

प्रज्ञानं ब्रह्म



Manipal

INSPIRED BY LIFE

Annual Quality Assurance Report (AQAR)

2013 -14

**Manipal Academy
of Higher Education**



Submitted to

**National Assessment
and Accreditation Council (NAAC)**

VISION

Global leadership in human development,
excellence in education and healthcare

MISSION

Be the most preferred choice of students, faculty and industry

Be in the top 10 in every discipline of education health sciences,
engineering and management.

VALUES

- Integrity
- Transparency
- Quality
- Team work
- Execution with passion
- Humane touch

***MANIPAL ACADEMY OF HIGHER
EDUCATION, MANIPAL***

(Established under Section 3 of UGC Act, 1956)

**Annual Quality Assurance Report
(AQAR)**

2013-14

Submitted to

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

Bangalore - 560 072 India

Part – A

AQAR for the year (for example 2013-14)

2013-14

1. Details of the Institution

1.1 Name of the Institution

MANIPAL ACADEMY OF HIGHER
EDUCATION (MAHE), MANIPAL

1.2 Address Line 1

"manipal.edu"

Address Line 2

MADHAV NAGAR

City/Town

MANIPAL, UDUPI

State

KARNATAKA

Pin Code

576104

Institution e-mail address

registrar@manipal.edu

Contact Nos.

0820-2922323

Name of the Head of the
Institution:

DR. K RAMNARAYAN

Tel. No. with STD Code:

0820-2922615

Mobile:

98450 69081

Name of the IQAC
Co-ordinator:

Mr. SANDEEP SHENOY

Mobile:

9880368390

IQAC e-mail address:

iqac@manipal.edu

1.3 NAAC Track ID

(For ex. MHC0GN 18879)

KAUNGN10065

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)*

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1.5 Website address:

www.manipal.edu

Web-link of the AQAR:<http://manipal.edu/mu/about-us/iqac-mahe/aqar-2013-14.html>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	B+		2002	5 yrs
2	2 nd Cycle	--	--	--	--
3	3 rd Cycle	--	--	--	--
4	4 th Cycle	--	--	--	--

1.7 Date of Establishment of IQAC :

DD/MM/YYYY

03/06/2013

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)

- AQAR_2013-14 submitted NAAC on 21/05/2016 (DD/MM/YYYY)
- AQAR 2014-15 submitted NAAC on 21/05/2016 (DD/MM/YYYY)

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)

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)

Allied Health, Communication, Regenerative Medicine, Architecture, Nursing, Hotel Management, Life science, Information Science,

1.11 Name of the Affiliating University (for the Colleges)

Not applicable

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

Autonomy by State/Central Govt. / University As a Deemed University by Central Govt.

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 checked="" type="checkbox"/>
UGC-Innovative PG programmes	<input type="text" value="--"/>	Any other (Specify)	TIFAC-CORE
UGC-COP Programmes	<input type="text" value="--"/>		

2. IQAC Composition and Activities

2.1 No. of Teachers	13
2.2 No. of Administrative/Technical staff	16
2.3 No. of students	-
2.4 No. of Management representatives	5
2.5 No. of Alumni	3
2.6 No. of any other stakeholder and community representatives	-
2.7 No. of Employers/ Industrialists	1
2.8 No. of other External Experts	-
2.9 Total No. of members	38
2.10 No. of IQAC meetings held	Yearly 2

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

- Fire Safety measure
- Awareness programme on integrated management system, quality objectives
- Basic Life Support workshop
- Quality Audit training to Faculty
- Lingual straight wire technique in Orthodontics
- Research Methodology Biostatistics
- Inter-Collegiate Quiz – Perio Gnanam
- Operation Theatre Technique
- CBCT Imaging in Dentistry

- Medico-Legal considerations for dentists
- Ceramic Build Up and Firing
- On VLSI, Embedded Systems and Healthcare IT
- Advances in Regenerative Medicine
- Pharmaceutical Sciences
- Mentoring of medical students
- Orientation of medical students- Second , Third MBBS(Part 1 and Part 2)
- Teaching Methodologies
- Integrated teaching
- How to write a research paper
- Use of Power point presentation
- Making stem cell Therapy a reality: how Stamford's interdisciplinary translational might shape the future of medicine.
- Rapid Diagnosis of Infections in the intensive Care
- Medical education workshop
- Clinical trials and Statistics
- Pharmacovigilance
- Career Guidance for Life Science students
- Pre analytical errors and Importance of Calibration and controls
- P3 and LEAN presentation
- Ethical issues in Biomedical Research
- Workshop on Blood Safety

2.14 Significant Activities and contributions made by IQAC

MAHE

- Compiled data for QS University Ranking BRICS 2013 - Ranked No. 100 by QS University Ranking BRICS 2013
- Compiled data for India Today top private Universities in India - Ranked fifth among top private Universities in India – India Today June 2013
- Compiled data for UI Green Metric World University Ranking 2013 - Ranked Number 1 in India and 27th in the world under suburban subcategory in the UI Green Metric World University Ranking 2013
- Compiled Award application for Golden Peacock Environment Management Award for the year 2013 and won the award
- Compiled Award application for ASSOCHAM National Education Excellence Awards 2014 – Won Best University Promoting Research award

- Compiled data for Careers360 University Ranking 2014 - Ranked No. 3 among Top Private Universities in India by Careers360 University Ranking 2014
- Compilation of NAAC Self Study report (2012-2014).
- Mr. Sandeep Shenoy, Deputy Director, Quality & Compliance attended the first ever workshop named The Economic Times Master Class organized by QS and Indian Center for Assessment and Accreditation at the British council, New Delhi on November 15, 2013 on the topic 'World university rankings & its implications' - a unique & innovative initiative to help Indian institutions manage the ranking environment and enhance performance on an enduring basis.
- Mr. Derrick Ian Joshua, Environment Executive, attended the IRCA certified lead auditor training program conducted by BSI for the International Standard, ISO 50001:2011 and qualified as a lead auditor for Energy Management System.
- Internal auditors training program integrating both ISO 9001:2008 and ISO 14001:2004 Standards was conducted for six batches with the help of lead auditors from M/s TUV Rheinland Pvt. Ltd B'lore between July 1 to 10, 2013 and August 1 to 9, 2013 at Manipal and Mangalore campuses respectively. The training has added 125 Integrated Management System (ISO 9001+ ISO 14001) internal auditors to the pool of empanelled University Quality & Environment auditors.

