

The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. (Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)

Part – A

AQAR for the year (for example 2013-14)

2014-2015

1. Details of the Institution

1.1 Name of the Institution

MANAV RACHNA COLLEGE OF ENGINEERING

1.2 Address Line 1

SECTOR-43, SURAJKUND ROAD

Address Line 2

ARAVALI HILLS

City/Town

FARIDABAD

State

HARYANA

Pin Code

121001

Institution e-mail address

registrar@mru.edu.in

Contact Nos.

0129-4268500

Name of the Head of the Institution:

PROF. M.R.TYAGI

Tel. No. with STD Code:

0129-4268519

Mobile:

Name of the IQAC Co-ordinator:

Mobile:

IQAC e-mail address:

1.3 NAAC Track ID (For ex. MHC0GN 18879)

OR

1.4 NAAC Executive Committee No. & Date:
(For Example EC/32/A&A/143 dated 3-5-2004.
This EC no. is available in the right corner- bottom
of your institution's Accreditation Certificate)

1.5 Website address:

Web-link of the AQAR:

For ex. <http://www.ladykeanecollege.edu.in/AQAR2012-13.doc>

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	A	3.10	2011	SEPT 15, 2016

1.7 Date of Establishment of IQAC : DD/MM/YYYY

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (for example AQAR 2010-11 submitted to NAAC on 12-10-2011)

- i. AQAR 2010-11 Submitted to NAAC on
- ii. AQAR 2011-12 Submitted to NAAC on 26.09.2012
- iii. AQAR 2012-13 Submitted to NAAC on 26.12.2013
- iv. AQAR 2013-14 Submitted to NAAC on 07.04.2015

1.9 Institutional Status

University* State Central Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved Institution Yes No

(eg. AICTE, BCI, MCI, PCI, NCI) AICTE

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Totally Self-financing

1.10 Type of Faculty/Programme

Arts Science Commerce Law PEI (Phys Edu)

TEI (Edu) Engineering Health Science Management

Others (Specify)

Manav Rachna College of Engineering (affiliated to Maharshi Dayanand University, Rohtak) has now been converted into Manav Rachna University (State Private University established under Haryana State Legislature Act No 26 of 2014 & under section 2(f) of UGC Act 1956)

1.11 Name of the Affiliating University (for the Colleges)

Maharshi Dayanand University,
Rohtak (Haryana)

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University

University with Potential for Excellence	<input type="text" value="-----"/>	UGC-CPE	<input type="text" value="-----"/>
DST Star Scheme	<input type="text" value="-----"/>	UGC-CE	<input type="text" value="-----"/>
UGC-Special Assistance Programme	<input type="text" value="-----"/>	DST-FIST	<input type="text" value="-----"/>
UGC-Innovative PG programmes	<input type="text" value="-----"/>	Any other (<i>Specify</i>)	<input type="text" value="-----"/>
UGC-COP Programmes	<input type="text" value="-----"/>		

2. IQAC Composition and Activities

2.1 No. of Teachers	<input type="text" value="11"/>
2.2 No. of Administrative/Technical staff	<input type="text" value="1"/>
2.3 No. of students	<input type="text" value="NIL"/>
2.4 No. of Management representatives	<input type="text" value="1"/>
2.5 No. of Alumni	<input type="text" value="1"/>
2.6 No. of any other stakeholder and community representatives	<input type="text" value="NIL"/>
2.7 No. of Employers/ Industrialists	<input type="text" value="1"/>
2.8 No. of other External Experts	<input type="text" value="NIL"/>
2.9 Total No. of members	<input type="text" value="15"/>
2.10 No. of IQAC meetings held	8

Date of Meeting	Agenda
July 19, 2014	Preparing Calendar for IQAC & Filling of AQAR
July 25, 2014	Faculty Induction Programme
August 22, 2014	Compiling the data for AQAR
September 4, 2014	Progress on Filling up of AQAR 2013-14

October 17, 2014	Monitoring of Attendance Registers
November 28, 2014	Compiling of AQAR 2013-14
January 5, 2015	Review of Course Material
February 2, 2015	Planning of FDPs on: <ul style="list-style-type: none"> • Research Publication in Indexed Journals • Research in Computer Science • NBA Accreditation: An overview

2.11 No. of meetings with various stakeholders: No. Faculty
Non-Teaching Staff Students Alumni Others

2.12 Has IQAC received any funding from UGC during the year? Yes No
If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. International National State Institution Level

(ii) Themes

- “R&D Outcome Based Business Development”
- “Resources, Research and Rewards: Are we approaching it right?”
- “Developing Rubrics”
- “Improving Quality of Administration and student support services”
- “Training Needs Analysis”

2.14 Significant Activities and contributions made by IQAC

Activity	Report/ Brief
FDP on Quality Induction Programme	Quality Induction Programme as Tier-II of the Faculty Induction Programme was organized and conducted by Internal Quality Assurance Cell of Manav Rachna University on July 14, 2015. The

	programme was attended by 32 new faculty members belonging to different faculties and departments.
Review of Attendance Registers	For ensuring quality of the attendance registers, IQAC did a surprise check of the attendance registers of the faculty members. The defaulters were notified and suggestions for improvement given.
Review of Course Material	IQAC reviewed the Course material for all the courses at the beginning of the semester to ensure quality in the content prepared.
FDPs on: Research Publication in Indexed Journals, Research in Computer Science, NBA Accreditation: An overview	IQAC in its efforts to boost the research focus of the faculty members organized FDP to enlighten the members on how to publish their Research Publication in Indexed Journals. Another FDP for Computer Science faculty members focused on Scope of Research in Computer Science. A FDP on NBA Accreditation process was scheduled to acquaint the faculty members of the accreditation process.

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
FDP: For newly inducted Faculty members	Conducted Faculty Development Program On the topic of 'Developing Quality Course Material' from 25 July 2014. All newly recruited Faculty members were benefitted from the activity.
Report submission: Course Review Committee (CRC)	CRC submitted a report of the status of the course materials prepared and the issued guidelines for those meeting the standards.
Lecture/ Seminar/ Workshop for Faculty Members	<ul style="list-style-type: none"> • Workshop on "Developing Rubrics" was organized on September 22, 2014. It was based on assessment and evaluation. • Guest Lecture on "R&D Outcome Based Business Development" was organized on December 12, 2014. • Guest Lecture on "Improving Quality of Administration and student support services" was organized on February 28, 2015.
Lecture/ Seminar/ Workshop for Faculty Members	Workshop on "Training Needs Analysis" conducted during 20 th March – 8 th May 2015. Based on the analysis the training needs were identified and specific FDPs conducted to fulfil the identified gaps,
Report on: Review of Course Material Preparation	Course review committee reviews courses within 4weeks prior to the start of semester and issues recommended guidelines for DRC

Data submission by Departments/ Offices- For AQAR (2014-15) to IQAC members	The departments are working on to submit the data to all the members of IQAC, who are handling the filling of AQAR.
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* Attach the Academic Calendar of the year as Annexure.

2.15 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

Provide the details of the action taken

- IQAC looks at the internal processes and initiates measures for improvement.
- The year 2014-15 motivated R&D activities among the faculty and provided directions for publishing high quality research work.
- IQAC identified gaps in the skill set of the faculty and organised specific sessions for overcoming the shortcomings.

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD				
PG	M.Tech. (CSE, ECE, ME), MBA		4	M.Tech. & MBA summer and winter trainings; practical trainings; bridge courses
UG	B.Tech. (CSE, IT, ECE, ME)		4	B.Tech. (CSE, IT ECE, ME) summer trainings; practical trainings; bridge courses
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				
Others				
Total	8		8	

Interdisciplinary				
Innovative				Aptitude classes/Personality Development, Soft skills, Infosys Campus Connect program – as a part of summer training for all PG & UG courses.

