assistant	BE,2010	MIST, Indore, RGPV	8/8/2012	EC
21.	MIT. Prerit Jain	Professor	ME,2013	IIT,	8/8/2013	RF & Microwave

**11.** List of senior faculty visiting: NIL

- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- **13.** Student-Teacher Ratio: 10:1
- **14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 07
- 15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

S.No.	Name of the faculty member	Designation	Graduation, year of passing	Collage name & University
			BE , 2000	Jivaji University MITS ,Gwalior
1.	Dr. Keshav Patidar	Professor	ME, 2003	SGSITS , RGPV
			PhD, 2015	IIT, Indore
			B. Tech , 1993	JNTU Hyderabad
2.	Mrs. Balbhadrapatruni Harita	Associate Professor	ME , 2009	IET , DAVV
			PhD , Pursuing	IET DAVV
3	Mr. Ankit Kumar Jain	Assistant	BE , 2008	IIST, RGPV
5.	Mit. Alikit Kullai Jalli	Professor	ME, 2013	SVCE,RGPV
4	Assistant		BE ,2008	RIT, Indore, RGPV
4.	Amrita Pahadiya	Professor	ME, 2015	IET,DAVV
5	Ma Arond Montai	Assistant Professor	BE, 2009-10	IIST, RGPV
5.	Mr. Anand Mantri		ME, 2014	SSSITS , Sehore
6	Mr. Devendra Singh	Assistant	BE, 2003	JIT, RGPV
0.	Mandloi	Professor	ME, 2006	IET, DAVV
		Assistant Professor	BE , 2003	IET, DAVV
7.	Mrs. Sangeeta Solanki		ME, 2009	IET, DAVV
			Phd , Pursuing	IET, DAVV
8	Ms Neba Choudhary	Assistant	BE, 2010	JDCT, Indore, RGPV
0.	Wist I vona Choudhary	Professor	M. Tech., 2015	RGPV, bhopal
0	Mr. Shravan Kumar	Assistant	BE, 2010	RIT, Indore, RGPV
9.	Namdeo	Professor	ME, 2015	SDBCT, Indore, RGPV
		Assistant	BE ,2007	GEC Ujjain, RGPV
10.	Mr. Navanit Palrecha	Professor	M. Tech 2009	IIT Gawahati
11.	Mrs. Reeta Charde	Assistant	BE , 2009	SSPM Kankavli, Mumbai
		Professor	ME, 2012	IIST Indore RGPV
12	Mr. Dhonoriou Vumer	Assistant	BE, 2009	RGPV, Bhopal
12.	mr. Dhahanjay Kumar	Professor	ME, 2014	MANIT Bhopal

			PhD Pursing	BITs Pilani
13	Mr Mohan Karma	Assistant	BE, 2012	JIT Borawan, RGPV
15.	MI: Monali Karilia	Professor	M. Tech, Pursuing	JIT Borawan, RGPV
14	Mr. Lilber, Kether	Assistant	BE, 2006	SGSITS, Indore ,RGPV
14.	Mr. Ulhas Kothari	Professor	ME, 2010	IET, DAVV
15	Mr. Pupash Dutta	Assistant	BE, 2009	IETE New Delhi
15.	MI. Rupesii Dutta	Professor	ME, 2012	Tezpur University
16	Ma Aarti Vaday	Assistant	BE, 2010	SIMS, Indore, RGPV
10.	Ms. Aarti Tadav	Professor	ME, 2014	MIT, Ujjain RGPV
17	Mr Atul Singh Kushwah	Assistant	BE, 2010	PCST, Indore, RGPV
17.	Mi. Atu Singii Kushwan	Professor	M. Tech. ,2014	PCST, Indore, RGPV
18	Mr. Deenak Vaday	Assistant	BE, 2008	JIT Borawan, RGPV
10.	мп. Deepak Tadav	Professor	ME, 2014	IET,DAVV
19	Mr Sachin Manglasheril	Assistant	BE, 2008	JIT Borawan , RGPV
17.	Wit: Sachini Wianglasherni	Professor	ME, 2012	SVITS, Indore ,RGPV
20	Mr. Nooroj Malviva	Asst Professor	BE,2012	AITR Indore
20.	wii. Neeraj warviya	Asst. FIOIEssoi	M. Tech, 2014	SGSITS Indore
21	Mr. Prorit Iain	Assistant	BE,2010	MIST, Indore, RGPV
21.		Professor	ME,2013	IIT,

- **16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL
- **17.** Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL
- 18. Research Centre /facility recognized by the University : NIL
- **19.** Publications:
  - a. Publication per faculty
    - Number of papers published in peer reviewed journals (national / international) by faculty and students
  - b. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database International Social Sciences Directory, EBSCO host, etc.)
    - Monographs
    - Chapter in Books
    - Books Edited
    - Books with ISBN/ISSN numbers with details of publishers
    - Citation Index
    - SNIP
    - SJR
    - Impact factor
    - h-index

S.	Name of	T:41-	Duration	Name of Journal /	ISBN/ISSN
No.	Faculty	Ittle	/ date	Conference	numbers
1.	Devendra Singh Mandloi	" Performance Analysis of Dual Hop Amplify and Forward Opportunistic Relay System"	1/7/2015	International Journal Of Engineering, Education And Technology ( <i>ARDIJEET</i> )	2320- 883X,VOLUM E 3 ISSUE 3
2.	Devendra Singh Mandloi	"An improved efficient pegasis protocol in wireless sensors network"	09 September 2015	International Journal of Advance research and Management, ISSN (online)	ISSN (online) 2348-9006 volume 2 Issue 9
3.	Shravan Namdeo	" Performance analysis of smart antenna using genetric algorithm"	September 2015	International Journal of Advance research in Electronics and Communication Engineering,	Volume 4 Issue 9
4.	Amrita Pahadia	"Layout Design, Analysis and implementation of combinational & sequential circuits using Micro wind"	July August 2015	Seventh Sense Research Group International Journal of VLSI & Signal processing,	vol 2 issue 4
5.	Keshav Patidar	"A high step-up PWM DC-DC Converter based on quasi z- source Topology"	2014	IET Power Electronics, (in press)	
6.	Keshav Patidar	"High step-up converters based on quadratic boost converter for micro-inverter,"	February 2015,	Electric Power Systems Research,	Volume 119, Pages 168-177, ISSN 0378- 7796.
7.	Keshav Patidar	"A step-up PWM DC-DC Converter for renewable energy applications"		International Journal of Circuit Theory and Applications	
8.	Patidar K	"Control of DC link voltage in quasi Z-source inverter by using one cycle control method,"	16 /12/2014- 19 /12/2014	IEEE International conference Power Electronics, Drives and Energy Systems (PEDES), IIT Bombay, India	
9.	Ankit Jain and Kundan Kumar	"Performance Analysis of Dual-Hop Cooperative Systems Over Fading Channels"	April 2015	PACE- A Journal of Research of Prestige Institute of Management Dewas"	ISSN NO: 0976 0938
10.	Anand Mantri	" Compression Effect on Images using different Wavelet Transformation "	Feb 2015	International Journal of Advanced Research in Electronics and Communication Engineering	Volume 4 Issue 2 P.P. 0399-40
11.	Amrita Pahadia	" Design strategy of barrel shifter using 2:1 mux at 40nm and 90nm technology"	April 2015	International Journal for Science and Research in Technology	Volume 1 Issue 4 ,ISSN : 2395- 1052
12.	Amrita Pahadia	"A review on high performance 2:1 multiplexers"	24 <sup>th</sup> May, 2015	International conference on Electrical Electronics communication robotics and instrumentation Engineering, ICEECIE	978-93-85225- 31-4
13.	Deepak Yadav	" Design strategy of Barrel Shifter Using 2:1 Mux at 40	03 Feb, 2015	International Journal on Electronics and	

		nm and 90 nm Technology"		Electrical Engineering	
14.	Shravan Namdeo	"Performance analysis of smart antenna using particle swarm optimization algorithm	June 2015	SSRG International Journal of Electronics and Communication Engineering,	Volume 2 Issue 6
15.	Reeta Charde	"Compression Effect on Images using different Wavelet Transformation"	Feb 2015	International Journal of Advanced Research in Electronics and Communication Engineering	Volume 4 Issue 2 P.P. 0399-402
16.	Neha Choudhary	"Analysis of worm Hole Attack in MANET using AODV routing Protocol"	Dec 2014	International Journal of Electronics & Communication Engg.	Volume 1 Issue 10, ISSN 2278- 0181
17.	Neha Choudhary	"Analysis of Black Hole Attack in MANET using AODV routing Protocol".	11 Nov 2014	International Journal of Engineering Research and Technology	Volume1, 3 Issue
18.	Neha Choudhary	" Compression Effect on Images using different Wavelet Transformation "	2 Feb 2015	International Journal of Advanced Research in Electronics and Communication Engineering	Volume 4 Issue P.P. 0399-402
19.	Ms. Priya Rathore	" Compressive sensing receiver with HIC"	Jan. 2015	International Journal of software & hardware research in engineering (IJSHRE),	Volume 3 Issue 1.
20.	Dhananjay Kumar	"Modelling and simulation of D-STATCOM for voltage regulation imparting Various Control Strategies"	Jan 2014	National Conference on Trends and Challenges in Applied Science and Technology.	
21.	Dhananjay Kumar	"D-STATCOM Modelling and Simulation Applying Control Schemes for Power Quality Improvement",	April 2015	International Journal of Electrical and Electronic Engineering & Telecommunications (IJEETC)	Vol. 4, No. 2
22.	Ankit Jain	"Pipeline ADC using switched capacitor sharing technique with 2.5V, 10 bit"	January - 2014	International Journal of enhanced research in science, technology & engineering (2319- 7463) Vol. 3, Issue 1	(2319-7463) Vol. 3, Issue 1
23.	Dhananjay Kumar	"Modelling and simulation of D-STATCOM for voltage regulation imparting Various Control Strategies"	Jan 2014	National Conference on Trends and Challenges in Applied Science and Technology.	
24.	Dhananjay Kumar	"Piezoelectric Energy Harvesting from Vibration Induced Deformation of Floor Tiles"	Dec 2013.	6th National Power Electronics Conference (NPEC) at IIT, Kanpur	
25.	Dhananjay Kumar	"Piezoelectric Energy Harvester Design And Power Conditioning "	1-2 March 2014.	IEEEStudentConferenceonElectricalElectronicsandComputerScience20142014atMaulanaAzadNationalInstituteOfTechnologyBhopal,	http://ieeexplore .ieee.org/xpl/art icleDetails.jsp? arnumber=6804 491

26.	Anand Mantri	,"Development of FPGA based human voice recognition system with MFCC feature",	Feb 2014	SSRG International Journal of Engineering trends and technology, volume 8 number 10,	volume 8 number 10,
27.	Anand Mantri	" Performance Evaluation of Human Voice Recognition System based on MFCC feature and HMM classifier",	February 2014	International Journal of Engineering Research and Applications www.ijera.com	ISSN : 2248 - 9622, Vol. 4, Issue 2, , pp.715-719
28.	Balbhadrapatru ni Harita	"Performance analysis of turbo codede Wimax system over different communication channel "	August 2012	International Journal of Engineering Research and Development	
29.	Ankit Jain	"FPGA Design For Implementing data acquisition"	6 April 2013-7 April 2013	International Conference on Advance in Electronics and Electrical Engineering AEEE at Bangkok, Thailand	
30.	Ankit Jain	FPGA Design For Implementing data acquisition"	11 June 13	International journal of Advancements in electronics & Electrical Engineering IJAEEE	Volume 2 Issue 2 ISSN Number 2319-7498
31.	Ankit Jain	"FPGA Design For Implementing data acquisition Using ADC"	Feb 2013	Second International Conference PrCon 2013 Prestige Institute of Management Dewas	
32.	Ankit Jain	"Smart Camera as Embedded System"	March 2013	National Conference on Advances in Electronics and Communication Engineering at SVCE Indore	
33.	Ankit Jain	"Speed Control of Fan Using Fuzzy Logic Control"	Oct 2012	National Conference on Technological Research in Electrical and Electronics Engineering	
34.	Ankit Jain	"Cryptography Using MATLAB"	Sep 2012	National Conference on Recent Advances in Embedded System and VLSI Design	
35.	Ankit Jain and Deepak Yadav	"Different Windowing Techniques "	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
36.	Devendra Singh Mandloi	"Performance analysis of turbo codede Wimax system over different communication channel "	August 2012	International Journal of Engineering Research and Development Volume 3 Issue 1 P.P. 62-69 ISSN: 2278-067	Volume 3 Issue 1 P.P. 62-69 ISSN: 2278-067
37.	Devendra Singh Mandloi	"Equripple Optimal digital FIR Filter using Signed Power of 2"	Oct 2012	National Conference on Technological Research in Electrical and Electronics Engineering	
38.	Devendra Singh	" FIR Filter Design Using	Sep 2012	International Journal of	Volume 3 Issue

	Mandloi	Rounding Techniques"		Computer Science and Information	5 ISSN 0975- 9646
39.	Devendra Singh Mandloi	"OFDM signal of Digital video broadcasting implementation with FFT"	Sep 2012	Recent Advances in Embedded System and VLSI Design	
40.	Deendra Singh Mandloi	" Analysis QAM Performance over AWGN Channel"	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
41.	Sangeeta Solanki	"OFDM Signal of Digital Video Broadcasting Implementation With FFT"	Sep 2012	National Conference on Recent Advances in Embedded System and VLSI Design	
42.	Sangeeta Solanki	"Analysis QAM Performance over AWGN channel"	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
43.	Sangeeta Solanki	"Equripple Optimal digital FIR Filter using Signed Power of 2"	Oct 2012	National Conference on Technological Research in Electrical and Electronics Engineering	
44.	Sangeeta Solanki	" FIR Filter Design Using Rounding Techniques"	5 Sep 2012	International Journal of Computer Science and Information Technologies	Volume 3 Issue ISSN 0975- 9646
45.	Sangeeta Solanki	" Design High Pass FIR Filter with Signed Power of Two Term Using MATLAB"	August 2012	International Journal of Engineering Research and Application	Vol. 2 Issue 4 p.p 1968-1970 ISSN 2248- 9622
46.	Reeta Charde	"Image Performance over AWGN channel using PSK system"	July 2012	International Journal of Engineering and Innovation Technology	Volume 2 Issue 1 (ISSN 2277- 3754)
47.	Reeta Charde	"Performance Comparison of WT Denoising & MF Denoising over AWGN Channel"	July 2012	International Journal of Engineering Research and Technology	Volume 1 Issue 5
48.	Veena Tiwari	" Digital Wate Marker "	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
49.	Shravan Namdeo	"Cryptography using MATLAB"	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
50.	Shravan Namdeo	"Text and picture transmission by stenography"	March 2013	National Conference on Advance in Electronics and communication engineering	

S. No.	Name of the student	Event	Paper Title
1.	Shivani Kothari	Conference, 2012-13	Fin FET Technology for Low Power Design
2.	Sourabh Malu and Prabal Tiwari	Conference, 2012-13	Role of Social and Ethical issue in development of nanotechnology
3.	K.Kalpana, Deepak Patidar	Conference, 2012-13	Wireless Communication with WIBREE
4.	Dhananjay Dwivedi	Conference, 2012-13	Growth and Challenges of wireless technology from 1G to 4 G
5.	Roshan Khanna and Rupesh Kumar and Swati Pal	Conference, 2012-13	Different Windowing Techniques in Voice Recognition
6.	Hemendra Prajapati	Conference, 2012-13	Cryptography using MATLAB
7.	Achal Kukreja and Pooja Arandolwala	Conference, 2012-13	Smart Camera as Embedded Systems

- 20. Area of consultancy income: NIL
- **21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

- **22.** Student Projects:
  - Percentage of students who have done in-house projects including inter departmental / program:

The students of B.E final year are mandatorily required to submit the project, so 100% of final year students of B.E. course have done the projects.

- Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies 0%
- **23.** Awards / Recognitions received by faculty and students

Awards received by faculty:

S.No.	Name of faculty	Given By	Name of the award	Year
1	Mr. Ankit Jain	IIT QEEE	Quality Teacher	2014-15
2	Mr. Ankit Jain	IIT QEEE	Quality Teacher	2015-16
3.	Mr. Shravan Namdeo	IIT QEEE	Quality Teacher	2015-16
4.	Mr. Atul Singh Kushwah	IIT QEEE	Quality Teacher	2015-16

Award Received by students:

- 1. Mr. Shubham Mandloi, Ms. Vaishali Patidar & Mr. Madhusudah Kalwa Got RGPV Chancellor Scholarship for year 2014 & 2015.
- 2. Under QEEE Program following students got the certificate for successfully participated in the module Time Domain Analysis of first and second order system delivered by Professor Tushar Jain, IIT Mandi & Convolution time & frequency domain analysis delivered by Professor Devendra Jalihal IIT Madras.

- 3. Ayush Sethia, Banarasi Das Gupta, Navotna Modi, Pranjal Yadav, Rohit Chaturvedi Infrasonic Biological Earthquake Monitoring Station selected for first phase of Texas instruments innovation challenge India analog design contest 2014.
- 4. Arun Kumar R., Harsh Dani, Shashwat Bhargava, Aditya Mujumdar, Kunjan Dhoble Pick Trace and Place Autonomous Robot selected for first phase for Texas instruments innovation challenge India analog design contest 2014.

S No.	Name of the Students	Event	Prize
17.	Shikha Rajput	IIT Bombay	15th Position All India
18.	Shrishti Jain	IIT Bombay	15th Position All India
19.	Vaibhav Yadav	Body Building	State Nodal 2nd
20.	Suyog Jain	Body Building (M) (Bestphysique)	Gold Medal
21.	Vaishali Phate & Vaishali Thakur	Volleyball	Winner
22.	Vaibhav Yadav Sambhavaditya Sharma Subham Tripathi	Power Lifting (M)	Winner
23.	Ujjawal Mane	Quiz Competition	2000/- Runner Up
24.	Saloni Rathore	Basketball (W)	Runner
25.	Vaishali Phate	Volleyball	Winner
26.	Aman Arora	Tennis (M)	Winner
27.	Vaishali Phate & Vaishali Thakur	Volleyball (M & W )	Winner
28.	Ayush Sethiya	Kyaking/ Kanoing	Winner
29.	Deepak Soliwal Manvendra Narvariya	Lawn Tennis	Winner
30.	Banarashi Das Gupta	Hockey	Winner
31.	Ayush Sethiya	Swimming	Winner
32.	Suyog Jain	Power Lifting	Gold Medal

5. Srishti Kothiya - Battery charging through paints selected for first phase of ELECRAMA 2014.

**24.** List of eminent academicians and scientists / visitors to the department:

Date	Name of Guest	Industry/Designation
17/09/2015	Mr. Mustafa Hasan Abrar	BSNL, Bhopal
3/02/016	Mr. Virendra Patidar	BSNL, Indore
24/02/2016	Mr. Viresh Nayak	Scientific Officer BARC Mumbai
16/10/14	Mr Veeresh Nayak	Scientific Officer BARC Mumbai
10/2/2015	Dr. Krishna Lala, Sr. Project Manager	IIT Bombay
29/11/2013	Mr. Surendra Yadav	Scientific Officer RRCAT, Indore
25/3/14	Dr. Vaibhav Neema	IET DAVV, Indore
13/03/13	Dr. Ram Bilas Pachori	IIT, Indore
12/4/2013	Dr. Vaibhav Neema	IET DAVV, Indore

# 25. Seminars/ Conferences/Workshops organized & the source of funding

### c) National

Module description	Duration	Resource Persons	Funded by
eYantra Program	18-7-16 to 19-7-16	eYantra team members	E Yantra IIT Bombay
eYantra Program	17-4-2015 to 18-4-15	eYantra team members	E Yantra IIT Bombay
eYantra Program	10-2-2015	Dr. Krishna Lala, Sr. Project Manager	E Yantra IIT Bombay

# d) International

Nil

#### **26.** Student profile program/course wise:

Name of the	A mulications received	Salastad	Enrolled		Pass
Course/programme	Applications received	Selected	*M	*F	percentage
BE(ECE) 2012-2016	By State Counseling	116	84	32	NA
BE(ECE) 2013-2017	By State Counseling	32	19	14	NA
BE(ECE) 2014-2018	By State Counseling	10	6	4	NA
BE(ECE) 2015-2019	By State Counseling	32	26	6	NA

#### **27.** Diversity of students

Name of the Course	% of students from the same state	% of students from other state	% of students from abroad
BE(ECE) 2012-2016	92.3%	7.7 %	0
BE(ECE) 2013-2017	94.2 %	6.8 %	0
BE(ECE) 2014-2018	100 %	0 %	0
BE(ECE) 2015-2019	93.75 %	6.25 %	0

**28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Year	Number of Students	Name of Exam
2012-13	0	-
2013-14	2	GATE
2014-15	4	GATE
2015-16	5	GATE

**29.** Student Progression

Student prograssion	Against % enrolled					
Student progression	2012-2016	2011-2015	2010-2014	2009-2013		
UG to PG	6	8	7	8		
PG to M. Phil.	-	-	-	-		
PG to Ph.D.	-	-	=	-		

Ph.D. to Post-Doctoral				
Employed				
Campus selection	62	54	57	45
Other than campus recruitment				
Entrepreneurship/Self-employment	NA	NA	4	3

30. Details of Infrastructural facilities

- Departmental Library
  - The resources available
  - Titles: 150
- Internet facilities for Staff & Students: Internet Connection in all Departmental Computer Labs & Staff Cabin
  ISP: Airtel 8 Mbps (1:1)
  ISP: RPNet 35 Mbps (1:1)
  43 Mbps
- > Class rooms with ICT facility: Provided in every Classroom
- ➤ Laboratories:

Laboratories	Equipments
Network Analysis Lab / Digital electronics Lab	Thevenin's, Norton and other theorem kits, Fourier synthesis kits, spectrum analyzer, KVL, KCL Kits, maximum power transfer kit, Super position theorem kit, Fourier analysis kit, Flip flop, Counter, Encoder and Decoder, Register, different type of gates, universal gates, adder and subtractor, counters, shift register, multiplexer and de- multiplexers.
Communication Network Lab	Filter kits, transmission line kits, digital storage oscilloscope, and multimeter.
Microwave Lab / Antenna Lab	Test Bench klystron, Function generator, gun power supply, klystron power supply, attenuator, SWR meter, e-plane, waveguide cavity, multi hole directional coupler, magic tee, phase shifter, attenuator, CRO. FEKO Software, broad side array, phase array antenna, power meter, array antenna, simple dipole $\lambda/4$ , simple dipole $3/2\lambda$ , yagi-uda, SWR meter, current sensor, end fire antenna, digital multimeter, antenna trainer set kit, cathode ray oscilloscope.
Electronics Instrumentation Lab / Electronics Devices / Electronics Circuit Lab	CRO Trainer, Function generator, LVDT, Bridges, RTD, and Transducer kits, optical transducer trainer, digital power supply, multimeter. FET, BJT, UJT, MOSFET, TRIAC, SCR kits, PN, Zener, Tunnel diodes, Different type of amplifier kits, Op-amp (inverting and non inverting), Op-amp application, h-parameters, different types of oscillators, power supply, dc- multimeter, bread board, and different electronics components.
TV & Radar Engineering Lab / Optical communication Lab	Colour TV trainer, RADAR trainer, CRO, digital multimeter. Optical trainer kits, fiber optic trainer, multiplexer & de-multiplexer trainer, digital link trainer, analog link trainer, elementary fiber optic trainer, advanced fiber optic trainer, optical power meter.
Micro processor and microcontroller Lab	8085 trainer kit, 8086 trainer kit, universal programmer and tester kit, 8051 microcontroller kit, microcontroller programmer kit, interfacing

	kits (stepper motor, seven segment, ADC and DAC).
Software -I Lab / Software- II Lab/ VLSI /CMOS Circuit Design lab	VLSI Universal Development board, Microwind 3.5 Software. Lab view 8.6 based software, TINA Pro 7.1 and 9.0 software for circuit design and simulation. Xilinx 12.1i ISE system edition, CPLD kit, FPGA kit, power supply, and different peripherals cards and cables.
Computer network lab /DSP Lab	MATLAB R2010B, GSM trainer (transmitter and receiver kit)
Project lab	Project work Bench, Soldering iron, digital storage oscilloscope, Bread-Board, Miltimeters, function generator, PCB art work film maker, IC tester, analog work station lab, digital work station lab, Compass Sensor 1101A, Sharp Distance Sensor (2YOA02)F-12, Universal Programmer (TOP 2008), Arduino UNO Development Board, ARM 9 With 3.5 TFT Development Board, ARM 7LPC2148 Development Board, PIC18F452, PIC Programmer, PIC Development board, AT 89S52, and various electronic components.
Analog and Digital Communication (CS) / Analog Communication/ Digital Communication	Different type of modulator and demodulator kits, Signal Sampling and reconstruction Kits, TDM PCM PAM PPM PWM kits, ASK, FSK, PSK, spectrum analyzer, function generator, digital storage oscilloscope.
Fundamental of Electronics lab / Fundamental of Electrical Lab	Transformers, superposition and Thevenin's theorem kit, Logic gates kit, De Morgan's theorem kit, AC circuit boards, Motors and transformer

**31.** Number of students receiving financial assistance from college, university, government or other agencies : NIL

Details		2015-16		2014-15		2013-14		2012-13	
		Count	%	Count	%	Count	%	Count	%
	SC	28		28		36		64	
Catagory	ST	02	28%	02	29%	6	30%	04	24%
Category	OBC	363		408		500		369	
	Minority	58		49		09		14	
Total		451		487		551		451	

**32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

Module description	Any other contributory institute /industry	Duration	Resource persons	Target audience	PEO's
Workshop on virtual lab	IIT Delhi	31/3/16 to 1/4/16	Mr. Tanmay Das, Mr Prateek Sharma and Mr Ashish Mudgil	Students 2 <sup>nd</sup> year, 3 <sup>rd</sup> year and 4 <sup>th</sup> year & faculty & Staff members	PEO 2
Workshop on Mobile Making	Indian Tech Group Pvt Ltd	25-26 Feb 2016	Team of Indian Tech Group (ITG)	Students 2 <sup>nd</sup> year, 3 <sup>rd</sup> year and 4 <sup>th</sup> year & Faculty members.	PEO 1, PEO 2

Workshop on Communication toolbox using MATLAB	ITIE Knowledge Solution Pvt Ltd	4-5 Feb 2016	Mr. Sanjeev Kubakkadi	Students 2 <sup>nd</sup> year, 3 <sup>rd</sup> year and 4 <sup>th</sup> year & Faculty members.	PEO 1, PEO 2
Robotics Workshop	IIT Delhi	18-19 Sep 2015	Mr. Surjeet Kumar VBM Technologies in association with IIT Delhi	Students 2 <sup>nd</sup> year, 3 <sup>rd</sup> year and 4 <sup>th</sup> year & Faculty members.	PEO 1, PEO 3
Workshop on virtual lab	IIT Delhi	09/09/2015 to 10/09/2015	Mr. Tanmay Das, Mr Prateek Sharma and Mr Ashish Mudgil	Students 2 <sup>nd</sup> year , 3 <sup>rd</sup> year and 4 <sup>th</sup> year & faculty & Staff members	PEO 2
QEEE Program	IIT Madras	Jan to June 2016	QEEE team members	Students 2nd year, 3rd year and 4th year & Faculty members.	PEO 2
eYantra Program	IIT Bombay	17-4-2015 to 18-4- 2015	eYantra team members	Students 3rd year and Faculty Members	PEO1, PEO2
iPDC (Propeller Display Challenge) workshop	Techkriti 2015, IIT Kanpur with i3indya Technologies	30 Jan 2015	Mr. Deepak Pandey i3indya technologies team members	Students 2nd year , 3rd year and 4th year & faculty & Staff members	PEO 1, PEO 3
Workshop on Embedded System	Indeyes InfoTech Pvt. Ltd	11th to 12th sep 2014	Mr Abhishek Tiwari and its team	3rd year and 4th year & faculty & Staff members	PEO 1
QEEE Program	IIT Madras	19-1-2015 to 19-3- 2015	QEEE team members	Students 2nd year , 3rd year and 4th year	PEO2
National Robotics Championship & workshop	ARK Techno solutions in association with Helios, IIT – Bombay	27 to 28 Sep 2013	Mr. Nitin Mishra & Mr. Phanideep	Students 2nd year , 3rd year and 4th year & faculty & Staff members	PEO 1, PEO 3
Workshop on EM simulations and Antenna Designs using CAD FEKO tool	Safew Tech System.	20 to 21 Sep 2013	Mr. Vishal Jain, Mr Swapnil Kulkarni and Mr. Dhananjay Magar	4th year & faculty & Staff members	PEO 1, PEO 2
Workshop on Advance Controller	Kaim softech Bangalore	14 to 19 Jan 2013	Mr. Abhilash Thamos	Faculty & Staff members	PEO 1, PEO 2
Workshop on Fun with MATLAB toolbox used image processing	ITIE Knowledge Solution Bangalore	26 to 28 Dec 2012	Mr. Sanjeev Kubakkadi	Faculty & Staff members	PEO 1, PEO 2
National Robotics Championship & workshop	Novel Technologies	30 August to 3 Sep 2012	Novel Technologies team members	Students 1st year, 2nd year, 3rd year and 4th year & faculty & Staff members	PEO 3

Date	Name of Guest/ Speaker/ Expert	Industry/Designation	Topic	PEO's
13th July 2015	Mr Anil Pandey & K Pradeep	Head, Tushar Surti Gridlogics Technologies Pvt. Ltd, Managing Director Prodyovidhi	Intellectual Property Rights in Electronics, IT & ICT	PEO 3
28th July 2015	Shri V P Sharma	Deputy Director MSME	Entrepreneurship Development Cell	PEO 3
17/09/2015	Mr. Mustafa Hasan Abrar	BSNL, Bhopal	Mobile Communication	PEO 1, PEO 3
27-10-15	Ms. Kriti Namdeo	Senior quality assurance analyst in waste management logistics	software testing	PEO 3
3/02/016	Mr. Virendra Patidar	BSNL, Indore	Communication System	PEO 1, PEO 2
24/02/2016	Mr. Viresh Nayak	Scientific Officer BARC Mumbai	Introduction of attenuator	PEO 1, PEO 2
16/10/14	Mr Veeresh Nayak	Scientific Officer BARC Mumbai	Introduction of attenuator	PEO 1
30/01/15	Mr. Deepak Pandey	i3indya™ Technologies Pvt. Ltd	Introduction of Propellor Clock System	PEO1, PEO3
10/2/2015	Dr. Krishna Lala, Sr. Project Manager	IIT Bombay	Robotics	PEO 1, PEO 2
29/11/2013	Mr. Surendra Yadav	Scientific Officer RRCAT, Indore	MATLAB & Simulink	PEO 1, PEO 2, PEO 3
25/3/14	Dr. Vaibhav Neema	IET DAVV, Indore	CMOS VLSI Design	PEO 1, PEO 2
23/08/12	Mr. P.S.Rathore	Doordarshan Indore	Digital Earth Station & DTH Services	PEO 1, PEO 2
13/03/13	Dr. Ram Bilas Pachori	IIT, Indore	Signal Processing (Wavelet Transform)	PEO 1, PEO 2, PEO 3
12/4/2013	Dr. Vaibhav Neema	IET DAVV, Indore	VLSI Design	PEO 1, PEO 2

#### Seminar / Expert Lecture

## **33.** Teaching methods adopted to improve student learning

List of teaching method adopted by the department.