Programmes organized by MCPD from July 2013 to June 2014

Sl#	Name of the workshop	Dates	Participants	College/university	Number of participants
1.	Pedagogic & Personal Effectiveness Workshop	2nd to 4th July 2013	Dubai Campus	MU	60
2.	Workshop Curriculum Design	9th July, 2013	MU Faculty	MU	63
3.	Pedagogic & Personal Effectiveness Workshop	15th to 19th July, 2013	MU faculty	MU	37
4.	Pedagogic & Personal Effectiveness Workshop	22nd to 26th July, 2013	MU faculty	MU	37
5.	PBL workshop	26th July, 2013	Nursing faculty	MU	30
6.	VSO workshop	24th August, 2013	VSO members	MU	25

7.	Research Methodology	29th August, 2013	Interns of Dental College	MCOADS	60
8.	Assessment workshop	17th September, 2013	Dental College	MCOADS	35
9.	Pedagogic & Personal Effectiveness Workshop	7th & 8th October, 2013	SVS Institute of Dental Sciences, Mahabubnagar	Hyderabad	50
10.	Pedagogic & Personal Effectiveness Workshop	2nd to 4th December, 2013	Architecture and MIC faculty	MU	30
11.	Palliative Care workshop	7th & 8th December, 2013	Palliative Care members	Bangalore	35
12.	Effective Electronic Presentation	21st, 28th December, 2013 and 4th January, 2014	MU faculty	MU	145
13.	Enhancing English Language	8 Friday's (from 17th January onwards)	MU Non-teaching staff	MU	30
14.	Research Methodology Workshop	11th January, 2014	Dental PG Students –	MCOADS, Manipal	35
15.	Teacher Effectiveness workshop	25th January, 2014	MU Faculty	MU	67
16.	National workshop on MCQ (DESIGN)	17th & 18th February, 2014	Faculty	MU & other faculty members	80
17.	Enhance English Language Skills	14 hours	MU Non-Teaching staff	MU	30
18.	Pedagogic & Personal Effectiveness workshop	24th – 26th February, 2014	Wayanad	Kerala	30
19.	Professional and Personal Effectiveness workshop	6th to 8th March, 2014	M.Sc/PG students	Biochemistry	24
20.	Patent Filing	22nd March,	Faculty	MU Faculty	44

	Camp	2014			
21.	Personality Development Workshop	24th, 26th and 29th March, 2014	Non-Teaching Staff	MU	109
22.	Relationships.. with yourself and other self	31st March, 2014	Faculty	MU Faculty and Staff	50
23.	Personality Development Workshop	9th, 16th, 23rd & 30th April, 2014	Non-Teaching Staff	MU	120
24.	Enhancing English Language	15th, 16th, 22nd, 25th & 29th April, 2014 and 2nd & 6th May (14 hours)	Non-Teaching Staff	MU	30
25.	Mini-workshop on Knowledge, Memory and Learning	26th April, 2014	Faculty	MU	60
26.	Curriculum Committee Meeting	9th May, 2014	Faculty	MU	45
27.	Research Methodology Workshop	10th, 17th and 24th May, 2014	Students of MMMC	MMMMC	142
28.	Evolution of Teaching and Learning in Higher Education	15th May, 2014	Faculty	MU	46
29.	Mini-workshop on Virtual Patients in Health Professions Education	16th May, 2014	Faculty	MU	10

Training Programs organized by Directorate of Research

#	Name of Faculty	Topic	Date	Place	No. of Participants
1	Directorate of Research	Summer School	June 3- July 2, 2013	MCOPS, Manipal	140
2	Directorate of Research	Organization of Manipal	November 14, 2013	Interact, Manipal	150

		University Students Research Forum			
3	Dr. M. K. Unnikrishnan	Introducing Interdisciplinary Research	January 17, 2014	Interact, Manipal	100
4	Dr. G Jagadish Adjunct Prof. MCOPS, Manipal	Planning, Executing and Publishing Research Projects	February 11, 2014	MCOPS, Manipal	100
5	Dr. Raviraja Adhikari	Interdisciplinary Research	February 19, 2014	Interact, Manipal	100
6	Dr. P. D. Gupta Adjunct Professor MCOPS	Search and Research	March 10, 2014	Interact, Manipal	100
7	Directorate of Research	Manipal Research Colloquium -2014	April 11-12, 2014	Interact Manipal	600
8	Directorate of Research	Student Research Poster Competition (SRPC 2014):			
9	Dr. Arun Kumar Chawla	Availability of various Australian fellowships and scholarships	June 5, 2014	Interact Manipal	100
10	Dr. Arun Kumar Chawla	Availability of various Australian fellowships and scholarships	June 7, 2014	KMC, Mangalore	100
11	Directorate of Research	Summer Training 2015	June 16-July 12, 2014	Interact, Manipal	240

Software Applications Developed

- Online Attendance Software and Marks implementation
 - MCOPS
- SIS Portal - launched in September, 2013
- Patient Management System for MCODES MLR – completed in August, 2014 (jointly with BOP)

IT Infrastructure Projects

- Cisco Switches Deployment in MU Campus – Phase – III – completed
- MPLS Link from Reliance – completed

Training Programme for Non - Teaching Staff - 2014

#	Date of Training	Duration	Topics/Areas	Trainers	Category of employees
1	January 31, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Administrative staff Batch I
2	February 15, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Administrative staff Batch II
3	March 1, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Administrative staff Batch III
4	March 8, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Administrative staff Batch IV
5	March 15, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Executives - Batch VI
6	March 22, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Executives - Batch VII
7	March 29, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	Security - Batch VIII
8	April 5, 2014	8 hours	Soft skills & Environmental awareness topics	MCPD trainers	General Worker & Housekeeping

					Staff - Batch IX
Training modules have been finalized in consultation with MCPD, MU, Manipal					
Training on Enhancement of English Language Skills for the pilot batch :Started on January 17, 2014.					
Training on Microsoft office for administrative staff are planned from February to March 2014					

Admissions

Candidates are allowed to take second attempt if they are not satisfied with the performance in the first test, and then, the better of the two scores is considered for the merit list.

KMC Manipal

- Since its inception the internal quality assurance cell (IQAC) of KMC Manipal has been working on developing quality and key performance indicators for the institution. The key focus has been on feedback and shifting of feedback from manual to online system for majority of the stakeholders like students and employees.
- The feedback analysis is done by the IQAC.
- IQAC is also encouraging research based work culture among students and faculty
- Sensitization of all staff/ Holding regular meetings.
- Community and extension programmes.
- Professional Development programme

SOAHS Manipal

Mock drills for Fire emergencies, emergency response preparedness for some hazardous spillage of materials was conducted .Internal audit were conducted twice in the year.

MCON Manipal

Maintaining the quality of curricular activities

MCOPS Manipal

Internal auditing, review of audit outcome and corrective actions

MMMC Manipal

Department of Pharmacology organised a Hands-on workshop on basic techniques of molecular biology on 11th October 2014. Training was provided to 24 faculty members.

Path-Theatre, an initiative of the department of Pathology was held in October 2014. This unique contest tests not just the conceptual understanding but also its application to dramatics.