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	8
Trimester	
Annual	

1.3 Feedback from stakeholders* Alumni Parents Employers Students
(On all aspects)

Mode of feedback : Online Manual Co-operating schools (for PEI)

*Please provide an analysis of the feedback in the Annexure

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

NO

1.5 Any new Department/Centre introduced during the year. If yes, give details.

NO

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Professors	Others
	190	160	13	17	44

2.2 No. of permanent faculty with Ph.D.

43

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
61	NIL	0	NIL	5	NIL	4	NIL	70	NIL

2.4 No. of Guest and Visiting faculty and Temporary faculty Assist Prof Assoc. Prof Professor

1

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	6	32	NIL
Presented papers	37	1	NIL
Resource Persons	1	11	NIL

2.6 Innovative processes adopted by the institution in Teaching and Learning:

➤ **Innovations in Teaching and Learning**

The process of Teaching has undergone a sea change in the wake of ‘outcome based education’ movement, initiated and established through Washington Accord and followed by National Board of Accreditation, India. The enormous development and evolution in the global society force a continuous change in the emerging areas of education. It has become important to move from ‘teacher centric system’ to ‘learner centric system’. MRCE has moved in this direction through the introduction of a number of innovations in the teaching and learning process. The quality assurance system at MRCE ensures compliance of the same and thereby helps in making the Teaching Learning Process ‘outcome oriented’.

➤ **Effective Teaching through usage of latest tools and technologies:**

The TLP is supplemented with latest tools and technologies to enhance the effectiveness of the course delivery and equip the students in a better way. Some of the technologies adopted are Multimedia Based Teaching (through PPTs, educational videos), Case studies, Role plays, Innovative Assignments, Live Projects, Students presentations, Workshops on upcoming technologies, Guest Lectures by senior corporate professionals, Online National and International Journals, NPTEL Videos.

➤ **NBA Compliant, quality reviewed Teaching Learning Process:**

- In line with the Vision and Mission of the Institute, all the degree offering departments have well-defined Program Education Objectives (PEOs) and Program Outcomes (POs), approved by the Academic Committee of the Institute.
- All courses are designed to collectively achieve the PEOs and POs. Hence, during the course design the course objective, the learning outcomes, the lesson plan, the teaching methodology, the evaluation parameters and the content beyond syllabi are carefully designed so as to contribute to specific targeted PEOs.
- The course descriptions are supported by the tutorials and lab exercises (if applicable). It is ensured that the tutorial and lab exercises are designed to attain specific Course Objectives and Outcomes, which are specified in the tutorial and lab sheets.
- The complete course material, after several reviews by the departmental committees, is uploaded on the intranet at least 10 days before the beginning of the semester.
- IQAC ensures the quality of the uploaded material through periodic checks.
- The course designs are updated every year in line with technology enhancements worldwide. Care

is also taken to learn from best practices being adopted nationally and internationally.

- The evaluation methods are designed to assess the achievement of learning objectives. All the evaluation methods are aimed at encouraging development of self-learning skills, application of concepts, development of analytical skills through open ended problems, and ability to synthesize systems and processes.

➤ **Summer Training:**

- The Institute initiated an intensive summer training program aimed at bridging the gap between the prescribed university curricula and the industry requirements.
- The summer training curricula is enhanced every year to maintain its effectiveness and focus.
- Since the summer training is an intensive program, attending it is compulsory and the minimum attendance criteria are also maintained at a high level to ensure that the students get the maximum benefit.
- The training is conducted during the summer vacations of the students immediately after their university exams. The training offers:
 - Integrated summer training programme for B.Tech. Students including technical summer training projects, Infosys Campus Connect Program and Infosys governed soft skills training.
 - Introduction to the upcoming technologies required in the industry but missing from the university curricula.
 - Preparation of the final year students for the forthcoming placement drives through practice sessions on Logical and Aptitude papers.

The summer trainings have been extremely helpful in the overall grooming of the students and it is evident in the excellent placements of the institute in the year 2014-15. The batches passing out in 2015 have been through this intensive training starting from the first year through to the final year.

➤ **Co-curricular & Extra-curricular Activities enhancing the TLP:**

- MRCE focuses on grooming the overall personality of the students. Hence, the extra-curricular and co-curricular activities are designed to provide the required value addition so as to bridge the gap between the prescribed curriculum and demands of national and international academic fraternity.
- Chapters of major national and international societies such as IEEE, ASME, SAE etc. have been set up. These chapters work towards providing the required value addition in the form of workshops, seminars, competitions and other such technical activities.
- MRCE also engages the students towards making them Socially Responsible citizens through various social clubs (such as MRCE Leo club under sponsorship of Faridabad Lions Club), joining hands with NGOs for undertaking tasks that serve the society at large.
- MRCE has partnered with industries such as Infosys, IBM, TCS etc and has a vibrant culture of guest lectures, seminars, workshops, alumni interactions etc. which have greatly impacted the holistic development of students.

➤ **Evaluation System:**

Being affiliated to Maharshi Dayanand University, MRCE follows the MDU examination system. The end semester examinations are conducted by the University. The Internal Assessment however is compiled through a system of Continuous Evaluation and Monitoring. For continuous internal evaluation the faculty members use various tools. The tools are designed to judge the degree of achievement of stated course objectives and outcomes. Different evaluation tools are:

- Tutorials (reviewed weekly)
- Lab Exercises (reviewed weekly)
- Case studies

- Presentations
- Projects
- Seminars
- Quizzes etc.

The institute conducts the sessional examinations thrice a semester. A senior professor, by rotation, is appointed as Controller of examination. There are clearly defined roles and responsibilities of CoE approved by Academic Committee of the institute. CoE prepares a calendar and ensures smooth and fair conduct of examination. CoE has well laid out guidelines and advisories for invigilators, students and flying squads.

➤ **Feedback System:**

MRCE has a well-established system of taking regular feedbacks from the all its stake holders.

- **Students:** The feedback of students is taken, through an in-house developed online feedback system, twice in a semester for all courses being delivered in the semester. The criteria are designed to assess the degree of achievement of course objectives and outcomes and the effectiveness of the facilities/resources required to attain them. The same feedback form is filled by the course instructor also. The feedback process is designed to gauge the student and faculty's self satisfaction with the progress of a course so as check the convergence of their satisfaction with a course and to facilitate improvement in teaching/learning process.
- **Passing out batch:** Program Feedback is conducted in the final year to analyse the satisfaction level of students with the academic offerings and other services offered by college during their graduation.
- **Alumni:** Feedback from Alumni through registered Alumni Association. The feedback is taken at the time of Annual Alumni Meet, Convocation and at the time Alumni visit the campus for any purpose.
- **Industry:** Feedback from the recruiting companies through the office of Dean Industry Interaction. The feedback from recruiters has been extremely useful in training the students in the right direction and manner and has led to commendable increase in the campus placements.
- **Parents:** Feedback through Dean Academics Office. 2 days in a semester are earmarked in the Academic Calendar for Parent Teacher Interaction where parents provide their valuable feedback.

The feedback process helps the Deans and Heads to analyse the attainment of stated Program Education Objectives; effectiveness of departmental policies regarding projects, summer trainings, value added courses etc. The department utilizes the feedback to review the existing policies and put in changes wherever required. The feedback also provides the administration an insight into the students' perception of existing administrative procedures and helps them to make the system more efficient.

2.7 Total No. of actual teaching days during this academic year

166

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

Examination and Evaluation Reforms:

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- Tutorials (reviewed weekly)

- Lab Exercises (reviewed weekly)
- Case studies
- Presentations
- Projects
- Seminars
- Quizzes etc.

The institute conducts the sessional examinations thrice a semester. A senior professor, by rotation, is appointed as Controller of examination. There are clearly defined roles and responsibilities of CoE approved by Academic Committee of the institute. CoE prepares a calendar and ensures smooth and fair conduct of examination. CoE has well laid out guidelines and advisories for invigilators, students and flying squads.

The Institution has introduced a number of innovations in the ***Examination and Evaluation Process***:

- a) **Three Sessional exams**- The institute conducts three sessional exams. The first and third sessional exam question papers are based on the format prescribed by the University. But the second sessional exam is in the form of MCQ (Multiple Choice Questions) conducted either Online or Written, with multiple sets of question papers. All sessionals carry equal weightage in the internal assessment i.e. 30 marks for sessional exams carry a weightage of 10 marks each for the three sessional exams. The second sessional exam serves to prepare students for the placement drives.
- b) **Common Question Paper**: The institute focuses on the concept of common question paper for all branches, sections and shifts studying a particular course. This is facilitated through a common Course Coordinator coordinating the course delivery and coverage uniformly across all branches, sections and shifts studying that particular course.
- c) **Uniform Evaluation**: In order to establish uniform evaluation of answer scripts across branches, sections and shifts, the following measures were adopted:
 - a. The course coordinator calls a meeting of the peer group taking the course in the concerned branches and sections and the solution key is prepared with mutual consent and discussions.
 - b. The checking of answer sheets is also coordinated such that the coordinator assigns the checking of a specific question, in all answer sheets of all branches, sections and shifts, to each member of the peer group to ensure uniform evaluation.
- d) **Continuous Evaluation**: The institute has introduced the concept of continuous evaluation for marking the teacher assessment component of the internal assessment. The assessment comes through grading of all tutorials and labs continuously throughout the semester and finally scaling the marks to 10.
- e) **Thesis Evaluation**: The institute has initiated the continuous evaluation process of all M.Tech. dissertations. The process begins in the third semester and has following steps:
 - a. Allocation of thesis topics
 - b. Dissertation proposal and schedule presentation
 - c. Mid-term thesis review
 - d. Final thesis review.
- f) **Continuous Projects Evaluation**: B.Tech. final year projects are done in three stages:
 - a. Synopsis Review
 - b. Mid-term progress review
 - c. Final progress review with presentation and/or working code/project.

g) **Summer Training Evaluation:** The summer trainings at the end of a year are evaluated through presentation and viva and the awarded grades are incorporated as a component in the internal assessment of the general proficiency paper in the following semester.