Category	Methods Adopted		
	Teaching Aids		
	Black Board		
Theory	• White-board		
	Power Point Presentations		
	Multimedia presentation		
	Ctude metanial side as like NDTEL Teaching Matheda		
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	• Study material videos like NPTEL Teaching Methods		
	<ul> <li>Correlating concepts taught in the class with laboratory experiments</li> </ul>		
	<ul> <li>Assignments with emphasis on thinking and innovation skills</li> </ul>		
	<ul> <li>Tutorials for the problem oriented subjects</li> </ul>		
	Seminar Presentation for students		
	<ul> <li>Discussions based on previous Examination question papers</li> </ul>		
	Motivating mini projects		
	Arranging guest lectures		
	<ul> <li>Hands on Demonstration/ workshops through ISTE</li> </ul>		
	Questions on previously taught topics		
	Suitable materials from web		
	• e Course file / e Note		
	Demonstration of experiments using simulation software's wherever		
Laboratory	applicable		
	Minor & Major project		

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced:

- To make teaching effective, concepts are explained by charts and models wherever necessary.
- Certain topics are covered with orientation towards GATE & IES
- Some important basics and topics beyond syllabus are covered
- Faculty are provide internet to prepare lecture notes
- ➢ Faculties are encouraged to attend seminars, conferences, workshop to enhance their skills so that the knowledge can be transferred in a better way.
- E-recourses, reference books are provided in the library
- LCD projector screens / Overhead projectors help the faculty to deliver interactive lectures and demonstrations of animations/ ppt slides/ lecture contents.
- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- SMART Class SMART boards are being used for teaching purposes.
- Augmentation of conventional black board teaching by using audio-video aids.
- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.

> Online availability of journals in the intranet for the project guidance.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

The department conducting students symposia, Invited Lectures, Paper Presentations, Technical Quiz Competitions, Group Discussions and project presentation etc. The students of ECE department are also members of professional society ISTE. The activities groom the overall personality and organizing skills of the students.

The college team visits nearby villages and conducts camps to promote hygienic aspects and also to undertake social service activities to create awareness among people. This also improves friendship among students, team work and leadership quality. Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm. We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.

In-plant Training Undertaken by Students

Students undergo in-plant training in various industries during their semester vacation holidays. This provides an industrial exposure to the students and facilitates them to develop their career in the high tech industrial requirements.

- **35.** SWOC analysis of the department and Future plans
- Strength :
  - Well qualified, committed and experienced Faculty members.
  - Excellent infrastructure with well-equipped and sufficient laboratories and library facility and Smart classrooms are available for the usage of Animations/NPTEL Videos/Demos.
  - Placement of the students in Good Percentage.
  - Good numbers of technical interactions like Guest Lectures, Workshops, Competitions & symposiums are conducted by the Department
  - Robotics Club, mini project exhibition, National societies ISTE for the benefit of faculty and students to horn their skills.
  - Coaching Classes are carried out to prepare the students for Placements/GATE/GRE /BEC (Business English Certificate) Examination
  - Long list of alumni students who are serving in leading industries at respectable positions.
  - There is solid student assistant management in department
  - Interdisciplinary and innovative projects by student
  - Department emphasis on overall grooming of student (hand on practical's, industry visits, social causes etc.)
- ✤ Weakness:
  - Lack of patents activity.

- Lack in the industry projects or consultation though it may not apply to the department.
- Intake of low rank student.
- Industry institute interaction needs to be strengthened further.
- Utilization of research laboratories may to be improved
- Number of faculty members doing research work has to be increased.
- Number of MoU with companies may be increased.

### ✤ Opportunity:

- An effort for better research work
- As students are from varying background, communication skill needs to be improved.
- Provide better opportunities for our faculty and students to engage in professional consultancy services to the industries and government sectors.
- Student's projects internship is encouraged in industries and National laboratories.
- Innovation in teaching learning process.
- Development of skill development courses.
- Student's participation in club activities, intercollegiate competitions.
- The technology is developing at a rapid rate, Robotics, Mechatronics
- including Nanotechnology, cloud computing 4G in mobile communication construction Management are the recent technological advances to name a few.
- The students have become more demanding. The students have a large potential, which can be honed.
- The interdisciplinary research in niche areas is the need of the day, which gives opportunity in all areas.

### Challenges:

- To motivate students for pursuing a research career
- Lack of basic proficiency and technologies to work effectively and efficiently.
- Faculty perceives that the quality of student has declined, thereby making it more difficult to provide research based study.
- To promote study-abroad and student exchange programme for higher semester students.
- Patenting the innovative research work carried out in the department.
- To encourage the students to become entrepreneurs.
- Collaboration with foreign Universities.
- Constant changes in technology.
- Changing Social and economical scenario leading to unpredictable future.
- Coping with rapid changing in technology and the industrial requirements to improve the employability of the students are the biggest challenge.

# ER 4 MECHANICAL ENGINEERING

- 1. Name of the department: Mechanical Engineering
- 2. Year of Establishment: 2003
- 3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.) :
  - UG Bachelor of Engineering, Mechanical Engineering
  - PG Master of Engineering, Machine Design

Program	Description
	Started with 60 seats in 2003
	Intake increased to 90 in 2004
UG in Mechanical Engineering	Intake increased to 120 in 2009
	Intake increased to 180 in 2013
	Intake increased to 240 in 2014
	Intake increased to 360 in 2015
	Intake Decreased to 240 in 2016
PG in Machanical Engineering	Started with 18 Seats in 2009
r o in Mechanical Eligneeting	With specialization in Machine Design

4. Names of Interdisciplinary courses and the departments/units involved:

Semester	Subject	Department
III &IV	Engg. Mathematics	Applied Science & Humanities
III	JAVA	CSE
IV	DOT NET	CSE
V	RDBMS	CSE

5. Annual/ semester/choice based credit system (programme wise): 2004 to 2010 -Non Grading System; 2010 to 2015 Grading System 2015 onwards-CBCS (Choice Based Credit System)

6. Participation of the department in the courses offered by other departments: YES

Semester	Subject	Department
I/II	Engineering Mechanics	CE, EC, CHEM, IT, CSE
I/II	Manufacturing Practice	CE, EC, CHEM, IT, CSE
I/II	Engineering Graphics	CE, EC, CHEM, IT, CSE
I/II	Concept of Engineering Design	CE, EC, CHEM, IT, CSE

- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL

**9.** Number of teaching posts:

Designation	Filled
Professor	05
Associate Professor	05
Assistant Professor	29

10. Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

Name	Qualification	Designation	Specialization	Experie nce	No. of P.hd Guided Student
Dr. K. K. Gupta	Ph. D – 2012 MNIT BHOPAL	Professor & Dean	Thermal Engg	14	NIL
Prof. V.C.Gupta	M TECH IIT Roorkee	Professor	Thermal Engg	32	NIL
Dr. Prasanna kumar	Ph.D., IISC Bangalore	Professor	Thermal Engg	31	NIL
Dr. Manish Choudhary	Ph.D.	Professor	Industrial Engg & Management	12	NIL
Brig.G.P.Chattopadh yay	M TECH 1977 IISC Bangalore	Associate professor	Machine Design	30	NIL
Mr. Anand Mahajan	ME-2001 RGPV BHOPAL	Associate professor	Industrial Engg & Management	14	NIL
Dr. A.P. Singh	Ph.d 2011 NIT,silcher	professor	Thermal Engg	10	2*
Mr. Mukesh Sharma	ME-2001 RGPV Bhopal	Associate professor	Industrial Engg & Management	15	NIL
Mr. Rakesh Thakur	sh Thakur ME-2005 RGPV Associate Tribology & Bhopal professor Machine Desi		Tribology & Machine Design	13	NIL
Mr. K.P. Tiwari	M. TECH -2012 DAVV INDORE	Associate professor	Renewable Energy	8	NIL
Mr. Om Prakash Singh	ME-2014 RGPV Bhopal	Assistant professor	Industrial Engg & Management	12	NIL
Mr. Amit Yadav	ME-2015 RGPV Bhopal	Assistant professor	Industrial Engg & Management	7	NIL
Ms. Minakshi Das	ME-2015 RGPV Bhopal	Assistant professor	Production & Machine Design	5	NIL
Mr. Akhilesh Mishra	ME -2015 RGPV BHOPAL	Assistant professor	Thermal Engg	7	NIL
Ms. Deepti Malviya	BE-2011 RGPV BHOPAL	Assistant professor	Machine Design	5	NIL
Ms. Falguni Gorana	ME RGPV BHOPAL	Assistant professor	Machine Design	5	NIL
Mr. Pritesh Paliwal	ME-2014 RGPV Bhopal	Assistant professor	Machine Design	5	NIL
Ms. Priyanka	ME RGPV	Assistant	CIM	5	NIL

Potghan	Potghan BHOPAL professor				
Ma Daamika Datahan	ME	Assistant	CIM	CIM 4	
Ms. Deepika Polghan	RGPV BHOPAL	professor	CIM	4	INIL
	ME-2014	Assistant	Production &		
Mr .Sumeet Shukla	RGPV	Assistant	Machina Dasign	8	NIL
	Bhopal	professor	Machine Design		
Mr. Arpan	BE-2012	Assistant	Production &	4	NII
Suryavanshi	RGPV BHOPAL	professor	Machine Design	4	INIL
Mr. Baiaay Gunta	ME-2015	Assistant	Production &	3	NII
wir. Kajeev Oupta	RGPV, Bhopal	professor	Machine Design	3	INIL
Ma Chantany Day	ME 2015, RGPV	Assistant	Mashina Dasian	75	NII
Mr. Snantanu Koy	BHOPAL	professor	Machine Design	1.5	INIL
Ma Haman Khan	ME-2015	Assistant	Thermal & Design	1	NII
Mr. Usman Knan	RGPV Bhopal	professor	Engg	1	INIL
Mr. Daiach Sanaan	ME-2008 RGPV	Assistant	Industrial Engg &	o	NII
Mr. Rajesh Songar	Bhopal	professor	Management	0	INIL
Mr. N. Doghy Drogod	M Tech 2014	Assistant	Mashina Dasian	4	NII
Mr. N. Kagilu Prasad	BIT Mesra	professor	Machine Design	4	INIL
Mr. Aiou Dogoro	ME-2014	Assistant	Industrial Engg &	4	NIL
Mr. Ajay Pagare	DAVV Indore	professor	Management	4	
	ME-2016	Assistant	Thormal nag	0.5	NII
IVII. ASIIISII SOIII	RGPV Bhopal	professor	r nermai ngg.		MIL
Mr. Yogesh Dodiya	ME-2011	Assistant	Thermal & Design	4	NIL
	DAVV Indore	professor	Engg	4	
Mr. Umash Padada	BE 2008	Assistant	Thermel Enga	4	NII
MI. Unlesh Badode	RGPV BHOPAL	professor	Thermai Engg.		INIL
Mr. Voibboy Join	ME-2013 RGPV	Assistant	Production &	0	NII
wii. Valuitav Jain	Bhopal	professor	Machine Design	7	MIL
Mc Saniotana Gunta	ME-2013 RGPV	Assistant	CIM	6	NII
wis Sanjotsha Gupta	Bhopal	professor	CIW	0	INIL
Mr. Krishna Whaga	ME 2014	Assistant	Production &	L L	NII
MI. KIISIIIa whage	DAVV, Indore	professor	Machine Design	C	INIL
Mr. Vilsoch Sharma	ME-2013 RGPV	Assistant	Production &	L L	NII
IVII. VIKASII SHAHIMA	Bhopal	professor	Machine Design	5	INIL
Mr. Dooroi mondlivo	ME-2014 RGPV	Assistant	Production &	5	NII
Mr. Deeraj mandifya	Bhopal	professor	Machine Design	3	INIL
Mr Harshwardhan	BE	Assistant	Thermal	10	NII
Pathak	RGPV Bhopal	professor	Engineering	10	NIL
Mr. Pushpanjay	M-tech NIT	Assistant	Thermal	1	NII
Kumar Singh	Patna	professor	Engineering	1	NIL
Ma Litin Mandalal	ME SGISTS	Assistant	Thermal		NIT
wir. Jiun Mandoloi	Indore	professor	Engineering		
Ma Dob-1 Vour	ME-2015	Assistant	Thermal	2	NII
Mr. Rahul Verma	RGPV BHOPAL	professor	Engineering	3	NIL

**11.** List of senior faculty visiting: NIL

- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- **13.** Student-Teacher Ratio: 15:1

**14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 10 & Administrative staff: 01

S.No	Name	Qualification	Designation
1.	Dr K. K. Gupta	Ph. D – 2012 MNIT BHOPAL	Professor & Dean
2.	Prof. V.C.Gupta	M TECH 1977 IIT Roorkee	Professor
3.	Dr. Prasanna kumar	Ph.D., IISC Bangalore	Professor
4.	Dr Manish Choudhary	2015 DAVV Ph.D.	Professor
5.	Brig.G.P.Chattopadhyay	M TECH 1977 IISC Bangalore	Associate professor
6.	Mr. Anand Mahajan	ME-2001 RGPV BHOPAL	Associate professor
7.	Dr. A.P. Singh	Ph.D. 2011 NIT, silcher	Associate professor
8.	Mr. Mukesh Sharma	ME-2001 RGPV Bhopal	Associate professor
9.	Mr. Rakesh Thakur	ME-2005 RGPV Bhopal	Associate professor
10.	Mr. K.P. Tiwari	M. TECH -2012 DAVV INDORE	Assistant professor
11.	Mr. Om Prakash Singh	ME-2014 RGPV, Bhopal	Assistant professor
12.	Mr. Amit Yadav	ME-2015 RGPV, Bhopal	Assistant professor
13.	Ms. Minakshi Das	ME-2015 RGPV, Bhopal	Assistant professor
14.	Mr. Akhilesh Mishra	ME-2015 RGPV BHOPAL	Assistant professor
15.	Ms Deepti Malviya	BE-2011 RGPV BHOPAL	Assistant professor
16.	Ms. Falguni Gorana	ME- 2016 RGPV BHOPAL	Assistant professor
17.	Mr. Pritesh Paliwal	ME-2015 RGPV, Bhopal	Assistant professor
18.	Ms. Priyanka Potghan	ME 2015RGPV BHOPAL	Assistant professor
19.	Ms. Deepika Potghan	ME 2015 RGPV, BHOPAL	Assistant professor
20.	Mr .Sumeet Shukla	ME-2014 RGPV, Bhopal	Assistant professor
21.	Mr. Arpan Suryavanshi	ME-2014 RGPV, BHOPAL	Assistant professor
22.	Mr. Rajeev Gupta	ME-2015 RGPV, Bhopal	Assistant professor
23.	Mr. Shantanu Roy	ME 2016 RGPV BHOPAL	Assistant professor
24.	Mr. Usman Khan	ME-2015 RGPV Bhopal	Assistant professor
25.	Mr. Rajesh Songar	ME-2008 RGPV Bhopal	Assistant professor
26.	Mr N. Raghu Prasad	M Tech 2014 BIT Mesra	Assistant professor
27.	Mr. Ajay Pagare	ME-2014 DAVV Indore	Assistant professor
28.	Mr Ashish Soni	ME-2016 RGPV Bhopal	Assistant professor
29.	Mr. Yogesh Dodiya	ME-2011 DAVV Indore	Assistant professor
30.	Mr. Umesh Badode	BE 2008 RGPV BHOPAL	Assistant professor
31.	Mr Vaibhav Jain	ME-2013 RGPV Bhopal	Assistant professor
32.	Ms Sanjotsana Gupta	ME-2013 RGPV Bhopal	Assistant professor
33.	Mr Krishna Whage	ME 2014 DAVV, Indore	Assistant professor
34.	Mr Vikash Sharma	ME-2013 RGPV Bhopal	Assistant professor
35.	Mr. Dheeraj mandliya	ME-2014 RGPV Bhopal	Assistant professor
36.	Mr. Jitin Mandloi	ME-2015RGPV Bhopal	Assistant professor
37.	Mr. Pushpanjay Kumar Singh	M.TECH-2016 NIT Patna	Assistant professor
38.	Mr Harshwardhan Pathak	BE1998 RGPV Bhopal	Assistant professor
39.	Mr. Rahul Verma	ME-2015 RGPV Bhopal	Assistant professor

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

- **16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL
- 17. Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL

### 18. Research Centre /facility recognized by the University : NIL

#### **19.** Publications:

- a. Publication per faculty
  - Number of papers published in peer reviewed journals (national / international) by faculty and students
- b. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
  - Monographs
  - Chapter in Books
  - Books Edited
  - Books with ISBN/ISSN numbers with details of publishers
  - Citation Index
  - SNIP
  - SJR
  - Impact factor
  - h-index

S. No.	Title	Author	Publishers	ISBN No.
1	Sustainable Energy Technologies	Brig. G.P. Chattopadhyay	Atlantic publication and distributors	9788126920327
2	Engineering as Career	Brig. G.P. Chattopadhyay	Atlantic publication and distributors	9788126918027
3	Thermodynamics	Dr Prasnna kumar	Pearson Education	9788131771853

Name of the Faculty	Title of Paper	Detail of Journal / Conference
	A Review. Renewable and Sustainable Energy Reviews. ISBN No. 2946-2955 Vol 2010; 14(9)	Bio-Fuels for the Gas Turbine.
	Ironical Journal of Energy & Environment Vol. 2010; 1(3): 205-210	Evaluation of Soya Bio-diesel as a Gas Turbine Fuel.
	International Journal of Engineering Research and Industrial Applications Vol 2010; 3 ( III) : 287-297	Characterization of Karanj bio-diesel for Gas Turbine Applications
Dr. K. K. Gupta	Elixir international thermal engg ISBN no. 25867-25873 vol 72 (2014) 25867-25873,26 july 2014	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K- $\epsilon$ Turbulence Model
	International Journal of Advances in Engineering - IJAE Tech International Journal Vol.1, No. 1. Oct.2014	Analysis of Supersonic Flows in the De- Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD
	International Journal of Advances in Engineering - IJAE Tech International Journal Vol.1, No.1, Oct.2014.	Computational Analysis of De Laval Nozzle into A Suddenly Expanded Duct
	International Journal of Advances in Engineering - IJAE Tech International	Computational analysis of isolator for de-laval nozzle for supersonic flow

	Journal Vol.1, No.1, Oct.2014.	
	XIX ISAF (International Symposium on Alcohol Fuels) International Symposium on Alcohol Fuels Oct 10-14, 2011	Analysis and Characterization of Biodiesels for the Gas Turbine
	International Conference on Energy Engineering, Pondicherry Engineering College, Puducherry January, 2009	Feasibility of Jatropha bio-diesel for the Gas Turbine
	15 <sup>th</sup> International Conference on New Horizons of Mechanical Engineering, Rajiv Gandhi Technological University, Bhopal	Effect of alternative fuels and operating conditions on the performance and emissions of a Gas Turbine
	International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014)	Design analysis and Fabrication of electric bicycle and recover energy by different methods
	International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014)	Numerical Analysis of heat Exchanger by fluent using K-€ turbulence model
	International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014)	Numerical analysis of S.I. engine Carburetor at different angles of throttle valve
	National Conference on "Recent Trends & Challenges in Mechanical Engineering, KITS, Nagpur	Inlet air cooling – an effective method for performance enhancement in Gas Turbine
	All India Seminar on "Development of Green Fuels for Energy Security & Environment Protection" organized by IES, IPS Academy, Indore	Bio-fuels as diesel substitute – Problems and possible Solution
	National Conference organized by Institute of Technology, Guru Ghansi Das University, Bilaspur	Latest Developments in Hybrid Vehicle
Dr A P Singh	National Seminar on "Eco-Friendly Technologies and Challenges for Mechanical Engineers", at S.G.S.I.T.S. Indore (M. P.)	Refrigerant R-152a an environment friendly alternative to R-134a
Di. A. I. Shigh	National Seminar organized by Takshshila Institute of Engineering & Technology, Jabalpur (M.P.)	World Class Manufacturing- A winning concept in Indian context
	During XIII National Conference of Indian Society of Mechanical Engineers (ISME)IIT Roorkee	Pool boiling of Refrigerants on Horizontal Tubes
	National Conference in CDGI Institute, Indore	Analysis of Emission characteristics of Karanja Bio-Diesel at different loads
	National Conference (NCIRE-2014) at MIST, Indore	Analysis Of A Helical Savonius Rotor At 45° Twist Angle Using Fluent
	National Conference (NCIRE-2014) at MIST, Indore	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery
	National Conference (NCIRE-2014) at MIST, Indore	Analysis of combined Savonius -Darrieus and Helical Savonius wind rotor using ANN
	National Conference (NCIRE-2014) at MIST, Indore	Perform two-dimensional modeling and simulation of the performance of combined two bucket Savonius and two-bladed Darrieus rotor
	National Conference (NCIRE-2014) at Patel group of Institution, Indore	Analysis of Engine Performance of Karanja Bio-Diesel at different loads

Mr. K.D. Timori	International Journal of Engineering Research & Technology e-ISSN: 2278-0181 Vol.2 - Issue 10 (October - 2013)	Effect of Fuel Injection Pressure on CI Engine Using Preheated Karanja Oil as a Fuel
MI. K.P. HIWan	International Journal of Engineering Research & Technology e-ISSN: 2319-1163 Volume: 02 Issue: 10 Oct-201	FUEL WASTAGE AND EMISSION DUETOIDLINGOFVEHICLESATROAD TRAFFIC SIGNALS
Ms. Falguni Gorana	International Journal of Engineering Sciences and Management (IJESM) ISSN:2277-5528	Improve the flow of inventory and information by using value stream mapping to achieve a cost saving in an industry
	International Science congress Association ISSN 2278-9472 Vol. 4(5), 1-7, May 2015	Design Optimization of vehicle body structure against roof crush as per FMVSS216using finite element analysis.
Ms. Priyanka Potghan	International journal of Engineering Sciences and Research Technology ISSN 2277-9655	Analysis and reduction of stress in a circular saw blade.
	International journal of Engineering Sciences and Management ISSN 2277-5528	Finite Element Analysis of circular saw blade and Stress reduction by using surface coating method
	International Science congress Association ISSN 2278-9472 Vol. 4(5), 1-7, May 2015	Design Optimization of vehicle body structure against roof crush as per FMVSS216using finite element analysis.
Ms. Deepika Potghan	International journal of Engineering Sciences and Research Technology ISSN 2277-9655	Stress reduction by introducing stress relieving features of spur gear used in lathe headstock.
	International journal of Engineering Sciences and Research Technology ISSN 2277-9655	Finite element analysis of spur gear in lathe headstock
Ms. Minakshi Das	International journal of engineering sciences & research technology ISSN: 2277-9655	Commercial Passenger Vehicle Seat Design and Testing Using Advance Simulation Procedure
Ms. Minaksmi Das	International Journal of Engineering Sciences and Management IJESM ISSN:2277-5528	Improve the flow of inventory and information by using value stream mapping to achieve a cost saving in an industry
Mr. N. Raghu Prasad	International Advance Research Journal in Science Engineering and Technology ISSN No: 2393 8021 Vol: 2 ISSN No: 2393 8021 Page no 126-129	Buckling Analysis Of Rectangular Plates With Cut-outs And Partial Edge Compression
	International Journal Applied Engineering and Research	Pitch and Bounce Analysis for LCV's cabin and rear suspension
Ms. Deepti Malviya	International journal of engineering sciences & research technology ISSN: 2277- 9655	DESIGN AND DEVELOPMENT OF WALKING BIPEDAL ROBOT WITH THE HELP OF ARDUINO CONTROLLER
	International journal of engineering sciences & research technology ISSN: 2277 - 5528	DESIGN AND CONSTRUCTION OF WALKING BIPEDAL ROBOT
Mr. Ajay Pagare	International Journal of Emerging Technologies and Innovative Research ISSN:2349-5162 Vol.1, Issue 1, page no.1-4, June-2014	Study and Analysis of Inventory Management Practices in Small Scale Industry.
Mr. Ashish Soni	International Journal of Engineering Trends and Technology 10.14445/22315381/IJETT V27P236 Volume-27 Number-4	Optimization of Selecting Tool Materials under Different Tool Geometry in a Single Point Cutting Tool - a Review
Mr. Varun Pathak	IOSR Journal of Mechanical and Civil Engineering ISSN: 2278-1684,P-ISSN:2320- 334x, Vol. 12, Issue 1	Safety Features Evaluation of the vehicle Interior using finite Element Analysis (Fea)
Mr. Akshay Kutumbale	IOSR Journal of Mechanical and Civil	Safety Features Evaluation of the vehicle

	Engineering ISSN: 2278-1684,P-ISSN:2320- 334x, Vol. 12, Issue 1	Interior using finite Element Analysis (Fea)
Mr. Dheeraj Mandliya	IOSR Journal of Mechanical and Civil Engineering ISSN: 2278-1684,P-ISSN:2320- 334x, Vol. 12, Issue 1	Safety Features Evaluation of the vehicle Interior using finite Element Analysis (Fea)
	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K- $\epsilon$ Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
	Analysis Of A Helical Savonius Rotor At 450 Twist Angle Using Fluent	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
Mr. O P Singh	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
	Analysis of combined Savonius -Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014
	Analysis of Supersonic Flows in the De- Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014.
	Computational analysis of DE LAVAL Nozzle into a suddenly Expanded Duct	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014
	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAE Tech International Journal, Vol.1, No.1, Oct.2014.
	Analysis of Emission characteristics of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014
	Analysis of Engine Performance of Karanja Bio-Diesel at different loads	National Conference (NCIRE-2014) at Patel group of Institution, Indore, 31st oct 2014 -01 nov 2014.

#### **Students Publication**

Name of the Student	Title of Paper	Detail of Journal / Conference
	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K-E Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
	Analysis Of A Helical Savonius Rotor At 450 Twist Angle Using Fluent	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
Saket B.S.Pandey	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014
	Analysis of Supersonic Flows in the De- Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD	IJAETech International Journal, Vol.1, No. 1. Oct.2014.
	Computational analysis of DE LAVAL Nozzle into a suddenly Expanded Duct	IJAETech International Journal, Vol.1, No. 1. Oct.2014
	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAETech International Journal, Vol.1, No.1, Oct.2014.

	Analysis of Emission characteristics of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014
	Analysis of Engine Performance of Karanja Bio-Diesel at different loads	National Conference (NCIRE-2014) at Patel group of Institution, Indore, 31st oct 2014 - 01 nov 2014.
	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K-E Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
Antim Rewapati	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
Annini Kewapan	Design and Fabrication of Electric Bicycle and Recover Energy By Different Methods	IJAETech International Journal, Vol.1, No. 1. Oct.2014
	Design, Analysis and Fabrication of Human Transporter Segway Vehicle	IJAETech International Journal, Vol.1, No.1, Oct.2014.
	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K-E Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
	Computational analysis of DE LAVAL	IJAETech International Journal, Vol.1, No.
	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAETech International Journal, Vol.1, No.1, Oct.2014
Pratik Sharma	Analysis of Engine Performance of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014
	Numerical Analysis of heat Exchanger by fluent using K-€ turbulence model"	International Conference on (ICAMES-2014)22-23 December, 2014 in LNCT Gwalior.
	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014
	Analysis of Supersonic Flows in the De- Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014.
	Analysis Of A Helical Savonius Rotor At 450 Twist Angle Using Fluent	National Conference (NCIRE-2014) at MIST. Indore, Sept 2014.
Gauray Patel	Analysis of Emission characteristics of Karania Bio-Diesel at different loads	National Conference in CDGI Institute, Indore Nov-2014
	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAETech International Journal, Vol.1, No.1, Oct.2014
Nishant Moona	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014
Akshay Sangamnerkar	Design and Fabrication of Electric Bicycle and Recover Energy By Different Methods	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014

	Design, Analysis and Fabrication of Human Transporter Segway Vehicle	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014
Moin Khan	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAE Tech International Journal, Vol.1, No.1, Oct.2014
	Numerical Analysis of heat Exchanger by fluent using K-€ turbulence model"	International Conference on (ICAMES-2014)22-23 December, 2014 in LNCT Gwalior
Kamal Verma	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAE Tech International Journal, Vol.1, No.1, Oct.2014

- **20.** Area of consultancy income: NIL
- **21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

- Dr. K.K. Gupta: Member of editorial board for the International Journal of Energy and Power Engineering, USA.
- Dr. A. P. Singh: Member of technical committee for IASCIT International Association of Computer science and Information technology.
- Dr. A. P. Singh: Member of editorial board Reviewer in Elsevier in Acta-Aeronautical journal.
- Dr. A. P. Singh: Member of editorial board of International Journal of application of Engineering and Technology.
- Dr. A. P. Singh: Member of technical committee for APCBEES Asia-Pacific Chemical, Biological & Environmental Engineering Society.
- Dr. A. P. Singh: Member of technical Body in IAENG International Association of Engineers.
- Dr. A. P. Singh: Reviewer of International Journal of Chemical Engineering and applications
- Dr. A. P. Singh: Editorial Board Member of International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014).
- Dr. A. P. Singh: Member, SAE India
- Mr. K. P. Tiwari : Chair Person, ISHRAE Institute of Excellent- ISHRAE
- Mr. K. P. Tiwari : Member, SAE India

- **22.** Student Projects:
  - Percentage of students who have done in-house projects including inter departmental / program:

The students of B.E final year are mandatorily required to submit the project, so 100% of final year students of B.E. course have done the projects.

• Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies 0%

23. Awards / Recognitions received by faculty and students

- Dr KK Gupta (Professor) & Mr Sumit Shukla (Assistant professor), was awarded SRIJAN Award for Best faculty in RGPV for the year 2015.
- BAJA 2016: Department Team VIJAYRATH consisting of 25 students won PRIDE OF INDORE AWARD and got Prize of Rs. 100,000/- in The SAE Event.
- GO KART Main event 2015: Department Team VIJAYRATH ranked at 2<sup>ND</sup> position out of 90 teams participated and won Rs. 5000 Cash (Oct'15, UIET Chandigarh).
- Research article on "WOMEN ENTERPRENEURSHIP –A GLOBAL REQUIREMENT "By students Rajat gupta, Saurabh Gayakwad and Rajesh Porwal under the guidance of Dean of mechanical engg. Dept. Dr. K.K.Gupta.