KMC Mangalore

The IQAC has contributed significantly to streamlining the quality processes in the respective departments. Adherence to Time Table, examination time lines and feed back are monitored and discussed. Besides this research output is captured in the form of conference presentations, research grants and paper publications. Various quality related activities like organising talks and workshops related to academic and research development are also conducted.. The IQAC liaises with the research cell which facilitates to increase quality research output. It also coordinates with the MEU to conduct workshops on faculty development

MCODS Mangalore

1. Value added certificate courses
2. Encourage Research
3. Audit by External Agency
4. Community programmes
5. Patient Management System (MIS)
6. Student Exchange Programme
7. Online Feedback by stakeholders
8. Orientation programme to newly recruited staff
9. Professional Development programme
10. Infection Control Cell & Bio waste management
11. Environment friendly campus
12. MOU with International Universities

MIT Manipal

- ✓ The academic performance of all departments reviewed and suggested steps to improve overall teaching learning process.
- ✓ Monitors the activities throughout the year, makes suggestions and incorporates the remedial measures
- ✓ Interaction with Heads and faculties of each and every department for maintaining and sustaining quality teaching learning process.
- ✓ Framing of quality objectives for institution and departments (programme outcomes).
Action plan, monitoring and assessment of quality objectives.

FOA Manipal

Activities: Internal Audits once in 6 months, Management Review Meetings

Contributions: Quality improvement in academic systems & environment management

SOM Manipal

2 internal quality audits and review meetings.

SOC Manipal

Internal audits

SOIS Manipal

- **SUBLIME** - Applied Cognition Systems (APCOGSYS), Bangalore & School of Information Sciences, Manipal have come up with a novel program. In this program students will be able to effectively apply their technical & design knowledge in realizing a prototype from a novel idea which will benefit the society.
- **Smart Sole project** - Students were carrying out the technical implementation of the DST funded project of School of Allied Health Sciences known as “Smart Sole”.
- **Centre for Software Development (CSD)** - The objective of this centre is to identify the internal software requirements of the Manipal University, constituent institutions and hospitals and develop software’s for their requirement.
- Two IMS internal audits and MRMs have been conducted.
- A talk on “**Meaningful by Design**” by Mr. Abhimanyu Kulkarni, Director, Philips Design India has been arranged on 20th April 2013
- Workshop on “Medical Image Processing Application Development Using ITK and VTK” on 25th & 26th October, 2013
- **Grant writing and Research workshop** - A five day workshop was conducted for the faculty of the institute to provide an overall perspective of research activities and also to discuss on how to go about writing project proposals 24-06-2013 to 27-06-2013.
- Talk on ‘Role of statistics in research’ by Dr. Sreekumaran Nair, HOD, Department of Statistics, MAHE
- **Community service –Mithra Association** - Members of SOIS have been actively participating in community service activities in and around Manipal. Sponsored tuitions/college fees for two students.

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 *

Quality objectives

Excellence in education, health care and research to maintain a place in the top ten private universities in India.

Academic: Quality of intake

#	Quality Objective	Target	Achievement Status
1	Cut off ranking at admission level	Lower as compared to previous year	Cut off ranking of some courses are lower when compared to previous year. However, there is a remarkable improvement in Medical / Dental and to some extent in the Engineering courses
2	Diversity of students	Better representation as compared to previous year	Better represented when compared to previous year
3	International / NRI students	Increase in 5% over previous bench mark till it reaches the permissible quota	Achieved (National 2013 - 101880 ; 2014 – 122514 International 2013 – 1711 ; 2014 – 1954)
4	Increase in number of applications, National and International.	National: Not Defined International: Target 5%	Currently MU ratio is 22:10:1

Examination Results:

#	Quality Objective	Target	Achievement Status
1	Increase in pass percentage over the previous bench mark	average of previous 3 years	Status being reviewed in BoS meetings
2	Declaration of results on time	Within a month of conduct of exams	Being done

Service delivery Process:

#	Quality Objective	Target	Achievement Status
1	Student feedback of faculty	Minimum of 3 on a scale of 5	Institutions are monitoring. All colleges have achieved the target
2	Student feedback on infrastructure	Minimum of 3 on a scale of 5	Feedback was collected & presented in Students Affairs com. meeting
3	Student feedback on academic program	minimum of 3 on a scale of 5	Institutions are monitoring.
4	Patient feedback on services	minimum of 3 on a scale of 5	OP: 4.4 / IP: 3.1 (KH –Quarter ended Apr. – Jun.2014) OP: 91.3% / IP: 89% (KMCH –Quarter ended Apr. – Jun.2014) PSI: 3.81 (MCOBS Manipal for May 2014)

Research:

#	Quality Objective	Target	Achievement Status
1	Number of papers presented in National and International conferences	Minimum 5% increase every year	2012-13: 1090 2013-14: 1706 Increase of 56.5%
2	Number of publications in National and International, Indexed and non-indexed journals	Minimum 5% increase every year	2012-13: 1942 2013-14: 2350 Increase of 21%
3	Amount of research grants received	5% increase every year	2012-13: Rs 19 Crores 2013-14: Rs 22 Crores Increase of 15.79%
4	No of patents applied for	at least one patent more than the previous year	Registered: 20 Filed: 22 No change as compared to last year
5	Number of Ph D registrations	at least 5% increase every year	2013 : 180 2014: 116 (till date)

Purchase:

#	Quality Objective	Target	Achievement Status
1	To reduce the period of identification of the required capital items from the date of receipt of indent in consultation with end user	Reduction	Achieved
2	To reduce procurement time for capital equipments from the date of identifying the item to delivery of the item	Reduction	Indigenous: Achieved Import: Not Achieved
3	To reduce procurement time from the date of receipt of indent to delivery of the item for indigenous / imported spares/accessories/ consumables	Reduction	Achieved
4	To improve customer satisfaction level by improving quality of service	Improvement	Achieved
5	To maintain cost effectiveness in the purchase of items	Savings	Achieved
6	Timely processing of Annual Maintenance Contract	No delay	Achieved

EMS Objectives:

#	Quality Objective	Target	Achievement Status
1	Reduction in paper consumption	Minimum 5% over a period of 3 years	As the 3 year lock in period is over and target is also achieved

2	Reduction in water consumption	Minimum 5% over a period of 3 years	as presented in the last MRM, new objectives will be presented in this MRM for approval
3	Reduction in power consumption	Minimum 5% over a period of 3 years	
4	Closure of 80% of reported environmental incidents within 48 hrs	80% within 48 hrs.	
5	Implement research studies in areas of environment	Consider inclusion of this objective after online software is ready.	Kept pending as unable to get accurate data