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

01	150	All BOS members (30)
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(During the process of being converted into State Private University established under Haryana State Legislature Act No 26 of 2014 & under section 2(f) of UGC Act 1956)

2.10 Average percentage of attendance of students

As per MDU norms, average attendance maintained by students is 65% aggregate.

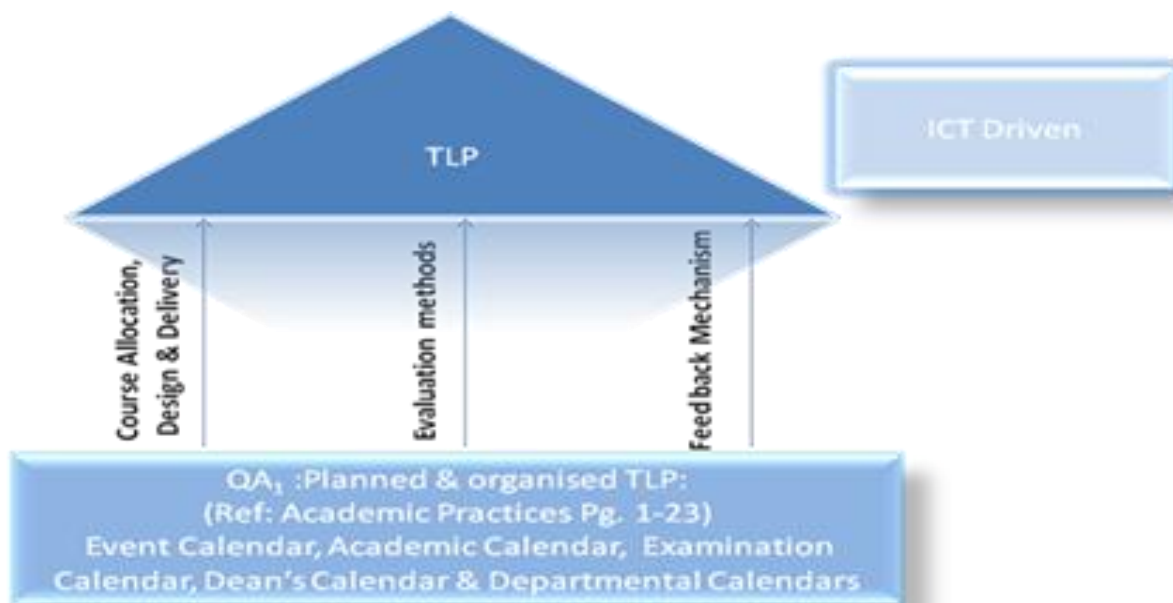
2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
CSE	167	11	56	19	-	86
ECE	180	5	48	26	-	79
IT	106	4	50	15	-	69
ME	69	1	32	30	-	63
MCA	27	Nil	56	33	-	89
MBA	57	Nil	61	18	-	79
M.TECH. (CE)	17	47	47	6	-	100
M.TECH.(ECE)	11	8	83	8	-	99
M.TECH. (ME)	1	Nil	100	Nil	-	100

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

ACADEMIC PROCESS





IQAC at MRCE has Deans and Heads as members who are process owners and hence can effectively contribute/monitor or evaluate various components:

S. No.	Component	Process Owners	Action	
1	Curriculum design and Delivery	Dean Academics and Heads of the Departments	Contribute	Being affiliated college, MRCE follows the curriculum scheme and syllabii as prescribed by MDU Rohtak. The process owners contribute by: <ol style="list-style-type: none"> 1. Consolidating the NBA compliant 'outcome based system' 2. Identifying gaps and value additions required and bridging the same 3. Conduct/nominate faculty for workshops/seminars etc. for upgradation of technical and pedagogical skills 4. Propose/implement policies for betterment of delivery process
			Monitor	<ol style="list-style-type: none"> 1. Design calendars for monitoring the process 2. Constitute various institutional/departmental committees for effective conduct and monitoring 3. Interact with faculty and students of a programme 4. Take feedback (formal as well as informal)
			Evaluate	<ol style="list-style-type: none"> 1. Analyse the program feedback and course feedback 2. Analyse the results of internal assessment and external assessments and present them at institutional forum

2	Evaluation	Dean Academics; Heads of the Departments and Controller of examination	Contribute	<ol style="list-style-type: none"> 1. Design policies to ensure <ol style="list-style-type: none"> a. smooth conduct of examinations b. application of uniform and fair evaluation techniques c. continuous evaluation of student performance in tutorials/labs/project work/trainings etc. d. cater to diverse needs 2. Propose/Identify methods to design evaluation techniques for measurement of ‘outcomes’ 3. Constitute committees for monitoring/carrying out various examination related functions
			Monitor	<ol style="list-style-type: none"> 1. Design calendar of examination for monitoring the examination process 2. Monitor performance in courses through course coordinator system 3. Call for examination papers/answer scripts for monitoring the efficacy of the system
			Evaluate	<ol style="list-style-type: none"> 1. Analyse student performances to evaluate <ol style="list-style-type: none"> a. the efficacy of policies implemented b. the impact of measures applied for taking care of diverse needs 2. Evaluate Achievement of ‘outcomes’
3	Value Addition (Through seminars/workshops/trainings/ field visits etc)	Dean Students Welfare and Dean Industry Interface	Contribute	<ol style="list-style-type: none"> 1. Dean Academics and Heads identify the gaps in curriculum and the value added courses/trainings required. Dean Students Welfare and Dean Industry Interaction put in place the various workshops/seminars/co-curricular activities/summer trainings etc. to bridge these gaps 2. Appoint various committees of students for conduct of activities 3. Dean II office <ol style="list-style-type: none"> a. Organises various trainings/interactions/mock interviews/Group discussions etc. as a run through for placement b. Shares the feedback of the recruiters with Dean Academics and Heads who take action on the feedback. 4. Dean students’ office through Alumni network organises various alumni interactions; organises technical workshops for students under IEEE, SAE,ASME etc.
			Monitor	<ol style="list-style-type: none"> 1. Design calendar of activities for organising and monitoring the co/extra-curricular activities. 2. Monitor the activities through faculty coordinators
			Evaluate	<ol style="list-style-type: none"> 1. Dean students presents the reports of all co/extra-curricular activities; alumni activities/student club activities etc in Institutional level meeting of Dean Students conducted every semester. 2. Dean II office also presents its report in Institutional level meeting of Dean II conducted every semester.