S.NO.	Student Name / team	Year	Organizing Agency	Events / Competition	
1	Team vijayrahth	2014	SAE INDIA	BAJA Participation virtual in Qualified the round	
2	Speed of sultan	2014	SAE INDIA	GO- KART virtual Participation in Qualified the round	
3	Team vijayrahth	2013	SAE INDIA	BAJA Participation virtual in Qualified the round	
4	Speed of sultan	2013	SAE INDIA	GO-KART virtual Participation in Qualified the round	
5	Team vijayrahth	2013	SAE INDIA	BAJA Participation virtual in Qualified the round	
6	Team vijayrahth	2012	SAE INDIA	BAJA Participation virtual in Qualified the round	
7	Speed of sultan	2012	SAE INDIA	GO- KART virtual Participatior in Qualified the round	
8	Team vijayrahth	2012	SAE INDIA	BAJA Participation virtual in Qualified the round	

Award Received by students:

S.No.	Student Name / team	Year	Organized by	Events / Competition	Prize
18.	Shubham Dalal	2012-13	RGPV Bhopal	EXAM	University top
19.	Shubham Dalal	2013-14	RGPV Bhopal	EXAM	University top
20.	Sourabh Gayakwad, Rajat Gupta	2013-14	Shail group	Group dance compotation	2 <sup>nd</sup> prize
21.	Prithavi sisodiya	2013-14	Shail group	Singing competition	1 st prize
22.	Vishnu nair	2013-14	Shail group	Extempore	2 <sup>nd</sup> prize
23.	Gaurav patel	2013-14	Shail group	Poster making Competition	2 <sup>nd</sup> prize
24.	Rajat Kumar Malviya	2013-14	Shail group	Solo dance Competition	1 st prize
25.	Shubham raghuwanshi ,vipin rathod and prashant patidar	2013-14	CDGI, indore	Auto junkies	2 <sup>nd</sup> prize
26.	Team vijayrahth	2014	SAE INDIA	BAJA Participation virtual	Got 11 <sup>th</sup> position of ALL INDIA
27.	Speed of sultan	2014	SAE INDIA	GO- KART virtual	Got 2 <sup>nd</sup> position
28.	Aakash agarwal	2013-14	IIT Bombay	Reform nation	15 <sup>th</sup> position
29.	Vishnu Nair,satish rai,sushil verma,sawan gurjar,shruti jain	2013-14	Eco friendly green vehicle "the recovery"	ELECRAMA 2014 Bangalore	Grant listed and financial grant amount of up to Rs.50000/
30.	Bhagyshree Bhujade and team	2014-15	SAIT, Indore	Drama (Techno chill)	First prize
31.	Himanshu Pipariya	2014-15	International Taekwondo competition	sports	Represented RGPV university
32.	Rupesh Choudry	2014-15	Soft ball & Base ball	sports	RGPV university captain
33.	Ayushi Dogre	2014-15	Athletics Championship	sports	Represented RGPV university
34.	Mr.Saket Bihari Panday & Antim Rewapati	2015-16	MIST, Indore	Paper presentation	1 st prize

**24.** List of eminent academicians and scientists / visitors to the department:

Year	Date	Industry / Designation	Name of Guest / Speaker / Expert
2015-16	18/09/2015	Sky Flyers	Mr. Kamlesh Suryavanshi
	8/9/2015	Sagar automobile	Mr. Hamid
	27/07/15	Ministry of Micro, Small and Medium Enterprises	Mr. V P Sharma, Dy. Director, MSME
2014-15	22/09/2014	IICAE, Indore	Mr. Sumeet Sharma

	06/02/2014	CAD King	Dr.Shuyog Maheshawari
2013-14	3/7/2013	Natrip	Dr. P.P.Chatraj Additional Director Natrip
2012-13	17/02/2013	CRISTOPIA	Advances in Thermodynamics and Energy system

## 25. Seminars/ Conferences/Workshops organized & the source of funding

e) National

S.No.	Date	Name of Events	Organized by	Expert
1	31/03/2016	One day Workshop on Empowerment of Entrepreneurship NIESBUD	E.D.C. Cell, Department of Mechanical Engg	Mr. Dinesh Kumar (Mentor National Institute of Entrepreneurship small business development Noida)
2	11-04-15	Seminar on Interaction with Alumni Entrepreneur	E.D.C. Cell, Department of Mechanical Engg	Mr. Shashank Chourey India infotech Ltd. (Digital Marketing & search Engine optimization)
3	18/09/2015	Workshop on Aero-modeling	Aero-modeling Club, Department of Mechanical	Mr. Kamlesh Suryavanshi, Flyer India
4	09-08-15	Workshop on Engine assembly	SAE IIST club, Department of Mechanical Engg	Mr. Hamid from Sagar Automobile Indore
5	8/10/2014 to 30/10/2014	Training Programme on Auto CAD.	Department of Mechanical Engg	Mr. Deepak Modi Easy CAD Solutions Indore.
6	19/06/2014 to 03/07/2014	Workshop for vehicle dynamics	SAE IIST club, Department of Mechanical Engg	Mr Himanshu Singh
7	22/09/2014 to 30/10/2014	Workshop on Hypermesh.	Department of Mechanical Engg	Mr.Sumeet Sharma IICAE Indore.
8	23/09/2014 to 01/10/2014	Workshop on Cre-o	Department of Mechanical Engg	Param Technology
9	16/04/2014 to 20/04/2014	Workshop for vehicle dynamics	SAE IIST club, Department of Mechanical Engg	Mr Himanshu Singh
10	06/02/2014 (20 Days)	Workshop on Pro-E	SAE IIST club, Department of Mechanical Engg	Dr.Shuyog Maheshawari
11	24/01/2014 to 25/01/2014	Workshop for vehicle dynamics	SAE IIST club, Department of Mechanical Engg	Mr Himanshu Singh
12	07-03-13	Cre-O workshop	SAE IIST club, Department of Mechanical Engg	Dr. P.P.Chatraj Additional Director Natrip.
13	17/08/2013	National Workshop on Advances in Thermodynamics and Energy system.	Department of Mechanical Engg	Dr. B.V. Reddy University of Ontario, Canada

## **26.** Student profile program/course wise:

Name of the	Applications received	Salaatad	Enro	lled	Pass
Course/programme	Applications received	Selected	*M	*F	percentage
BE(ME) 2012-2016	By State Counseling	120+4	122	2	NA
BE(ME) 2013-2017	By State Counseling	180+6	183	3	NA
BE(ME) 2014-2018	By State Counseling	123+3	126	0	NA
BE(ME) 2015-2019	By State Counseling	69+15	84	0	NA

#### 27. Diversity of students

Name of the Course	% of students from	% of students from	% of students
Name of the Course	the same state	other state	from abroad
BE(ME) 2012-2016	95.16 %	4.8 %	0
BE(ME) 2013-2017	96.7 %	3.2 %	0
BE(ME) 2014-2018	94.4 %	5.5 %	0
BE(ME) 2015-2019	92.8%	7.14 %	0

**28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Voor	Number of	Name of	Number of	Name of	Number of	Name of
I ear	Students	Exam	Students	Exam	Students	Exam
2012-13	2	GATE	2	GRE	1	CAT
2013-14	4	GATE	0	-	1	CAT
2014-15	1	GATE	2	GRE	0	-
2015-16	1	GATE	0	0	0	0

#### 29. Student Progression

Student progragion	Against % enrolled				
Student progression	2012-2016	2011-2015	2010-2014	2009-2013	
UG to PG	1 %	2.5%	4.1 %	4.17 %	
PG to M.Phil.	-	-	-	-	
PG to Ph.D.	-	-	-	-	
Ph.D. to Post-Doctoral	-	-	-	-	
Employed					
Campus selection	57.7 %	32.37 %	9.0 %	19.0 %	
Other than campus recruitment					
Entrepreneurship/Self-employment	NA	-	-	-	

#### 30. Details of Infrastructural facilities

➤ Library

The Department has its own small Library, which caters to the immediate needs of faculty and students. The library has, as of today, around 300 books needed for undergraduate and postgraduate course along with other materials (projects, thesis, journals etc.) relating to various subjects for quick reference.

Internet facilities for Staff & Students:

In order to maximize benefits of the technological advancement, learning through internet has gained vital importance among students. Keeping abreast with time, 43 MBPS leased line has been laid within the entire department thereby providing INTERNET facility to faculty, students and staff also department is Wi-Fi enabled.

Class rooms with ICT facility: Provided in every Classroom

#### ➤ Laboratories:

Department of Mechanical Engineering has sixteen laboratories. These laboratories are continuously updated to expose/demonstrate students related to various principles of mechanical engineering discipline.

**31.** Number of students receiving financial assistance from college, university, government or other agencies :

Details		2015-	-16	2014	-15	2013	-14	2012	-13
		Count	%	Count	%	Count	%	Count	%
	SC	28		28		36		64	
Category	ST	02	28%	02	29%	6	30%	04	24%
	OBC	363		408		500		369	
	Minority	58		49		09		14	
Total		451		487		551		451	

**32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

S. No.	Title	Organized by	No of Participate	Resource Person with designation	Date
1	Workshop on Empowerment of entrepreneurship (NIESBUD)	EDC In with Association of NIESBUD	40	Chief Guest Mr. Dinesh Kumar (Mentor NIESBUD )	31/03/2016
2	Seminar on (interaction with alumni entrepreneur)	EDC In with Association of Indian Infotech Ltd	25	Mr. Shashank Chourey Indian Infotech Ltd (Digital Marketing & search Engine Optimization)	4/11/2015
3	Workshop on Aero modeling	Sky Flyer	20	Mr. Kamlesh Suryavanshi	18/09/2015
4	Engine Assembly Work Shop (in house)	SAE with Sagar Automobile	25	Mr. Hamid from Sagar Automobile Indore	8/9/2015
5	Workshop for vehicle dynamics	SAE, Collegiate Club of IIST Indore	50	Mr. Hussain IITK	3/7/2015
7	Workshop on CreO	Param Technology	25	Mr. Salil Param Technology	23/09/2014 to 01/10/2014
8	Workshop on Hypermesh	IICAE Indore	20	Mr. Sumit Sharma IICAE Indore	22/09/2014 to 30/10/2014
9	Workshop On Automotive Design & development	Elite Techno Group	50	Mr. Himanshu Arora	19/06/2014 To 03/07/2014
10	Workshop On Automobile & Vehicle Dynamics	Elite Techno Group	50	Mr. Himanshu Arora	16/04/2014 to 20/04/2014
11	Workshop on Pro-E/CreO	CAD King Solution Indore	50	Mr. Suyog Maheshwari, CAD King Indore	06/02/2014 to

					20/03/2014
12	Workshop on Advance Automobile & vehicle dynamics	SAE Colligate IIST Club In with Elite Techno Group	20	Mr. Himanshu Arora	21/01/2014 25/01/2014
13	National Workshop on advance in thermodynamics & Energy System	IIST Indore	40	Dr. B.V. Reddy University of Ontario, Canada	17/08/2013
14	Workshop on CreO	SAE ,INDIA	25	Dr. P.P. Chatraj Additional Director Natrip	3/7/2013

**33.** Teaching methods adopted to improve student learning

Teaching and learning activities is student centric and experiment based. The faculty helps them to develop passion towards the subject taught by conducting experiments. The teacher should be a facilitator rather than a feeder of things. So, the objectives to be fulfilled in the student centric learning are to develop:

- Communication and writing skill
- Analyzing both academic and non academic problems
- Maintain dignity and esteem both at self and society level
- Creative thinking and decision making
- Department technical clubs are working for providing platform for students to expose the possibilities and to learn by hands on practice.
- SAE-collegiate club provides exposure to students in the area of automobile. SAE- collegiate team participates and won several prizes at national level.
- ISHRAE Student Chapter provides exposure and knowledge to students in the area of HVAC & R. ISHRAE Student Chapter team participates and won several prizes at national level.
- Department has been exploring all possible means to achieve the above said with the available supportive schemes and infrastructure.
- 34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm. We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.

**35.** SWOC analysis of the department and Future plans

- Strength :
  - SAE-IIST Collegiate Cubs- Our team of students participates and won laurels to the department and institute in the events organized by SAE- India at national levels.
  - Classified work responsibilities defined.
  - Good infrastructural facility to conduct hands on training for all students
  - Interdisciplinary and innovative projects by student
  - Department emphasis on overall grooming of student (hand on practical's, industry visits, social causes etc.)
  - Arranging expert talk and seminars from eminent personality from industry and academics.
  - Highly modern digital class rooms.
  - Long list of alumni students who are serving in leading industries at respectable positions.
  - Faculty-well qualified dedicated and experienced faculty.
  - Good Faculty-Students interaction.
  - Infrastructure All class rooms are equipped with LCD projectors, well equipped laboratories, auditorium etc.
  - Technical Activity clubs- Department runs technical Activity clubs / professional clubs i.e. SAE India, ISHRAE Student Chapter, E D Cell, AEROMODELING Club, ISNEE India where students get exposure and hand on practice on tools and techniques used in these areas.
- ✤ Weakness:
  - Lack of patents activity.
  - Lack in the industry projects or consultation though it may not apply to the department.
  - Intake of low rank student.
  - Industry Institution Interaction needs to be strengthened further.
- ✤ Opportunity:
  - An effort for better research work
  - Funding to build core services and training programs for outside students
  - To provide high quality technical education to the students and improving their skills through ICT based teaching-learning process so that their employability is enhanced.
  - Development of skill development courses.
  - Students' participation in club activities, intercollegiate competitions.
  - Preparing students for GATE, PSUs and aptitude exam.
  - The students have become more demanding. The students have a large potential, which can be honed.
  - The interdisciplinary research in niche areas is the need of the day, which gives opportunity in all areas.
- ✤ Challenges:

- To motivate students for pursuing a research career
- Lack of basic proficiency and technologies to work effectively and efficiently.
- Faculties perceive that the quality of student has declined, thereby making it more difficult to provide research based study.
- To provide high quality technical education to the students and improving their skills through ICT based teaching learning process so that their employability is enhanced.
- To organize national/international level seminars/conferences/workshops etc.
- Coping with rapid changing in technology and the industrial requirements to improve the employability of the students are the biggest challenge.

# ER 5 CIVIL ENGINEERING

- 1. Name of the department: Civil Engineering
- **2.** Year of Establishment: 2012
- **3.** Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.) : UG Bachelor of Engineering, Civil Engineering
- 4. Names of Interdisciplinary courses and the departments/units involved:

S. No.	Semester	Subject	Department Involved
1	Ι	Engineering Chemistry	Applied Science
2	Ι	Engineering Mechanics	Civil & Mechanical
3	Ι	Engineering graphics	Mechanical Engineering
4	II	Engineering Physics	Applied Science
5	II	Communication Skill	Applied Science
6	II	Engineering Mathematics I	Applied Science
7	III	Engineering Mathematics II	Applied Science
8	IV	Engineering Mathematics III	Applied Science

- Annual/ semester/choice based credit system (programme wise): 2004 to 2010 -Non Grading System; 2010 to 2015 Grading System 2015 onwards-CBCS (Choice Based Credit System)
- 6. Participation of the department in the courses offered by other departments: NIL
- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL
- **9.** Number of teaching posts:

Designation	Filled
Professor	0
Associate Professor	1
Assistant Professor	12

Name	Qualification	Designation	Specialization	Experience	No. of P.hd Guided Student
Mr. Utkarsh Jain	Ph.D (Pursuing)	Asso. Prof & HOD	Structure	5 Year	NIL
Mr. Sandeep Rashinkar	B.E	Asst. Prof	Civil Engineering	35 Year	NIL
Mr. Aman Tiwari	M.E	Asst. Prof.	Construction Technology & mgmt.	4.10 Year	NIL
Mr. Rupesh Rathore	M.E	Asst. Prof.	Water resource	3.3 Year	NIL
Mr. Lalitesh Sinha	M.E	Asst. Prof.	Water resource	2 Year	NIL
Mr. Anurag Saraogi	B.E	Asst. Prof.	Civil Engineering	3 Year	NIL
Mr. Shailendra Singh	M.E	Asst. Prof.	Structure	3.6 Year	NIL
Mr. Manish K. Nimoriya	M.E	Asst. Prof.	Structure	3 Year	NIL
Mr. Avinash Singh	M.E	Asst. Prof.	Structure	1 Year	NIL
Mr. Ghanshyam Patidar	M.E	Asst. Prof.	Construction Technology & mgmt.	1.6 Year	NIL
Ms. Gulezehra Hussain	M.E	Asst. Prof.	Structure	2 Year	NIL
Mr. Anand Raghuwanshi	M.E	Asst. Prof.	Transportation	0.9 Year	NIL

# 10. Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

- **11.** List of senior faculty visiting: NIL
- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- **13.** Student-Teacher Ratio: 20:1
- **14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 03 and Administrative Staff: 01
- 15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

Name	Qualification	Designation	
	B.E.( IES-IPS, RGPV, 2010)		
Mr. Utkarsh Jain	M.E(SGSITS, RGPV,2012)	Assistant Professor & HOD	
	Ph.D (Pursuing, Udaipur National University)		
Mr. Sandeep Rashinkar	B.E(GEC, Ujjain, Vikram University 1981)	Assistant Professor	
Mr. Amon Tiwari	B.E(UIT-RGPV, Bpl 2011)	Assistant Professor	
WII. Allian Tiwali	M.E.( SATI, Vidisha, RGPV, 2014)	Assistant Professor	
Mr. Rupesh Rathore	B.E.( UEC Ujjain, RGPV, 2010)	Assistant Professor	
Wit: Rupesii Raulore	M.E(SGSITS, RGPV,2013)	Assistant Professor	

Mr. Lalitash Sinha	B.E.( IES-IPS, RGPV, 2010)	Assistant Professor	
Mit. Lantesii Siina	M.E(SGSITS, RGPV,2014)	Assistant Fioresson	
Mr. Anurag Saraogi	B.E.( SATI, Vidisha, RGPV, 2013)	Assistant Professor	
Mr. Shailandra Singh	B.E.(MITS, Gwalior, RGPV, 2011)	Assistant Professor	
wir. Shahendra Shigh	M.E(SGSITS, RGPV,2015)	Assistant Fioresson	
Mr. Manish K. Nimoriya	B.E.(IES-IPS, RGPV, 2010)	Assistant Professor	
wir. wianish K. winoriya	M.E(SGSITS, RGPV,2013)	Assistant Floresson	
Mr. Avinash Singh	B.E.(IES-IPS, RGPV, 2012)	Assistant Professor	
wit. Av masn Singh	M.E.(IES-IPS, RGPV, pursuing)	Assistant I TOTESSO	
Mr. Ghanshyam Patidar	B.E.(VITM, Indore, RGPV, 2012)	Assistant Professor	
Wir. Onansiryani i andar	M.E( MIST RGPV, pursuing)	Assistant i foressor	
Ms. Gulezehra Hussain	B.E.(JDCT, Indore, RGPV, 2014)	Assistant Professor	
Wis. Gulezenia Hussain	M.E (SAIT, Indore, RGPV, pursuing)	Assistant I TOTESSO	
Mr. Anand Raghuwanshi	B.E.(OIST, Bpl, RGPV,2013)	Assistant Professor	
Wit: 7 mane Ragnuwanshi	M.E(SGSITS, RGPV,2015)	Assistant 1 10103501	

- **16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL
- **17.** Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL
- 18. Research Centre /facility recognized by the University : NIL
- **19.** Publications:
  - c. Publication per faculty
    - Number of papers published in peer reviewed journals (national / international) by faculty and students
  - d. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database International Social Sciences Directory, EBSCO host, etc.)
    - Monographs
    - Chapter in Books
    - Books Edited
    - Books with ISBN/ISSN numbers with details of publishers
    - Citation Index
    - SNIP
    - SJR
    - Impact factor
    - h-index

S. No.	Name of Book Published	Name of Authors	ISBN/ISSN Number	Details of Publishers
1	A Text Book of Engineering Mechanics	Mr. Utkarsh Jain	ISBN NO: 9789384164409	Parasmani Publishers, Indore
2	Kuch Meri Kuch Tumhari	Mr. Sandip Rashinkar & Mrs. Shreeti Rashinkar	ISBN NO: 9788191023657	Ansari Publication, Greater Noada

S. No.	Name of the Faculty	Designation	No. Of Journal / Conference Publication up to AY 2015-16
1	Mr. Utkarsh Jain	Assistant Professor	10
2	Mr. Rupesh Rathore	Assistant Professor	3
3	Mr. Lalitesh Sinha	Assistant Professor	4
4	Mr. Shailendra Singh	Assistant Professor	9
5	Mr. Manish K. Nimoriya	Assistant Professor	4
6	Mr. Anand Raghuwanshi	Assistant Professor	5

S. No.	Name of Faculty	Title	Name of Journal / Conference	ISBN/ISSN numbers	Citation Index& Impact Factor
1		Parking Study of CBD Area of Indore – A Case Study	International Journal of Scientific Research in Science & Technology	2395–602X	3.6
		A Text Book of Engineering Mechanics	Parasmani Publishers, Indore	ISBN NO: 978938416440 9	More than 1000 Copies sold
		A Comparative Assessment of Water Quality for Pithampur Industrial Area, Indore, India	International Journal of Scientific Research in Science, Engineering and Technology	2394 - 4099	2.875
	Mr. Utkarsh Jain	Seismic Response of Base Isolation R/C Frame Structure	International Journal of Engineering Technology & Management	2394 - 6881	2.06
		A Comparative Study of Simply Supported and Continuous R.C.C. Slab Bridges	International Journal of Engineering Research and General Science	2091 - 2730	3.843
		Analysis to Convert Traditional Building to Green Building	International Journal of Engineering Trends & Technology	2231 - 5381	1.795
		Using Marble Detritus in Concrete Mix in the Percent Replacement of Cement	International Journal Of Emerging Trends In Engineering And Development	2249 - 6149	2.87
		Effect of Crumb Rubber Material on Concrete Mix	SSRG International Journal of Civil Engineering	2348 - 8352	2.54
		Seismic Analysis of RC Shell Structure	International Journal of Emerging Trends in Engineering and Development	2249 - 6149	2.87

		Watershed Delineation of Narmada Basin- Indira Sagar Dam to Maheshwar Dam of Madhya Pradesh	International Journal of Emerging Technology and - Advanced Engineering	2250 - 2459	2.324
		Analysis of Flexural Behaviour of Beam by various Sensing Techniques	International Journal of Emerging Trends in Engineering and Development	2249 - 6149	2.87
		Climatic changes in Indore with reference to solid waste management & air pollution	International Journal of Innovative Science, Engineering and Technology	2348 - 7968	1.5
		A Comparative Assessment of Water Quality for Pithampur Industrial Area, Indore, India	International Journal of Scientific Research in Science, Engineering and Technology	2394 - 4099	2.875
		Seismic Response of Base Isolation R/C Frame Structure	International Journal of Engineering Technology & Management	2394 - 6881	2.06
	Mr	Seismic Response of Soft Storey on High Rise Building Frame	International Journal of Engineering Technology and Computer Research	2348 - 2117	3.983
2 Shailendra Singh	A Comparative Study of Simply Supported and Continuous R.C.C. Slab Bridges	International Journal of Engineering Research and General Science	2091 - 2730	3.843	
		Stabilization of Black Cotton Soil using Lime	International Journal of Science and Research	2319 - 7064	4.438
	Analysis to Convert Traditional Building to Green Building	International Journal of Engineering Trends & Technology	2231 - 5381	1.795	
		Using Marble Detritus in Concrete Mix in the Percent Replacement of Cement	International Journal Of Emerging Trends In Engineering And Development	2249 - 6149	2.87
		Effect of Crumb Rubber Material on Concrete Mix	SSRG International Journal of Civil Engineering	2348 - 8352	2.54
		Climatic changes in Indore with reference to solid waste management & air pollution	International Journal of Innovative Science, Engineering and Technology	2348 - 7968	1.5
	Mr. Manish	Seismic Response of Base Isolation R/C Frame Structure	International Journal of Engineering Technology & Management	2394 - 6881	2.06
3	Nimoriya	Seismic Evaluation Of RC Building Using Pushover Analysis	International Journal of Engineering Technology and Management	2394 - 6881	2.06
		Seismic Vulnerability Assessment Of Bridges Using Fragility Based Approach	Global Journal of Engineering Science and Research Management	2349-4506	2.545
4	Mr. Rupesh Rathore	Watershed Delineation of Narmada Basin- Indira Sagar Dam to Maheshwar Dam of Madhya Pradesh	International Journal of Emerging Technology and Advanced Engineering	2250 - 2459	2.324

		Assessment of Scheduling of irrigation water for wheat crop using zero one model for an irrigation project.	International Conference on Innovative Trends in Engineering Science & Management		
		A Case Study Of Raddison Square Indore For Design Of Signalized Roundabout	International Journal of Engineering Research and General Science	2091-2730	3.843
		Watershed Delineation of Narmada Basin- Indira Sagar Dam to Maheshwar Dam of Madhya Pradesh	International Journal of Emerging Technology and Advanced Engineering	2250 - 2459	2.324
5	Mr. Lalitesh Sinha	Analysis of Flexural Behaviour of Beam by various Sensing Techniques	International Journal of Emerging Trends in Engineering and Development	2249 - 6149	2.87
	Siiiia	A Comparative Assessment of Water Quality for Pithampur Industrial Area, Indore, India	International Journal of Scientific Research in Science, Engineering and Technology	2394 - 4099	2.875
		A Case Study of Radisson Square Indore for Design of Signalized Round about	International Journal of Engineering Research and General Science	2091 - 2730	3.843
		A Case Study of Radisson Square Indore for Design of Signalized Roundabout	International Journal of Engineering Research and General Science	2091 - 2730	3.843
		Nano material Compatibility and Effect on Properties of Base Bitumen Binder and Polymer Modified Bitumen	International Journal of Innovative Science, Engineering & Technology	2348 - 7968	4.332
6 Mr Ragi	Mr. Anand Raghuwanshi	Improvement of Black Cotton Soil with Cement & Flyash Treated With Terrasil	International Journal of Scientific Research in Science, Engineering and Technology	2394-4099	3.7
		Effect Of Density And Moisture On The Slope Stability Of Highway Embankment	International Journal Of Engineering Sciences & Research Technology	2277-9655	4.116
		Assessment of Pedestrian Level of Service For Mixed Lane	An International Peer- Reviewed Research (Unpaid) Journal of Engineering & Technology	0976-2973	***

**20.** Area of consultancy income: NIL

**21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

S.No.	Name of Faculty	National Committee	Membership No.
		Indian Geotechnical Society	LM442
1	Mr. Utkarsh Jain	ICACI	LM15.30
		INSTITUTE OF ENGINEER	AM1601574

2	Mr. Lalitesh Sinha	Indian Water resources Society (IWRS)	SCM-2014- 1015/INDORE
3	Mr. Shailendra Singh	Indian Geotechnical Society	445
4	Mr. Monich V. Nimorius	Indian Geotechnical Society	446
4	wir. Manish K Nimoriya	Indian Water Works Association	SM00900

22. Student Projects:

• Percentage of students who have done in-house projects including inter departmental / program:

The students of B.E final year are mandatorily required to submit the project, so 100% of final year students of B.E. course have done the projects.

- Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies 0%
- 23. Awards / Recognitions received by faculty and students

Awards received by faculty:

S.No.	Name of faculty	Given By	Name of the award	Year
1	Mr. Sandip Rashinkar	Srijan RGPV	Excellent Faculty	10/04/2016

Award Received by students:

S.No	Student Name	Achievement / Medal Event/ Competition Name		Organiser Name
1	Shivam Gupta	1 <sup>st</sup> position	CON?Q	Ultratech Cement Ltd.
2	Aakash Kumar	1 <sup>st</sup> position	CON?Q	Ultratech Cement Ltd.
3.	Civil Engg. Team	1 <sup>st</sup> Prize (Football)	Annual Sports Day (2012)	IIST
4.	Civil Engg. Team	1 <sup>st</sup> Prize (Cricket)	Annual Sports Day (2012)	MITM, Indore
5	Aman Sekhawat	Chancellor's Merit Scholarship 2015	Chancellor's Merit Scholarship 2015	RGPV, Bhopal
		1 <sup>st</sup> position	CAD QUEST EVENT 2016	NICMAR, Indore
6.	Ankit Likhar	2 <sup>nd</sup> position	AutoCAD	PIEMR, Indore
		1 <sup>st</sup> position	Mind Spark, AutoCAD	Acropolis Technical Campus, Indore

24. List of eminent academicians and scientists / visitors to the department:

Year	Date	Name of Guest / Speaker / Expert	Industry/ Designation
2013-14	2 <sup>nd</sup> August 2013	Dr. R.K. Shriwastava	Professor S.G.S.I.T.S.
2014-15	29 <sup>th</sup> March 2014	Mrs. Vandana Tare	Professor S.G.S.I.T.S.

25. Seminars/ Conferences/Workshops organized & the source of funding

- a) National: Nil
- b) International: Nil

### **26.** Student profile program/course wise:

Name of the			Enrolled		Decc	
Course/programme (refer question no. 4)	Applications received	Selected	*M	*F	percentage	
BE(CE) 2012-2016	By State Counseling	60	56	04	100%	
BE(CE) 2013-2017	By State Counseling	58	54	04	59%	
BE(CE) 2014-2018	By State Counseling	60	57	03	28%	
BE(CE) 2015-2019	By State Counseling	35	32	03	38%	

#### **27.** Diversity of students

Name of the Course	% of students from the same state	% of students from other state	% of students from abroad
BE(CE) 2012-2016	90 %	10 %	0
BE(CE) 2013-2017	96.97 %	3.33 %	0
BE(CE) 2014-2018	93.33 %	6.67 %	0
BE(CE) 2015-2019	96.96 %	3.03 %	0

**28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Year	Number of Students	Name of Exam
2012-13	0	-
2013-14	0	-
2014-15	0	-
2015-16	0	-

#### 29. Student Progression

Student prograssion	Against % enrolled				
Student progression	2012-2016	2011-2015	2010-2014	2009-2013	
UG to PG	NA	NA	NA	NA	
PG to M.Phil.	-	-	-	-	
PG to Ph.D.	-	-	-	-	
Ph.D. to Post-Doctoral	-	-	-	-	
Employed	6.6%	NA	NA	NA	

Campus selection				
Other than campus recruitment				
Entrepreneurship/Self-employment	NA	NA	NA	NA

**30.** Details of Infrastructural facilities

- Departmental Library
  - The resources available
  - Titles: 50
  - Print Journals: 06 journals/month subscription

Internet facilities for Staff & Students: Internet Connection in all Departmental Computer Labs & Staff Cabin
 ISP: Airtel 8 Mbps (1:1)
 ISP: RPNet 35 Mbps (1:1)
 43 Mbps

- > Class rooms with ICT facility: Provided in every Classroom
- ➤ Laboratories:

Name of Laboratory	Equipment detail		
Enga Machanics	Fly wheel, Jib Crane, Bending Moment Apparatus, Simply supported beam, truss,		
Eligg. Mechanics	Grave sand apparatus		
Surveying	Auto level, dumpy level, Theodolite, plane table, compass, ranging rods, chains		
Advanced Surveying	Digital Plannimeter, Digital Theodolite, Total station, GPS		
Gootochnical Enga	Direct shear apparatus, Hydrometer, liquid limit apparatus, Triaxial test apparatus,		
Geolecinical Engg	vane shear apparatus		
Fluid Mechanics	Orifice meter, venturimeter, metacentric height apparatus, pipe friction apparatus		
Theory of Structure	Deflection of beam, pin joint truss, portal frame ,two & three hinged arch		
Engg. Geology	Charts, Globe, set of mineral ores, set of stones, hardness test box		
Construction Material	Concrete mixture, compaction Factor, Digital Compression testing machine, Vicat		
Construction Material	apparatus		
Highway Enga	Ductility testing machine, impact value, Crushing value apparatus, L A Abrasion		
nigiiway Engg	testing machine		

**31.** Number of students receiving financial assistance from college, university, government or other agencies :

Dataila		2015-16		2014-15		2013-14		2012-13	
De	lans	Count	%	Count	%	Count	%	Count	%
	SC	28		28		36		64	
Cotogory	ST	02	<b>2</b> 004	02	<b>2</b> 004	6	2004	04	<b>.</b>
Category	OBC	363	28%	408	29%	500	30%	369	24%
	Minority	58		49		09		14	
То	otal	451		487		551		451	

S. No.	Resources person	Торіс	Date
1.	Dr. S. Solanki Professor IIT, Bombay	Non Conventional Energy Resources	02/11/2012
2.	Dr. A.N. Patel Processor S.G.S.I.T.S.	Geo-Tech Engg.	08/03/2013
3.	Dr. R.K. Shriwastava Professor S.G.S.I.T.S.	Water Resources Engg	2nd August 2013
4.	Er. Ketan Jain Structure Engineer	Designing of multistory building using STADD PRO Software.	24th August 2013
5.	Dr. Abhay Gupta Principal Consultant to ESCDM Pvt. Ltd.	The Engineers future through Civil engineering corporate in India	20th Sep-13
6.	Mrs. Vandana Tare Professor S.G.S.I.T.S.	Expectation of corporate from fresh Engineering Graduates.	29th March 2014
7.	S. B. Sarwate Consultant	Demolition of High Rise Building in busy areas by explosion	7thAugust 2014
8.	Ar. Siddharth Inani Director (Kalagraha Consultant )	Smart city	12th March 216
9.	Mr. Sandip Rashinkar Assistant Professor (IIST)	Mural the Elevational Magic	12th March 216

**32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

#### 33. Teaching methods adopted to improve student learning

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced:

- To make teaching effective, concepts are explained by charts and models wherever necessary.
- Certain topics are covered with orientation towards GATE & IES
- Some important basics and topics beyond syllabus are covered
- > Faculty are provide internet to prepare lecture notes
- Faculties are encouraged to attend seminars, conferences, workshop to enhance their skills so that the knowledge can be transferred in a better way.
- E-recourses, reference books are provided in the library
- LCD projector screens / Overhead projectors help the faculty to deliver interactive lectures and demonstrations of animations/ ppt slides/ lecture contents.

- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- > SMART Class SMART boards are being used for teaching purposes.
- > Augmentation of conventional black board teaching by using audio-video aids.
- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.
- > Online availability of journals in the intranet for the project guidance.
- 34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm. We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.

- **35.** SWOC analysis of the department and Future plans
- Strength :
  - Classified work responsibilities defined.
  - Good infrastructural facility to conduct hands on training for all students
  - There is solid student assistant management in department
  - Interdisciplinary and innovative projects by student
  - Department emphasis on overall grooming of student (hand on practical's, industry visits, social causes etc.)
  - Arranging expert talk and seminars from eminent personality from industry and academics.
  - Highly modern digital class rooms.
- ✤ Weakness:
  - Lack of patents activity.
  - Lack in the industry projects or consultation though it may not apply to the department.
  - Intake of low rank student.
  - Absence of PG. course in this department.
- ✤ Opportunity:
  - There is potential to develop additional program in the area of post-graduation
  - An effort for better research work

- Funding to build core services and training programs for outside students
- ✤ Challenges:
  - To motivate students for pursuing a research career
  - Lack of basic proficiency and technologies to work effectively and efficiently.
  - Faculties perceive that the quality of student has declined, thereby making it more difficult to provide research based study.
  - Need to work toward the opening of student's Chapters for the reputed societies.

# ER 6 CHEMICAL ENGINEERING

- 1. Name of the department: Chemical Engineering
- **2.** Year of Establishment: 2012
- **3.** Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.) : UG Bachelor of Engineering, Chemical Engineering
- 4. Names of Interdisciplinary courses and the departments/units involved: NIL
- Annual/ semester/choice based credit system (programme wise): 2004 to 2010 -Non Grading System 2010 to 2015 Grading System 2015 onwards-CBCS (Choice Based Credit System)
- 6. Participation of the department in the courses offered by other departments: NIL
- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL
- **9.** Number of teaching posts:

Designation	Filled
Professor	01
Associate Professor	01
Assistant Professor	04

**10.** Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

Name	Qualification	Designation	Specialization	Experience	No. of P.hd Guided Student
Dr. Shilpa Tripathi	Ph.D (Environmental Engineering / Chemical Engg)	Professor	Environmental Engineering	22 years 2 months	NIL
Mrs. Samatha Singh	M. Tech, Ph.D Purse	Asso. Professor	Computer aided design	14 years 9 months	NIL
Mr. Rahul Gupta	M. Tech	Assistant Professor	Environmental Engineering	3 years 4 months	NIL
Ms. Arshia Khan	M. Tech	Assistant Professor	Environmental Engineering	2 years 8 months	NIL
Ms. Amrita	M. E	Assistant Professor	Petroleum Engineering	1 year 9 months	NIL

Mr. Rahul	DE	A state Des Constant	Environmental	9 months 20	NII
Bhargava	D.E.	Assistant Professor	Management	days	INIL

- **11.** List of senior faculty visiting: NIL
- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- 13. Student-Teacher Ratio: 20:1
- **14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 02
- 15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

Name	Qualification	Designation
Dr. Shilpa Tripathi	Ph.D , 2012, Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal	Professor
Mrs. Samatha Singh	M. Tech, Ph.D Pursuing, 2014, MANIT- Bhopal	Assistant Professor
Mr. Rahul Gupta	M. Tech, 2012 UEC,Ujjain	Assistant Professor
Ms. Arshia Khan	M. Tech, 2012,UEC,Ujjain	Assistant Professor
Ms. Amrita	M. E, 2014, BITS Pilani	Assistant Professor
Mr. Rahul Bhargava	B.E., M.Tech pursuing, 2014 UEC,Ujjain	Assistant Professor

- **16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL
- **17.** Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL
- 18. Research Centre /facility recognized by the University : NIL

#### **19.** Publications:

- a. Publication per faculty
  - Number of papers published in peer reviewed journals (national / international) by faculty and students
- b. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database International Social Sciences Directory, EBSCO host, etc.)
  - Monographs
  - Chapter in Books
  - Books Edited
  - Books with ISBN/ISSN numbers with details of publishers
  - Citation Index
  - SNIP

- SJR
- Impact factor
- h-index

S. No.	Name of the Faculty	Designation	No. Of Journal / Conference Publication up to AY 2015-16
1	Dr. Shilpa Tripathi	Prof.	11
2	Mrs. Samatha Singh	Asst. Prof	5
3	Ms. Arshia Khan	Asst. Prof	1
4	Mr. Rahul Gupta	Asst. Prof	2
5	Mr. Amrita	Asst. Prof	4

Name of the Faculty	Title of Paper	Detail of Journal / Conference		
Dr. Shilpa Tripathi	Effect of Geometrical Parameters on Heat Transfer Performance of Rectangular Circumferential Fins	International Journal of Innovative Research and Review ISSN: 2347 -4424 (Online) An Online International Journal Available at http://www.cibtech.org/jirr.htm		
Dr. Shilpa Tripathi	Modelling Of Compost Process For Agro-Wastes Based On Measurement Of Carbon Dioxide Evolved	International Journal of Biotechnology, Chemical & Environmental Engineering		
Dr. Shilpa Tripathi	Some Study on Moringa Oleifera (drumstick) Seed as Natural coagulants for Treatment of Distillery Waste Water	International Journal of Applied Engineering and Technology ISSN: 2277-212X		
Dr. Shilpa Tripathi	Time-seriesAnalysisofCompostingPhenomenonofAgricultural WasteUsing ANN	International Journal of Biotechnology, Chemical & Environmental Engineering ISSN 2278 – 0696		
Dr. Shilpa Tripathi	Simulation of Carbon Dioxide Production During Composting of Agro wastes	International Journal of Engineering & Technology, UK		
Dr. Shilpa Tripathi	Effect Of Initial Estimate Of Aqueous Carbon On Ann Based Simulation Of Composting Of Agricultural Waste	International Journal of Engineering Research and Industrial Applications		
Dr. Shilpa Tripathi	Effect of initial estimates of aqueous carbon and constraints on kinetic model in prediction of carbon dioxide evolution during aerobic composting of agro- wastes".	Journal of Environmental Science and Engineering NEERI		
Dr. Shilpa Tripathi	Organized and Optimized Composting of Agro Waste: Some Important Considerations and Approaches	Journal of Environmental Science and Engineering NEERI		
Dr. Shilpa Tripathi	Role Of Constraints On Process Parameters In Artificial Neural Network Based Simulation Of Composting Of Agricultural Waste	Indian Journal of Science and Technology		
Dr. Shilpa Tripathi	An Experimental Study on Waste Water Treatment by Using Root	National Conference on 'Management Horizons in Changing Economic Environment: Visions and		
Zone Technology		Challenges' sponsored by AICTE, New Delhi organized by SVITS, Indore (M.P.)		
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Dr. Shilpa Tripathi	Electrochemical Treatment of Rice Grain Based Distillery Effluent Using Aluminum Electrode"	"International Conference on Advances in Chemical Engineering" Organized by Deptt. Of Chemical Engg., NIT Raipur (CG)		
Mrs. Samatha Singh	A review on various MFC for power generation	Journal of Bio fuel and Bio energy		
Mrs. Samatha Singh	Electricity generation using MFC with the help of nano materials	International conference and exhibition		
Mrs. Samatha Singh	Production of biodegradable plastic (polylactic acid) from molasses	International journal of engineering science and humanities		
Mrs. Samatha Singh	A review on MFC using organic waste as feed	CIB Tech Journal of biotechnology		
Mrs. Samatha Singh "Study of Spray Drying in Food Industry"		National Conference on Comsol Multiphysics. "Study of Spray Drying in Food Industry" Bangalore		
Mr. Rahul Gupta <sup>"Hydraulic</sup> Speed Breaker Power Generator"		International Journal of Engineering Research & Applications, Volume 3, Issue 6.		
Mr. Rahul Gupta	An Experimental Study on Waste Water Treatment by using RZT	National conference "Management Horizons in Changing Economic Environment: Vision & Challenges"		
Ms. Arshia Khan Performance evaluations and design of the UASB reactor for the treatment of dairy wastewater with the help of the mixed Multiple seed		Jr. of Industrial pollution Control		
Bioremediation growth kinetics of Cr(VI) contaminated aqueous solution using Pseudomonas sp., an indigenous microbial strain isolated from aerobic mixed culture		2014 International Congress on Environmental, Biotechnology, and Chemistry Engineering (CEBCE 2014), IPCBEE, IACSIT Press, Singapore. DOI: 10.7763/IPCBEE. 2014.		
Ms. Amrita Optimization of Partial Oxidation Process for Synthesis gas production using ASPEN PLUS		66 <sup>th</sup> Annual Session of Indian Institute Chemical Engineers in association with International Partners (CHEMCON-2013) and Joint Indo-North American Symposium		
Ms. Amrita	Bioremediation of Cr(VI) Contaminated Aqueous Solution using Pseudomonas sp.	66 <sup>th</sup> Annual Session of Indian Institute Chemical Engineers in association with International Partners (CHEMCON-2013) and Joint Indo-North American Symposium		
Ms. Amrita Ms. Amrita Study and design of effluent treatment plant of coke oven and by-product plant		"Energy Efficient Technologies for Green Environment" 8th annual session of students' chemical engineering congress, SCHEMCON- 2012		

**20.** Area of consultancy income: Student's training for students of Fire Technology & Safety Engineering of Vikrant Institute of Technology & total income Rs.18150/-.

#### **21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

• Mrs. Samatha Singh as a Peer reviewer in Environmental Progress international journal

- Dr. Shilpa Tripathi as reviewer in Journals of Institution of Engineers (Kolkata) taken up by Springer
- **22.** Student Projects:
  - Percentage of students who have done in-house projects including inter departmental / program:

The students of B.E final year are mandatorily required to submit the project, so 100% of final year students of B.E. course have done the projects.

• Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies

The students of B.E third year are mandatorily required to do industrial training, so 100% of third year students of B.E. course have done the projects.

**23.** Awards / Recognitions received by faculty and students

Award Received by students:

- a Ms. Tashmeer khan scored 9.56 SGPA in VII Semester
- b Ms. Shreyanshi Gupta scored 9.88 SGPA in V Semester
- c Ms. Shreyanshi Gupta awarded Excellency Certificate for Spoken English from IIT Madras under the Quality Enhancement of Engineering Education Program, an initiative by MHRD, Govt. of India
- d Tashmeer khan achieved runner up position in shot-put
- e Md. Rizwan sheikh participated in Nodal Inter college cricket tournament.
- f G. Kameshwar represented college in Nodal inter college chess tournament.
- g Mr. Santosh Bhandari represented college in Nodal inter college Swimming competition.
- h Mr. Aviket Patel & team won 1st position in Nodal Inter college Football tournament.
- i Mr. Avi Vishwakarma selected among 60 NCC cadets for basic Mountaineering course for 26 days.
- j Mr. Aviket patel Participated in Indore District football team

**24.** List of eminent academicians and scientists / visitors to the department:

- Dr. L. M. Kukreja from RRCAT given lecture on 25th July,2014 on the topic " Nanotechnology for future industrial application"
- Eminent personality from the field of Chemical Engineering Prof. V.K. Srivastava visited IIST on 25th Nov, 2014
- Expert lecture on "Computational Fluid Dynamics" by Mr. Muffazal Badshawala
- Prof. S.P. Chaurasia, Dept of Chemical Engineering, MNIT Jaipur, given expert lecture on "Membrane Distillation" on 4<sup>th</sup> Feb, 2016.

- Sh. Vinay Verma , GM Quality Assurance, Sunpharma, Dewas, given expert lecture on Challenges & opportunities in pharmaceutical industry" on 5<sup>th</sup> May, 2016.
- 25. Seminars/ Conferences/Workshops organized & the source of funding
  - a) National

Seminar/Workshop/ FDP in the Dept.	Sponsorship	Date/Month/Year of the Seminar/ Workshop/ FDP/ TE Conducted	No. of Participation
National Symposium on "Waste & Biomass Valorisation: Potential, Issues & Challenges"	Sponsored by S.E.R.B., Department of Science & Technology, Govt. of India	12-13 ,Sep,2014	120
National Workshop on "Breakthrough Energy Technologies & Challenges for Sustainable Development"	Sponsored by MPCST, Bhopal , Govt. of M.P.	29-30 Oct,2015	150

#### **26.** Student profile program/course wise:

Name of the			Enro	lled	Dece	
Course/programme (refer question no. 4)	Applications received	Selected	*M	*F	percentage	
BE 2012-2016	By State Counselling	31	23	08	73.33%	
BE 2013-2017	By State Counselling	33	23	10	90.32%	
BE 2014-2018	By State Counselling	15	10	5	60%	
BE 2015-2019	By State Counselling	13	11	02	50%	

#### **27.** Diversity of students

Name of the Course	% of students from	% of students from	% of students
Name of the Course	the same state	other state	from abroad
BE 2012-2016	93.54%	6.45%	0
BE 2013-2017	100%	0%	0
BE 2014-2018	86.67%	13.33%	0
BE 2015-2019	92.30	7.7%	0

- **28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.? Nil
- **29.** Student Progression

Student prograssion	Against % enrolled				
Student progression	2012-2016	2011-2015	2010-2014	2009-2013	
UG to PG	NA	NA	NA	NA	
PG to M.Phil.	-	-	-	-	
PG to Ph.D.	-	-	-	-	
Ph.D. to Post-Doctoral	-	-	-	-	

Employed <ul> <li>Campus selection</li> </ul>	67 %	NA	NA	NA
• Other than campus recruitment				
Entrepreneurship/Self-employment	1	NA	NA	NA

30. Details of Infrastructural facilities

- Departmental Library
  - The resources available
  - Titles: 70
  - Journal: 06

Internet facilities for Staff & Students:

- All faculties got personnel systems with internet connection in their cabins.
- Wi-Fi connection in the campus for students.
- Special internet labs for students.

ISP: Airtel	8 Mbps (1:1)
ISP: RPNet	35 Mbps (1:1)
=	43 Mbps

- Class rooms with ICT facility: Provided in every Classroom
- > Laboratories: The following Laboratory available in the department:

Name of Laboratory		
Chemical process control		
Environment Engg.		
Advance Engg. Chemistry		
Chemical Instrumentation		
Material & Energy Balance		
Fuel Technology		
Fluid Particle Mechanics		
Heat Transfer		
Mass Transfer I		
Mass Transfer II		
Chemical Reaction Engineering I		
Chemical process plant simulation -II		

**31.** Number of students receiving financial assistance from college, university, government or other agencies :

Detaile		2015-16		2014-15		2013-14		2012-13		
Der	lalls	Count	%	Count	%	Count	%	Count	%	
	SC	28		28		36		64		
Catagory	ST	02	<b>2</b> 004	02	<b>2</b> 004	6	2004	04	<b>.</b>	
Category	OBC	363	28%	28%	408	29%	500	30%	369	24%
	Minority	58			49		09		14	
Тс	otal	451		487		551		451		

- **32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts
  - Dr. L. M. Kukreja from RRCAT given lecture on 25th July,2014 on the topic " Nanotechnology for future industrial application"
  - Eminent personality from the field of Chemical Engineering Prof. V.K. Srivastava visited IIST on 25th Nov, 2014
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  - Prof. S.P. Chaurasia, Dept of Chemical Engineering, MNIT Jaipur, given expert lecture on "Membrane Distillation "on 4<sup>th</sup> Feb, 2016.
  - Sh. Vinay Verma, GM Quality Assurance, Sunpharma, Dewas, given expert lecture on Challenges & opportunities in pharmaceutical industry" on 5<sup>th</sup> May, 2016.
  - All India Seminar on " Computer Application in Engineering: Emerging Trends and Technologies" on 22-23 Nov, 2013
  - National Symposium on "Waste & Biomass Valorisation: Potential, Issues & Challenges" Sponsored by S.E.R.B., Department of Science & Technology, Govt. of India conducted on 12-13 ,Sep,2014.
  - National Workshop on "Breakthrough Energy Technologies & Challenges for Sustainable Development" Sponsored by MPCST, Bhopal, Govt. of M.P. conducted on 29-30 Oct, 2015.

S. No.	Resources person	Торіс	Date
10.	Sh. Vinay Verma Genarl Manager, Sun pharmaceutical industries ltd. Dewas, M.P	Expert talk on "Opportunities & challenges in pharmaceutical industries : An overview"	5 <sup>th</sup> May,16
11.	Dr. S.P. Chourasia, Professor, Deptt. Of Chemical Engineering, MNIT, Jaipur (Rajasthan)	Expert lecture on "Bioethanol production from agricultural waste"	4 <sup>th</sup> Feb,16
12.	Dr.V.K.Shrivastava,Ex DeanR &D, IIT Delhi	Expert lecture on "Environmental protection management"	25 <sup>th</sup> Nov,2014
13.	Dr.L.M.Kukreja, Sr. Scientist, RRCAT, Indore (M.P)	Expert lecture on "Emerging trends in nanotechnology"	25 <sup>th</sup> July,2014
14.	Mr. Pradyumna Sharma Territory technical services manager, Ultra tech cement, Aditya Birla Group	Expert talk on "Modern trends in cement manufacturing industries"	11 <sup>th</sup> Feb 2013

15	Mr. S.P.Gautam, Former Chairman,	National Symposium on "Waste & Biomass	12-13
15.	Central Pollution Control Board	Valorization: Potential, Issues & Challenges"	Sept,2014
	Dr. V.P. Thergaonkar, Ex Scientist	Notional Summarium on "Waste & Diamona	10.12
16.	Envire Techno Consult Private Ltd	National Symposium on waste & Biomass	12-13 Sont 2014
	Nagpur	valorization. Potential, issues & Chanenges	Sept,2014
	Mr. Dharmendra M. Ramteke, Sr.		
17	Manager (HRD) Rashtriya Chemicals &	National Symposium on "Waste & Biomass	12-13
17.	Fertilizer Mumbai	Valorization: Potential, Issues & Challenges"	Sept,2014
	Dr. Devendra Deshmukh, Department of	National Symposium on "Waste & Biomass	12.13
18.	Mechanical Engineering IIT Indore	Valorization: Potential Issues & Challenges"	12-13 Sent 2014
	Mr. B.D.Dalwadi, Chiaf Exacutiva	valorization. Fotential, issues & chancinges	Sept,2014
	Officer Bharuch Enviro Infrastructure	National Symposium on "Waste & Biomass	12-13
19.	Ltd. (Waste management company)	Valorization: Potential Issues & Challenges"	12-13 Sent 2014
	Ankleshwar, Guiarat	valorization. Fotential, issues & chanenges	5601,2014
	Mr. Saniay Kapoor Tata International		
20	Ltd Solid waste management in tanneries	National Symposium on "Waste & Biomass	12-13
	Dewas	Valorization: Potential, Issues & Challenges"	Sept,2014
	Mrs. Radha Pandey, M.P. Waste		
	management project: An integrated	National Symposium on "Waste & Biomass	12-13
21.	approach in hazardous material/waste	Valorization: Potential, Issues & Challenges"	Sept,2014
	management		<b>x</b> *
22.	<ol> <li>Mr. Sudesh Sharma, Addl. Chief Engg. CP &amp; CC Directorate, NPCIL Mumbai</li> <li>Dr. S Suresh, Prof. Deptt. Of Chemical Engineering MANIT Bhopal</li> <li>Mr. Ankit Gupta , Consultant at Power Trading Corporation India Ltd.</li> <li>Prof. D.K.Sharma, Centre for energy studies, IIT Delhi</li> <li>Mr. Manideep Saxena, Senior Manager KWATT Solution Pvt. Ltd.</li> <li>Dr. C. Mukharjee, Scientist R.R.Centre for</li> </ol>	National Workshop On "Breakthrough Energy Technologies & Challenges for Sustainable Development	29-30 October2015
	Advanced Technology, Indore		

**33.** Teaching methods adopted to improve student learning

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced:

- > To make teaching effective, concepts are explained by charts and models wherever necessary.
- ➢ Certain topics are covered with orientation towards GATE & IES
- > Some important basics and topics beyond syllabus are covered

- > Faculty are provide internet to prepare lecture notes
- Faculties are encouraged to attend seminars, conferences, workshop to enhance their skills so that the knowledge can be transferred in a better way.
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- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- SMART Class SMART boards are being used for teaching purposes.
- > Augmentation of conventional black board teaching by using audio-video aids.
- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.
- > Online availability of journals in the intranet for the project guidance.
- 34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm. We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.

- **35.** SWOC analysis of the department and Future plans
- Strength :
  - Well qualified experienced and dedicated faculty.
  - E Teaching & E Learning facilities
  - Labs with latest state of art laboratory equipments
  - Regular calibration of lab apparatus
  - State-of-the-Art computing facilities
  - Latest Software catering the need of Industries.
  - Constant encouragement given for faculty members in pursing research leading to PhD
  - Enthusiastic, dedicated students who are consistent in their results.
  - Healthy student teacher ratio(STR)
  - High success rate & good academic performance by the students

- More emphasis on Personality development programs and communication skills of students.
- Interdisciplinary and innovative projects by student
- Department emphasis on overall grooming of student (hand on practical's, industry visits, social causes etc.)
- Arranging expert talk and seminars from eminent personality from industry and academics.
- Funded seminars and workshops in the department every year
- ✤ Weakness:
  - Less awareness of Chemical Engineering in the region.
  - Professional skills needs to be further improved among students
  - Students from rural background need improvement in communication and professional skills.
  - Revenue from external consultancy needs to be improved.
  - Research Projects sponsored by various funding agencies
- ✤ Opportunity:
  - Readiness of leading industries to collaborate with institution through MOU
  - Strengthen the Industry-Institution interaction for better placements of students.
  - Enter into collaborative projects with industries and other Institutes for better exposure to students
  - Industrial development in & around Indore
  - Placement opportunity in SEZ for pharmaceutical industries, Pithampur
  - Post graduation, Diploma and Interdisciplinary courses can be introduced.
- ✤ Challenges:
  - Qualifying various competitive exams viz. a. viz. GATE, UPSC, PSC etc.
  - Creating awareness about the upcoming trends & technologies and related research areas.
  - Developing interest in R &D
  - Getting funded projects from Govt. agencies and Industries.

# ER 7 BASIC SCIENCE & HUMANITIES

- 1. Name of the department: Applied Science
- 2. Year of Establishment: 2003
- Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., and Integrated Masters; Integrated Ph.D., etc.):
   UG Bachelor of Engineering
   PG Master of Engineering
- 4. Names of Interdisciplinary courses and the departments/units involved: CS / ME / EC / IT / CM / CE
- Annual/ semester/choice based credit system (programme wise): 2004 to 2010 -Non Grading System; 2010 to 2015 Grading System 2015 onwards-CBCS (Choice Based Credit System)
- 6. Participation of the department in the courses offered by other departments: NIL
- 7. Courses in collaboration with other universities, industries, foreign institutions etc. : NIL
- 8. Details of courses/programmes discontinued (if any) with reasons: NIL
- 9. Number of teaching posts:

Designation	Filled
Professor	01
Associate Professor	04
Assistant Professor	06

10. Faculty profile with name, qualification, designation, specialization, (D.Sc. /D.Litt. /Ph.D. / M. Phil. etc.)

Name	Qualification	Designation	Specialization	Experi ence	No. of P.hd Guided Student
Dr.Saurabh Jain	Ph.D	Associate Professor (Dean)	Fixed Point	13 Year	Nil
Dr. Namrata Kaushal	PhD	Associate Prof.	Lattice Theory	14 Year	Nil
Dr. Parimeeta Chanchani	PhD	Professor	Drug Designing	8 Year	Nil
Dr. Niharika Shivhare	Ph.D	Associate Prof.	Organic chemistry	6 Year	Nil
Dr. Irfan Mansuri	PhD	Associate Prof.	Material Science	5 Year	1

Dr. Swati Singh	PhD	Assistant Prof.	English	12 Year	Nil
Dr. Purti Bilgaiya	PhD	Assistant Prof.	Drug Chemistry	4 Year	Nil
Mr. Sanja y Tiwari	MPhil	Assistant Prof.	Mathematics	10 Year	Nil
Ms Richa Jain	M.Sc	Assistant Prof.	Mathematics	5 Year	Nil
Rupali Tiwari	M.A., M.Phil, MBA	Assistant Prof.	English	9 Year	Nil
Mr. Amit Jain	MPhil	Assistant Prof.	Material Science	4 Year	Nil

- **11.** List of senior faculty visiting: NIL
- **12.** Percentage of lectures delivered and practical classes handled(programme wise)by temporary faculty: NIL
- 13. Student-Teacher Ratio: NA
- **14.** Number of academic support staff (technical) and administrative staff; sanctioned and filled: Technical support staff : 03
- 15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG

Name	Qualification	Designation
Dr.Saurabh Jain	PhD From Vikram University Ujjain (2014)	Associate Professor (Dean)
Dr. Namrata Kaushal	PhD From DAVV (2015)	Associate Professor
Dr. Parimeeta Chanchani	PhD From DAVV (2012)	Professor
Dr. Niharika Shivhare	PhD From Rashtrasant Tukdoji Maharaj Nagpur University (2012)	Associate Professor
Dr. Irfan Mansuri	PhD from DAVV (2011)	Associate Professor
Dr. Swati Singh	PhD from DAVV (2014)	Assistant Professor
Dr. Purti Bilgaiya	PhD from DAVV (2012)	Assistant Professor
Mr. Sanjay Tiwari	MPhil from Global Open University (2010)	Assistant Professor
Ms Richa Jain	M.Sc (2009)	Assistant Professor
Rupali Tiwari	M.A.( 2002,), M.Phil(2004), MBA from DAVV (2013)	Assistant Professor
Mr. Amit Jain	MPhil, from DAVV (2011)	Assistant Professor

- **16.** Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL
- **17.** Departmental projects funded by DST FIST; UGC, DBT, ICSSR, etc. and total grants received : NIL
- 18. Research Centre /facility recognized by the University : NIL

#### **19.** Publications:

- a. Publication per faculty
  - Number of papers published in peer reviewed journals (national / international) by faculty and students
- b. Number of publications listed in International Database (For Eg: Web of Science, Scopus, And Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
  - Monographs
  - Chapter in Books
  - Books Edited
  - Books with ISBN/ISSN numbers with details of publishers
  - Citation Index
  - SNIP
  - SJR
  - Impact factor
  - h-index

S. No	Faculty Name	Designation	No. of Publication	National / International
1	Dr Saurabh Iain	Associate Professor (Dean)	8	4(N)+4(I)+1Book
2	Dr. Namrata Kaushal	Associate Professor	7	4(N)+3(I)
3	Dr. Parimeeta Chanchani	Professor	3	3(N)
4	Dr. Niharika Shivhare	Associate Professor	11	6 (N), 5 (INT)
5	Dr. Irfan Mansuri	Associate Professor	13	1 (N) + 12 (In) + 1 Book
6	Dr. Swati Singh	Assistant professor	5	5(N)
7	Mr. Sanjay Tiwari	Assistant Professor	2	2(N)
8	Ms Richa Jain	Assistant professor	3	3 (N)

S. No.	Name of Faculty	Title	Name of Journal / Conference	ISBN/ISSN Numbers
	1 Dr. Saurabh Jain	Fixed point theorems for gernal contractive multivalued mappings	Asian Journal of Mathematics	23077743
		A Common Fixed point theorem for six mappings in a complete metric space	Vikram Mathematical Journal,	
		Common random fixed points of random multivalued operators on polish spaces	Indian research communications	ISSN. 0973- 9661.
1		Fixed point theorem of multivalued mappings in cone metric spaces	International Journal of Mathematical Archive-2	ISSN.2229- 5046
		A common fixed point theorem for six mappings	International journal of mathematical archive-2(8),	
		International Banking: Comparisons and Perspectives	Opportunities and Challenges in the Global Business	ISBN: 978- 81-7446-718- 8.
		E-Governance and E-	published) in book IT	ISBN: 978-