** Attach the Academic Calendar of the year as Annexure.*

2.15 Whether the AQAR was placed in statutory body Yes No
 Management Syndicate other body

Provide the details of the action taken

- 1. International admissions** – Chairman suggested to identify new locations like Indonesia to tap prospective students for. University received good response from Tanzania which was explored this year.
- 2. Space Constraint at Faculty of Architecture** - Director, FoA to submit a proposal for separate building.
- 3. Quality & Quantity of Ph. Ds.** - Pro VC suggested to review the ratio of PhD : PG : UG admissions and bench mark with International Universities having student base of around 25,000. Increase in In-house Ph D registrations means there will be increase in Research funding too. Suggested Directorate of Research to take this as their target.
- 4. Feedback** – Explore possibility of engaging external agencies to collect feedback from students, parents and industry. - Identify the parameters for benchmarking and thereafter identify an external agency for the study and submit proposal for management approval

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	12	–	12	12
PG	144	15	159	159
UG	46	5	51	51
PG Diploma	10	1	11	11
Advanced Diploma	-	–	-	-
Diploma	2	1	3	3
Certificate	10	1	11	11
Others	11	1	12	12
Total	235	24	259	259

Interdisciplinary	12	-	12	12
Innovative	3	-	3	3

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

Programs governed by regulatory bodies follow the curriculum as prescribed by them and incorporate flexibility by offering elective / open options within the limits as permissible by the regulatory bodies. Credit system is introduced for 100 percent of the Technology, Management and Communication programs and 15 percent of the health sciences programs. Most of the programs which are in the credit system are gradually progressing towards incorporating the requirements of the Choice based credit system.

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	Health Sciences:28, Technology, Management and others :123
Trimester	Technology ,Management and others :1
Annual	Health Sciences: 107 Technology ,Management and others : Nil

1.3 Feedback from stakeholders* Alumni Parents Employers Students

(On all aspects)

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

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

Following are some of the institution wise revisions / updates:

KMC Manipal

Periodic updating/revision of syllabi is done by the board of studies of the University with a view to enhance the quality

SOLS Manipal

Board of Studies (BoS) meeting on 21.06.2014 approved revised syllabus of Biology-I: practical paper for I semester B.Sc. Biotechnology course (as per the UGC guidelines substituted animal dissection with new experiments)

MCOPS Manipal:

Uniform regulations to govern the programs, Introduction of credit based system, and evaluation, revised curriculum with inputs from experts

MMMC Manipal:

- Some minor revisions are made.

KMC Mangalore:

The syllabi is as per the regulatory body. In 2014, horizontal integration was started in the preclinical and para clinical subjects. Also innovative methods of learning like PBL, CBL, Broken classes and hand-outs was introduced.

MCODS Mangalore:

1. Objective Structured Practical and Clinical Examinations (OSPE & OSCE)
2. A minimum of 30% to be scored in Internal Assessment to be eligible for appearing for University Examination in the subject/s offered
3. Includes both Objective and Descriptive pattern of Theory examination

FOA Manipal

The entire syllabus has been revised and implemented with effect from July

SOIS Manipal:

- Structure and syllabus modified in M.Sc. Tech (VLSI Design/ VLSI System Design & Verification). New electives added in M.Sc. Tech (Embedded Systems). Revision in examination evaluation Processes.

SOM Manipal:

- All courses revised based on feedback from alumni and employers. Moved to trimester pattern from semester system.

WGSHA Manipal:

- Modifications in Existing Course Structures passed through the Senate during 2013-14

SORM Bangalore:

- Change in diploma syllabus—Stem cell and diseases (Practical & theory)-I st sem Immunology

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

Criterion – II**2. Teaching, Learning and Evaluation****2.1 Total No. of permanent faculty**

Total	Asst. Professors	Associate Professors	Professors	Others
2196	992	496	407	301

2.2 No. of permanent faculty with Ph.D.

432

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
142	146	14	53	15	27	163	163	334	389

2.4 No. of Guest and Visiting faculty and Temporary faculty

78

162

0

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	361	734	228
Presented	476	551	111
Resource Persons	48	163	67

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

- Integrated teaching is introduced in pre and para clinical departments.
- Horizontal and vertical integration of various subjects were implemented.
- Small group teaching / discussions

SOAHS Manipal

- Introduction of problem based learning

- Faculty development program such as SMILE for enhancing the leadership qualities in faculty

SOLS Manipal

- Teacher guardian for first year students
- Weekly coaching for poor students

MCON Manipal

- Innovative teaching learning methods are adopted, e.g :Team based learning, concept mapping
Evidence Based Practice

MCOPS Manipal:

Macro and micro academic management system, 2. Student information systems – Online attendance/ marks, 3. Strict adherence to examination schedules, 4. Good teacher awards

MMMC Manipal

Active learning is emphasized in the curriculum. Self-Directed Learning (SDL), Problem Based Learning (PBL), Case Based Learning (CBL), audio-visual aids and practical sessions are part of teaching learning methods.

PBL: Students are introduced to a conceptually and clinically significant topic, presented in the format of a case scenario. PBL is conducted in two sessions. In the first session (brain storming session), cases are given and the students work together to analyze the problem and clarify difficult terms, identify key issues, formulate a hypothesis, and list the learning objectives. In the second session (presentation session), which is conducted after a week, students present the specified learning objectives.

The mode of teaching makes use of both traditional blackboard teaching and modern techniques such as power point presentations with good use of quality images and videos. Students can access audio-visual learning materials prepared by faculty members in the health sciences library of the university.

Case based learning: Using cases (real or paper based), to enhance the critical thinking and reasoning is extensively used in laboratory based learning sessions.

Team based learning: To inculcate the spirit of collaborative and cooperative learning, some topics are conducted using the team based learning approach.

Gaming: To make learning fun and to enhance retention, methods like crosswords, puzzles and other gaming approaches have been incorporated

KMC Mangalore

Integrated classes, Problem based learning, Competency Based learning, Case Based learning and Broken classes have been adopted. Small group teaching has been introduced in Pre and Para clinical subjects.

MCODS Mangalore

1. OSPE and OSCE
2. ICT enabled teaching
3. Teacher Guardian mentorship
4. Case based learning

MIT Manipal:

- Remedial classes for academically poor students.
- Guest Lectures
- Program electives/ open electives
- AMS-Interactive tool for student performance and attendance analysis
- Slot-wise timetable
- Organizing Guest Lecture from Industry experts and site visits, Power point Presentation facility in each class, Continuous Evaluation, QEEE program for students and faculty members
- Open Electives are introduced for IV & V semester students.
- Industry sponsored electives.
- Black board teaching for subjects involving intensive mathematical analysis.
- Power Point Presentations for subjects involving complex diagrams.
- Assignments – All subjects of all semesters involves five assignments which will be evaluated at regular intervals to monitor students' performance.
- Mini-projects and demonstrations – In subjects and labs, students have to work on a mini project and demonstrate its working.
- Industry visits – Industrial visits are carried out by the department for both UG and PG students to near-by Industries for better understanding of theoretical knowledge gained by students. Also, IE student chapter organises Industrial visit. Some of the industries are Canara Lighting Mangalore, GE Bangalore, Infosys Bangalore, Wipro Bangalore, Shamili Hydel Power Plant ltd. Sangur Plant, Siddapur, Udupi and other power plants near-by, etc.
- Black board teaching for subjects involving intensive mathematical analysis.
- Case studies – Used in teaching design based and management subjects.
- Assignments – All subjects of all semesters: involves five assignments at regular intervals.