4	Feedback	Dean Academics, Heads of the Departments	Contribute	<ol style="list-style-type: none"> 1. Propose changes in /new feedback forms/mechanisms. 2. Propose policies based on feedback from stakeholders. 3. Take immediate corrective actions wherever possible. 4. Constitute committees for conduct of feedback.
			Monitor	<ol style="list-style-type: none"> 1. Ask for reports from committees as per calendar 2. Analyse the feedback reports.
			Evaluate	<ol style="list-style-type: none"> 1. Discuss the feedbacks with departments and find measures for continuous improvements. 2. Analyse the <ol style="list-style-type: none"> a. attainment of stated Program Education Objectives b. effectiveness of departmental policies regarding projects, summer trainings, value added courses etc. c. review the existing policies and put in changes wherever required d. Student satisfaction with existing administrative procedures and take corrective measures to make the system more efficient

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	
UGC – Faculty Improvement Programme	
HRD programmes	
Orientation programmes	55 (2 Programs held)
Faculty exchange programme	
Staff training conducted by the university	
Staff training conducted by other institutions	3
Summer / Winter schools, Workshops, etc.	
FDP: 6 Workshops : 2	FDP: MRCE Faculty: Almost all, Outside Faculty members: 27
Others: International Conference: 1 (Green chemistry Conference), Paper presentation: 38, Training Needs Assessment (TNA): 1	Conference: MRCE Faculty Members: 7, Outside Faculty Members: 18 Paper Presentations: 38 TNA: All faculty members

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily

Administrative Staff	23	NIL	2	NIL
Technical Staff	16	NIL	2	NIL

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

IQAC has taken the following initiatives with an objective of Sensitizing/Promoting Research Climate in the institution:

- **Internal R & D Fund:** The Institute provides an Internal R&D fund of Rs. 17 lacs annually. The purpose of the fund is to provide seed money to faculty members for starting initial work and take it up to a level where it can be submitted to external funding bodies for higher grants.
- **Contingency Grant:** The college promotes publication in Scopus and SCI listed journals. The Board of Governors of MRCE has agreed to Academic Committee's proposal of providing a contingency grant of Rs. 25000 to a faculty member who publishes in the above indexed list.
- **Visiting Scientist Scheme:** For faculty development in emerging areas and technologies a visiting scientist scheme has also been initiated wherein scientists and researchers from other national and international institutes/industries can be appointed as visiting scientists. These visiting scientists shall expose the faculty to advancements in specific areas.
- **Consultancy and Extension:** College also promotes consultancy and extension work by faculty members. The revenue generated is shared between the faculty member and College in the ratio 80:20 after the deduction of expenditure.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	2	2		
Outlay in Rs. Lakhs	8.5 Lakhs	7.5 Lakhs		

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	1	3		
Outlay in Rs. Lakhs	0.5 Lakhs	4.63 Lakhs		

3.4 Details on research publications

	International	National	Others
Peer Review Journals	74	2	NIL
Non-Peer Review Journals	NIL	NIL	NIL
e-Journals	NIL	NIL	NIL
Conference proceedings	37	1	NIL

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2014-15	MRCE	7,50,000	7,50,000
Minor Projects	2014-15	MRCE	4,63,000	4,63,000
Interdisciplinary Projects	2014-15	MRCE	561723	561723
Industry sponsored	NIL	NIL	NIL	NIL
Projects sponsored by the University/ College	2014-15	MRCE	9000	9000
Students research projects <i>(other than compulsory by the University)</i>	NIL	NIL	NIL	NIL
Any other(Specify)				
Total			1783723	1783723

3.7 No. of books published i) With ISBN No. Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST
DPE DBT Scheme/funds

3.9 For colleges Autonomy CPE DBT Star Scheme
INSPIRE CE Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	1				
Sponsoring agencies	Royal Society of Chemistry, London, North India Section and Indian oil R&D, Faridabad.				

3.12 No. of faculty served as experts, chairpersons or resource persons 12

3.13 No. of collaboration International 3 National 7 Any other 10

3.14 No. of linkages created during this year 01 (University of Tennessee)

3.15 Total budget for research for current year in lakhs : 50 Lakhs

From Funding agency From Management of University/College
Total

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	01
	Granted	
International	Applied	
	Granted	
Commercialised	Applied	
	Granted	

3.17 No. of research awards/ recognitions received by faculty and research fellows
Of the institute in the year

Total	International	National	State	University	Dist	College
22	2	20				

3.18 No. of faculty from the Institution
who are Ph. D. Guides
and students registered under them

3.19 No. of Ph.D. awarded by faculty from the Institution

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF SRF Project Fellows Any other

3.21 No. of students Participated in NSS events: NIL

University level State level

National level International level

3.22 No. of students participated in NCC events: NIL

University level State level

National level International level

3.23 No. of Awards won in NSS: NIL

University level	<input type="text"/>	State level	<input type="text"/>
National level	<input type="text"/>	International level	<input type="text"/>

3.24 No. of Awards won in NCC: NIL

University level	<input type="text"/>	State level	<input type="text"/>
National level	<input type="text"/>	International level	<input type="text"/>

3.25 No. of Extension activities organized

University forum	<input type="text"/>	College forum	<input type="text"/>
NCC	<input type="text"/>	NSS	<input type="text"/>
		Any other	<input type="text" value="2"/>

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- Organized Blood donation Camp in association with Lions Club Faridabad on 16th Sept. 2014 and collected 500 units of blood
- Students visited the Govt. Girls Sr. Secondary school at Mohna Village every Friday in the month of October, 2014 and conducted the classes on Health and Hygiene, Communication, General awareness, Dance and Music, Science experimentation etc.
- Students organized the workshop with the students of Prakashdeep NGO on Decoration of Diyas
- Students organized the awareness campaign and Lecture on E Waste
- In the month of Nov and Dec, 2014 project EK Muthi Daan was organized and 1500 Kg of rice was collected and donated to 3 different NGO's.
- Students organized the cleanliness drive in and around railway station and the suburb of the city.
- MBA students in their combined effort with University of Tennessee, Flame University- Pune, EDI- Ahmedabad and Siddganga Institute of Management & Technology started with a cleanliness campaign undertaken to collect data on garbage disposal and waste management techniques adopted by industry and Government authorities.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	10.48 Acres			
Class rooms	50			

Laboratories	38			
Seminar Halls	12			
No. of important equipments purchased (\geq 1-0 lakh) during the current year.	97.47	9.09	INTERNAL	106.56
Value of the equipment purchased during the year (Rs. in Lakhs)	82.33	18.89	INTERNAL	101.22
Others: Workshop	1			
Drawing Hall	2			
Research & Instrumentation (Labs)	3 (Research and Instrumentation lab, Solar Lab, Techno Planet lab)			

4.2 Computerization of administration and library

The following softwares are being used in the institute in various areas:

- **Attendance Monitoring System:** Attendance monitoring system is entirely supported by Google docs and TCS software.
- **In-house Developed Feedback system:** Feedback system is supported by the Google docs.
- **Courseware:** The entire course ware including lecture notes, assignments, tutorial sheets; academic calendars etc. have been uploaded on the intranet &TCS software.
- **Library:** The records at the library (issue and return of the books) are supported by Libsys Software; the Digital library is equipped with 30 computers with internet connections).
- **Accounts/Fee:** The entire accounts/fee system is supported by Tally and then shifted to Gabba Software.
- **Admission Process:** The admission process at the institute is entirely based on TCS software.
- **HR:** The leave management system (leave records), etc. of faculty and staff members are supported by TCS software (HRMS).

4.3 Library services:

	Existing (Jan 2014- July 2014)		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	22788		212 +204 (Gifted) = 416	1,03,077	23204	
Reference Books	4705		204 + 117 (Gifted) = 321		5026	
e-Books	-	-	-		-	-
Journals	65	66995	30	1,85,788	90	2,52,783

			Journals Continue from previous year 60 Journals new purchase			
e-Journals	4463	14,06074	56111	21,15612	60574	35,21686
Digital Database	7	14,06074	9	21,15612	16	35,21686
CD & Video	2099		56		2155	
Others (specify)						

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Deptt.	Others
Existing	682	408	ALL	30	35		Laptops - 60 Other users desktop - 79	Class rooms 31 Language Lab 35 ECE Lab 15 Mech Lab 27 ECE M Tech Lab 33
Added	----	---	---	---	---	---	---	
Total	682	408	ALL	30	35		139	141

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

Intranet and Wi-Fi facility are provided in the campus.

Following programmes are organized for technology upgradation:

Faculty training/FDPs/Workshops on various institutional processes like attendance monitoring, admission, feedback, leave management system, placement at the beginning of every session for the newly joined faculty members and the existing faculty and staff members from time to time. Expert lectures (form industry and alumni) are organized to bridge the industry-academia gap.