		Government: Present Scenario and Challenges Ahead	Enabled Practices and Emerging Management Paradigms, Excel Books, New Delhi	81-7446-676- 1
		Covering Relation of Lattice Valued Non-Deterministic Automaton	Sohag journal of math.,(Natural Sciences Publishing USA)	2375-2890
		"Distributive Lattice Under the S- Accessibility	"International Journal of Scientific Research in Multidisciplinary Studies	Vol.1(1) pp.11-14.
		Chip-firing Game as Probability Abacus By Characterization of ULD Lattices	Asian Journal of Mathematics	2307-7743
		Generalized Engel's Algorithm for Minimizing Playing Time to Stabilize the Initial Configuration and for finding Absorbing probability	International journal of computer applications(R.S Publications)	0975-8887
		Partial Ordering on Alternating Sign Matrices and its Bijection	Journal of Indian academy of math	0970-5120
2	Dr Namrata Kaushal	Composite Mapping of Flip-Flop Poset of Join-Irreducible Elements of Distributive Lattice	International Journal of Scientific and Innovative Math. Research	79-62
		"Constructions of Distributive Lattice by flip-flop on Set of Orientations of Strongly Connected Digraph"	Journal of Computer and Math. Sciences	403-409
		A Lattice Fixed Point Theorem with Anti-morphisms	International Journal of Applied Math. Analysis and Applications,	139-141
		Applications of Distributive Lattice in the field of Computer Science, Economics & Management	Business Management & Information Technology	ISBN:978- 93-5062-253- 7(586)
		Applications of Boolean Lattice to Distributed Computing	Business Management & Information Technology	ISBN:978- 93-5062-253- 7(573)
2	Me Riche Join	Dominant Eigenvector of Connected Graph	American International Journal of Research in Science, Technology, Engineering & Mathematics	(Print): 2328- 3491, (Online): 2328-3580, ISSN (CD- ROM): 2328- 3629
3	MS. Kicha Jam	Triple Connected Domination Number and Strong Triple Connected Domination Number of a Connected Graph	International Journal of Mathematics Trends and Technology- Volume28 Number1	ISSN: 2231- 5373
		Survey on Intersection of two Maximum Length Paths in Connected Graph"	Research Journal of Mathematical and Statistical Sciences	· ISSN 2320–6047,
4	Dr. Niharika Shivhare	Rheological studies on virgin, plasticized and solid filled HTPB	Global Journal of Advanced Engineering Technologies	2349-0292

		binder system	and Sciences	
		Role of filler particle size in	Global Journal of Advanced	
		formulation of composite solid	Engineering Technologies	2349-0292
		propellant	and Sciences	
		Gravel bed constructed wetland	Dallatian Daaranah	32(2), 415 -
		for treatment of sewage water	Pollution Research,	419.
		Physico-chemical study of		
		groundwater in 75 villages of	Della di su Deservati	32(2), 393 -
		Bhandara District, Maharashtra,	Pollution Research,	398.
		India.		
		1. Physico-chemical analysis of		
		bore-well water samples of	Chamical Sciences and	2(2), 202 -
		Bhandara District, Maharashtra,	Tashnalagy	204.
		India,	Technology,	
		. Removal efficiency of physico-	Internetional Internet of	
		chemical parameters and heavy	Scientific and Engineering	2(6) maga 6
		metals using some natural	Bessereh	5(0), page 0.
		materials and industrial wastes, ,	Kesearch	
		Mine-pit water treatment for	International Journal of	
		water supply in draught affected	Engineering Science and	2(1), 51-57.
		areas	Management	
		Evaluation of wastewater	International Journal of	
		characteristics in Budha Nallah	Engineering Science and	2(1) 58 – 64
		discharge into River Satluj in	Management	2(1), 50 04.
		Ludhiana City	Wianagement,	
		Study of non linear MHD wave	Purvanchal Academy of	issn 0972-
5	Mr. Sanjay Tiwari	propagation in a rotating system	Science, Jaunpur	3498,21
	5.2	On wave motion in MHD flow	Purvanchal Academy of	IISN:0972-
			Science, Jaunpur	3498 ISDN
		A Text book of Physics -	Shree Parasmani	13DIN - 07803841643
		Manthan	publications	97893841043
		Structural and transport properties	Material science in	
		of La1-xAgxMnO3 ( $x=0.75, 0.1$ )	semiconducting processing -	ISSN: 1369-
		0.125 and 0.15) manganites	Elsevier USA	8001
		Analysis of electrical resistivity	International Journal of pure	10011 0010
		of electron doped La1-	applied and industrial	ISSN : 2319-
		xTexMnO3 manganites	Physics	/61/
		Effect of Fe and Co doping on		
		electrical and thermal properties	Materials Research Bulletin	ISSN: 0025-
		of $La_{0.5}Ce_{0.5}Mn_{1-x}(Fe, Co)_xO_3$	[Elsevier-U.S.A],	5408
6	De Infon Monouei	manganites.		
0	Dr. Inan Mansuri	Structure and electrical resistivity	I Allows and Compounds	ISSN: 0025
		of $La_{1-x}Ba_xMnO_3$ (0.25 $\le x \le 0.35$ )	J. Anoys and Compounds	135IN. 0923- 9399
		perovskites	[Elsevier-0.3.A]	0300
		Influence of Ce doping on	L of Magnetism and	
		electrical and thermal properties	Magnetic materials	ISSN: 0304-
		of $La_{0.7-x}Ce_{x}Ca_{0.3}MnO_{3}$ (0.0 $\leq x$	[Elsevier-U S A]	8853
		$\leq 0.7$ ) manganites.		
		Effects of A-site disorder on	, J. of Magnetism and	
		magnetic, electrical and thermal	Magnetic Materials,	ISSN: 0304-
		properties of La0.5-x LnxCa0.5-y	[Elsevier-Netherlands]	8853
		SryMnO3 manganites.		TOOM
		Alkaline Earth (Ca) and	J. of Modern Physics,	ISSN Online: 2152
		Transmon Metal (NI) Doping on	Locientific Research	Onnie: 2155-

		the Transport Properties of $Y_{1-}$	Publishing, Inc. USA]	120X
		$_{x}Ca_{x}Ba_{2}(Cu_{1-v}Ni_{v})_{3}O_{7-\partial}$		
		Superconductors		
		Influence of Cerium doping on		
		structural and transport properties	J. Low Temp. Phys.	1573-7357
		of CaMnO <sub>3</sub> manganites	[Springer / Plenum-U.S.A.]	
		Effect of Ca(Ce) doping on	Fizika Nizkikh Temperatur	E-
		thermopower of LaMnO <sub>3</sub>	[AIP- Low Temperature	ISSN: 1090-
		Manganites	Physics]	6517
		Interpretation of temperature-	L Allerer and Common de	ICCN: 0025
		dependent resistivity of	J. Alloys and Compounds	155IN: 0925-
		La <sub>0.7</sub> Ba <sub>0.3</sub> MnO <sub>3</sub> manganites.	[Elsevier-U.S.A],	0300
		Interpretation of thermal		
		conductivity in the ferromagnetic	L Low Tomp Phys	
		phase of La0.83Sr0.17MnO3	[Springer / Plenum-II S A ]	1573-7357
		manganites: Scattering of	[Springer / Tienum-0.5.A.]	
		Phonons and Magnons.		
		Explanation of optical		
		conductivity in the ferromagnetic	Modern Physics Letters B	0217-9849
		state of La0.70Ca0.30MnO3	[Word Scientific-Singapore]	0217 2012
		manganites.		
		Effect of electron/hole doping on	J. Phys.: Condens. Matter	10(1)(10)
		the transport properties of	[I.O.P <i>U.K</i> .]	1361-648X
		Anticipating the Destructor		
		Penchant in the Play Havayadana	Research Link, Monthly	ISSN – 0973-
		by Girish Karnad	National Journal	1628.
	7     Dr. Swati singh   Music and Films as Resources of Language Learning, a Clinical Study Man and Nature Act and React	Music and Films as Resources of		
		Language Learning, a Clinical	Research Link, Monthly	ISSN – 0973-
7		Study	National Journal	1628
/		Research Link, Monthly		
		upon Each Other	National Journal	
		Information through Skills	Book Soft Skills-A Key to	
		Published in the	Professional Excellence.	
		ELT Away From the Classroom	Spark International Online e	
			Journal	
		QSAR Modeling of Sulfonamides	Management EFFIGY	ISSN NO-
		The use of Duplist of polycopes	_	2249-1045
		for estimating Padmakar Ivan	Journal of Engineering	Vol 4 Jesua
	Dr Parimeeta	Index of Fabonancenes &	science & Management	111 (197-199)
8	Chanchani	Heliceness	Education NITTTR, Bhopal	III, (177 177)
		Paper published on First unique		
		example of use of Balaban J	81st Annual session of	
		index in monoparametric	Thiruspanethpurem	
		regression	Tinituananauiputani	
		Synthesis, Spectroscopic		
	charecterisation and antbacterial			
	9 Dr. Purti Bilgaiyan	screening of novel Mannich bases		
0		ot 2-amino -9[ {(1,3-	Arebian J of chemistry	
9		unydroxypropane-		
		2y1)0xy}ineury1]0,90iny0r0-3H		
		Synthesis and invitro study of	L of chilean chemical	
		some medicinally important	society,	57,N 3

Mannich bases derive from 2-		
amino -9[		
{(1,3dihydroxypropane2yl)oxy}m		
ethyl]6,9dihydro-3H purin-6-one.		
Synthesis and Studies of Mannich		
Bases of 2-chloro-4-nitro	Journal of environmental	
benzamide as potential	research and development	, vol.3, No.1,
antimicrobial agent.	×.	
Synthesis Spectral Studies and	Dessent issues 1 of	
antimicrobial study of	Research journal of	vol 1 22
aminomethylated derivatives of	pharmaceutical, biological	V01.1, 25
7-azaspiro [4.5] decane 6-8 dione	and chemical sciences	
Synthesis, Charecterisation and		
antibacterial screening of		wel 2 122
aminomethylated screening of	Der Pharma Chemica	, vol.2,122-
aminomethylated derivatives of 7-		129
azaspiro(4.5) decane-6,8-dione.		

### • Conference Publication Details (National/ International)

Name of Faculty	Duration / date	Title
	12th & 13th Sept.	Participated in National Symposium on "Waste &
Dr. Saurabh Jain	2014.	Biomass Valorisation: Potential and Challenges"
		Indore Institute of Science and Technology
		Presented a paper on "Applications of Boolean Lattice to
		Distributed Computing "in International Conference
	08-09 February	PrCON
	2013.	Presented a paper on "Applications of Distributive Lattice
		in the field of Computer Science, Economics &
		Management" in International Conference PrCON
		Prestige Institute of Management Dewa
		Presented a paper on" Generation of distributive lattice by
		orientation of strongly connected and acyclic diagraph" in
		18th Annual CUM international conference of Gwalior
		Academy of Mathematical Science (GAMS) organized by
Dr Namrata Kaushal	22-26 September 2013.	department of mathematics.
		Presented a paper on" Mathematical basis for analysis of
		nonlinear propagation of Intense Electromagnetic Beam
		through Density Profiles Plasma " in 18th Annual CUM
		international conference of Gwalior Academy of
		Mathematical Science (GAMS) organized by department
		of mathematics. MANIT Bhopal M.P
		Presented a paper on "A Noble Approach of Graph
	December 24-26,	Theory for Lattice Theory" in International Conference
	2013	On Recent Advances in Mathematics Sciences and
		Applications ()" organized by Department of Applied
		Mathematics. RGPV Bhopal M.P.
		International Conference on Special Functions and their
	2012	Applications. Malviya National Institute of Technology,
		Jaipur
Ms. Richa Jain	Dec 2012	International Conference on Recent Advances in
	Dec 2015	Mathematical Sciences and Applications, RGPV Bhopal
	2014	National Conference on Pure and Applied Mathematics
		Mta Gujri Mahila Mahavidhyalaya Jabalpur

Dr. Parimosta	2012	Paper presented at National Conference on "Advances in pharmaceutical & chemistry research" Paper presented in 49 Annual convention of chemists on" QSAR study to investigate the potential of some topological indices for a set of Benzenoids in mono variant regression" NITTTR, Bhopal
Chanchani	2014	Presented paper in National conference on Trend & Challenges in Applied sciences & Engineering on "Application of graph theory in modelling Sulphonamides". SATI, Vidisha
	2014	National conference on Innovative Trends in Applied sciences, Humanities, management and Environment, SVITS, Indore

**20.** Area of consultancy income: NIL

#### **21.** Faculty as members in:

a) National committees b) International Committees c) Editorial Boards....

	Name of Faculty: Dr. Niharika Shivhare
	Editorial Board detail:
1.	International Journal of Engineering Science and Research Technology
2.	International Journal of Engineering Science and Management
3.	Global Journal of Engineering Science and Researches
	Name of Faculty: Dr. Saurabh Jain
	National committees:
	Member of Project review and supervisory group for the national mission on education
	through MHRD / NMEICT for Virtual Lab

#### **22.** Student Projects:

• Percentage of students who have done in-house projects including inter departmental / program:

The students of B.E final year are mandatorily required to submit the project, so 100% of final year students of B.E. course have done the projects.

• Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies 0%

#### 23. Awards / Recognitions received by faculty and students

Awards received by faculty:

S.No.	Name of faculty	Given By	Name of the award	Year
1	Ms. Richa Jain	International Young Scientist Congress at MRCPS Indore.	Young Scientist award	2015

S.No.	Name of academicians/ scientists/ visitors	Designation	Date Of Visit
1	Dr. N. S. Chaudhary	Head, CSE Deptt.IIT, Indore	16/03/2013
2	Er. B. Saboo	Manager, Volvo Eicher CVL, Pithampur	16/03/2013
3	Dr. Vandana Tare	Prof, CE Deptt, SGSITS Indore	16/03/2013
4	Mr. Sudarshan Varma,	Project Manager, Idea Vate , Indore	02/08/2013
5	Mr. Nirmal Matharu,	VP & Plant Head, Mahindra Two Wheelers, Indore	02/08/2013
6	Dr. R. K. Shrivastava,	Prof., Civil Engg Deptt, SGSITS, Indore	02/08/2013
7	Dr. Pratha Chattaraj	, Deputy Director, NATRIP, Pithampur	02/08/2013
8	Dr. Kukreja,	Scientists from RRCAT Indore	08/9/2014
9	Mr.Varun Kapoor	Inspector General of Police	22/04/2015

**24.** List of eminent academicians and scientists / visitors to the department:

#### 25. Seminars/ Conferences/Workshops organized & the source of funding

- f) National : Nil
- g) International : Nil

#### **26.** Student profile program/course wise:

Not applicable for Basic Sciences and Humanities as these subjects are supporting courses for engineering students.

#### **27.** Diversity of students

Not applicable for Basic Sciences and Humanities as these subjects are supporting courses for engineering students.

**28.** How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Not applicable for Basic Sciences and Humanities as these subjects are supporting courses for engineering students.

#### **29.** Student Progression

Not applicable for Basic Sciences and Humanities as these subjects are supporting courses for engineering students.

30. Details of Infrastructural facilities

- ➢ Library
  - Total Area 1500 sqm
  - Reading Space : 200 students
  - Number of Titles: 4150
  - Number of Volumes : 45531
  - Number of Journals & Magazines : 114
  - Number of International Journal : 36
  - No of issues : 80 100 per day
  - Digital Library (NPTEL MIT, IIT)
  - Book issued to students at one time (5 books)
  - ESH departmental library contain 150 books.

S. N0	Journals & Magazine Name					
1	Pramana - Journal of Physics					
2	Journal of Astrophysics and Astronomy					
3	Proceedings (Mathematical Sciences)					
4	Proceedings (Earth and Planetary Sciences)					
5	Sadhana (Engineering Sciences)					
6	Journal of Biosciences					
7	Journal of Genetics					
8	Resonance – Journal of Science Education*					
9	Journal on Mathematics					
10	ISST Journal of mathematics & Computing System					
11	Competition Success Review Pvt. Ltd.					
12	General Knowledge Today					
13	Journal on Today's Ideas					
14	Punjab University Research Journal (Science)					
15	India Today					
16	DELNET (Online)					
17	J-Gate (Online)					

- Internet facilities for Staff & Students: Internet Connection in all Departmental Labs & Staff Cabin
   ISP: Airtel 8 Mbps (1:1)
   ISP: RPNet 35 Mbps (1:1)
   = 43 Mbps
- Class rooms with ICT facility: Provided in every Classroom

#### ➤ Laboratories:

Laboratory	Space, number of students	Type of experiments
Chemistry	1168 sq. ft & 30 per batch	Basic General Chemistry Experiments
Fundamental of Electrical Engineering	800 sq ft & 30 per batch	Hands on experiment where students done experiment on circuit laws verification and demonstrate and reinforce concepts taught in theory classes.
Fundamental of Electronics Engineering	800 sq ft & 30 per batch	Hands on experiment where students done experiment on circuit laws verification and demonstrate and reinforce concepts taught in theory classes.
Engineering Graphics	1600 Sq. ft & 30 per batch	As per experiment list supplementing theory course and Practices Sheet works
Engineering Graphics	600 Sq. ft & 30 per batch	As per experiment list supplementing theory course and Practices Sheet works
Work Shop(Manufacturing Practice)	3500 Sq. ft & 30 per batch	As per experiment list supplementing theory course & Molding, fitting, Black smithy, welding and Machine shop
Engineering Physics	796 Sq. ft & 30 per batch	Basic General Physics Experiments
Communication Skills/English	894 Sq ft. & 30 per batch	Audio - visual, work-sheets, animated.
Environmental Science	1168 sq. ft & 30 per batch	As per experiment list supplementing theory course & Molding, fitting, Black smithy, welding and Machine shop
Data Structure	894 Sq ft. & 30 per batch	As per experiment list supplementing theory course and Practices Sheet works
Computer Programming	894 Sq ft. & 30 per batch	As per experiment list supplementing theory course and Practices Sheet works
Engineering Mechanics	800 Sq. & 30 per batch	As per experiment list supplementing theory course and Practices Sheet works

# **31.** Number of students receiving financial assistance from college, university, government or other agencies :

Not applicable for Basic Sciences and Humanities as these subjects are supporting courses for engineering students.

**32.** Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

S.No.	Special lectures / workshops / seminar	Date					
1	VIRTUAL LAB workshop by IIT Delhi under virtual Lab program	26,27 march 2015					
2	VIRTUAL LAB workshop by IIT Delhi under virtual Lab program 9, 10 Septem						
3	VIRTUAL LAB workshop by IIT Delhi under virtual Lab program	31 march ,1 April 2016					
	Challenges to Interface Nanoscale Technology and						
4	Superconductivity, organized by Indore Institute of Science &	12 & 13 April 2013					
	Technology, Indore						

33. Teaching methods adopted to improve student learning

Apart from regular lectures through chalk-a- talk, following innovative teaching approaches are being practiced:

- > To make teaching effective, concepts are explained by charts and models wherever necessary.
- > Certain topics are covered with orientation towards GATE & IES
- Some important basics and topics beyond syllabus are covered
- > Faculty are provide internet to prepare lecture notes
- Faculties are encouraged to attend seminars, conferences, workshop to enhance their skills so that the knowledge can be transferred in a better way.
- E-recourses, reference books are provided in the library
- LCD projector screens / Overhead projectors help the faculty to deliver interactive lectures and demonstrations of animations/ ppt slides/ lecture contents.
- Laboratories with Internet Connection permit the students to widen their knowledge and skills.
- Faculty members apply teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies.
- SMART Class SMART boards are being used for teaching purposes.
- > Augmentation of conventional black board teaching by using audio-video aids.
- Computers & laptops are used for teaching purposes and internet facility is available even in classrooms.
- > Online availability of journals in the intranet for the project guidance.
- 34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Various activities and events are organized Like Yoga day, Blood donation camp etc in the favour of social responsibilities. Faculties and students both participate in these activities with great enthusiasm. We have a School Connect Program, where our faculties interact with 11<sup>th</sup> and 12<sup>th</sup> class' students.

- **35.** SWOC analysis of the department and Future plans
- Strength :
  - Department has a good team of 11faculty members(Sciences and Humanities) out of which 7 are Ph. D awarded and 3 are pursuing Ph. D.
  - Along with good qualification faculty members have good teaching experience also.
  - Well organized labs are available in chemistry and physics department.
  - Departmental lab required in first year classes are also well equipped and well arranged.
  - Various software's are available and being used in language lab and communication lab to develop the communication skills of the students.
  - To enhance e-teaching learning class rooms are provided with projectors and cameras.
  - Rich centralized library with large number of books and e-library facilities are available.
  - Books of all kinds including subjects, competitive exams and biography of great people are available in the library.
  - To bridge the gap of language (for students of rural background) department conduct personality development classes.
- ✤ Weakness:
  - Since the quality of students is not up to the mark, the university result does not meet our expectations.
  - Regular FDPs are not available for faculty members due to compact curriculum design.
  - Students from rural background need improvement in communication and professional skills.
- Opportunity:
  - As the quality of resources in terms of faculty members and infrastructures available are very good, they can be optimized by introducing some new courses.
  - FDPs and refresher courses can be organized on regular basis which must ensure participation of outside faculty members.
  - Regular workshops for students including students of other colleges should be organized.
- ✤ Challenges:
  - To get the good quality of students at the time of admission.
  - Retention and motivation of the faculty members is required.

# DECLARATION BY HEAD OF THE INSTITUTE

I certify that the data included in this Self-study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part there of has been outsourced. I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Signature of the Head of the institution with seal:

Place:

Date:

# ANNEXURE

## **ANNEXURE I: AICTE AFFILIATION LETTER 2016-17**



All India Council for Technical Education (A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001 PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 <u>www.aicte-India.org</u>

F.No. Central/1-2812676023/2016/EOA

Date: 25-Apr-2016

To,

The Principal Secretary (Technical Education) Vallabh Bhawan, 1st floor. R .No. 113 Mantralaya, Bhopal-462004

Sub: Extension of approval for the academic year 2016-17

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam.

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Central	Application Id	1-2812676023
Name of the Institute	INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY	Permanent Id	1-4279771
Name of the Society/Trust	SHAIL EDUCATIONAL & WELFARE SOCIETY	Institute Address	DEHRI, OPP IIM, PITHAMPUR ROAD, RAU, INDORE, MADHYA PRADESH, INDORE, INDORE, Madhya Pradesh, 453331
Institute Type	Unaided - Private	Society/Trust Address	OPP IIM, PITHAMPUR ROAD, RAU, INDORE,INDORE,INDORE,Madhya Pradesh,453331

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1 Program	-2812676	Level	Course	Full/Part Time	Affiliating Body	Intake 2015-16	Intake Approved for 2016-17	NRI Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaborarion/Twining Program Approval status
ENGINEERIN G AND TECHNOLO	1st Shift	POS T GRA DUA	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	18	18	NA	NA	NA

Application Number: 1-2812676023

Note: This is a Computer generated Report.No signature is required. Printed By : AE1733721

Page 1 of 4 Letter Printed On:26 April 2016

#### All India Council for Technical Education (A Statutory body under Ministry of HRD, Govt. of India)



7th Floor, Chandralok Building, Janpath, New Delhi- 110 001 PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

GY		TE								
ENGINEERIN G AND TECHNOLO GY	1st Shift	POS T GRA DUA TE	DIGITAL COMMUNICATI ONS	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	18	18	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	POS T GRA DUA TE	MACHINE DESIGN	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	18	18	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	UND ER GRA DUA TE	CHEMICAL ENGINEERING	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	60	60	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	UND ER GRA DUA TE	CIVIL ENGINEERING	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	60	60	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	UND ER GRA DUA TE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	240	240	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	UND ER GRA DUA TE	ELECTRONICS & COMMUNICATI ON ENGG	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	120	120	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	UND ER GRA DUA TE	INFORMATION TECHNOLOGY	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	60	60	NA	NA	NA
ENGINEERIN G AND TECHNOLO GY	1st Shift	UND ER GRA DUA TE	MECHANICAL ENGINEERING	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyala ya, Bhopal	360	360	NA	NA	NA
MANAGEME NT	1st Shift	POS T GRA DUA TE	MASTERS IN BUSINESS ADMINISTRATI ON	FULL TIME	Devi Ahilya Vishwavidyala ya, Indore	60	60	NA	NA	NA

Application Number: 1-2812676023 Note: This is a Computer generated Report.No signature is required. Page 2 of 4 Letter Printed On:26 April 2016

Printed By : AE1733721



All India Council for Technical Education (A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001 PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

The above mentioned approval is subject to the condition that INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

Course(s) Applied for Closure by the Institute for the AY 2016-17:

Application Id: 1-2812676023		Name of the Course	Full/Part Time	Affiliating Body	Course Closure Status	
Program	Shift	Level				
ENGINEE RING AND TECHNOL OGY	1st Shift	UNDER GRADUAT E	COMPUTER ENGINEERING : (Last Approved Intake 60)	FULL TIME	Rajiv Gandhi Prodoyogiki Vishwavidyalaya, Bhopal	Approved

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Dr. Avinash S Pant Vice - Chairman, AICTE

Copy to: The Regional Officer, 1. All India Council for Technical Education Tagore Hostel-2, Shamla Hills Bhopal-462 002, Madhya Pradesh

- 2. The Director Of Technical Education, Madhya Pradesh
- 3. The Registrar, Rajiv Gandhi Prodoyogiki Vishwavidyalaya, Bhopal
- 4. The Principal / Director, INDORE INSTITUTE OF SCIENCE AND TECHNOLOGY DEHRI, OPP IIM, PITHAMPUR ROAD, RAU, INDORE, MADHYA PRADESH, INDORE, INDORE, Madhya Pradesh,453331
- 5. The Secretary / Chairman, SHAIL EDUCATIONAL & WELFARE SOCIETY OPP IIM, PITHAMPUR ROAD, RAU, INDORE,

Application Number: 1-2812676023 Note: This is a Computer generated Report.No signature is required. Printed By : AE1733721

Page 3 of 4 Letter Printed On:26 April 2016

## ANNEXURE II: RECOGNITION UNDER SECTION 2 (F) OF THE UGC ACT, 1956



Speed Post

UGC Website: www.ugc.ac.in Ph. 011-23604414 (CPP-I/Colleges)

F. No. 8-309/2016 (CPP-I/C)

The Registrar, Rajiv Gandhi Proudyogiki Vishwavidyalaya Airport Bypass, Gandhi Nagar Bhopal - 462 036 Madhya Pradesh

विश्वविद्यालय अनुदान आयोग University Grants Commission (मानव संसाधन विकास मंत्रालय, भारत सरकार) Ministry of Human Resource Development, Govt. of India) बहादूर शाह जफर मार्ग, नई दिल्ली - 110 002 Bahadur Shah Zafar Marg, New Delhi - 110 002

August, 2016

9 AUG 2016

Sub: - Recognition of College under Section 2 (f) of the UGC Act, 1956.

Sir.

I am directed to refer to the letter no. IIST/UGC2(F)12(B)/894 dated 27.04.2016 received from the Principal, Indore Institute of Science and Technology, Pithampur Road, Opposite IIM, Rau, Indore - 453 331, Madhya Pradesh on the above subject and to say that it is noted that the College is un-aided/self financed and temporarily affiliated to Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal. I am further to say that the name of the following College has been included in the list of Colleges prepared under Section 2 (f) of the UGC Act, 1956 under the head 'Non-Government Colleges teaching upto Master's Degree':-

Name of the College	Year of Establishment	Remarks
Indore Institute of Science and Technology, Pithampur Road, Opposite IIM, Rau, Indore – 453 331, Madhya Pradesh.	2003	The college does not fulfill the requirement of permanent affiliation. Therefore, the college is <b>not</b> eligible to receive Central assistance under Section 12 (B) of the UGC Act, 1956.

The indemnity Bond and the other supporting documents submitted in respect of the above College have been accepted by the University Grants Commission.

Yours faithfully,

(Charan Dass) Under Secretary

#### Copy to:-

- 1. The Principal, Indore Institute of Science and Technology, Pithampur Road, Opposite IIM, Rau, Indore - 453 331, Madhya Pradesh.
- The Secretary, Government of India, Ministry of Human Resource Development, Department of 2 Secondary Education & Higher Education, Shastri Bhavan, New Delhi - 110 001.
- 3. The Principal Secretary, Department of Higher & Technical Education, Government of Madhya Pradesh, Mantralaya, Bhopal - 462 004, (Madhya Pradesh).
- Education Officer, UGC, Central Regional Office (CRO), Tawa Complex, Bittan Market, E-5, 4. Arera Colony, Bhopal - 462 016, (Madhya Pradesh).
- 5. Section Officer (F.D.-III Section) U.G.C., New Delhi. 6. Guard file.

marine (M.P. Singh) Section Officer











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## ANNEXURE III: MASTER LAYOUT FOR LIBRARY



# ANNEXURE IV: PUBLICATIONS DETAIL

S. No.	Name of Faculty	Title	Name of Journal / Conference	ISBN/ISSN numbers	Citation Index& Impact Factor
	Mr. Utkarsh Jain	Parking Study of CBD Area of Indore – A Case Study	International Journal of Scientific Research in Science & Technology	2395-602X	3.6
		A Text Book of Engineering Mechanics	Parasmani Publishers, Indore	ISBN NO: 978938416440 9	More than 1000 Copies sold
		A Comparative Assessment of Water Quality for Pithampur Industrial Area, Indore, India	International Journal of Scientific Research in Science, Engineering and Technology	2394 - 4099	2.875
		Seismic Response of Base Isolation R/C Frame Structure	International Journal of Engineering Technology & Management	2394 - 6881	2.06
1		A Comparative Study of Simply Supported and Continuous R.C.C. Slab Bridges	International Journal of Engineering Research and General Science	2091 - 2730	3.843
		Analysis to Convert Traditional Building to Green Building	International Journal of Engineering Trends & Technology	2231 - 5381	1.795
		Using Marble Detritus in Concrete Mix in the Percent Replacement of Cement	International Journal Of Emerging Trends In Engineering And Development	2249 - 6149	2.87
		Effect of Crumb Rubber Material on Concrete Mix	SSRG International Journal of Civil Engineering	2348 - 8352	2.54
		Seismic Analysis of RC Shell Structure	International Journal of Emerging Trends in Engineering and Development	2249 - 6149	2.87
		Watershed Delineation of Narmada Basin- Indira Sagar Dam to Maheshwar Dam of Madhya Pradesh	International Journal of Emerging Technology and - Advanced Engineering	2250 - 2459	2.324
		Analysis of Flexural Behaviour of Beam by various Sensing Techniques	International Journal of Emerging Trends in Engineering and Development	2249 - 6149	2.87
2	Mr. Shailendra Singh	Climatic changes in Indore with reference to solid waste management & air pollution	International Journal of Innovative Science, Engineering and Technology	2348 - 7968	1.5
	5	A Comparative Assessment	International Journal of	2394 - 4099	2.875

		of Water Quality for Pithampur Industrial Area,	Scientific Research in Science, Engineering and Technology		
		Seismic Response of Base Isolation R/C Frame Structure	International Journal of Engineering Technology & Management	2394 - 6881	2.06
		Seismic Response of Soft Storey on High Rise Building Frame	International Journal of Engineering Technology and Computer Research	2348 - 2117	3.983
		A Comparative Study of Simply Supported and Continuous R.C.C. Slab Bridges	International Journal of Engineering Research and General Science	2091 - 2730	3.843
		Stabilization of Black Cotton Soil using Lime	International Journal of Science and Research	2319 - 7064	4.438
		Analysis to Convert Traditional Building to Green Building	International Journal of Engineering Trends & Technology	2231 - 5381	1.795
		Using Marble Detritus in Concrete Mix in the Percent Replacement of Cement	International Journal Of Emerging Trends In Engineering And Development	2249 - 6149	2.87
		Effect of Crumb Rubber Material on Concrete Mix	SSRG International Journal of Civil Engineering	2348 - 8352	2.54
	Mr. Manish Nimoriya	Climatic changes in Indore with reference to solid waste management & air pollution	International Journal of Innovative Science, Engineering and Technology	2348 - 7968	1.5
		Seismic Response of Base Isolation R/C Frame Structure	International Journal of Engineering Technology & Management	2394 - 6881	2.06
3		Seismic Evaluation Of RC Building Using Pushover Analysis	International Journal of Engineering Technology and Management	2394 - 6881	2.06
		Seismic Vulnerability Assessment Of Bridges Using Fragility Based Approach	Global Journal of Engineering Science and Research Management	2349-4506	2.545
4	Mr. Rupesh Rathore	Watershed Delineation of Narmada Basin- Indira Sagar Dam to Maheshwar Dam of Madhya Pradesh	International Journal of Emerging Technology and Advanced Engineering	2250 - 2459	2.324
		Assessment of Scheduling of irrigation water for wheat crop using zero one model for an irrigation project.	International Conference on Innovative Trends in Engineering Science & Management		
		A Case Study Of Raddison Square Indore For Design Of Signalized Roundabout	International Journal of Engineering Research and General Science	2091-2730	3.843
5	Mr. Lalitesh Sinha	Watershed Delineation of Narmada Basin- Indira Sagar Dam to Maheshwar Dam of Madhya Pradesh	International Journal of Emerging Technology and Advanced Engineering	2250 - 2459	2.324
		Analysis of Flexural Behaviour of Beam by	International Journal of Emerging Trends in	2249 - 6149	2.87

		various Sensing Techniques	Engineering and Development		
		A Comparative Assessment of Water Quality for Pithampur Industrial Area, Indore, India	International Journal of Scientific Research in Science, Engineering and Technology	2394 - 4099	2.875
		A Case Study of Radisson Square Indore for Design of Signalized Round about	International Journal of Engineering Research and General Science	2091 - 2730	3.843
6	Mr. Anand Raghuwans hi	A Case Study of Radisson Square Indore for Design of Signalized Roundabout	International Journal of Engineering Research and General Science	2091 - 2730	3.843
		Nano material Compatibility and Effect on Properties of Base Bitumen Binder and Polymer Modified Bitumen	International Journal of Innovative Science, Engineering & Technology	2348 - 7968	4.332
		Improvement of Black Cotton Soil with Cement & Flyash Treated With Terrasil	International Journal of Scientific Research in Science, Engineering and Technology	2394-4099	3.7
		Effect Of Density And Moisture On The Slope Stability Of Highway Embankment	International Journal Of Engineering Sciences & Research Technology	2277-9655	4.116
		Assessment of Pedestrian Level of Service For Mixed Lane	An International Peer- Reviewed Research (Unpaid) Journal of Engineering & Technology	0976-2973	***