- Mini-projects and demonstrations – In subjects such as Embedded Systems, VLSI design, Electronic Circuit design, Digital design, students have to work on a mini project and demonstrate its working. In subjects such as Circuit design using P-Spice, DSP using MATLAB, teachers demonstrate the concepts through examples.
- Conducted workshop on latest technologies
- Conducted Placement classes
- Guest lectures from Adjunct faculty
- Modern facilities like LCD projection including animations, showing models

FOA Manipal

Integrated teaching methods, Live labs, Hands on workshops, Interaction with industry experts and alumni.

SOC Manipal

Student practice Newspaper, Documentary production (video & audio), Organising & managing events, Class presentations, Class seminars

SOIS Manipal

- Industry Sponsored labs & State of the art teaching facilities
- Industry standard hardware and software laboratories
- Opportunities to work on industry defined mini-projects & Industry relevant curriculum
- Opportunity to study abroad
- All subjects with associated labs & seminar by all students in I & II semester.
- In-house Centre for Software Development (CSD)

WGSHA Manipal

Manipal University encourages faculty exchanges with various foreign Universities, through academic collaboration agreements with them. The research publications and output is one of the parameters on which the faculty performance is assessed at the annual performance review and for release of Performance Incentives.

•The institution has different clubs that facilitate literature, dramatics, sports, adventure and social activities. The institution has joined hands with another institution (India Skills) to train and develop the youth to take up jobs in the hospitality sector. The faculty have actively participated in these activities.

Student / Faculty Research: The College has established the Centre for Excellence in Hospitality and Tourism Research (CEHTR) to focus on research, consultancy and continuing professional development initiatives in the area of hospitality and tourism management within the college. Extensive involvement of faculty and students in research

projects demonstrate continual quality improvement in all its academic and co-curricular activities to achieve global competency through research

Skills training for unemployed youth from the local community are imparted through Manipal City & Guilds as our CSR initiative. Many short term courses in hospitality are offered as part of the programme

WGSHA is the only college in India to offer Sommelier programme from the International Sommelier Guild (ISG) with its two levels of wine fundamentals certifications. This is also integrated with the existing F & B curriculum of BHM and BA in Culinary Arts. International faculty representing ISG, train the students in this global certification which adds value to our students learning

Community Outreach Programme: The programme conducted in Padukere Beach and Hirebettu School enable d the student to involve in social activities.

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

Institution wise actual teaching days:

#	College / School	Teaching days
1	KMC Manipal	300
2	SOAHS Manipal	182-199
3	SOLS Manipal	286
4	MCON Manipal	230-248
5	MCOADS Manipal	228
6	MCOPS Manipal	180
7	MMMC Manipal	305
8	KMC Mangalore	244
9	MCOADS Mangalore	243
10	MIT Manipal	176
11	FOA Manipal	233
12	SOC Manipal	208
13	SOIS Manipal	177
14	WGSHA Manipal	187
15	SORM Bangalore	203

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

Following are the reforms initiated:

1. Bar code on answer books
2. Multiple choice questions for few courses
3. Examination automation through Student information system (SIS)
4. On Screen Marking (OSM) for evaluation
5. Open book examination

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

Total no. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop are **671**

2.10 Average percentage of attendance of students: 85

2.11 Course/Programme wise distribution of pass percentage:

#	COURSE	Appeared	Distinction %	First %	Second / Pass Class %	Total Pass %
1	M.Sc. Photonics	08	0.00	0.00	100.00	100.00
2	M.Sc. DAN	18	0.00	0.00	55.56	55.56
3	M.Sc. HTM	02	100.00	0.00	0.00	100.00
4	BA in Culinary Arts	20	0.00	0.00	100.00	100.00
5	M.Sc. Nanopharmaceuticals	02	0.00	0.00	100.00	100.00
6	M.Sc. Clinical Research Management	03	0.00	0.00	100.00	100.00
7	M.Sc. Pharmaceutical Regulatory Affairs	10	0.00	0.00	100.00	100.00
8	BBM (e-Banking & Finance)	84	0.00	0.00	79.76	79.76
9	BBM (Financial Markets)	21	0.00	0.00	57.14	57.14
10	M.Sc. Biostatistics	19	0.00	0.00	100.00	100.00

11	M.Sc. Geopolitics & International Relations	17	0.00	0.00	94.12	94.12
12	M.Sc. in Chemistry	20	0.00	0.00	100.00	100.00
13	M.Sc. in Applied Mathematics & Computing	30	0.00	0.00	96.67	96.67
14	M.Sc. in Physics	35	0.00	0.00	94.29	94.29
15	Master of Public Health	35	40.00	51.43	8.57	100.00
16	Master of Social Work	21	57.14	42.86	0.00	100.00
17	M. Arch.	10	0.00	0.00	90.00	90.00
18	B. Arch.	72	0.00	0.00	98.61	98.61
19	B.Sc. Applied Science	4	0.00	0.00	75.00	75.00
20	M. Phil. Psychiatric Social Work	04	0.00	0.00	75.00	75.00
21	M.Sc. (Medical)	93	6.45	30.11	46.24	82.80
22	PG Diploma in Panchakarma	09	0.00	33.33	66.67	100.00
23	M.Sc. Clinical Embryology	06	0.00	50.00	50.00	100.00
24	Fellowship in Neonatology	01	0.00	0.00	100.00	100.00
25	M.Sc. Yoga Therapy	05	0.00	0.00	100.00	100.00
26	DM (Cardiology)	01	0.00	0.00	100.00	100.00
27	DM (Neurology)	02	0.00	0.00	100.00	100.00
28	MCH (Urology)	01	0.00	0.00	100.00	100.00
29	MCH (Neurosurgery)	02	0.00	0.00	100.00	100.00
30	M.D. Anatomy	01	0.00	0.00	100.00	100.00
31	M.D. Biochemistry	05	0.00	0.00	100.00	100.00
32	M.D. Community Medicine	04	0.00	0.00	100.00	100.00
33	M.D. Dermatology, Venereology & Leprosy	03	0.00	0.00	100.00	100.00
34	M.D. Forensic Medicine	02	0.00	0.00	100.00	100.00
35	M.D. General Medicine	39	0.00	0.00	97.44	97.44
36	M.D. Hospital	02	0.00	0.00	100.00	100.00