4.5 Amount spent on maintenance in lakhs:

i) ICT	39.3
ii) Campus Infrastructure and facilities	208.74
iii) Equipments	144.95
iv) Others	53.54
Total :	446.53

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- IQAC is actively engaged in recommending improvements in various areas including support services. The Dean Academics (member IQAC) also takes feedback of the students regarding the hostel facilities and other support services. IQAC coordinates with student representatives to ensure smooth working.
- Orientation of the students is conducted by the HODs and Deans (members IQAC) at the commencement of every semester wherein all the students are updated form time to time regarding the activities and new facilities created/available in the institute.
- Dean Students' office apprises students about all the policies and processes like academic calendars followed at the institute through handbooks etc. The same is uploaded on the website, intranet and TCS to have wider scope of accessibility.
- IQAC as a part of its initiative towards Quality Enhancement modifies processes like course coordination, feedback, attendance monitoring etc. from time to time.
- The well-formed MRCE (now MRU) Women's Cell, Anti-ragging, Proctor committees, students' clubs and their constitution have been mentioned on the notice boards, institute prospectus also along with website.
- The institute (now MRU) has a provision of funding students' projects and participation in various national and international events. The policy/rule has been documented in the students' booklet.
- QAC reviews the study material quality uploaded on the intranet & TCS for the students.

5.2 Efforts made by the institution for tracking the progression

- Monitoring of academic progression: The academic progression of the students taking different courses is regularly monitored at the course and the departmental levels both. The attendance and the academic records of the students are present with their respective departments.
- The academic progression and the results are discussed and deliberated upon and the necessary actions are planned to be implemented during the meetings of senior functionaries and Board of Governors' meeting (once a year). The action taken reports and MOM of the meetings are documented every time.
- The class/a group of students has been assigned a Mentor who maintains academic and attendance records of the students and provides guidance regularly.
- Feedback system: The formal feedback is taken twice a semester in the form of formative and summative feedback. Informal feedback is conducted from time to time to monitor the progression.
- The Dean Students' (member IQAC) also holds the meeting to present the details of the students' activities and to discuss the future plans regarding extra- and co-curricular areas. The action taken reports and MOM of the meetings are documented every time.

5.3 (a) Total Number of students

2222

(b) No. of students outside the state

599

(c) No. of international students

NIL

Men	No	%	Women	No	%
	1455	65.5		767	34.5

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
554	11	NIL	53	2	620	524	6	NIL	20	NIL	550

Demand ratio 4.2

Dropout % 0.01

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- Under summer trainings/employment enhancement programme, aptitude development classes and specific modules related to core technical subjects are organized for the purpose of placement. These also benefit the students appearing for other competitive examinations.
- Career Development Centre (CDC) is accountable for skill enhancement of students, provides coaching on Aptitude, Language Skills, Employ-ability Skills, Business Communication, Personal Productivity Skills, Quality and Managerial Skills.

No. of students beneficiaries

2222

5.5 No. of students qualified in these examinations

NET SET/SLET GATE CAT
IAS/IPS etc State PSC UPSC Others

5.6 Details of student counselling and career guidance

- For day to day academic and personal counselling, students approach their class mentors, HoDs, coordinators & Deans. The provision for parent-teacher interaction days (duly mentioned in the academic calendars) also promotes the same. Placement officers are providing continuous career guidance to the students. Mentors also guide their mentees in career related issues.
- Training programmes are organized by the Placement Department for the students on regular intervals. For career counselling and guidance, the Training and Placement Cell under Dean Industry Interaction organizes sessions like pre-placement talks with Corporate Resource Center (CRC) & Dean (II) to provide guidance and details about Placements.
- The Orientation day is organized in the beginning. The students are sensitized about the courses/trainings that they shall be undergoing in the semester, their contribution in the overall curriculum and their importance in terms of placement.
- The continuous training programme for the students is operational in the institute. The programme covers technical, aptitude and soft skills with the objective to equip students with skills for better job opportunities.
- Alumni are invited for interaction with current students.
- Entrepreneurship Cell conducts frequent programmes for creating awareness about entrepreneurial endeavours and hand holding students in making business plans and reaching start-up stage.

No. of students benefitted

2222

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
122	474	216	22

5.8 Details of gender sensitization programmes

NIL

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level National level International level

No. of students participated in cultural events and technical events

State/ University level National level International level

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports : State/University level National level International level

Cultural: State/University level National level International level
(& technical)

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	87 (fee) 90 (projects)	6410400/- 473403/-
Financial support from government	13	1326800/-
Financial support from other sources		
Number of students who received International/ National recognitions	11	Won gifts in the form of cash (worth 3000 USD), kinds and trainings

5.11 Student organised / initiatives

Fairs : State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any) redressed: NIL

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

The vision of MRCE is to become an internationally recognized centre of excellence in technical education for knowledge generation, knowledge dissemination and transfer of knowledge.

Mission

The mission of MRCE is

- to emerge as a centre of applied science and technology
- to develop linkage nationally and internationally with academia and industry
- to produce human resources that are globally competitive and relevant to society.
- to produce well rounded technical personnel with good technical and soft skills, disciplined and responsible citizens of the country.
- to make a significant impact on the technical community, both nationally and internationally.

6.2 Does the Institution has a management Information System

Yes

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

MRCE is an affiliated to Maharshi Dayanand University, Rohtak, Haryana. The college follows the curriculum scheme and syllabi of the affiliating university.

The Institute, however identifies the gaps in the curriculum and the value addition required.

- a) In addition to the prescribed curriculum, additional modules are designed and imparted to students in the form compulsory in house summer trainings and workshops.
- b) Departments have created Special Interest Groups which identify latest tools/technologies and thereafter develop and design modules/experiments/projects for students.
- c) MRCE takes special efforts to strengthen the laboratory work. Hence in addition to the curriculum prescribed by the University, following measures are taken:
 1. Extension of prescribed experiments
 2. Development of additional experiments
 3. Introduction of mini projects
- d) Value added courses are also imparted through co curricular activities under aegis of various student societies like IEEE, SAE, ASME.

6.3.2 Teaching and Learning

Following measures are taken to make continuous improvements in the teaching learning process:

- Faculty induction program and workshops are conducted at the beginning of an academic year to make the newly inducted faculty aware of the teaching learning practices being followed by the institution.
- Reviewing the course material before the commencement of the session by the departmental committees ensures the timely preparation and quality of course material to be uploaded on intranet for students' reference.
- Periodic reviews of courses being delivered, by course coordinators and their teams, ensures uniform coverage and timely flagging of academic issues, if any, in the delivery of course.
- Online feedback taken twice a semester for a course, from students as well as faculty delivering the course, helps to identify the improvement areas and check the convergence of faculty and student perception.
- Analysis of internal assessment and university results is done and presented in academic committee. These analysis are helpful in identifying the concern areas and putting in appropriate measures/strategies.

6.3.3 Examination and Evaluation

- Examinations are well planned.
- Continuous evaluation of student performance in theory as well as lab courses is done through series of tests, quizzes, assignments, tutorials, vivas etc.
- Question Papers are designed to assess the achievement of outcomes as defined in course description.
- Uniform evaluation tools are applied across various sections taking the same course. A common question paper is administered and questions in answer scripts are marked by single evaluator as per guidelines agreed in the course faculty group.
- Assessment of examination results is an important part of teaching learning process.

6.3.4 Research and Development

- Institute R&D fund is allocated to various faculty members for seeding the research and development work to a stage where it is ready for submission.
- Research Incentive Scheme has been introduced to encourage faculty members to publish in SCOPUS conferences and journals.
- Faculty members are encouraged to collaborate and develop external R&D linkages.
- Departments recruit research assistants to assist faculty members with their research work.

6.3.5 Library, ICT and physical infrastructure / instrumentation

1. Library: To enrich the library following practices are followed:
 - a. Allocation of funds to departments enables the individual faculty and departments to buy books without prior sanctions/approvals.
 - b. As an institutional policy the library encourages procurement of larger no of titles rather than large no of volumes of a title.
 - c. Access to online journals on faculty PCs.
 - d. Availability of digital material in digital library.
2. ICT: Usage of ICT
 - a. In teaching learning process: LCD projectors; availability of course material on intranet for ready reference; Wi Fi enabled campus; Online feedback system; conduct of webinars; usage of Virtual labs (as Nodal centre for Virtual Labs)
 - b. In administration: Library; fee; admission; biometric employee attendance system; attendance monitoring of students.
3. Infrastructure/Instrumentation:
 - a. Infrastructure as per regulatory body is established and maintained. Maximum utilisation of resources is encouraged.
 - b. New Research labs have been developed by institutional R&D funding
 - c. For summer trainings all requirements of new instruments/additional consumables are met.
 - d. Lab incharge faculty are responsible for raising the maintenance/new requirements for laboratories.
 - e. Annual/as per requirement maintenance of instruments/infrastructure is done.
 - f. Liberal grants for student projects and innovation lab.