S.	Name of Faculty	Title	Name of Journal /	ISBN/ISSN Numbers
110.		Fixed point theorems for gernal	Asian Journal of	23077743
1	Dr. Saurabh Jain	A Common Fixed point theorem for six mappings in a complete metric space	Vikram Mathematical Journal,	
		Common random fixed points of random multivalued operators on polish spaces	Indian research communications	ISSN. 0973- 9661.
		Fixed point theorem of multivalued mappings in cone metric spaces	International Journal of Mathematical Archive-2	ISSN.2229- 5046
		A common fixed point theorem for six mappings	International journal of mathematical archive-2(8),	
		International Banking: Comparisons and Perspectives	Opportunities and Challenges in the Global Business	ISBN: 978- 81-7446-718- 8.
		E-Governance and E- Government: Present Scenario and Challenges Ahead	published) in book IT Enabled Practices and Emerging Management Paradigms, Excel Books, New Delhi	ISBN: 978- 81-7446-676- 1
2	Dr Namrata Kaushal	Covering Relation of Lattice Valued Non-Deterministic Automaton	Sohag journal of math.,(Natural Sciences Publishing USA)	2375-2890
		"Distributive Lattice Under the S- Accessibility	"International Journal of Scientific Research in Multidisciplinary Studies	Vol.1(1) pp.11-14.
		Chip-firing Game as Probability Abacus By Characterization of ULD Lattices	Asian Journal of Mathematics	2307-7743
		Generalized Engel's Algorithm for Minimizing Playing Time to Stabilize the Initial Configuration and for finding Absorbing probability	International journal of computer applications(R.S Publications)	0975-8887
		Partial Ordering on Alternating Sign Matrices and its Bijection	Journal of Indian academy of math	0970-5120
		Composite Mapping of Flip-Flop Poset of Join-Irreducible Elements of Distributive Lattice	International Journal of Scientific and Innovative Math. Research	79-62
		"Constructions of Distributive Lattice by flip-flop on Set of Orientations of Strongly Connected Digraph"	Journal of Computer and Math. Sciences	403-409
		A Lattice Fixed Point Theorem with Anti-morphisms	International Journal of Applied Math. Analysis and Applications,	139-141
		Applications of Distributive Lattice in the field of Computer	Business Management & Information Technology	ISBN:978- 93-5062-253-

#### DEPARTMENT OF BASIC SCIENCE & HUMANITIES

		Science, Economics &		7(586)
		Management		
				ICDN:079
		Applications of Boolean Lattice	Business Management &	93-5062-253-
		to Distributed Computing	Information Technology	7(573)
				(Print): 2328-
		Dominant Eigenvector of	American International	3491,
			Journal of Research in	(Online):
		Connected Graph	Science, Lechnology,	2328-3580, ISSN (CD
			Engineering & Mathematics	ROM): 2328-
2				3629
3	Ms. Richa Jain	Triple Connected Domination	International Journal of	
		Number and Strong Triple	Mathematics Trends and	ISSN: 2231-
		Connected Domination Number	Technology- Volume28	5373
		of a Connected Graph	Number1 Research Journal of	
		Maximum Length Paths in	Mathematical and Statistical	· ISSN
		Connected Graph"	Sciences	2320–6047,
		Rheological studies on virgin,	Global Journal of Advanced	
		plasticized and solid filled HTPB	Engineering Technologies	2349-0292
		binder system	and Sciences	
		formulation of composite solid	Global Journal of Advanced	2349 0292
		propellant	and Sciences	2349 0292
		Gravel bed constructed wetland	Dallation Decemb	32(2), 415 -
		for treatment of sewage water	Pollution Research,	419.
		Physico-chemical study of		22(2) 202
		Bhandara District Maharashtra	Pollution Research,	32(2), 393 - 398
	Dr. Niharika	India.		590.
		1. Physico-chemical analysis of	International Journal of	
4	Shivhare	bore-well water samples of	Chemical Sciences and	2(2), 202 -
		Bhandara District, Maharashtra,	Technology,	204.
		India, Removal efficiency of physico-		
		chemical parameters and heavy	International Journal of	
		metals using some natural	Scientific and Engineering	3(6), page 6.
		materials and industrial wastes, ,	Research	
		Mine-pit water treatment for	International Journal of	
		water supply in draught affected	Engineering Science and	2(1), 51-57.
		Evaluation of wastewater	Management	
		characteristics in Budha Nallah	International Journal of	
		discharge into River Satluj in	Engineering Science and	2(1), 58-64.
		Ludhiana City	Management,	
		Study of non linear MHD wave	Purvanchal Academy of	issn 0972-
5	Mr. Sanjay Tiwari	propagation in a rotating system	Science, Jaunpur	3498,21 USN:0072
		On wave motion in MHD flow	Science, Jaunpur	3498
		A Taxt book of Dhusios	Shree Dorosmani	ISBN -
6	Dr Irfan Mansuri	Manthan	nublications	97893841643
0			Publications	93
		Structural and transport properties	Material science in	ISSN: 1369-
		of La1-xAgxMnO3 (x=0.75, 0.1,	semiconducting processing -	8001
---	-----------------	--	-------------------------------	------------------------
		0.125 and 0.15) manganites	Elsevier USA	
		Analysis of electrical resistivity	International Journal of pure	ISSN · 2310
		of electron doped La1-	applied and industrial	7617
		xTexMnO3 manganites	Physics	/01/
		Effect of Fe and Co doping on		
		electrical and thermal properties	Materials Research Bulletin	ISSN: 0025-
		of $La_{0.5}Ce_{0.5}Mn_{1-x}(Fe, Co)_xO_3$	[Elsevier-U.S.A],	5408
		manganites.		
		Structure and electrical resistivity	J. Alloys and Compounds	ISSN: 0925-
		of $La_{1-x}Ba_xMnO_3(0.25 \le x \le 0.35)$	[Elsevier-U.S.A]	8388
		alactrical and thermal properties	J. of Magnetism and	ISSN: 0304
		of Lagran Ce Case MpOs $(0.0 \le x)$	Magnetic materials,	8853
		< 0.7) manganites	[Elsevier-U.S.A]	0055
		Effects of A-site disorder on		
		magnetic, electrical and thermal	, J. of Magnetism and	ISSN: 0304-
		properties of La0.5-x LnxCa0.5-y	Magnetic Materials,	8853
		SryMnO3 manganites.	[Elsevier-Netherlands]	
		Alkaline Earth (Ca) and		
		Transition Metal (Ni) Doping on	J. of Modern Physics,	ISSN
		the Transport Properties of $Y_{1-}$	[Scientific Research	Online: 2153-
		$_{x}Ca_{x}Ba_{2}(Cu_{1-y}Ni_{y})_{3}O_{7-\partial}$	Publishing, Inc. USA]	120X
		Superconductors		
		Influence of Cerium doping on	J. Low Temp. Phys.	
		structural and transport properties	[Springer / Plenum-U.S.A.]	15/3-/35/
		$E_{\rm and CalVinO_3}$ manganites	Eizilto Nighilth Tomportur	E
		thermonower of LaMnO <sub>2</sub>	[AIP- Low Temperature	E- ISSN: 1090-
		Manganites	Physics]	6517
		Interpretation of temperature-		0517
		dependent resistivity of	J. Alloys and Compounds	ISSN: 0925-
		$La_{0.7}Ba_{0.3}MnO_3$ manganites.	[Elsevier-U.S.A],	8388
		Interpretation of thermal		
		conductivity in the ferromagnetic	L Low Torra Dhus	
		phase of La0.83Sr0.17MnO3	J. Low Temp. Phys.	1573-7357
		manganites: Scattering of	[Springer / Fiendin-0.5.A.]	
		Phonons and Magnons.		
		Explanation of optical		
		conductivity in the ferromagnetic	Modern Physics Letters B	0217-9849
		state of La0./0Ca0.30MnO3	[word Scientific-Singapore]	
		Effect of electron/hole doming on		
		the transport properties of	J. Phys.: Condens. Matter	1361-648¥
		lanthanum manganites $L_aMn\Omega_a$	[I.O.P <i>U.K</i> .]	1501-0 <del>4</del> 0/
		Anticipating the Postmodern		
		Penchant in the Play Hayavadana.	Research Link, Monthly	ISSN – 0973-
		by Girish Karnad	National Journal	1628.
		Music and Films as Resources of	Descerch Link Monthly	ISSN 0072
7	Dr. Swati singh	Language Learning, a Clinical	National Journal	1678
		Study		1020
		Man and Nature Act and React	Research Link, Monthly	
		upon Each Other	National Journal	
		Information through Skills	Book Soft Skills-A Key to	

		Published in the	Professional Excellence.	
		ELT Away From the Classroom	Spark International Online e Journal	
		QSAR Modeling of Sulfonamides using Constitutional	Management EFFIGY	ISSN NO- 2249-1643
8	Dr. Parimeeta Chanchani	The use of Dualist of polycenes for estimating Padmakar-Ivan Index of Fabonancenes & Heliceness	Journal of Engineering science & Management Education NITTTR, Bhopal	Vol-4, Issue III, (197-199)
		Paper published on First unique example of use of Balaban J index in monoparametric regression	81st Anuual session of NASI, at Kerala University Thiruananathpuram	
		Synthesis, Spectroscopic charecterisation and antbacterial screening of novel Mannich bases of 2-amino -9[ {(1,3- dihydroxypropane- 2yl)oxy}methyl]6,9dihydro-3H purin-6-one.	Arebian J of chemistry	
9	Dr. Purti Bilgaiyan	Synthesis and invitro study of some medicinally important Mannich bases derive from 2- amino -9[ {(1,3dihydroxypropane2yl)oxy}m ethyl]6,9dihydro-3H purin-6-one.	J of chilean chemical society,	57,N 3
		Synthesis and Studies of Mannich Bases of 2-chloro-4-nitro benzamide as potential antimicrobial agent.	Journal of environmental research and development	, vol.3, No.1,
		Synthesis Spectral Studies and antimicrobial study of aminomethylated derivatives of 7-azaspiro [4.5] decane 6-8 dione	Research journal of pharmaceutical, biological and chemical sciences	vol.1, 23
		Synthesis, Charecterisation and antibacterial screening of aminomethylated screening of aminomethylated derivatives of 7- azaspiro(4.5) decane-6.8-dione.	Der Pharma Chemica	, vol.2,122- 129

Name of Faculty	Duration / date	Title	
	12th & 13th Sept.	Participated in National Symposium on "Waste &	
Dr. Saurabh Jain	2014.	Biomass Valorisation: Potential and Challenges"	
		Indore Institute of Science and Technology	
		Presented a paper on "Applications of Boolean Lattice to	
		Distributed Computing "in International Conference	
	08-09 February	PrCON	
	2013.	Presented a paper on "Applications of Distributive Lattice	
D. Margarette Karalasi		in the field of Computer Science, Economics &	
Dr Namrata Kaushai		Management" in International Conference PrCON	
		Prestige Institute of Management Dewa	
	22-26 September	Presented a paper on" Generation of distributive lattice by	
	2013.	orientation of strongly connected and acyclic diagraph" in	
		18th Annual CUM international conference of Gwalior	

		Academy of Mathematical Science (GAMS) organized by		
		department of mathematica		
		Descented a neuron an" Mathematical basis for analysis of		
		Presented a paper on Mathematical basis for analysis of		
		nonlinear propagation of Intense Electromagnetic Beam		
		through Density Profiles Plasma " in 18th Annual CUM		
		international conference of Gwalior Academy of		
		Mathematical Science (GAMS) organized by department		
		of mathematics. MANIT Bhopal M.P		
		Presented a paper on "A Noble Approach of Graph		
	December 24-26,	Theory for Lattice Theory" in International Conference		
	2013	On Recent Advances in Mathematics Sciences and		
		Applications ()" organized by Department of Applied		
		Mathematics. RGPV Bhopal M.P.		
		International Conference on Special Functions and their		
	2012	Applications. Malviva National Institute of Technology.		
		Jaipur		
Ms. Richa Jain		International Conference on Recent Advances in		
	Dec 2013	Mathematical Sciences and Applications RGPV Bhopal		
	2014	National Conference on Pure and Applied Mathematics		
	2011	Mta Guiri Mahila Mahavidhyalaya Jahalpur		
		Paper presented at National Conference on "Advances in		
		nharmaceutical & chemistry research"		
		Paper presented in 40 Annual convention of chemists on"		
	2012	OSAR study to investigate the potential of some		
		topological indicas for a set of Banzanoids in mono		
		variant regression" NITTE Phonel		
Dr. Parimeeta		Presented represent in National conference on Trend &		
Chanchani		Challenges in Amilial science on Trend &		
	2014	Channenges in Applied sciences $\alpha$ Engineering on		
		Application of graph theory in modelling		
		Supnonamides . SATI, Vidisha		
	2014	National conference on Innovative Trends in Applied		
	2014	sciences, Humanities, management and Environment,		
		SVITS, Indore		

S.	Name of	Title	Duration	Name of Journal /	ISBN/ISSN
No.	Faculty		/ date	Conference	numbers
51.	Devendra Singh Mandloi	" Performance Analysis of Dual Hop Amplify and Forward Opportunistic Relay System"	1/7/2015	International Journal Of Engineering, Education And Technology ( <i>ARDIJEET</i> )	2320- 883X,VOLUM E 3 ISSUE 3
52.	Devendra Singh Mandloi	"An improved efficient pegasis protocol in wireless sensors network"	09 September 2015	International Journal of Advance research and Management, ISSN (online)	ISSN (online) 2348-9006 volume 2 Issue 9
53.	Shravan Namdeo	" Performance analysis of smart antenna using genetric algorithm"	September 2015	International Journal of Advance research in Electronics and Communication Engineering,	Volume 4 Issue 9
54.	Amrita Pahadia	"Layout Design, Analysis and implementation of combinational & sequential circuits using Micro wind"	July August 2015	Seventh Sense Research Group International Journal of VLSI & Signal processing,	vol 2 issue 4
55.	Keshav Patidar	"A high step-up PWM DC-DC Converter based on quasi z- source Topology"	2014	IET Power Electronics, (in press)	
56.	Keshav Patidar	"High step-up converters based on quadratic boost converter for micro-inverter,"	February 2015,	Electric Power Systems Research,	Volume 119, Pages 168-177, ISSN 0378- 7796.
57.	Keshav Patidar	"A step-up PWM DC-DC Converter for renewable energy applications"		International Journal of Circuit Theory and Applications	
58.	Patidar K	"Control of DC link voltage in quasi Z-source inverter by using one cycle control method,"	16 /12/2014- 19 /12/2014	IEEE International conference Power Electronics, Drives and Energy Systems (PEDES), IIT Bombay, India	
59.	Ankit Jain and Kundan Kumar	"Performance Analysis of Dual-Hop Cooperative Systems Over Fading Channels"	April 2015	PACE- A Journal of Research of Prestige Institute of Management Dewas"	ISSN NO: 0976 0938
60.	Anand Mantri	" Compression Effect on Images using different Wavelet Transformation "	Feb 2015	International Journal of Advanced Research in Electronics and Communication Engineering	Volume 4 Issue 2 P.P. 0399-40
61.	Amrita Pahadia	" Design strategy of barrel shifter using 2:1 mux at 40nm and 90nm technology"	April 2015	International Journal for Science and Research in Technology	Volume 1 Issue 4 ,ISSN : 2395- 1052
62.	Amrita Pahadia	"A review on high performance 2:1 multiplexers"	24 <sup>th</sup> May, 2015	International conference on Electrical Electronics communication robotics and instrumentation Engineering, ICEECIE	978-93-85225- 31-4
63.	Deepak Yadav	" Design strategy of Barrel	03 Feb.	International Journal on	

#### DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

		Shifter Using 2:1 Mux at 40 nm and 90 nm Technology"	2015	Electronics and Electrical Engineering	
64.	Shravan Namdeo	"Performance analysis of smart antenna using particle swarm optimization algorithm	June 2015	SSRG International Journal of Electronics and Communication Engineering,	Volume 2 Issue 6
65.	Reeta Charde	"Compression Effect on Images using different Wavelet Transformation"	Feb 2015	International Journal of Advanced Research in Electronics and Communication Engineering	Volume 4 Issue 2 P.P. 0399-402
66.	Neha Choudhary	"Analysis of worm Hole Attack in MANET using AODV routing Protocol"	Dec 2014	International Journal of Electronics & Communication Engg.	Volume 1 Issue 10, ISSN 2278- 0181
67.	Neha Choudhary	"Analysis of Black Hole Attack in MANET using AODV routing Protocol".	11 Nov 2014	International Journal of Engineering Research and Technology	Volume1, 3 Issue
68.	Neha Choudhary	" Compression Effect on Images using different Wavelet Transformation "	2 Feb 2015	International Journal of Advanced Research in Electronics and Communication Engineering	Volume 4 Issue P.P. 0399-402
69.	Ms. Priya Rathore	" Compressive sensing receiver with HIC"	Jan. 2015	International Journal of software & hardware research in engineering (IJSHRE),	Volume 3 Issue 1.
70.	Dhananjay Kumar	"Modelling and simulation of D-STATCOM for voltage regulation imparting Various Control Strategies"	Jan 2014	National Conference on Trends and Challenges in Applied Science and Technology.	
71.	Dhananjay Kumar	"D-STATCOM Modelling and Simulation Applying Control Schemes for Power Quality Improvement",	April 2015	International Journal of Electrical and Electronic Engineering & Telecommunications (IJEETC)	Vol. 4, No. 2
72.	Ankit Jain	"Pipeline ADC using switched capacitor sharing technique with 2.5V, 10 bit"	January - 2014	International Journal of enhanced research in science, technology & engineering (2319-7463) Vol. 3, Issue 1	(2319-7463) Vol. 3, Issue 1
73.	Dhananjay Kumar	"Modelling and simulation of D-STATCOM for voltage regulation imparting Various Control Strategies"	Jan 2014	National Conference on Trends and Challenges in Applied Science and Technology.	
74.	Dhananjay Kumar	"Piezoelectric Energy Harvesting from Vibration Induced Deformation of Floor Tiles"	Dec 2013.	6th National Power Electronics Conference (NPEC) at IIT, Kanpur	
75.	Dhananjay Kumar	"Piezoelectric Energy Harvester Design And Power Conditioning "	1-2 March 2014.	IEEE Student Conference on Electrical Electronics and Computer Science 2014 at Maulana Azad National Institute of Technology, Bhopal,	http://ieeexplore .ieee.org/xpl/art icleDetails.jsp? arnumber=6804 491

76.	Anand Mantri	,"Development of FPGA based human voice recognition system with MFCC feature",	Feb 2014	SSRG International Journal of Engineering trends and technology, volume 8 number 10,	volume 8 number 10,
77.	Anand Mantri	" Performance Evaluation of Human Voice Recognition System based on MFCC feature and HMM classifier",	February 2014	International Journal of Engineering Research and Applications www.ijera.com	ISSN : 2248 - 9622, Vol. 4, Issue 2, , pp.715-719
78.	Balbhadrapatru ni Harita	"Performance analysis of turbo codede Wimax system over different communication channel "	August 2012	International Journal of Engineering Research and Development	
79.	Ankit Jain	"FPGA Design For Implementing data acquisition"	6 April 2013-7 April 2013	International Conference on Advance in Electronics and Electrical Engineering AEEE at Bangkok, Thailand	
80.	Ankit Jain	FPGADesignForImplementingdataacquisition"	11 June 13	International journal of Advancements in electronics & Electrical Engineering IJAEEE	Volume 2 Issue 2 ISSN Number 2319-7498
81.	Ankit Jain	"FPGA Design For Implementing data acquisition Using ADC"	Feb 2013	SecondInternationalConferencePrCon2013PrestigeInstituteofManagementDewas	
82.	Ankit Jain	"Smart Camera as Embedded System"	March 2013	National Conference on Advances in Electronics and Communication Engineering at SVCE Indore	
83.	Ankit Jain	"Speed Control of Fan Using Fuzzy Logic Control"	Oct 2012	National Conference on Technological Research in Electrical and Electronics Engineering	
84.	Ankit Jain	"Cryptography Using MATLAB"	Sep 2012	National Conference on Recent Advances in Embedded System and VLSI Design	
85.	Ankit Jain and Deepak Yadav	"Different Windowing Techniques "	June 2013	NationalConferenceonRecentAdvancesinMechtronicsandComputingTechnologyand Management	
86.	Devendra Singh Mandloi	"Performance analysis of turbo codede Wimax system over different communication channel "	August 2012	International Journal of Engineering Research and Development Volume 3 Issue 1 P.P. 62-69 ISSN: 2278-067	Volume 3 Issue 1 P.P. 62-69 ISSN: 2278-067
87.	Devendra Singh Mandloi	"Equripple Optimal digital FIR Filter using Signed Power of 2"	Oct 2012	National Conference on Technological Research in Electrical and Electronics Engineering	
88.	Devendra Singh Mandloi	" FIR Filter Design Using Rounding Techniques"	Sep 2012	International Journal of Computer Science and	Volume 3 Issue 5 ISSN 0975-

				Information Technologies	9646
89.	Devendra Singh Mandloi	"OFDM signal of Digital video broadcasting implementation with FFT"	Sep 2012	Recent Advances in Embedded System and VLSI Design	
90.	Deendra Singh Mandloi	" Analysis QAM Performance over AWGN Channel"	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
91.	Sangeeta Solanki	"OFDM Signal of Digital Video Broadcasting Implementation With FFT"	Sep 2012	NationalConferenceonRecentAdvancesinEmbeddedSystemandVLSI DesignVLSI	
92.	Sangeeta Solanki	"Analysis QAM Performance over AWGN channel"	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
93.	Sangeeta Solanki	"Equripple Optimal digital FIR Filter using Signed Power of 2"	Oct 2012	National Conference on Technological Research in Electrical and Electronics Engineering	
94.	Sangeeta Solanki	" FIR Filter Design Using Rounding Techniques"	5 Sep 2012	International Journal of Computer Science and Information Technologies	Volume 3 Issue ISSN 0975- 9646
95.	Sangeeta Solanki	" Design High Pass FIR Filter with Signed Power of Two Term Using MATLAB"	August 2012	International Journal of Engineering Research and Application	Vol. 2 Issue 4 p.p 1968-1970 ISSN 2248- 9622
96.	Reeta Charde	"Image Performance over AWGN channel using PSK system"	July 2012	International Journal of Engineering and Innovation Technology	Volume 2 Issue 1 (ISSN 2277- 3754)
97.	Reeta Charde	"Performance Comparison of WT Denoising & MF Denoising over AWGN Channel"	July 2012	International Journal of Engineering Research and Technology	Volume 1 Issue 5
98.	Veena Tiwari	" Digital Wate Marker "	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
99.	Shravan Namdeo	"Cryptography using MATLAB"	June 2013	National Conference on Recent Advances in Mechtronics and Computing Technology and Management	
100.	Shravan Namdeo	"Text and picture transmission by stenography"	March 2013	National Conference on Advance in Electronics and communication engineering	

Name of the Faculty	Title of Paper	Detail of Journal / Conference
	A Review. Renewable and Sustainable Energy Reviews. ISBN No. 2946-2955 Vol 2010; 14(9)	Bio-Fuels for the Gas Turbine.
	Ironical Journal of Energy & Environment Vol. 2010; 1(3): 205-210	Evaluation of Soya Bio-diesel as a Gas Turbine Fuel.
	International Journal of Engineering Research and Industrial Applications Vol 2010; 3 ( III) : 287-297	Characterization of Karanj bio-diesel for Gas Turbine Applications
	Elixir international thermal engg ISBN no. 25867-25873 vol 72 (2014) 25867- 25873,26 july 2014	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K- $\epsilon$ Turbulence Model
	International Journal of Advances in Engineering - IJAE Tech International Journal Vol.1, No. 1. Oct.2014	Analysis of Supersonic Flows in the De- Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD
Dr. K. K. Gupta	International Journal of Advances in Engineering - IJAE Tech International Journal Vol.1, No.1, Oct.2014.	Computational Analysis of De Laval Nozzle into A Suddenly Expanded Duct
	International Journal of Advances in Engineering - IJAE Tech International Journal Vol.1, No.1, Oct.2014.	Computational analysis of isolator for de-laval nozzle for supersonic flow
	XIX ISAF (International Symposium on Alcohol Fuels) International Symposium on Alcohol Fuels Oct 10- 14, 2011	Analysis and Characterization of Biodiesels for the Gas Turbine
	International Conference on Energy Engineering, Pondicherry Engineering College, Puducherry January, 2009	Feasibility of Jatropha bio-diesel for the Gas Turbine
	15 <sup>th</sup> International Conference on New Horizons of Mechanical Engineering, Rajiv Gandhi Technological University, Bhopal	Effect of alternative fuels and operating conditions on the performance and emissions of a Gas Turbine
	International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES- 2014)	Design analysis and Fabrication of electric bicycle and recover energy by different methods
	International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES- 2014)	Numerical Analysis of heat Exchanger by fluent using K-€ turbulence model
Dr. A. P. Singh	International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES- 2014)	Numerical analysis of S.I. engine Carburetor at different angles of throttle valve
	National Conference on "Recent Trends & Challenges in Mechanical Engineering, KITS, Nagpur	Inlet air cooling – an effective method for performance enhancement in Gas Turbine
	All India Seminar on "Development of Green Fuels for Energy Security & Environment Protection" organized by IES, IPS Academy, Indore	Bio-fuels as diesel substitute – Problems and possible Solution

#### DEPARTMENT OF MECHANICAL ENGINEERING

	National Conference organized by Institute of Technology, Guru Ghansi Das University, Bilaspur	Latest Developments in Hybrid Vehicle
	National Seminar on "Eco-Friendly Technologies and Challenges for Mechanical Engineers", at S.G.S.I.T.S. Indore (M. P.)	Refrigerant R-152a an environment friendly alternative to R-134a
	National Seminar organized by Takshshila Institute of Engineering & Technology, Jabalpur (M.P.)	World Class Manufacturing- A winning concept in Indian context
	During XIII National Conference of Indian Society of Mechanical Engineers (ISME)IIT Roorkee	Pool boiling of Refrigerants on Horizontal Tubes
	National Conference in CDGI Institute, Indore	Analysis of Emission characteristics of Karanja Bio-Diesel at different loads
	National Conference (NCIRE-2014) at MIST, Indore	Analysis Of A Helical Savonius Rotor At 45° Twist Angle Using Fluent
	National Conference (NCIRE-2014) at MIST, Indore	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery
	National Conference (NCIRE-2014) at MIST, Indore	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN
	National Conference (NCIRE-2014) at MIST, Indore	Perform two-dimensional modeling and simulation of the performance of combined two bucket Savonius and two-bladed Darrieus rotor
	National Conference (NCIRE-2014) at Patel group of Institution, Indore	Analysis of Engine Performance of Karanja Bio-Diesel at different loads
Mr. K.P. Tiwari	International Journal of Engineering Research & Technology e-ISSN: 2278-0181 Vol.2 - Issue 10 (October - 2013)	Effect of Fuel Injection Pressure on CI Engine Using Preheated Karanja Oil as a Fuel
	International Journal of Engineering Research & Technology e-ISSN: 2319- 1163 Volume: 02 Issue: 10 Oct-201	FUEL WASTAGE AND EMISSION DUE TO IDLING OF VEHICLES AT ROAD TRAFFIC SIGNALS
Ms. Falguni Gorana	International Journal of Engineering Sciences and Management (IJESM) ISSN:2277-5528	Improve the flow of inventory and information by using value stream mapping to achieve a cost saving in an industry
	International Science congress Association ISSN 2278-9472 Vol. 4(5), 1-7, May 2015	Design Optimization of vehicle body structure against roof crush as per FMVSS216using finite element analysis.
Ms. Priyanka Potghan	International journal of Engineering Sciences and Research Technology ISSN 2277-9655	Analysis and reduction of stress in a circular saw blade.
	International journal of Engineering Sciences and Management ISSN 2277- 5528	Finite Element Analysis of circular saw blade and Stress reduction by using surface coating method
Ms. Deepika Potghan	International Science congress Association ISSN 2278-9472 Vol. 4(5), 1-7, May 2015	Design Optimization of vehicle body structure against roof crush as per FMVSS216using finite element analysis.

	International journal of Engineering Sciences and Research Technology ISSN 2277-9655	Stress reduction by introducing stress relieving features of spur gear used in lathe headstock.
	International journal of Engineering Sciences and Research Technology ISSN 2277-9655	Finite element analysis of spur gear in lathe headstock
	International journal of engineering sciences & research technology ISSN: 2277-9655	Commercial Passenger Vehicle Seat Design and Testing Using Advance Simulation Procedure
Ms. Minakshi Das	International Journal of Engineering Sciences and Management IJESM ISSN:2277-5528	Improve the flow of inventory and information by using value stream mapping to achieve a cost saving in an industry
Mr. N. Raghu Prasad	International Advance Research Journal in Science Engineering and Technology ISSN No: 2393 8021 Vol: 2 ISSN No: 2393 8021 Page no 126-129	Buckling Analysis Of Rectangular Plates With Cut-outs And Partial Edge Compression
	International Journal Applied Engineering and Research	Pitch and Bounce Analysis for LCV's cabin and rear suspension
Ms. Deepti Malviya	International journal of engineering sciences & research technology ISSN: 2277- 9655	DESIGN AND DEVELOPMENT OF WALKING BIPEDAL ROBOT WITH THE HELP OF ARDUINO CONTROLLER
	International journal of engineering sciences & research technology ISSN: 2277 - 5528	DESIGN AND CONSTRUCTION OF WALKING BIPEDAL ROBOT
Mr. Ajay Pagare	International Journal of Emerging Technologies and Innovative Research ISSN:2349-5162 Vol.1, Issue 1, page no.1-4, June-2014	Study and Analysis of Inventory Management Practices in Small Scale Industry.
Mr. Ashish Soni	International Journal of Engineering Trends and Technology 10.14445/22315381/IJETT V27P236 Volume-27 Number-4	Optimization of Selecting Tool Materials under Different Tool Geometry in a Single Point Cutting Tool - a Review
Mr. Varun Pathak	IOSR Journal of Mechanical and Civil Engineering ISSN: 2278-1684,P- ISSN:2320-334x, Vol. 12, Issue 1	Safety Features Evaluation of the vehicle Interior using finite Element Analysis (Fea)
Mr. Akshay Kutumbale	IOSR Journal of Mechanical and Civil Engineering ISSN: 2278-1684,P- ISSN:2320-334x, Vol. 12, Issue 1	Safety Features Evaluation of the vehicle Interior using finite Element Analysis (Fea)
Mr. Dheeraj Mandliya	IOSR Journal of Mechanical and Civil Engineering ISSN: 2278-1684,P- ISSN:2320-334x, Vol. 12, Issue 1	Safety Features Evaluation of the vehicle Interior using finite Element Analysis (Fea)
	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K-ε Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
Mr. O P Singh	Analysis Of A Helical Savonius Rotor At 450 Twist Angle Using Fluent	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014

Analysis of Supersonic Flows in the De-Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014.
Computational analysis of DE LAVAL Nozzle into a suddenly Expanded Duct	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014
Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAE Tech International Journal, Vol.1, No.1, Oct.2014.
Analysis of Emission characteristics of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014
Analysis of Engine Performance of Karanja Bio-Diesel at different loads	National Conference (NCIRE-2014) at Patel group of Institution, Indore, 31st oct 2014 -01 nov 2014.