	Administration					
37	M.D. Microbiology	07	0.00	0.00	100.00	100.00
38	M.D. Pharmacology	08	0.00	0.00	100.00	100.00
39	M.D. Pulmonary medicine	02	0.00	0.00	100.00	100.00
40	M.D. Radiodiagnosis	06	0.00	0.00	100.00	100.00
41	M.D. Paediatrics	07	0.00	0.00	85.71	85.71
42	M.D. Pathology	12	0.00	0.00	100.00	100.00
43	M.D. Physiology	03	0.00	0.00	100.00	100.00
44	M.D. Psychiatry	03	0.00	0.00	100.00	100.00
45	M.D. Radio Therapy	02	0.00	0.00	100.00	100.00
46	M.S. Oto-Rhino-Laryngology	08	0.00	0.00	100.00	100.00
47	M.S. General Surgery	19	0.00	0.00	68.42	68.42
48	M.S. Orthopaedics	12	0.00	0.00	75.00	75.00
49	M.S. Obstetrics & Gynaecology	17	0.00	0.00	94.12	94.12
50	M.S. Ophthalmology	10	0.00	0.00	100.00	100.00
51	DPM (Psychiatry)	06	0.00	0.00	100.00	100.00
52	D.Orthopaedics	09	0.00	11.11	77.78	88.89
53	D.O. (Ophthalmology)	01	0.00	0.00	100.00	100.00
54	D.M.R.D. (Radio Diagnosis)	02	0.00	50.00	50.00	100.00
55	D.L.O. (Oto-Rhino-Laryngology)	02	0.00	50.00	50.00	100.00
56	D.G.O. (Obstetrics & Gynaecology)	04	0.00	0.00	100.00	100.00
57	D.D.V.L. (Dermatology, Venereology & Leprosy)	02	0.00	0.00	100.00	100.00
58	D.C.H. (Child Health)	05	0.00	20.00	80.00	100.00
59	M.D. (Anesthesiology)	18	0.00	0.00	100.00	100.00
60	D.A. (Anesthesiology)	10	0.00	11.11	80.00	90.00
61	D.C.P. (Clinical Pathology)	06	0.00	16.67	83.33	100.00
62	M.Sc. Yoga Therapy	01	0.00	0.00	100.00	100.00
63	M.Sc. (Medical)	04	0.00	25.00	75.00	100.00
64	PG Certificate course in	06	0.00	16.67	83.33	100.00

	Panchakarma					
65	Fellowship in Clinical Genetics	01	0.00	0.00	100.00	100.00
66	D.L.O. (Oto-Rhino-Laryngology)	01	0.00	0.00	100.00	100.00
67	D.G.O. (Obstetrics & Gynaecology)	01	0.00	0.00	100.00	100.00
68	M.D. General Medicine	01	0.00	0.00	0.00	0.00
69	M.S. Obstetrics & Gynaecology	06	0.00	0.00	100.00	100.00
70	M.S. Ophthalmology	02	0.00	0.00	100.00	100.00
71	MBBS	475	1.26	33.05	51.79	86.11
72	DUAL DEGREE	10	0.00	0.00	100.00	100.00
73	M.S. Embedded Systems	88	0.00	0.00	100.00	100.00
74	M.S. EWT	29	0.00	0.00	100.00	100.00
75	MS. ITM	15	0.00	0.00	100.00	100.00
76	MS Medical Software	23	0.00	0.00	100.00	100.00
77	MS VLSI-CAD	42	0.00	0.00	100.00	100.00
78	MS VLSI- System Design & Verification	11	0.00	0.00	100.00	100.00
79	MS Virtualization & Computing	24	0.00	0.00	100.00	100.00
80	M.Phil. Clinical Psychology	08	0.00	0.00	100.00	100.00
81	MASLP	02	0.00	0.00	100.00	100.00
82	B.Sc. NMT + PGDNMT	05	0.00	40.00	40.00	80.00
83	M.Phil Clinical Psychology	07	0.00	0.00	100.00	100.00
84	M.Sc. MLT	08	12.50	37.50	37.50	87.50
85	MASLP	31	0.00	19.35	64.52	83.87
86	M. Optom.	05	0.00	60.00	40.00	100.00
87	MOT	08	12.50	12.50	75.00	100.00
88	MPT	46	2.17	67.39	28.26	97.83
89	M.Sc. MIT	04	0.00	25.00	50.00	75.00
90	M.Sc RRT	02	0.00	50.00	50.00	100.00
91	M.Sc NMT	03	33.33	0.00	0.00	33.33

92	M.Sc RT	02	50.00	50.00	0.00	100.00
93	M.Sc HHIA	05	0.00	0.00	100.00	100.00
94	PGDNMT	05	0.00	40.00	40.00	80.00
95	M.Sc MRP	03	66.67	33.33	0.00	100.00
96	B.Sc.CVT	02	0.00	0.00	50.00	50.00
97	B.Sc. HIA	01	0.00	100.00	0.00	100.00
98	BASLP	01	0.00	0.00	100.00	100.00
99	B.Optomety	02	0.00	0.00	50.00	50.00
100	BPT	40	2.50	25.00	45.00	72.50
101	B. Sc MIT	16	12.50	25.00	25.00	62.50
102	B.Sc RRT & DT	02	0.00	50.00	50.00	100.00
103	B.Sc. CVT	14	7.14	42.86	28.57	78.57
104	B.Sc. HIA	9	0.00	0.00	88.89	88.89
105	Bachelor of Perfusion Technology	08	0.00	0.00	50.00	50.00
106	BOT	05	0.00	40.00	20.00	60.00
107	B.Sc. MRT	01	0.00	100.00	0.00	100.00
108	B.Optom.	16	0.00	0.00	100.00	100.00
109	B.Sc Optm	01	0.00	100.00	0.00	100.00
110	B.Sc. RT	12	25.00	33.33	33.33	91.67
111	MDS-Pedodontics and Preventive Dentistry	01	0.00	0.00	100.00	100.00
112	MDS-Conservative Dentistry and Endodontics	07	0.00	0.00	100.00	100.00
113	MDS-Oral and Maxillofacial Surgery	06	0.00	0.00	100.00	100.00
114	MDS-Oral Medicine and Radiology	06	0.00	0.00	100.00	100.00
115	MDS-Oral Pathology and Microbiology	06	0.00	0.00	100.00	100.00
116	MDS-Orthodontics and Dentofacial Orthopaedics	07	0.00	0.00	100.00	100.00