6.3.6 Human Resource Management

- The College has specific policies and processes for Human Resource Management.
- MREI has a complete HR Team that takes care of the recruitments, payrolls, appraisals and all HR issues.
- A dedicated HR representative is available on campus for addressing HR queries and issues.

6.3.7 Faculty and Staff recruitment

1. The Interview Panel boards comprise of Professors from IITs, JNU, DU and other premiere institutes
2. Screening of applicants, as per norms agreed, is done before calling for interviews
3. In case a potential candidate cannot attend the interview a telephonic/skype interview is conducted.
4. For wider applicant base advertisements in national daily newspaper is published.
5. In case of Lab staff, recruitment directly from polytechnics is also encouraged.

6.3.9 Admission of Students

- Setting minimum marks requirement in qualifying exams as eligibility condition (ex. 65% in XII for admission to B Tech program)
- Online applications for admissions
- Fair, transparent and merit based Admission process through Haryana State Counseling Society and Institute level Physical counseling.

6.4 Welfare schemes for

Teaching	Tie up with Reputed Hospital for Medical Care and Provided Accidental Insurance
Non teaching	Tie up with Reputed Hospital for Medical Care; Provident Fund
Students	Provisions of on-campus medical facilities for first aid and minor medical exigencies; availability of ambulance on the campus for severe emergency.

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been done Yes No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	No		Yes	IQAC Appointed Committee
Administrative	No		Yes	Internal Auditors – Head Office

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes Yes No

For PG Programmes Yes No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

University has reduced the period of conduct of examination, thereby increasing the duration of academic session
Panel of external examiners for university practical/project etc. examinations is now floated by the university.
University has made online facility for:

- uploading of internal assessments and external practical/project marks.
- Declaration of results and copy of individual mark sheet.
- Providing admit cards for examination.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

The syllabus is defined by the parent University (MDU) but the institute has the flexibility to define its own PEOs and Outcomes for the various courses. Further to attain the PEOs and the Outcomes, the institute designs its own delivery and evaluation mechanism. The institute has the flexibility for setting question papers of internal examinations, extending the laboratory exercises, setting own feedback system, adding value to courses through summer trainings and bridge courses.

6.11 Activities and support from the Alumni Association

Alumni conduct lectures/workshops/seminars for skill development of current students
Annual Alumni meet on 5th September every year
Alumni act as mentors/judges for various student club activities

6.12 Activities and support from the Parent – Teacher Association

Dates are earmarked in the academic calendar for parent-teacher interaction to provide information to the parents regarding their attendance and academic performance.

6.13 Development programmes for support staff

Administrative staff is trained on usage of different software involved in institutional processes such as admission, attendance, accounts, library management, managing web portals of regulatory bodies etc.

6.14 Initiatives taken by the institution to make the campus eco-friendly

- Installation of solar street lights
- Tree plantation drives
- Installation of solar panels and lighting of Director's office using the same
- Installation of dustbins for waste segregation at prime locations in campus e.g. near food courts.
- Institutional initiative of promoting R&D projects in the area of renewable energy and green Chemistry. These projects have led to SPV panels installation and development of SPV drier, to be used by sister hotel management institute for drying of grains, condiments etc.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

1. **Strengthening of STP and EEP:** This year rigorous efforts were made on summer training of B.Tech students so that they can be better connected with the course and understand the concepts by applications. The summer training project included the technical and soft skills training of the students. The Employability enhancement program was also conducted and it helped in increasing the numbers & performance of the students in placement.
2. **MCQ based sessional examination:** Students have often found it difficult to face the technical rounds of interviews. This weakness has been observed and a solution provided in the form of an additional MCQ based sessional examination. This practice reaped results in the form of enhanced placements in the year 2014-2015.
3. **Introduction of Attendance Management System:** A new centralised attendance management system was introduced which helped to have an automated system and reduced the administration related work load as well. Attendance of both graduate and post-graduate students is updated on daily basis on an automated software TCS-ION.
4. **Improved Course Coordination system:** A revised course coordination system was introduced to have uniform course coverage, uniform evaluation tools and grading process across branches, shifts and sections. With the help of this all academic issues pertaining to a course are raised and addressed timely in the course coordination group.
5. **Introduction of Special Interest Group:** Summer trainings were designed to extend the latest tools and technologies to the students and bridge the academia-industry gap. The trainings are regularly enhanced through introduction of new summer training modules and workshops prepared by the Special Interest Groups of the departments. This further created quality circles for different topics among the faculty and students.
6. **Introduction of Special Training for PG Students:** Specific Graduate attributes were developed for the PG students and in accordance to them a special and robust training for our PG students (M.Tech Courses) was arranged. The same practice helped us in engaging the students better in the course.
7. **Training Needs Assessment (TNA):** A TNA was done for the faculty members of the institute and the identified training needs were then fulfilled in the form of specific workshops and FDPs.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

S. No	Activity Planned	Activity Scheduled for	Activity Held	Activity Held on	Comments
1	FDP: For newly inducted Faculty members	25th July 2014(Friday)	Faculty Induction Development Program	25th July 2014 (Friday)	
2	Report submission: Course Review Committee	26th September 2014 (Friday)	Report of Course Review Committee	30 th September 2014 (Tuesday)	CRC submitted a report of the status of the course materials prepared and the issued guidelines for those meeting the standards.
3	Lecture/ Seminar/ Workshop for Faculty Members	September, 2014	Workshop on "Developing Rubrics"	September 22, 2014	Based on assessment and evaluation
4	Submission of AQAR	October 2014	AQAR Submission	April 2015	
5	Review of Feedback Management System (MBA)	October 2014			
6	Lecture/ Seminar/ Workshop for Faculty Members	18th October 2014 (Saturday)	R&D Outcome Based Business Development	December 12th 2014	
7	IQAC Annual Meeting	December 15th 2014 (Monday)		Pending	
8	Guest Lecture / Seminar/ Workshop for Faculty members	February 2015	Improving Quality of Administration and student support services	28 th February 2015	
9	Lecture/ Seminar/ Workshop for Faculty Members	21st March 2015 (Saturday)	Training Needs Analysis	20 th March – 8 th May 2015	

10	Data submission by Departments/ Offices- For AQAR (2014-15) to IQAC Members	30 June 2015 (Tuesday) - 15th July 2015 (Wednesday)	Data submission by Departments/ Offices- For AQAR (2014-15) to IQAC Members	Going on	
11	Report on: Review of Course Material Preparation	Within 4weeks from the start of semester	Report on: Review of Course Material Preparation	Within 4weeks prior to the start of semester	Course review committee issued recommended guidelines for DRC

7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

- | |
|---|
| <ol style="list-style-type: none"> 1. Training Needs Analysis (TNA) (Given Below as ANNEXURE i) 2. Formation of Special Interest Groups (SIG) (Given Below as ANNEXURE ii) |
|---|

**Provide the details in annexure (annexure need to be numbered as i, ii,iii)*

7.4 Contribution to environmental awareness / protection

- | |
|---|
| <p>Paryavaran Club of Manav Rachna College of Engineering organized two events during odd Semester July-June'15. These events were:</p> <ol style="list-style-type: none"> 1. Slogan Writing, Pencil Sketching – Theme for these is to preserve wildlife. 2. Quiz Competition- The questions of the quiz were related to environmental awareness, social issues, pollution and sustainable development. 3. Environmental Capture- To capture various moments of environmental phenomenon 4. Earth Day Celebration 5. World Plantation Day 6. Poster Making Competition 7. Lecture on Alternative Fuel |
|---|

7.5 Whether environmental audit was conducted? Yes No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

S. No.	Areas	Results
1	Strength	No. of Admission, Infrastructure, Academics & its Delivery Process, Curricular activities, No. Faculty & staff, Alumni Association, Operational budget
2	Weakness	consultancy, External grants, Extension courses

3	Opportunity	Demand of professional courses, International Collaborations, Availability of research grants by funding agencies,
4	Threats/ Challenges	Large number of Universities/ Institutions coming up in Delhi NCR, Gap Between Course Curriculum and Industry Demands, International Student' interest in Indian Professional courses