S. No.	Name of Faculty	Title	Duration /Year	Name of Journal	ISBN/IS SN numbers	Citation Index& Impact Factor
1.	Mrs. Samatha Singh	A review on various MFC for power generation	June 2016	Journal of Biofuel and Bioenergy	2454- 8618	3.249
2.	Mrs. Samatha Singh	Production of biodegradable plastic (polylactic acid) from mollasses	2012	International journal of engineering science and humanities		
3	Mrs. Samatha Singh	A review on MFC using organic waste as feed	2012	CIBTech Journal of biotechnology		
4	Mr. Rahul Gupta	Review on Reactive Distillation and Recent Applications	November201 6	Imperial Journal of Interdisciplinary Research	2454- 1362	3.7
5	Mr. Rahul Gupta	"Hydraulic Speed Breaker Power Generator"	November- December 2013	International Journal of Engineering Research & Applications, Volume 3, Issue 6.	2248- 9622	
6	Ms. Arshia Khan	Performance evaluations and design of the UASB reactor for the treatment of dairy wastewater with the help of the mixed Multiple	29-Jan-13	Jr. of Industrial pollution Control	0257- 8050	3.4
7	Rahul Bhargava	seed A review on :Electro Coagulation technique on Dairy Waste water Treatment	November- 2016	Imperial Journal of Interdisciplinary Research	2454- 1362	3.7

#### DEPARTMENT OF CHEMICAL ENGINEERING

Name of the Faculty	Title of Paper	Detail of Journal / Conference
Dr. Shilpa Tripathi	Effect of Geometrical Parameters on Heat Transfer Performance of Rectangular Circumferential Fins	International Journal of Innovative Research and Review ISSN: 2347 -4424 (Online) An Online International Journal Available at http://www.cibtech.org/jirr.htm
Dr. Shilpa Tripathi	Modelling Of Compost Process For Agro-WastesBasedOnMeasurementOfCarbonDioxideEvolved	International Journal of Biotechnology, Chemical & Environmental Engineering
Dr. Shilpa Tripathi	Some Study on Moringa Oleifera (drumstick) Seed as Natural coagulants for Treatment of Distillery Waste Water	International Journal of Applied Engineering and Technology ISSN: 2277-212X
Dr. Shilpa Tripathi	Time-seriesAnalysisofCompostingPhenomenonofAgriculturalWasteUsingANN	International Journal of Biotechnology, Chemical & Environmental Engineering ISSN 2278 – 0696
Dr. Shilpa Tripathi	Simulation of Carbon Dioxide Production During Composting of Agro wastes	International Journal of Engineering & Technology, UK

Dr. Shilpa Tripathi	Effect Of Initial Estimate Of Aqueous Carbon On Ann Based Simulation Of Composting Of Agricultural Waste	International Journal of Engineering Research and Industrial Applications
Dr. Shilpa Tripathi	Effect of initial estimates of aqueous carbon and constraints on kinetic model in prediction of carbon dioxide evolution during aerobic composting of agro- wastes".	Journal of Environmental Science and Engineering NEERI
Dr. Shilpa Tripathi	Organized and Optimized Composting of Agro Waste: Some Important Considerations and Approaches	Journal of Environmental Science and Engineering NEERI
Dr. Shilpa Tripathi	Role Of Constraints On Process Parameters In Artificial Neural Network Based Simulation Of Composting Of Agricultural Waste	Indian Journal of Science and Technology
Dr. Shilpa Tripathi	An Experimental Study on Waste Water Treatment by Using Root Zone Technology	National Conference on 'Management Horizons in Changing Economic Environment: Visions and Challenges' sponsored by AICTE, New Delhi organized by SVITS, Indore (M.P.)
Dr. Shilpa Tripathi	Electrochemical Treatment of Rice Grain Based Distillery Effluent Using Aluminum Electrode"	"International Conference on Advances in Chemical Engineering" Organized by Deptt. Of Chemical Engg., NIT Raipur (CG)
Mrs. Samatha Singh	A review on various MFC for power generation	Journal of Bio fuel and Bio energy
Mrs. Samatha Singh	Electricity generation using MFC with the help of nano materials	International conference and exhibition
Mrs. Samatha Singh	Production of biodegradable plastic (polylactic acid) from molasses	International journal of engineering science and humanities
Mrs. Samatha Singh	A review on MFC using organic waste as feed	CIB Tech Journal of biotechnology
Mrs. Samatha Singh	"Study of Spray Drying in Food Industry"	NationalConferenceonComsolMultiphysics."Study of Spray Drying inFood Industry"Bangalore
Mr. Rahul Gupta	"Hydraulic Speed Breaker Power Generator"	International Journal of Engineering Research & Applications, Volume 3, Issue 6.
Mr. Rahul Gupta	An Experimental Study on Waste Water Treatment by using RZT	National conference "Management Horizons in Changing Economic Environment: Vision & Challenges"
Ms. Arshia Khan	Performance evaluations and design of the UASB reactor for the treatment of dairy wastewater with the help of the mixed Multiple seed	Jr. of Industrial pollution Control
Ms. Amrita	Bioremediation growth kinetics of Cr(VI) contaminated aqueous solution using Pseudomonas sp., an indigenous microbial strain isolated from aerobic mixed culture	2014 International Congress on Environmental, Biotechnology, and Chemistry Engineering (CEBCE 2014), IPCBEE, IACSIT Press, Singapore. DOI: 10.7763/IPCBEE. 2014.
Ms. Amrita	Optimization of Partial Oxidation Process for Synthesis gas production using ASPEN PLUS	66 <sup>th</sup> Annual Session of Indian Institute Chemical Engineers in association with International Partners (CHEMCON-2013)

		and Joint Indo-North American Symposium
Ms. Amrita	Bioremediation of Cr(VI) Contaminated Aqueous Solution using Pseudomonas sp.	66 <sup>th</sup> Annual Session of Indian Institute Chemical Engineers in association with International Partners (CHEMCON-2013) and Joint Indo-North American Symposium
Ms. Amrita	Study and design of effluent treatment plant of coke oven and by-product plant	"Energy Efficient Technologies for Green Environment" 8th annual session of students' chemical engineering congress, SCHEMCON-2012

#### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

	NAME OF	
NAME	NATIONAL/INTERNATIONAL	TITLE OF PUBLICATION
	JOURNAL/CONFERENCE	
	INTERNATIONAL JOURNAL OF	IMPROVING REAL TIME PERFORMANCE FOR
	MATHEMATICAL ARCHIVE (IJMA)	HDTV APPLICATIONS
	INTERNATIONAL JOURNAL OF	ANALYSIS OF IMAGE SEGMENTATION
	MATHEMATICAL ARCHIVE-4(9), 2013, 1-8	THROUGH EDGE DETECTORS
DR.D.S.RAO	INTERNATIONAL JOURNAL OF	MORPHOLOGICAL ALGORITHMS FOR IMAGE
	MATHEMATICAL ARCHIVE (IJMA)	ENHANCEMENT
	INTERNATIONAL JOURNAL OF	SIX SIGMA IMPLEMENTATION IN SOFTWARE
	MATHEMATICAL ARCHIVE (IJMA)	COMPANIES USING DTS
DR.RAJEEV	INTERNATIONAL JOURNAL OF	A REVIEW PAPER ON ENERGY CONSUMPTION
VISHWAKA	ENGINEERING SCIENCES & RESEARCH	AND RELIABILITY OF WSN USING GENETIC
RMA	TECHNOLOGY IJESRT	AND PSO ALGORITHM FOR MOBILE SINK
	INTERNATIONAL JOURNAL OF	COMPARATIVE ANALYSIS OF IMAGE
	ELECTRONICS COMMUNICATION AND	SEGMENTATION ALGORITHMS
	COMPUTER ENGINEERING IJECCE	
	NATIONAL CONFERENCE DETEC 2012	REVIEW ON E-WASTE CRISIS AND E-WASTE
	NATIONAL CONFERENCE RSTES-2013	MANAGEMENT FOR BETTERMENT OF SOCIO-
	NATIONAL CONFERENCE RSTES-2013	CUST ESTIMATION METHODS FOR SUFTWARE
		DEVELOFMENT DEVENONE WASTE CRISIS AND E WASTE
	NATIONAL IOUDNAL DEDDIEV IOUDNAL	KEVIEW ON E-WASTE CRISIS AND E-WASTE MANAGEMENT FOR RETTERMENT OF SOCIO
	NATIONAL JOURNAL I EN IEX JOURNAL	ENVIRONMENTAL HABITAT
	INTERNATIONAL CONFERENCE ADET-	GAIT RECOGNITION THROUGH TEMPORAL
	2013	CONSISTENCE
	INTERNATIONAL JOURNAL OF	MORPHOLOGICAL ALGORITHMS FOR IMAGE
	MATHEMATICAL ARCHIVE (IJMA)	ENHANCEMENT
	INTERNATIONAL JOURNAL OF EMERGING	THE DETECTION AND VISUALIZATION OF
ANIL KHANDEKA	TECHNOLOGY AND ADVANCED	BRAIN TUMORS ON T2-WEIGHTED MRI
	ENGINEERING	
R	INTERNATIONAL JOURNAL OF	SIX SIGMA IMPLEMENTATION IN SOFTWARE
	MATHEMATICAL ARCHIVE (IJMA)	COMPANIES USING DTS
	INTERNATIONAL JOURNAL OF EMERGING	IMAGES USING MULTIPARAMETER FEATURE
	TECHNOLOGY AND ADVANCED	BLOCKS
	ENGINEEKING	DETECTION AND DEVENTION MECHANISM
	INTERNATIONAL JOURNAL OF	DETECTION AND PREVENTION MECHANISM
	COMPUTER APPLICATIONS (IJCA)	ATTACK IN MANET
		ANN CLASSIFIER FOR HUMAN
	INTERNATIONAL JOURNAL OF	IDENTIFICATION USING PCA FEATURE AND
	COMPUTER APPLICATION	GAIT ENERGY IMAGE
	INTERNATIONAL JOURNAL OF	A SURVEY PAPER ON HUMAN GAIT
	ENGINEERING SCIENCES & RESEARCH	<b>RECOGNITION USING PCA &amp; NEURAL</b>
	TECHNOLOGY IJESRT	NETWORK
	INTERNATIONAL IOURNAL OF	A SURVEY ON VARIOUS TECHNIQUES TO
	TECHNOLOGY RESEARCH AND APPLICATIONS	SECURE IMAGES USING VARIOUS METHODS
		LIKE STEGNOGRAPHY WATERMARKING AND
		CRYPTOGRAPHY

TECHNICAL RESEARCH AND APPLICATIONAL JOURNAL OF         BRAIN TUMOR AND CALCULATION OF ITS VOLUME           INTERNATIONAL JOURNAL OF         SIX SIGMA IMPLEMENTATION IN SOFTWARE COMPANIES USING DTS           T. S. ARORA         INTERNATIONAL JOURNAL OF         IMPROVING REAL TIME PERFORMANCE FOR MATHEMATICAL ARCHIVE (IJMA)           INTERNATIONAL JOURNAL OF         IMPROVING REAL TIME PERFORMANCE FOR MATHEMATICAL ARCHIVE (IJMA)         HDTV APPLICATIONS           INTERNATIONAL JOURNAL OF         SURVEY PAPER ON KNUCKLE BASED         RECOGNITION USING GABOR TRANSFORM & NECONFERENCE ON "RECENT TRENDS IN SCIENCE AND TECHNOLOGY" AT JNTUH, COLLEGE OF ENGINEERING, NACHUPALLY, KARIMNAGAR.         INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR NETWORK FOR HIGH QUALITY DATA TRANSMISSION", INTERNATIONAL JOURNAL ON APPLIED ENGINEERING RESEARCH         "INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR           INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH         "INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR           INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH APPLICATIONS (JERA).         "INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR           INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH APPLICATIONS (JERA).         "INTERFERENCE MINIMIZATION PROTOCOL IN HETEROGENEOUS WIRELESS SENSOR           INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH NETWORK FOR HIGH QUALITY DATA TRANSMISSION"         "CONGESTION CONTROL IN HETEROGENEOUS WIRELESS SENSOR NETWORKS FOR HIGH QUALITY DATA TRANSMISSION"           ACCEPTED TO PUBLISH SPRINGERADVANCES IN INTELLIGENT SYSTEMS AND
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INNOVATIONS IN COMPUTER SCIENCE HETEROGENEOUS WIRELESS SENSOR
AND INFORMATION TECHNOLOGY NETWORK FOR HIGH OUALITY DATA
(ICICSIT-2015) TRANSMISSION
INTERNATIONAL CONFERENCE ON ICT INTERFERENCE MINIMIZATION PROTOCOL IN
FOR INTELLIGENT SYSTEMS (ICTIS – HETEROGENEOUS WIRELESS SENSOR
2015), AHMEDABAD, GUJARAT, INDIA NETWORKS FOR MILITARY APPLICATIONS
ACCEPTED TO PUBLISH BY SPRINGER, "INTEREPENCE MINIMIZATION PROTOCOL IN
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GERMANY)[SCOPUS INDEXED]
MULTIPATH INTERFERENCE MINIMIZATION IN
ICCCE 2016 HETEROGENEOUS WIRELESS SENSOR
ICCCE 2016 HETEROGENEOUS WIRELESS SENSOR NETWORKS FOR RELIABLE DATA TRANSFER
ICCCE 2016       HETEROGENEOUS WIRELESS SENSOR         NETWORKS FOR RELIABLE DATA TRANSFER         NATIONAL CONFERENCE ON "COMPUTER         APPLICATIONS IN ENGINEERING"         PROTOCOL SURVEY IN WIRELESS NETWOOKS

	ORGANIZED BY INSTITUTE OF ENGINEERS"	
	INTERNATIONAL CONFERENCE ON ADVANCES& DEVELOPMENT IN ENGINEERING& TECHNOLOGY (ICADET- 2013)	GAIT RECOGNITION THROUGH TEMPORAL CONSISTENCE
	JOURNAL OF INFORMATION, KNOWLEDGE AND RESEARCH IN COMPUTER ENGINEERING,	OVERVIEW AND APPLICATIONS OF MOBILE
	INTERNATIONAL JOURNAL OF SCIENCE AND RESEARCH (IJSR), INDIA ONLINE	MOBILE AD HOC NETWORKING (MANET): ROUTING PROTOCOL EVALUATION CONSIDERATIONS
	"ICRD-ETS - 2013" HELD AT G.K.BHARAD INSTITUTE OF ENGINEERING, RAJKOT, INDIA.	OVERVIEW AND APPLICATIONS OF MOBILE ADHOC NETWORK
	NATIONAL CONFERENCE ON "RECENT ADVANCES IN MECHTRONICS, COMPUTING TECHNOLOGY & MANAGEMENT" (RAMCTM-2013)	REAL WORLD APPLICATIONS OF SWARM INTELLIGENCE
	ALL INDIA SEMINAR ON "COMPUTER APPLICATIONS IN ENGINEERING – EMERGING TRENDS AND TECHNOLOGIES"(AICAEET)	SWARM INTELLIGENCE
MARGI PATEL	NATIONAL SEMINAR ON "INFORMATION TECHNOLOGY APPLICATIONS STRATEGIES,ISSUES & CHALLENGES	PERFORMANCE EVALUATION OF PROACTIVE,REACTIVE &HYBRID PROTOCOLS IN ACMANET
	INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY(IJSRSET), IMPACT FACTOR 2.9, ONLINE ISSN : 2394-4099, VOLUME 1 ISSUE 5	APPLICATION FOR SECURING CREDENTIALS
	INTERNATIONAL JOURNAL OF TECHNOLOGY RESEARCH AND MANAGEMENT, ISSN(ONLINE) : 2348-9006, VOLUME 2 ISSUE 12, DECEMBER 2015	A SURVEY ON TECHNIQUES TO ENHANCE PERFORMANCE OF TCP DATA TYPE AND ITS VARIANTS FOR WIRELESS ADHOC NETWORK
	IARJSET, ISSN (ONLINE) 2393-8021, VOLUME 2, ISSUE 12, DECEMBER 2015	AN IMPLEMENTATION OF MODIFIED AODV PROTOCOL IN MANET FOR MITIGATION OF BLACKHOLE ATTACK WITH VARYING NODE DENSITIES,
	INTERNATIONAL JOURNAL OF EMERGING TRENDS & TECHNOLOGY IN COMPUTER SCIENCE (IJETTCS)	CERTAINTY BASED PRIVACY SERVICE MECHANISM ON KEY POLICY BEHAVIORAL BASED ENCRYPTION
	NATIONAL CONFERENCE ON RECENT ADVANCES IN COMPUTING TECHNOLOGY AT MALHOTRA GROUP OF INSTITUTION	TRUST ESTABLISHMENT IN AD-HOC NETWORK
NITIN RATHORE	NATIONAL CONFERENCE ON "RECENT ADVANCES IN MECHTRONICS, COMPUTING TECHNOLOGY & MANAGEMENT"	SECURING AD-HOC NETWORK USING TRUST COMPUTING
	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE-4(9), 2013, 1-8	ANALYSIS OF IMAGE SEGMENTATION THROUGH EDGE DETECTORS

	INTERNATIONAL JOURNAL OF SCIENTIFIC AND RESEARCH PUBLICATIONS (IJSRP), VOLUME 4, ISSUE 8	REVIEW ON BASIC CLUSTERING TECHNIQUES FOR HETEROGENEOUS WIRELESS SENSOR NETWORK
	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET
	IARJSET, ISSN (ONLINE) 2393-8021, VOLUME 2, ISSUE 12, DECEMBER 2015	AN IMPLEMENTATION OF MODIFIED AODV PROTOCOL IN MANET FOR MITIGATION OF BLACKHOLE ATTACK WITH VARYING NODE DENSITIES,
	INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN ELECTRICAL, ELECTRONICS AND INSTRUMENTATION ENGINEERING	PERFORMANCE EVALUATION OF CMMBCR METHOD TO IMPROVE BATTERY POWER AWARENESS IN AD HOC NETWORK
NITESH RASTOGI	INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN ELECTRICAL, ELECTRONICS AND INSTRUMENTATION ENGINEERING	PERFORMANCE EVALUATION OF UHCF USING TTL PROBING FOR PACKET SPOOFING DETECTION IN MANET
	INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY (IRJET)	A SURVEY ON IMAGE RETRIEVAL TECHNIQUES WITH FEATURE EXTRACTION
RANJEET OSARI	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET
CHANCHAL BANSAL	NET-ITM-III	STENOGRAPHY :AN OVERVIEW
	INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN EDUCATION & TECHNOLOGY (IJARET)	HANDWRITTEN NUMERAL RECOGNITION
POORVA SHUKLA	INTERNATIONAL YOUNG SCIENTIST CONGRESS	ENHANCED AODV THRESHOLD APPREHENSION AND LINK BREAKAGE MECHANISM FOR MANET
AKANKSHA VARGHESE	INTERNATIONAL JOURNAL OF ADVANCE RESEARCH IN COMPUTER SCIENCE AND MANAGEMENT STUDIES,VOLUME 4, ISSUE 2	IMAGE RETRIEVAL USING VECTOR OF LOCALLY AGGREGATED DESCRIPTORS
	INTERNATIONAL JOURNAL OF ADVANCED ENGINEERING SCIENCE & TECHNOLOGY (IJAEST)	SEARCH ENGINE OPTIMIZATION
NEHA RAJA	ALL INDIA SEMINAR ON "COMPUTER APPLICATIONS IN ENGINEERING: EMERGING TRENDS AND TECHNOLOGIES"	WEB SPIDER STRATEGIES FOR WEB PAGES
PAWAR	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	MORPHOLOGICAL ALGORITHMS FOR IMAGE ENHANCEMENT
	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	SENSING, FILTER AND PROCESSING (SFP) MODEL FOR ROBUST COOPERATIVE POSITION IDENTIFICATION IN MOBILE AD-HOC

	IEEE INTERNATIONAL CONFERENCE	FORECAST TECHNIQUE FOR IDENTIFYINGGEOGRAPHICAL LOCATION OF NODES IN MANETS
VISHAL CHANDEL	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	IMPROVING REAL TIME PERFORMANCE FOR HDTV APPLICATIONS
CHETAN KU SULE	INTERNATIONAL JOURNAL OF MATHEMATICAL ARCHIVE (IJMA)	IMPROVING REAL TIME PERFORMANCE FOR HDTV APPLICATIONS
KRUPI	ICIC	BINARY IMAGE STEGANOGRAPHY IN WAVELET DOMAIN
PATEL	RESEARCH ISSUES IN SOFT COMPUTING	IMAGE STEGANOGRAPHY IN TRANSFORM DOMAIN
RAJEEV RAMAN	INTERNATIONAL JOURNAL OF ENGINEERING TRENDS AND TECHNOLOGY IJETT	A SURVEY ON" ENERGY EFFICIENT AND SECURE INFRASTRUCTURE FOR MANET JAMMING ATTACK"
RAKESH	PARIPEX - INDIAN JOURNAL OF RESEARCH VOLUME: 2   ISSUE: 3   MARCH 2013	"A NEW ENERGY EFFICIENT RBNO MECHANISM FOR ON DEMAND ROUTING PROTOCOL IN MANET"
JAIN	NATIONAL CONFERENCE ON MODERN ADVANCES IN PHYSICS FOR INTERDISCIPLINARY DEVELOPMENTS	PERFORMANCE EVALUATION OF REGION BASED NODE ORGANIZATION (RBNO) LOCATION UPDATE SCHEME FOR MANET"
DEEPAK VISHWAKA RMA	INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS (IJCA)	DETECTION AND PREVENTION MECHANISM FOR TTL FIELD TAMPERING FORM OF DDOS ATTACK IN MANET
	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY	A NEW IMPROVED APRIORI ALGORITHM FOR ASSOCIATION RULES MINING
	INTERNATIONAL CONFERENCE ON COMPUTERS & COMMUNICATION ICCC- 2012	EVOLUTION OF CONVENTIONAL GENETIC AND HYBRID GENETIC ALGORITHM FOR OPTIMIZATION OF TRAVELING SALESMAN PROBLEM
LALITA BARGADIY	INTERNATIONAL JOURNAL OF SOFTWARE & HARDWARE RESEARCH IN ENGINEERING, IJSHRE,	EVALUATION OF COMMUNICATION OVERHEAD AND ENERGY CONSUMPTION IN WIRELESS SENSOR NETWORK USING DIFFERENT CLUSTERING TECHNIQUES
А	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY	AN ADVANCE ALGORITHM FOR ASSOCIATION RULES MINING: COMPARATIVE STUDY
	NATIONAL CONFERENCE ON COMPUTER SCIENCE AND INTELLIGENT SYSTEM, NCCSIS'13	PERFORMANCE ANALYSIS OF ROUTING PROTOCOL BASED ON FUZZY CLUSTERING TECHNIQUES FOR WIRELESS SENSOR NETWORK
	NATIONAL CONFERENCE ON " EMERGING TRENDS & APPLICATION IN MACHINE LEARNING (ETAML-13)	ANALYSIS OF COMMUNICATION OVERHEAD IN WIRELESS SENSOR NETWORK USING DIFFERENT CLUSTERING TECHNIQUES

Name of the Faculty	Title of Paper	Detail of Journal
Dr. Ashish Bansal	Application of Back propagation Neural Network to generate fragmented watermarks and Full Watermark by Union	International Journal of Computer Science and Network Security (IJCSNS)", vol.8 No.10, October 2008 South Korea.
Dr. Ashish Bansal	Generating Watermark Image with Authentication using Full Cover Image and Back propagation Neural Network	International Journal of Soft Computing",3(6):443-450,2008 ISSN:1816-9503, Medwell Journals,2008 .
Dr. Ashish Bansal	Watermarking using Neural Network and hiding the trained network within the cover image	Journal of Applied and theoretical Information Technology, (JATIT),vol.4 no. 8:663-671(ISSN:1992-8615),31 Aug 2008
Dr. Ashish Bansal	A novel approach using Full Counter propagation Network for watermarking (with improvements)	IEEE Journal of Information Forensics
Dr. Ashish Bansal	Robust Image watermarking systems in frequency domain using neural networks(with a novel extension for gray scale watermarks)	Varahmihir Journal of computer and information sciences",vol.2 no. 1 &2,(2007):137-142(ISSN-0973-3639) Jan-Dec 2007.
Dr. Ashish Bansal	Generating target watermark image with random matrices and fragmented watermarked cover image using Back propagation Neural Network"	Journal of Neural Network, Elsevier
Dr. Ashish Bansal	Digital watermarking Techniques and principles- An evolutionary approach	Asian Journal of Information Technology and Management, (10):1082-1087, 2006, Medwell.
Dr. Ashish Bansal	Application of genetic algorithm to optimize robustness and fidelity of watermarked images	International journal on computer science and engineering Vol.1(3),2009,239-242
Dr. Ashish Bansal	Application of FCNN in watermarking	International journal on computer science and engineering Vol.02,No.02,2010,289- 296
Dr. Ashish Bansal	Identification of Brain tumors in 2D MRI Using automatic seeded region growing method	International Journal of Electronics Communication and Computer Engineering Volume -3 , Issue(1) NCRTCST,ISSN 2249-071X,2012
Dr. Ashish Bansal	Applicability of Back propagation Neural Network for Recruitment Data Mining	International Journal of Engineering Research and Technology (IJERT) ISSN: 2278-0181 Vol. 1 Issue 3, May-2012
Dr. Ashish Bansal	Comparison of K-means and Back propagation Data Mining Algorithms	International Journal of Computer Technology and Electronics Engineering (IJCTEE) Vol. 2,Issue 2,april 15,2012
Dr. Ashish Bansal	Preventing copyrights infringement of images by watermarking in transform domain using Full Counter propagation Neural Network	International Journal of Information Sciences and Techniques (IJIST) Vol, 2,No 6,November 2012
Dr. Ashish Bansal	Image Security achieved through watermarking survey based on	International journal of computer science and its applications: vol 2:Issue 3 ISSN

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	spatial and transform domain techniques	2250-3765
Dr. Ashish Bansal	Robust Image watermarking systems in spatial domain using neural networks in color images	Varahmihir Journal of computer and information sciences Vol. 1,No 2, 2006,41- 46 ISSN: 0973-3639
Dr. Ashish Bansal	Comparative study of TCP variants in wireless sensor networks	International journal of Research in engineering technology and management ISSN-2347-7539
Dr. Ashish Bansal	Performance comparison of TC variants for wireless sensor networks	International journal of science, engineering and technology research, vol3 issue 1 nov. 2014 pp 3018-3022
Dr. Ashish Bansal	Link Prediction in temporal mobile database	International journal of engineering research and applications. April -12-13, 2014
Dr. Ashish Bansal	Video Steganography using neural network methods	IJRAT(International Journal of research in Advent technology), E-IDDN-2321- 9637,2013
Dr. Ashish Bansal	A survey on web usage mining	IRP, Indore ,2013
Dr. Ashish Bansal	Image Search (Content Based Image Retrieval using Sobel's Edge Detection Technique)	International Journal of Scientific Research and Engineering Studies (IJSRES) Vol. 1 Issue -5 ,November, 2014,ISSN: 2349-8862
Dr. Ashish Bansal	Restraining color image forgery by watermarking in DCT domain with full counter propagation neural network	International Journal of advanced research in computer science vol. 3 No 7, Nov-Dec 2012 (Impact factor: 03.74)
Mrs. Neha Gupta	Artificial Neural Network	VSRD international journal of computer science and information technology volume 3,number 5,may 2013 ISSN 2231-2471
Mrs. Neha Gupta	Different aspect in mobile computing	Recent trends in Metronics and computing Technology and Management (RAMCTM- 2013)JUNE 16 2013
Mrs. Neha Gupta	IROCS	International journal computer science and Information security (IJCSIS)july 2013
Mr. Akhilesh Chauhan	Satisfaction in buying Railway E- ticket: An Exploratory Study	international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654
Mrs.Sheetal Chouhan	A Nobel Approach of Web Log Mining	Vol-II VSRD journal
Mrs.Sheetal Chouhan	Implementation of web access pattern Discovery	IJEACT Vol-II sep-2012
Ms.Mohini Kumrawat	survey on energy efficient approach for wireless sensor network	june 2014 IJCSIT
Ms.Mohini Kumrawat	survey on clustering algorithm on WSN	april 2015 IJCSIT
Mr.Piyush Vyas	Methodology study of ARM	IJCA
Mr.Ankur Nahar	improve congestion control technique using EIA	IJCSIT in 2104

Name of the Faculty	Title of the paper	Details of Conference
Dr. Ashish Bansal	Network Security and Confidentiality with Digital Watermarking	IEEE International Conference on Digital Ecosystems and Technologies (IEEE DEST 2007), Cairns, Australia 325-328 (21-23 Feb 2007)
Dr. Ashish Bansal	Performance Comparison of watermarking techniques of various domains	IEEE International conference (IEEE- DEST2009), Istanbul, Turkey
Dr. Ashish Bansal	Digital Image Security in Network Transmission with high level of fidelity	IEEE (International Conference: IACC 09), Thapar Institute, Patiala.
Dr. Ashish Bansal	New method for Mining Sequential Patterns in Temporal Databases	International conference (GLOGIFT), RGPV, Bhopal ((M.P.), 27-30 Dec- 2005.
Dr. Ashish Bansal	Machine Learning Process, An approach to control wind energy generator through Neural Networks	International Conference on Wind Energy: Trends and Issues by NITTTR ,Bhopal,5-7 Jan-2006
Dr. Ashish Bansal	Application of ART network for benchmarking applications	National conference on "Advancement in soft computing and data mining" at Technocrats Institute Of Technology (TIT),Bhopal,12 <sup>th</sup> Aug. 2008
Dr. Ashish Bansal	Study of advantages of Neural Networks over Conventional Microcontrollers in Process Control	National Conference on "Emerging Trends in Technology and Management-EMTECHMAN" by GLAITM, Mathura, 18-19 Feb – 2006.
Dr. Ashish Bansal	Goal Stack Planning for 2 handed robots	National Conference on "Emerging Trends in Technology Management- "EMTECHMAN" conducted by GLAITM ,Mathura,18-19 Feb-2006
Dr. Ashish Bansal	Digital Revolution and Watermarking Techniques	National Conference on "Engineering Applications and Network Security using Neural Networks and Fuzzy Logic MIT,Ujjain,16-18 Aug-2006 (published)
Dr. Ashish Bansal	Limitations of Digital Watermarks"	National Conference on "Engineering applications and Network Security using Neural Networks and Fuzzy Logic MIT, Ujjain, 16-18 Aug2006.
Dr. Ashish Bansal	Watermarking security framework for supply chain	National Seminar on "New paradigms in supply chain management ",Dec 15,2006,MIT,Ujjain,M.P
Dr. Ashish Bansal	Role of Information Technology in Physical Chemistry	National Conference , Govt. Science College, Ujjain, M.P.
Dr. Ashish Bansal	An algorithm of interface for effective conversion between Asynchronous to Synchronous data	National Conference in Pioneer Institute of professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Customization of sensitive association rules in data mining	National conference on computational intelligence in Pioneer Institute of Professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Application of ART network for authenticity application in digital	National conference on computational intelligence in Pioneer Institute of

	watermarking	Professional studies, Indore
Dr. Ashish Bansal	Watermarked image correction with FCNN for enhancing watermarking performance	(May -6 2009) National conference on computational intelligence in Pioneer Institute of Professional studies, Indore (May -6 2009)
Dr. Ashish Bansal	Conceptual approach for deficiencies identification in using Full Counter Propagation Neural network for watermarking	National Conference on emerging technologies in electronics, mechanical and computer engineering, SHAIL group
Dr. Ashish Bansal	A Novel technique for watermarked Image Correction with Full Counter Propagation Network for enhancing the watermark performance	National Conference on software engineering and information security (Oct 23rd -24th ,2009) Acropolis institute of technology and research
Dr. Ashish Bansal	Location discovery in mobile wireless sensor networks	International conference on advanced computing and communication technologies (ICACCT-2012)
Dr. Ashish Bansal	Preventing IP and MAC spoofed attacks at source	International conference on advanced computer science and information technology (ICACSIT), Nagpur, 20th Jan,2013
Dr. Ashish Bansal	Application of soft computing technique for digital image correction	AICTE sponsored national conference on soft computing techniques in electrical engineering, SCTEE-09, 9-10 July, 2010
Dr. Ashish Bansal	Evolution in watermarked image correction with Full counter propagation neural network for enhancing the watermark performance	NCSEIS, 09
Dr. Ashish Bansal	Automatic construction of health image library using information retrieval techniques.	SSIBIG, 24 Jan 2014
Dr. Ashish Bansal	Online Attendance management system using RFID with object counter	ICRTET,OCT 2013
Dr. Ashish Bansal	Image security achieved through watermarking survey based on spatial and transform domain techniques	Proc. Of international conference on advanceds in electronics, electrical and computer science engineering –EEC 2012
. Dr. Ashish Bansa	A survey on Digital water marking Technique	National Conference on Emerging Practices in Management (19-20 February, 2016)
Dr. Ashish Bansa	A survey on Digital water marking Technique using soft computing	New Trends and Challenges in Computer Engineering and Technology– NTCCET 2016.
Mrs. Neha Gupta	SDRAM in Microcontroller based mobile system	ICT, Sir Padampat singhania university 2010 march Udaipur
Mrs. Neha Gupta	Mobility computing middleware	ICTD-SMT-2013 Ghaziabad
Mrs. Neha Gupta	Mobile computing in different layer	Gyan Sandhan national conference in Prestige Institute of science and technology
Mrs. Neha Gupta	Artificial intelligence and neural network	in International Conference on Control, Communication & Computer Technology (ICCCCT-2013) and Springer Series Editor - MATLAB