117	MDS-Pedodontics and Preventive Dentistry	06	0.00	0.00	100.00	100.00
118	MDS-Periodontology	09	0.00	0.00	100.00	100.00
119	MDS-Public Health Dentistry	05	0.00	0.00	100.00	100.00
120	MDS-Prosthodontics and Crown & Bridge	06	0.00	0.00	100.00	100.00
121	PG Diploma in Dental Materials	02	0.00	0.00	100.00	100.00
122	BDS	16	0.00	12.50	68.75	81.25
123	M.Sc. Nursing	40	0.00	0.00	97.50	97.50
124	PB B.Sc. Nursing	20	0.00	0.00	100.00	100.00
125	PB Diploma in Nursing	09	33.33	55.56	11.11	100.00
126	B.Sc. Nursing	195	0.00	0.00	91.79	91.79
127	M. Pharm	103	0.00	0.00	100.00	100.00
128	B. Pharm	86	0.00	0.00	86.05	86.05
129	MA in English / Philosophy / Sociology	16	0.00	0.00	100.00	100.00
130	PG Diploma in Corporate Communication	03	0.00	0.00	100.00	100.00
131	MA Communication	49	0.00	0.00	95.92	95.92
132	BAJC	80	0.00	0.00	68.75	68.75
133	PG Diploma in Jewellery Sales & Retail Operations	10	40.00	60.00	0.00	100.00
134	BBA (JDM)	28	0.00	0.00	100.00	100.00
135	MBA	120	0.00	0.00	95.00	95.00
136	M.Sc. Regenerative Medicine	14	0.00	0.00	100.00	100.00
137	Advanced PG Diploma in Stem Cell and Regenerative Medicine	02	0.00	0.00	100.00	100.00
138	M.Sc. Bioinformatics	02	0.00	100.00	0.00	100.00
139	M.Sc. Medical Biotechnology	13	0.00	0.00	100.00	100.00
140	PG Diploma in Cellular	10	30.00	60.00	10.00	100.00

	& Molecular Diagnostics					
141	B.Sc. Biotechnology	31	3.23	0.00	96.77	100.00
142	MBBS Phase II Stage II	106	0.00	0.00	98.11	98.11
143	MSc Tech IT Management	04	0.00	0.00	100.00	100.00
144	MSc Tech Dual Degree Programme	07	0.00	0.00	100.00	100.00
145	MSc Tech Medical Software	21	0.00	0.00	100.00	100.00
146	MSc Tech Embedded System	129	0.00	0.00	100.00	100.00
147	MSc Tech VLSI Design	74	0.00	0.00	100.00	100.00
148	MSc Tech VLSI System Design & Verification	05	0.00	0.00	100.00	100.00
149	MSc Tech Embedded System & Wireless Technology	06	0.00	0.00	100.00	100.00
150	MSc Tech Computing Technologies & Virtualization	07	0.00	0.00	100.00	100.00
151	BHM	84	0.00	0.00	91.67	91.67

Engineering programs:**Undergraduate**

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
Aeronautical Engineering	40	32.50	35.00	12.50	0.00	80.00
Automobile Engineering	39	30.77	30.77	7.69%	0.00	69.23
Bio-Medical Engineering	48	18.75	18.75	8.33%	0.00	45.83
Biotechnology	24	54.17	16.67	8.33	0.00	79.17
Chemical Engineering	67	29.85	35.82	23.88	0.00	89.55
Civil Engineering	84	41.67	28.57	14.29	0.00	84.52

Computer Science and Engineering	263	44.49	24.33	15.21	0.38	84.41
Electrical and Electronics Engineering	163	33.74	31.29	12.88	0.00	77.91
Electronics and Communication Engineering	258	45.35	26.74	14.73	0.00	86.82
Industrial and Production Engineering	51	27.45	37.25	9.80	0.00	74.51
Information Technology	108	20.37	35.19	22.22	0.00	77.78
Instrumentation and Control Engineering	30	36.67	23.33	13.33	0.00	73.33
Mechanical Engineering	237	48.52	23.21	13.50	0.00	85.23
Mechatronics	64	40.63	23.44	15.63	0.00	79.69
Printing Technology	13	23.08	7.69%	30.77	0.00	61.54

Postgraduate

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
Bio-Medical Engineering	25	72.00	28.00	0.00	0.00	100.00
Computer Science and Engineering	24	70.83	29.17	0.00	0.00	100.00
Construction Engg. and Management	18	52.94	35.29	0.00	0.00	88.24
Digital Electronics and Advanced Communication	25	79.17	20.83	0.00	0.00	96.00
Energy Management, Auditing and Lighting	18	83.33	16.67	0.00	0.00	100.00
Engineering Management	18	55.56	38.89	5.56	0.00	100.00
Structural Engineering	25	60.87	34.78	0.00	0.00	95.65
Computer Aided Mechanical Design and Analysis	18	83.33	5.56	0.00	0.00	94.44
Control Systems	18	72.22	11.11	0.00	0.00	100.00
Manufacturing Engineering and Technology	18	93.75	6.25	0.00	0.00	100.00
Network Engineering	17	31.25	31.25	18.75	0.00	87.50

Software Engineering	15	76.92	23.08	0.00	0.00	100.00
Nuclear Engineering	3	66.67	33.33	0.00	0.00	100.00
Printing and Media Technology	16	40.00	20.00	0.00	0.00	80.00
Microelectronics	19	84.21	10.53	5.26	0.00	100.00
Power Electronic Systems and Control	18	64.71	35.29	0.00	0.00	100.00
Astronomy and Space Engineering	18	72.22	27.78	0.00	0.00	100.00
Printing and Media Technology (Dual Degree)	10	10.00	0.00	0.00	0.00	20.00
Industrial Bio –Technology	16	75.00	25.00	0.00	0.00	100.00
Computer Science and Information Security	18	61.11	38.89	0.00	0.00	100.00
Chemical Engineering	5	80.00	20.00	0.00	0.00	100.00
Environmental Engineering	18	38.89	44.44	5.56	0.00	94.44
Biochemical Engineering	11	81.82	18.18	0.00	0.00	100.00

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

#	Institute	IQAC Contribution/Monitoring/Evaluating the Teaching & Learning processes
1	KMC Manipal	<ul style="list-style-type: none"> • Student feedback on teachers and infrastructure obtained periodically • Seminars and conferences for teaching faculty to inspire their quality of teaching. • Medical education unit through which IQAC periodically conducts sessions to explore avenues to enhance teacher effectiveness through professional skill development training programmes. • Department audit by trained Auditors twice a year • Analysis of Results, Research output, Performance of students and teachers analyzed in Core committee meeting and board of studies
2	SOAHS Manipal	<ul style="list-style-type: none"> • Internal audits, online feedback, marks sent to parents
3	MCON Manipal	<ul style="list-style-type: none"> • Every month departmental meeting are conducted and the progress of teaching and learning is discussed. Any