8. **Plans of institution for next year**

IQAC	
Manav Rachna College of Engineering	
Calendar of Activities 2015- 16	
Activity	Date
FDP: For Newly inducted Faculty members (Developing & Coordinating Quality Course Material)	23rd - 24th July 2015 (Thursday-Friday)
Report submission: Course Review Committee	September 2015
Lecture/ Seminar/ Workshop for Faculty Members	September 2015
Submission of AQAR	October 2015
Lecture/ Seminar/ Workshop for Faculty Members	October 2015
IQAC Annual Meeting	December 2015
Guest Lecture / Seminar/ Workshop for Faculty members	February 2016
Lecture/ Seminar/ Workshop for Faculty Members	March 2016
Data Submission by Departments / Offices- For AQAR to IQAC Members	30 June 2016 (Thursday) - 15th July 2016 (Friday)

Name _____

Name _____

Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

ANNEXURE

Annexure 2.14: Feedback

Manav Rachna College of Engineering Formative Feedback Aug.-Dec. 2014 Branch M.Tech ECE I									
Subjects	Does the lecture start in time? 90%	Is the lecture material well presented? 70%	Are the learning objectives and outcome of the course, as uploaded on the intranet, understood? 65%	Is the course progressing as per the lesson plan? 65%	Are the tutorial/assignment sheets, as uploaded on intranet, discussed in class?	Do you feel the need of tutorials in the course?	Are the lab exercises conducted as per schedule?	Are you encouraged by the instructor to work by yourself on the apparatus?	Are you satisfied with the number and working of lab apparatus?
Information and Communication Theory	5.00	4.75	4.75	5.00	4.50	2.50			
	100.00	95.00	95.00	100.00	90.00	50.00			
Advanced Microprocessors and Microcontrollers	5.00	4.50	4.25	4.50	4.25	3.25	5.00	4.75	3.50
	100.00	90.00	85.00	90.00	85.00	65.00	100.00	95.00	70.00
Advanced Digital Signal Processing	5.00	4.75	4.50	3.75	5.00	2.75			
	100.00	95.00	90.00	75.00	100.00	55.00			
Satellite & Space Comm	5.00	4.50	4.50	3.75	4.00	1.75	5.00	4.75	4.00
	100.00	90.00	90.00	75.00	80.00	35.00	100.00	95.00	80.00

Manav Rachna College of Engineering

Formative Feedback Aug.-Dec. 2014

Branch M.Tech ECE III

Subjects	Does the lecture start in time?	Is the lecture material well presented?	Are the learning objectives and outcome of the course, as uploaded on the intranet, understood?	Is the course progressing as per the lesson plan?	Are the tutorial/assignment sheets, as uploaded on intranet, discussed in class?	Do you feel the need of tutorials in the course?	Are the lab exercises conducted as per schedule ?	Are you encouraged by the instructor to work by yourself on the apparatus?	Are you satisfied with the number and working of lab apparatus?
Neural Networks and Fuzzy Logic	5.00	3.00	2.20	3.40					
	100.00	60.00	44.00	68.00					
CDMA System	4.80	4.60	4.50	4.50					
	96.00	92.00	90.00	90.00					
Computer Communications	4.90	4.60	4.60	4.70					
	98.00	92.00	92.00	94.00					
Seminar	4.60	4.40	4.00	4.40					
	92.00	88.00	80.00	88.00					

MANAV RACHNA COLLEGE OF ENGINEERING
IT Semester - 1 B
SUMMATIVE FEED BACK November 2014

S.No	Attributes	The stated/ uploaded course objectives have been met.	The stated/ uploaded course outcomes have been achieved.	Willingness to answer course related queries.	Presentation and completion of course material.	Relationship of the conceptual/theoretical knowledge to its application in the real world.	Encouragement to self-learning .	Method of applying theoretical concepts to problem solving.	Ability to look at a problem from different perspectives and apply different problem solving techniques.	Encouragement to learning through lab exercises.	Continuous evaluation of student performance in tutorials.	Continuous evaluation of student performance in lab.
1	Physics-I	3.82	3.41	3.64	3.73	3.86	3.73	3.59	3.77	3.95	3.77	3.91
		76.36	68.18	72.73	74.55	77.27	74.55	71.82	75.45	79.09	75.45	78.18
2	Mathematics-I	3.64	3.91	3.82	3.73	3.68	3.64	3.64	3.50	3.59		
		72.73	78.18	76.36	74.55	73.64	72.73	72.73	70.00	71.82		
3	Engineering Chemistry	2.64	2.55	2.45	2.73	2.45	2.64	2.50	2.36	2.64	2.59	2.77
		52.73	50.91	49.09	54.55	49.09	52.73	50.00	47.27	52.73	51.82	55.45
4	ELECTRICAL TECHNOLOGY	3.82	3.73	3.64	3.59	3.64	3.55	3.77	3.64	3.64	3.64	3.73
		76.36	74.55	72.73	71.82	72.73	70.91	75.45	72.73	72.73	72.73	74.55
5	ENGINEERING GRAPHICS AND DRAWING	3.64	3.32	3.27	3.18	3.14	3.41	3.14	3.00	3.59		3.55
		72.73	66.36	65.45	63.64	62.73	68.18	62.73	60.00	71.82		70.91
6	WORKSH	4.18	3.91	4.00	4.14	3.86	3.91	3.77	3.86	4.14		4.05

	OP TEC HNO LOG Y	83.64	78.18	80.00	82.73	77.27	78.18	75.45	77.27	82.73		80.9 1
		The stated/ upload ed course objectiv es have been met.	The stated/ upload ed course outco mes have been achiev ed.	Willin gness to answer course related queries.	Presenta tion and completi on of course material.	Level of assignme nts and exercis es conducted in class.	Method of condu cting exercis es in Langu age lab.	Encou ragem ent to self impro vemen t/learn ing throug h langua ge lab	Applica tion of gramm atical rules/co ncepts to every day commu nicatio n.	Enco urage ment to com muni cate bette r.	Contin uous evaluati on of student perfor mance.	
	ESSE NTIALS OF COM MUN ICAT ION	3.55	3.50	3.45	3.36	3.45	3.23	3.32	3.23	3.27	3.32	
		70.91	70.00	69.09	67.27	69.09	64.55	66.36	64.55	65.45	66.36	

Annexure 2.14: Academic Calendar 2014-15

MANAV RACHNA COLLEGE OF ENGINEERING ACADEMIC CALENDAR 2014-2015 B.TECH. Even Semester	
Important Events	Dates
Start of classes of B.Tech. II, IV and VI Semester	12th January (Monday)
Report of DRC for course material uploading and review-by coordinator DRC	January 14, (Wednesday)
Report on Finalized Projects/Training for B.Tech VIII Sem students	January 19, 2015
Formative Feedback	9th-13th February (Monday-Friday)
First Attendance Review	13th Feb (Friday)
Attendance letters dispatch to the parents	19th Feb (Thursday)
<i>First Sessional Examination</i>	16th - 23rd February (Monday-Monday)
Discussion of Answer Sheets	26th February (Thursday)
Parents Interaction Day I	27th February (Friday)
First Review and evaluation of Project/Training of VIII Sem students	March 2nd, (Monday)
Holi Holidays	2nd - 7th March (Monday-Saturday)
Second Attendance Review	20th March (Friday)
Summative Feedback	23rd - 27th March (Monday-Friday)
<i>Second Sessional Examination</i>	23rd - 28th* March (Monday-Saturday)
Attendance letters dispatch to the parents	25th March (Wednesday)
Parents Interaction Day II	March 30th (Monday)
Second Review and Evaluation of Projects/Training of VIII Sem students	April 18th (Saturday)
Third & Final Attendance Review	April 24th (Friday)
Attendance letters dispatch to the parents	April 28th (Tuesday)
<i>Third Sessional Examination</i>	27th April -2nd May (Monday - Saturday)
Discussion of Answer Scripts	May 7th (Thursday)
Display of award list to students	May 15th (Friday)
Final Evaluation of Projects /Training of VIII Sem Students	May 16th (Saturday)

Display of Detention List	Prior to the start of University Exams
End semester Practical Externals	To Be declared by MDU
End semester Theory Externals	To be Declared by MDU
LIST OF HOLIDAYS	
Republic day	26th January Monday
Maha Shivratri	17th February (Tuesday)
Holi	March 6 (Friday)
Ram Navami	March 28 (Saturday)

Annexure 7.3:

B- I

Name of the Best Practice: Reaching out the Trainers to Train the Trainers

1. Title of the Practice: ‘Training Needs Analysis’

2. Goal: To identify the training needs of the faculty members and subsequent skill enhancement to bridge the identified gap in the skill set.