		Applications in Engineering and Technology		
Mrs. Neha Gupta	Case study of artificial nural network	RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS		
Mrs. Neha Gupta	Artificial intelligence and neural network	Emerging Technologies in Electronics, Mechanical and computer engineering (ETEMC)		
Mrs. Neha Gupta	pregnental Yoga and Baby Centre	in computer Applications in Engineering: Emerging Trends and Technologies 22-23 November 2013		
Mrs. Neha Gupta	GAIT recognition through temporal consistency	International association of information cultural human and industry technology , AICIT		
Mrs.Neha Gupta	A survey on Digital water marking Technique	National Conference on Emerging Practices in Management (19-20 February, 2016)		
Mrs.Neha Gupta	A survey on Digital water marking Technique using soft computing	New Trends and Challenges in Computer Engineering and Technology– NTCCET 2016.		
Mr. Akhilesh Chauhan	Negative Association Rule Mining through Particle Swarm Optimization	International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 at Thakur College of Science and Commerce, Mumbai		
Mr. Akhilesh Chauhan	Comparative Optimization of Efficient Association Rule Mining through PSO and GA	ICMIRA-2013 proceedings in IEEE, at SMVDU Jammu,		
		International Journal of Computer		
Mr. Akhilesh Chauhan	Negative Association Rule Mining through Particle Swarm Optimization	Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012		
Mr. Akhilesh Chauhan Mr. Akhilesh Chauhan	Negative Association Rule Mining through Particle Swarm Optimization Customer Satisfaction in buying Railway E-ticket: An Exploratory Study	Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654		
Mr. Akhilesh Chauhan Mr. Akhilesh Chauhan Mr. Sanket Gupta	Negative Association Rule Mining through Particle Swarm Optimization Customer Satisfaction in buying Railway E-ticket: An Exploratory Study RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS	Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654 in Bhopal present in April-13		
Mr. Akhilesh Chauhan Mr. Akhilesh Chauhan Mr. Sanket Gupta Mrs.Sheetal Chouhan	Negative Association Rule Mining through Particle Swarm Optimization Customer Satisfaction in buying Railway E-ticket: An Exploratory Study RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS Network Security	Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654 in Bhopal present in April-13 National Conference in MANIT, Bhopal		
Mr. Akhilesh Chauhan Mr. Akhilesh Chauhan Mr. Sanket Gupta Mrs.Sheetal Chouhan Ms.Akansha Jain	Negative Association Rule Mining through Particle Swarm Optimization Customer Satisfaction in buying Railway E-ticket: An Exploratory Study RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS Network Security Effects of Impersonation Attack on MANET	Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654 in Bhopal present in April-13 National Conference in MANIT, Bhopal Recent Sustainable Trends in engineering and science		
Mr. Akhilesh Chauhan Mr. Akhilesh Chauhan Mr. Sanket Gupta Mrs.Sheetal Chouhan Ms.Akansha Jain Mrs.Alpanan Meena	Negative Association Rule Mining through Particle Swarm Optimization Customer Satisfaction in buying Railway E-ticket: An Exploratory Study RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS Network Security Effects of Impersonation Attack on MANET new design of block cipher module using simple encryption techniques	Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654 in Bhopal present in April-13 National Conference in MANIT, Bhopal Recent Sustainable Trends in engineering and science national conference at BIST Bhopal 2011		
Mr. Akhilesh Chauhan Mr. Akhilesh Chauhan Mr. Sanket Gupta Mrs.Sheetal Chouhan Ms.Akansha Jain Mrs.Alpanan Meena Ms.Mohini Kumrawat	Negative Association Rule Mining through Particle Swarm Optimization Customer Satisfaction in buying Railway E-ticket: An Exploratory Study RECENT TRENDS IN APPLIED SCIENCES WITH ENGINEERING APPLICATIONS Network Security Effects of Impersonation Attack on MANET new design of block cipher module using simple encryption techniques optimizing energy consumption in WSN through distributed weighted clustered algorithm	Applications in International Conference in Recent Trends in Information Technology and Computer Science held on 17 <sup>th</sup> & 18 <sup>th</sup> December, 2012 international journal of Review of Business and Technology Research, Vol. 4 No. 1, pp. 643-654 in Bhopal present in April-13 National Conference in MANIT, Bhopal Recent Sustainable Trends in engineering and science national conference at BIST Bhopal 2011 IEEE international conference 2015		

Name of Students	Title	Duration / Year	Name of Journal	ISBN/ISSN numbers	Citation Index& Impact Factor
Shubham Dubey	Review on Reactive Distillation and Recent Applications	November 2016	Imperial Journal of Interdisciplinary Research	2454-1362	3.7
Saumya Shah	Review on Reactive Distillation and Recent Applications	November 2016	Imperial Journal of Interdisciplinary Research	2454-1362	3.7
Faizan Khan	A review on :Electro Coagulation technique on Dairy Waste water Treatment	November- 2016	Imperial Journal of Interdisciplinary Research	2454-1362	3.7
Mohit Negi	A review on :Electro Coagulation technique on Dairy Waste water Treatment	November- 2016	Imperial Journal of Interdisciplinary Research	2454-1362	3.7

### List of Publications of Students

Name of the Student	Title of Paper	Detail of Journal / Conference	
Saket B.S.Pandey	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K- $\epsilon$ Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014	
	Analysis Of A Helical Savonius Rotor At 450 Twist Angle Using Fluent	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.	
	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.	
	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014	
	Analysis of Supersonic Flows in the De-Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD	IJAETech International Journal, Vol.1, No. 1. Oct.2014.	
	Computational analysis of DE LAVAL Nozzle into a suddenly Expanded Duct	IJAETech International Journal, Vol.1, No. 1. Oct.2014	
	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAETech International Journal, Vol.1, No.1, Oct.2014.	
	Analysis of Emission characteristics of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014	
	Analysis of Engine Performance of Karanja Bio-Diesel at different loads	National Conference (NCIRE-2014) at Patel group of Institution, Indore, 31st oct 2014 -01 nov 2014.	

	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K- $\epsilon$ Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
Antim Rewapati	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
Annin Kewapan	Design and Fabrication of Electric Bicycle and Recover Energy By Different Methods	IJAETech International Journal, Vol.1, No. 1. Oct.2014
	Design, Analysis and Fabrication of Human Transporter Segway Vehicle	IJAETech International Journal, Vol.1, No.1, Oct.2014.
	Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K- $\epsilon$ Turbulence Model	Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014
	Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
	Computational analysis of DE LAVAL Nozzle into a suddenly Expanded Duct	IJAETech International Journal, Vol.1, No. 1. Oct.2014
Pratik Sharma	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAETech International Journal, Vol.1, No.1, Oct.2014
	Analysis of Engine Performance of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014
	Numerical Analysis of heat Exchanger by fluent using K-€ turbulence model"	International Conference on (ICAMES-2014)22-23 December, 2014 in LNCT Gwalior.
	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014
	Analysis of Supersonic Flows in the De-Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014.
	Analysis Of A Helical Savonius Rotor At 450 Twist Angle Using Fluent	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
Gaurav Patel	Analysis of Emission characteristics of Karanja Bio-Diesel at different loads	National Conference in CDGI Institute, Indore.Nov-2014
	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAETech International Journal, Vol.1, No.1, Oct.2014
Nishant Moona	Analysis of combined Savonius - Darrieus and Helical Savonius wind rotor using ANN	National Conference (NCIRE-2014) at MIST, Indore, Sept 2014
Akshay Sangamnerkar	Design and Fabrication of Electric Bicycle and Recover Energy By Different Methods	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014
	Design, Analysis and Fabrication of Human Transporter Segway Vehicle	IJAE Tech International Journal, Vol.1, No. 1. Oct.2014
Moin Khan	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAE Tech International Journal, Vol.1, No.1, Oct.2014

	Numerical Analysis of heat Exchanger by fluent using K-€ turbulence model"	International Conference on (ICAMES-2014)22-23 December, 2014 in LNCT Gwalior
Kamal Verma	Computational analysis of Shell and Tube type Heat Exchanger at different Parameter	IJAE Tech International Journal, Vol.1, No.1, Oct.2014

Name of Students	Title	Duration / date	Name of Journal / Conference	ISBN/ISSN numbers	Citation Index& Impact Factor
Fatima Zakir Hussain	Application for Securing Credential	3 Sep 2015	International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET)	2394-4099	2.9
Anurag Choudhary	Reliability Prediction of Electronic Power conditioner using MIL – HDVK- 217 based ports count Method	10-12 Sep 2015	IEEE International Conference on Computer Communication and Control		
Kartavya	Search Engine Optimization	April 2013	International Journal of Advanced Engineering Science & Technology (IJAEST)	2230-7818	2.71
Bundela	Cloud Computing based E-Learning	15-16 March 2013	National Conference on Advances in Electronics and Communication Engineering		

Name of the student	Event	Paper Title
Shivani Kothari	Conference, 2012-13	Fin FET Technology for Low Power Design
Sourabh Malu and Prabal Tiwari	Conference, 2012-13	Role of Social and Ethical issue in development of nanotechnology
K.Kalpana, Deepak Patidar	Conference, 2012-13	Wireless Communication with WIBREE
Dhananjay Dwivedi	Conference, 2012-13	Growth and Challenges of wireless technology from 1G to 4 G
Roshan Khanna and Rupesh Kumar and Swati Pal	Conference, 2012-13	Different Windowing Techniques in Voice Recognition
Hemendra Prajapati	Conference, 2012-13	Cryptography using MATLAB
Achal Kukreja and Pooja Arandolwala	Conference, 2012-13	Smart Camera as Embedded Systems

# ANNEXURE V: SEMINAR / EXPERT LECTURE / CONFERENCE

S. No.	Resources person	Topic	Duration / date	Department
23.	Sh. Vinay Verma Genarl Manager, Sun pharmaceutical industries ltd. Dewas, M.P	Expert talk on "Opportunities & challenges in pharmaceutical industries : An overview"	11:00 a.m- 13:00 p.m. 5 <sup>th</sup> May,16	Chemical Engineering
24.	Dr. S.P. Chourasia, Professor, Deptt. Of Chemical Engineering, MNIT, Jaipur (Rajasthan)	Expert lecture on "Bioethanol production from agricultural waste"	11:00 a.m- 13:00 p.m. 4 <sup>th</sup> Feb,16	Chemical Engineering
25.	Dr.V.K.Shrivastava,Ex DeanR &D, IIT Delhi	Expert lecture on "Environmental protection management"	10:30a.m 12:30p.m 25 <sup>th</sup> Nov,2014	Chemical Engineering
26.	Dr.L.M.Kukreja, Sr. Scientist, RRCAT, Indore (M.P)	Expert lecture on "Emerging trends in nanotechnology"	10:30a.m 12:30p.m 25 <sup>th</sup> July,2014	Chemical Engineering
27.	Mr. Pradyumna Sharma Territory technical services manager, Ultra tech cement, Aditya Birla Group	Expert talk on "Modern trends in cement manufacturing industries"	10:30a.m. onwards 11 <sup>th</sup> Feb 2013	Chemical Engineering
28.	Mr. S.P.Gautam, Former Chairman, Central Pollution Control Board	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
29.	Dr. V.P. Thergaonkar, Ex Scientist NEERI, Nagpur, Managing Director, Enviro Techno Consult Private Ltd, Nagpur	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
30.	Mr. Dharmendra M. Ramteke, Sr. Manager (HRD), Rashtriya Chemicals & Fertilizer, Mumbai	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
31.	Dr. Devendra Deshmukh, Department of Mechanical Engineering, IIT Indore	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
32.	Mr. B.D.Dalwadi, Chief Executive Officer, Bharuch Enviro Infrastructure Ltd., (Waste management company) Ankleshwar, Gujarat	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
33.	Mr. Sanjay Kapoor, Tata International Ltd., Solid waste management in tanneries, Dewas	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry

34.	Mrs. Radha Pandey, M.P. Waste management project: An integrated approach in hazardous material/waste management	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	12-13 Sept,2014	Dept. of Chemistry
35.	Dr. S. Solanki Professor IIT, Bombay	Non Conventional Energy Resources	02/11/2012	Civil Department
36.	Dr. A.N. Patel Processor S.G.S.I.T.S.	Geo-Tech Engg.	08/03/2013	Civil Department
37.	Dr. R.K. Shriwastava Professor S.G.S.I.T.S.	Water Resources Engg	2nd August 2013	Civil Department
38.	Er. Ketan Jain Structure Engineer	Designing of multistory building using STADD PRO Software.	24th August 2013	Civil Department
39.	Dr. Abhay Gupta Principal Consultant to ESCDM Pvt. Ltd.	The Engineers future through Civil engineering corporate in India	20th Sep-13	Civil Department
40.	Mrs. Vandana Tare Professor S.G.S.I.T.S.	Expectation of corporate from fresh Engineering Graduates.	29th March 2014	Civil Department
41.	S. B. Sarwate Consultant	Demolition of High Rise Building in busy areas by explosion	7thAugust 2014	Civil Department
42.	Ar. Siddharth Inani Director (Kalagraha Consultant )	Smart city	12th March 216	Civil Department
43.	Mr. Sandip Rashinkar Assistant Professor (IIST)	Mural the Elevational Magic	12th March 216	Civil Department
44.	Mr. Gaurav Gupta (Intel, Banglore)	Internet Of Things	15/6/15	IT department
45.	Mr. K.K Rathi, Microsoft technology ivengelist & IT consltant , gatwing pvt ltd. Ahmedabad	Microsoft Azure	26/11	IT department
46.	Rupesh Patel, senior trainer (Appin Knowledge, indore.)	Ethical Hacking and Security	10/04/2014	IT department
47.	Sumit Shukla, Trainer Tevesa Infotech, Delhi	Ethical Hacking and Security	5/03/2014	IT department
48.	Vikrant madhav shinde, Tecno commercial manager, apple, IOS University Lab	IOS University Lab	26-06/2015	IT department
49.	Dr. Sandhya Chintala, Global business foundation skills, FSIT (foundation skill in IT)	NAMCOM	30-07-2015	IT department
50.	Arindham paul, Director Startrite Engineer's pvt. Ltd, hydrabad	EC-Council, ethical hacking	30/05/2014	IT department

51.	Mr. Aditya Rai, CEO of study Metro, Indore	Foreign Education	12/03/2016	IT department
52.	Mr. Pankaj Jain, Senior Project Developer, Infosys, benglore	Future of IT Industry	17/04/2015	IT department
53.	Mr. Ujjwal Bhargava, Ubites technologies, indore	Latest Trend on going in IT space	07/08/2015	IT department
54.	Ms. Kriti Namdev, senior quality assurance analyst, waste management logistics, Indore	Software Testing	27/10/2015	IT department
55.	Mr. Kamlesh Suryavanshi, Sky Flyers	Aero-modeling	18/09/2015	ME Department
56.	Mr. Hamid, Sagar automobile	Engine assembly	8/9/2015	ME Department
57.	Mr. V P Sharma, Dy. Director, Ministry of Micro, Small and Medium Enterprises	ENTREPRENEUR DEVELOPMENT CELL	27/07/15	ME Department
58.	Mr.Sumeet Sharma, IICAE,Indore	Hypermesh	22/09/2014	ME Department
59.	Mr. Shashank Chourey India infotech Ltd. (Digitral Marketing & search Engine optimization)	Seminar on Interaction with Alumni Entrepreneur	11-04-15	ME Department
60.	Mr.Faisal, Mozilla -Community Head- Bhopal	Mozilla-Moz Connect	20 March 2015	CS Department
61.	Mr.Pankaj Jain, Infosys Pvt. Ltd.	IT expert and its opportunity	17 April 2015	CS Department
62.	Mr. Varun Kapoor, PRTS - IG -Police Dept. MP	Cyber Security	22 April 2015	CS Department
63.	Mr. V. Sudarshan, Head ( Delivery Dept) Ideavate	IBM Academic Initiative Lab	22 May 2015	CS Department
64.	Mr Abhishel Kapoor, TCS Pvt. Ltd.	FDP on the topics-ERP, Access Control, Single Signon	6 June 2015	CS Department
65.	Mr. Gaurav Gupta, Sr. Project Manager, Intel, Bangalore	Internet of Things	15 June 2015	CS Department
66.	Mr.Anil Pandey and Mr.K Pradeep, MD, Prodyovidhi	Intellectual Property Rights and patenting	13 July 2015	CS Department
67.	Mr.Gourav, TCS PVT. LTD	TCS Orientation	20 Aug 2015	CS Department
68.	Mr.Shafique Patni Mozilla Reps	Developers Boot Camp (Mozilla)	6 Sept 2014	CS Department
69.	Mr. Jaffar Appin Technology	Ethical Hacking Seminar	April 2013	CS Department
70.	Mr. V. Sudarshan. Head (Delivery Deptt) Ideavate	First year Induction program	August 2013	CS Department
71.	Mr. James Malasmani TCS Pvt. Ltd	Campus Placement Overview	27-08-2013	CS Department
72.	Mr.Akram Khan K.A.S.A	Seminar On K.A.S.A Test	7-10-2013	CS Department

73.	Dr. Ashesh Tiwari Institute of Engineering & Technology and Honorary Secretary IEI, ILC.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
74.	Dr. P.K. Chande Ex Group Director, Truba Group, Ex Director MNIT.	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
75.	Dr. K.A. Subramanyam Professor, I. I. T. Delhi	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies" CS Department	22-23 Nov 2013	CS Department
76.	Dr. M.P.S. Chawla, SGSITS, Indore	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
77.	Dr. Santhosh sahu Professor, I.I.T. Indore	All India Seminar on Computer Applications in Engineering – Emerging Trends and Technologies"	22-23 Nov 2013	CS Department
78.	Mr Anil Pandey & K Pradeep Head, Tushar Surti Gridlogics Technologies Pvt. Ltd, Managing Director Prodyovidhi	Intellectual Property Rights in Electronics, IT & ICT	13th July 2015	EC Department
79.	Shri V P Sharma Deputy Director MSME	Entrepreneurship Development Cell	28th July 2015	EC Department
80.	Ms. Kriti Namdeo Senior quality assurance analyst in waste management logistics	software testing	27-10-15	EC Department
81.	Mr Veeresh Nayak Scientific Officer BARC Mumbai	Introduction of attenuator	16/10/14	EC Department
82.	Mr. Deepak Pandey i3indya™ Technologies Pvt. Ltd	Introduction of Propellor Clock System	30/01/15	EC Department
83.	Dr. Krishna Lala, Sr. Project Manager IIT Bombay	Robotics	10/2/2015	EC Department
84.	Mr. Surendra Yadav Scientific Officer RRCAT, Indore	MATLAB & Simulink	29/11/2013	EC Department
85.	Dr. Vaibhav Neema IET DAVV, Indore	CMOS VLSI Design	25/3/14	EC Department
86.	Mr. P.S.Rathore Doordarshan Indore	Digital Earth Station & DTH Services	23/08/12	EC Department
87.	Dr. Ram Bilas Pachori IIT, Indore	Signal Processing (Wavelet Transform)	13/03/13	EC Department
88.	Dr. Vaibhav Neema IET DAVV,	VLSI Design	12/4/2013	EC

	Indore			Department
89.	Mr. Pulkeet Scientech Pvt Ltd.	VLSI Design	27/09/11	EC Department
90.	Professor Rajesh Bodade MCTE College of Engg. MHOW	Digital Signal Processing	7/12/2011	EC Department
91.	Professor Apoorv Gaiwak , SGSITS, Indore	SONET & SDH (Optical Network)	21/05/12	EC Department

## ANNEXURE VI: WORKSHOP / FDP

S. No.	Date	Workshops / Training	Organized by / Resource Person	Department
39.	18th to 19th Sep 2015	Workshop on Robotics	VBM Technologies in association with IIT Delhi	EC Department
40.	09/09/2015 to 10/09/2015	Workshop on Virtual Lab	IIT Delhi	EC Department
41.	10-10-2015	Project Exhibition	IIST Robotics club members	EC Department
42.	17/04/2015 to 18/04/2015	Workshop on Embedded system	eYantra IIT Bombay	EC Department
43.	26/3/15 & 27/3/15	Workshop on Virtual Lab	IIT Delhi	EC Department
44.	30/01/2015	iPDC (Propeller Display Challenge) workshop	Techkriti 2015, IIT Kanpur with i3indya Technologies	EC Department
45.	11-12 Sep 2014	Workshop on Embedded System	Indeyes Infotech Pvt. Ltd.	EC Department
46.	29-30 Oct 2014	Workshop on Introduction of Embedded System	IIST Indore under ISTE Chapter	EC Department
47.	27-28 Sep 2013	National Robotics Championship & workshop	ARK Techno solutions in association with Helios, IIT – Bombay	EC Department
48.	20-21 Sep 2013	Workshop on EM simulations and Antenna Designs using CAD FEKO tool	Safew Tech System	EC Department
49.	2014	Workshop on Autonomous robotics (line follower, edge detection, grid solving)	IIST Indore under ISTE Chapter	EC Department
50.	31/08/2012 to 3/09/2012	National Robotics Championship & workshop	Novel Technologies	EC Department
51.	26-27-28 Dec 2012	Workshop on Fun with MATLAB toolbox	ITIE Knowledge Solution Bangalore	EC Department
52.	14-19 Jan 2013	Workshop on Advance Controller	Kaim softech Bangalore	EC Department
53.	16 June 2013	Sponsored IEEE Sponsored National Level conference on "Recent Advances in Mechtronics and Computing Technology & Management" (RAMCTM-2013)	RAMCTM Teams	EC Department

54.	29-30 October2015	National Workshop On "Breakthrough Energy Technologies & Challenges for Sustainable Development	<ol> <li>Mr. Sudesh Sharma, Addl. Chief Engg. CP &amp; CC Directorate, NPCIL Mumbai</li> <li>Dr. S Suresh, Prof. Deptt. Of Chemical Engineering MANIT Bhopal</li> <li>Mr. Ankit Gupta , Consultant at Power Trading Corporation India Ltd.</li> <li>Prof. D.K.Sharma, Centre for energy studies, IIT Delhi</li> <li>Mr. Manideep Saxena, Senior Manager KWATT Solution Pvt. Ltd.</li> <li>Dr. C. Mukharjee, Scientist R.R.Centre for Advanced Technology, Indore</li> </ol>	Chemical Engineering
55.	12-13 , Sep,2014	National Symposium on "Waste & Biomass Valorization: Potential, Issues & Challenges"	Sponsored by S.E.R.B., Department of Science & Technology, Govt. of India	Chemical Engineering
56.	12th March 216	Various Field Layout in construction	Project Engineer (Agrawal Construction Ltd.)	Civil Department
57.	27-28 Feb -2013	Mr. Jitu and Ms. Bindu, Technical Team, Flexus Infotech	Workshop on ANDROID	CS Department
58.	18-19 Oct, 2013	TCS Team	Two Days Technical Workshop for TCS	CS Department
59.	18/9/15	Mr. Aditya	Hadoop Platform & Training	IT department
60.	19/9/15	Mr.Hemant Vishwakarma	Android Workshop	IT department
61.	31/10/15	Mr. Vikas naidu	Unix Workshop	IT department
62.	18/04/2014	Assain Shekh, HR- Manager Universal Infotech, Indore	HTML	IT department
63.	6-7/3/14	Sagar wadhwani	Workshop by google group	IT department
64.	26/2/15	Sagar wadhwani	Workshop by google group	IT department
65.	31/03/2016	Mr. Dinesh Kumar (Mentor National Institute of Entrepreneurship small business development Noida)	one day Workshop on Empowerment of Entrepreneurship NIESBUD	ME Department
66.	18/09/2015	Mr. Kamlesh Suryavanshi, Flyer India	Workshop on Aero-modeling	ME Department
67.	09-08-15	Mr. Hamid from Sagar Automobile Indore	Workshop on Engine assembly	ME Department
68.	8/10/2014 to 30/10/2014	Mr. Deepak Modi Easy CAD Solutions Indore.	Training Programme on Auto CAD.	ME Department
69.	19/06/2014 to 03/07/2014	Mr Himanshu Singh	Workshop for vehicle dynamics	ME Department
70.	22/09/2014 to	Mr.Sumeet Sharma IICAE	Workshop on Hypermesh.	ME

	30/10/2014	Indore.		Department
71.	23/09/2014 to 01/10/2014	Param Technology	Workshop on Cre o	ME Department
72.	16/04/2014 to 20/04/2014	Mr Himanshu Singh	Workshop for vehicle dynamics	ME Department
73.	06/02/2014 (20 Days)	Dr.Shuyog Maheshawari	Workshop on Pro-E	ME Department
74.	24/01/2014 to 25/01/2014	Mr Himanshu Singh	Workshop for vehicle dynamics	ME Department
75.	17/08/2013	Dr. B.V. Reddy University of Ontario,Canada	National Workshop on Advances in Thermodynamics and Energy system.	ME Department
76.	07-03-13	Dr. P.P.Chatraj Additional Director Natrip.	Cre-O workshop	ME Department

## ANNEXURE VI: INDUSTRIAL VISIT / TOUR

S. No.	Industry Name	Date	Departm ent	Type of Company	Objective of Visit	Outcome of Visit
1.	Sanchi Dugdh Sangh, Mangliya, Indore	12 <sup>th</sup> March,2016	Chemical	Public Limited	To study various operations of milk processing in the plant.	Understanding the Organized way of reducing, processing and marketing of milk and milk products.
2.	Wind Mills, Dewas	6 <sup>th</sup> Nov 2015	Chemical	Government	To create awareness of renewable energy sources and to conserve the environment by promoting the Energy Efficiency and Conservation measures, devices in the state.	To understand the importance of renewable energy resources for sustainable development.
3.	Tata International Ltd., Dewas (M.P)	12 <sup>th</sup> March 2015	Chemical	Exporter / Manufacture r / Supplier	To understand the process of effluent plant in leather industries	To interpret the proper operation & maintenance of waste water treatment plant and awareness of guidelines prepared by government for waste water treatment plant.
4.	HPCL , Indore Depot, Manglya, Dewas road	1 <sup>st</sup> March 2014	Chemical	Government	To make students aware of safety measures taken in petroleum industries.	Awareness of occupational diseases in industries and importance of safety to be taken on-site.
5.	Srf Ltd., Sector III Pithampur, Indore	2 <sup>nd</sup> Aug 2014	Chemical	Limited	To understand the manufacturing engineering plastic products	To perceive the working of chemical industry equipment like heat exchangers, reactors etc.
6.	Rama Phospahte Sanwer Road	20 <sup>th</sup> Sep 2013	Chemical	Limited	To understand the manufacturing of Sulphuric Acid and Safety aspects	To understand the manufacturing Process and safety measures in Industries.
7.	Mandleshwar Narmada Filter Station	15/3/2014	Civil	Water Filtration Plant	Working Process of Water Filtration	Learn about Water Filtration
8.	Box Culvert Nakhrali Dhani Circle, Rau	24/3/2015	Civil	Construction Site	Box Culvert Construction	Vision of Box Culvert Construction
9.	Waste Water Treatment Plant Kabit Khedi, Indore	23/9/2015	Civil	Waste Water Treatment Plant	Working Process of Waste Water	Learn about Sewage Treatment Practically
10.	Mandleshwar Narmada Filter Station	19/3/2016	Civil	Water Filtration Plant	Working Process of Water Filtration	Learn about Water Filtration
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11.	Hostel Building	19/3/2016	Civil	Building Construction	Layout & Construction of Footing	Learn how to set Layout & Construction of Footing
12.	Paver Block Factory	19/3/2016	Civil	Paver Block Construction	Construction of Paver Block	Learn about construction methodology of paver block
13.	Raja Ramanna Centre for Advanced Technology, Indore	28 <sup>th</sup> Feb, 2016	EC	Communicat ion, Industrial Electronics & Instrumentat ion	The main objective behind the visit was to make student aware about how various activities related to research and development in	Students have got Exposure of the Latest research methodologies going on in the current scenario. They got a chance to transfer
14.	Raja Ramanna Centre for Advanced Technology, Indore	1 <sup>st</sup> Feb , 2015	EC	Communicat ion, Industrial Electronics & Instrumentat ion	the areas of Optics & Opto-Electronics, LASERs Biomedical Applications and Instrumentation, advanced materials and sensors and many more related to the advanced instrumentation research are carried out.	their theoretical knowledge to practical implementation. This will even help students to understand subject matter clearly in future also. They develop a new vision about the upcoming technologies, it was very knowledgeable, educational and intellectual for students as well as for the faculties.
15.	Scientech Technologies Pvt. Ltd Indore	14/02/2013	EC	VLSI, Embedded Systems, Industrial Electronics & Instrumentat ion	The main objective behind the visit was to make student aware about how various instrumentation works	Students have got Exposure of the Latest equipment and research methodologies going on in the current scenario
16.	Yspilon Infotech	Dec 15	IT	Software	Corporate Working	Learning of Corporate protocols
17.	Sanchi Food Limited	Jan 16	IT/CM	FMCG	Manufacturing of goods	Process of Manufacturing
18.	Dewas Metal Section	10 March 2016	ME	Sheet Metal Working	To know about Sheet metal working	StudentshavegotExposure of the Latestequipmentand
19.	Porwal Auto Component ltd	24 Sept 2015	ME	Manufacture of variety of steel alloy	Industrial Experience and Training of Students	research methodologies going on in the current scenario

S. No.	Industry Name	Date	Department	Type of Company	Objective of Tour	Outcome of Tour
1.	K.C Engineers	27 <sup>th</sup> – 3 <sup>rd</sup> April,2016	Chemical	Instrumentation		
2.	Central Scientific Instruments Organization (CSIO), Chandigarh	19 <sup>th</sup> to 28 <sup>th</sup> March 2016	EC	Industrial Electronics & Instrumentation	The main objective behind the tour was to make student aware about how various activities	Students have got real feel of the cutting edge research going on after this visit.
3.	Allain Duhangan Hydro Power Pvt. Ltd. (ADHPL ) Kullu	30 Mar to 6 April 2015	EC	Industrial Electronics & Instrumentation	related to research and development in the areas of Optics & Opto-	They got a chance to transfer their theoretical knowledge to practical implementati on. This will even help students to understand subject matter clearly in future also. To sum up the visit, it was very knowledgeabl e, educational and intellectual for students as well as for the faculty
4.	Indian Institute of Remote Sensing (IIRS) Dehradoon	07/04/2014	EC	Embedded Systems, Industrial Electronics & Instrumentation , RF & Microwave	Electronics, Geo- Scientific Instrumentation, Electronics and Nanotechnology,	
5.	Military Radar System Mt. Abu	17 April to 20 April 2013	EC	Embedded Systems , Industrial Electronics & Instrumentation, RF & Microwave	advanced materials and sensors and many more related to the advanced instrumentation research are carried out.	
6.	TOPs Technologies	Apr 2015	IT	Web and mobile development	For live project working	Students were able to understand the working of industry
7.	Sphinx solutions	January 2014	IT	Web and mobile development	For live project working	Students were able to understand the working of industry
8.	Ruplee solutions	April 2016	IT	Web and mobile development	For live project working	Students were able to understand the working of industry
9.	Spa Geo Technology	2 to 5 April 2015	CSE	Software Development	Real Time Development Process	Understand the Software Development Life Cycle & Risk

						Management
10.	Net Solutions	15 to 17 March 2016	CSE	Software Development	Web Development	Strategies for Software Development
11.	Sun Pharmaceuticals industries Ltd	04/04/2015	ME	Pharmaceuticals Company	To Get Industrial experience	Students were able to understand the working of industry
12.	Coca-Cola Wave Beverages Private Limited	29-03-2016	ME	Beverage company	To Get Industrial experience	Students were able to understand the working of industry