3. The Context: Academic system in affiliated colleges require the faculty members to frequently sharpen and enhance their skills set. The enhancement of the skill set pertains to upgrading the technical knowhow and the grooming the overall personality and teaching potential. Faculty members often lack the basic traits and personality required for effective teaching and control in the class owing to lack of experience or opportunities. Such faculty members also lack confidence while addressing public gatherings such as conferences, seminars or workshops. Manav Rachna College of Engineering has tried to address the situation by doing a “Training Need Analysis” where the training needs of the faculty members were analysed and thereafter suitable training programmes were designed to address the identified issues.

4. The Practice:

Senior officials of MREI conducted a training needs analysis of the teaching fraternity assessing them on their communication skills, class conduct and delivery (involving usage of ICT, recapitulation, check for assimilation and snap questions, ethical orientation and gender sensitivity) and personal carriage and conduct. Faculty members with weaknesses in any areas were identified and then specific FDPs were conducted to enhance the Verbal Communication Skills, inculcate Positive Thinking and Attitude, Self-Discovery and Goal Setting, Developing Emotional Intelligence, Stress Management etc. These served as useful guides for grooming the overall personality of the faculty members and added value to the educational experience thereby reaping positive results.

5. Evidence of Success

The Academic year 2014-15 saw the accomplishment of the identified Training Needs through specific and focussed FDPs:

Training Need	FDP/Workshop Conducted	Impact
Verbal Communication Skills Set Enhancement	3 days workshop on Verbal Communication Skills	A 3 days workshop on Verbal Communication Skills was conducted. The participants were introduced to the art of communication and the importance of effective communication with students and with peers.
Positive Thinking and Attitude	One Day FDP on Positive Thinking and Attitude	One Day FDP on Positive Thinking and Attitude was conducted to teach to the participants the importance of positive thinking and positive attitude on the overall personality and well being of an individual.
Self Discovery and Goal Setting	One day FDP on Self Discovery and	Faculty members often lack the enthusiasm and focus to identify their inner strengths and establish their goals. This

	Goal Setting	aimless working takes them nowhere and leads to indulgence in day to day repeated functions and lack of motive and innovation. Therefore a FDP on Self Discovery and Goal Setting was organised to train the faculty members to identify their inner strengths and establish goals so as to move towards progressive lives.
Emotional Intelligence	One day FDP on Emotional Intelligence	A mentally strong faculty member with a balanced emotional quotient is an asset for the organization and proves to be a superior faculty member. The FDP was directed towards attaining this goal.
Negotiation Skills	One day FDP on Negotiation Skills	The FDP was focussed on training the trainers on the art of effective negotiation skills.
Stress Management	One day FDP on Stress Management	Distressed faculty members are always the best teachers and guides. Hence stress management techniques were taught to the faculty members.
Effective TLP	FDP on Smart Learning way to enhance Teaching Learning Effectiveness	Classroom Teaching becomes more effective if the TLP is supported by smart techniques. Hence how to enhance the TLP and make it more effective thus turning the learning to Smart Learning.

6. Problems Encountered and Resources Required:

Problems Encountered

- The TNA was a tedious and lengthy exercise and took more than 15 days to complete. The judges had to be constantly engaged for the duration. This required careful planning and management. The slots were fixed, faculty members called and made to wait. This required a lecture shuffling also at times. Cancellation of entire slot due to unavailability of the judges was also a major problem.
- The Training Needs Analysis exercise was not accepted in a positive sense by few faculty members who considered it as a testing exercise. There was some resentment among the faculty members after the names were nominated as per the identified training needs for the respective FDPs. But the trainings imparted in the initial FDPs were quite helpful and the feedback acted as a motivating factor for the remaining FDPs with faculty members themselves opting to participate in the FDPs.

Resources Required: The financial implications were limited to snacks and food arrangements for the judges. The other resources required are a dedicated room with Laptop (with internet accessibility), projector, white board, white board markers and duster apart from seating arrangement for the judges. Apart from this set up one person to fix, communicate and manage the slots for the TNA and to oversee the snacks and food arrangements for the judges.

7. Contact Details

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B- II:

Name of the Best Practice: Formation of SIG(Special Interest Groups)

1. **Title of the Practice:** ‘Special Interest Groups’

2. **Goal:** To promote a culture of ‘self-updating’ and ‘self enhancement of skills and knowledge’ among faculty members and transferring this knowledge to students.

3. **The Context:** Academic system considers teaching as the main responsibility of a faculty member in affiliated colleges and very little expectations of research and developmental work by faculty are there. Year after year the faculty members are teaching more or less the same subjects and contents. Added to this, the limited exposure to the outside world makes the knowledge of a faculty member obsolete. This is a vicious cycle, as the obsolescence results in further isolation of this faculty in the external academic & industrial community; makes him/her unable to add value to classroom teaching and offer any new knowledge or expertise to students. When expectations are put on these faculty members to design new courses or revamp the existing syllabii the effective contribution is missing. Manav Rachna College of Engineering has tried to address the situation by encouraging faculty members with common interests, to build ‘Special Interest Groups’ and take responsibility of self enhancement and upgradation.

4. **The Practice:**

Faculty groups have taken initiative of identifying an emerging area/emerging technology. At the end of the day, after student teaching hours are over, sufficient time is devoted exclusively to academic upgrading of self. The group together plans the study material, identifies virtual tools and starts educating itself about the same. In a workshop mode, faculty members take turns to teach/train their group members and develop new exercises/cases/experiments. These are then solved and tested. After testing, the same are introduced as new laboratory exercises or are developed into full summer training modules for the students.

Faculty members also enroll themselves for different online courses being offered by world’s best universities, educate themselves of the best practices followed internationally and earn certificates. These courses are then redesigned for offer as electives in the near future.

5. **Evidence of Success**

The Academic year 2014-15 saw changes in/introduction of following courses/summer modules:

Self upgradation/enhancement by formation of SIG in area of:	Impact
Embedded course and Image Processing	<ul style="list-style-type: none"> • New summer training module based on Arduino microcontroller was developed and rolled out in Summer of 2015 for B Tech post 5th semester students. • Module based on Image enhancement, filtering and GUI was introduced for B.Tech students.
Communication Technologies	<ul style="list-style-type: none"> • HFSS Software Antenna Design Module was developed and delivered as Summer training module for M Tech post 2nd semester and B.Tech post 6th semester in summer 2015 and designs were fabricated in upgraded PCB lab
Pedagogy Training	<ul style="list-style-type: none"> • Summer training module on Pedagogy was developed and rolled out for M Tech post 2nd semester students, many of whom had given teaching as their career choice.
Web Technologies including Web Services (XML, XSLT, RDF, DOM, Graph Databases, Property Graphs & Ontologies)	<ul style="list-style-type: none"> • Module developed by the Web Technologies Special Interest Group (SIG) was imparted to Post-2nd Semester M Tech CSE students during their Summer Training in June-July 2015. • These technologies have also been incorporated in the subject Internet and Web Technologies in the 1st semester of M Tech (CSE) regular course
Soft Computing and Big Data	<ul style="list-style-type: none"> • A Module on Soft Computing technologies, including Neural Networks and Fuzzy Theory, is being developed by the Soft Computing and Big Data SIG and is offered as summer training module summer 2015 to students of post-6th semester B Tech (CSE/IT).
Android Operating System	<ul style="list-style-type: none"> • A Module on Android OS is being developed by the Android OS SIG and delivered to students of post-6th semester B Tech (CSE/IT) 2015. • The module is also offered to all faculty members of the Department of CSE/IT during the year 2014-2015 as a workshop.

6. Problems Encountered and Resources Required:

Problems Encountered

- The teaching hours of the institute for different shifts were 8 am to 3 pm and 12:00 to 6:45 pm. The institute timings were enhanced. There were no teaching or administrative assignment to be done during this period and the sole purpose was to encourage faculty members to sit together and have academic exchanges. There was a lot of resentment among faculty members due to increased timings.
- Many faculty groups are still not working in the direction of transferring the newly acquired skill to students in a structured module form. The time and patience required for designing a module, self testing it and then rolling it out is possibly a deterrent. However, the momentum of active groups shall act as a catalyst for these groups which are a minority.

Resources Required: The resources required are a computer lab for the group and high speed internet connection. Being non teaching hours, most of the labs are free. Institute has internet facility in all labs and staff rooms. Faculty groups are using open source tools. Wherever required, the individual faculty member can procure books upto a limit of Rs. 3000/- and submit the bill for reimbursement. Any minor expenditure required can be met from the imprest amount of Heads and Deans.

7. Contact Details

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