		<p>deviation from regular planned activity is rectified. Every month faculty meeting is held during which the progress and evaluation of the students are discussed. Feedback given by the students is communicated to the faculty during these meetings and need for improvement is stressed.</p>
4	MMMC Manipal	<ul style="list-style-type: none"> • By providing inputs, regular audits and collecting / analysing students feed backs
5	KMC Mangalore	<ul style="list-style-type: none"> • The departmental coordinators monitor the adherence to classes, innovative teaching learning methods, lesson plan. Student feedback on curriculum is also taken so that any suggestions which can be acted upon are deliberated and implemented.
6	MCODS Mangalore	<ul style="list-style-type: none"> • Online Feedback given by the students on quality of teaching/teacher, teaching methods and also suggestions from IQAC for improvement. • Department audit by trained Auditors twice in a year • Analysis of Results, Research output, Performance of students and teachers analysed in Core committee meeting • Faculty sent to Teaching Learning workshop conducted by the University
7	MIT Manipal	<ul style="list-style-type: none"> • All the faculty members are asked to enter the day to day activities in the “Academic Management System-AMS” and the same is monitored. • Course coverage is monitored. • Audits are done to see all the activities are done on time. • Feedbacks are studied and improvements are suggested.
8	FOA Manipal	<ul style="list-style-type: none"> • Through periodic subject wise faculty meetings & Class committee meetings, monitoring of the classes held as per course plans and lesson plans.
9	SOM Manipal	<ul style="list-style-type: none"> • Lesson planning and audits. • Online attendance system and audits.
10	SOC Manipal	<ul style="list-style-type: none"> • Lesson Plan, Faculty Meetings, Internal & External Audit
11	SOIS Manipal	Contributions:

	<ul style="list-style-type: none"> • Conduction of workshops and guest lectures for students • Workshops for faculty members <p>Monitoring/ Evaluation:</p> <ul style="list-style-type: none"> • Conduction of periodic IMS internal audit (twice in a year) • Review of internal audit by Management Representative from Department of Quality, MAHE • External audit by TUV, Bengaluru
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2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	85
UGC – Faculty Improvement Programme	38
HRD programmes	125
Orientation programmes	112
Faculty exchange programme	9
Staff training conducted by the university	130
Staff training conducted by other institutions	106
Summer / Winter schools, Workshops, etc.	250
Others	37

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	776	67	53	17
Technical Staff	561	43	30	9

Criterion – III

3. Research, Consultancy and Extension

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

- An annual budget of more than 8 crore INR earmarked to promote research
- Provision to utilize matching grants, seed money, publication charges and other logistics.
- Facilitate interdisciplinary research activities by sharing of specialized equipment, state-of-the-art research laboratories, libraries, medical simulation center, teaching hospitals, innovation centre, Manipal Anatomy and Pathology (MAP) museum etc.
- Foster globalization of research activities through joint research in partnerships with industry and premier institutions within India and overseas
- Training and technical assistance to the researchers through mobility and exchange programme
- Dissemination of research output through scientific publications and scientific presentations
- Implementation of uniform research policy including intellectual property rights, ethics, academic dishonesty and plagiarism.
- Awareness programme and training modules to increase the number of quality publications in Scopus and Web of Science indexed journals.
- Incentivize patents and research publications indexed in Scopus and Web of Science with a good impact factor.
- Policy to utilize these incentive points to attend International Conferences by the faculty.
- Subscription to databases like Scopus, Web of Science and access to publishers like Springer, Elsevier etc. to improve publication standards.
- Facilitate researchers to write joint and interdisciplinary proposals from public and private funding agencies.
- Recognition to top researchers through incentive awards on a yearly basis (Gold Medal/Cash Prize)
- Facility to file intellectual property and commercialization
- Assistance to file intellectual property and commercialization through technology transfer office.
- Introduction of bursary schemes for deserving undergraduate and postgraduate students and research scholars.

- Publication of Manipal Research Review and Manipal University Research E-Bulletin to compile and collate research activities
- Initiation of publishing research journals in the field of Medicine, Dentistry, Nursing, Allied Health, Pharmacy, Technology and Management
- Subscription to more than 500 periodicals in the year 2014
- Sanctioning of Dr. T M A Pai endowment chair worth INR10 lakhs for the 20 top researcher to yield high quality research
- Launch of Manipal University Student Research Forum (MUSRF) w November 14, 2013 to create a network of students interested in research and take up research as a career

Research Outcomes:

- Research Grants: Extramural grants to the tune of INR 27 crore were awarded to Manipal University in the academic year 2013.
- Research Publications: Faculty/Researchers of MU published a total of 1165 publications in Scopus indexed journals, with an average of 0.1 Citations per Publication and an average Journal Impact Factor of 0.3, with H-index of 16
- Intellectual Property: Manipal University filed 5 patents in the year 2013 and 2 were awarded
- Student grants: Award of ICMR STS projects to 47 students of KMC in 2013
- High Impact Papers: Three research papers in Journal with Impact Factor above 5

Research Activities

- Student Research Forum was constituted having student representatives from undergraduate, post graduate and PhD programme.
- Through this forum regular workshops and lectures were organized.
- UG students were encouraged to take up research projects under Manipal University UG student research grant.
- These initiatives have helped the students to improve their analytical skills, reasoning capacity and scientific curiosity.
- Orientation programmes for the benefit of UG and PG students
- Innovation day held at the Innovation Centre allowed the faculty and students to showcase their talent and innovations with outstanding innovations suitably rewarded.
- Presentation by students at National and International conferences and publication papers in reputed journals.
- Invitation to experts from renowned organizations to deliver plenary lectures.

- Forging partnerships with industry to enhance innovation and training students to acquire skills that equip them for fulfilling careers.
- Collaboration with international universities in all specialties including Engineering & Architecture, Medicine, Management, Media & communication, Life sciences, Dentistry and the culinary arts.

Workshops and CME organized

si	Name of Faculty	Topic	Date	Place	Number of Participants
1	Dr. M K Unnikrishnan	How to prepare a winning research proposal		MCOPS, Manipal	100
	Dr. Usha Y Nayak	Bio CARE	22-Jan-13		
	Dr. Vidhu Sankar Babu	DST Fast Track Application			
	Dr. Srinivas Mutalik	DBT Fast Track Experience			
	Dr. M Surlivel Rajan	ICMR Concept Note			
	Dr. Nandakumar and Mr. Anoop Kishore	Fast Track Scheme Application			
2	Mr. Sampath Kumar	DST Fast Track Funding	15-Mar-13	MIT, Manipal	
	Dr. (Mrs) Vidhu Sankar Babu	DST Fast Track Funding Experience			
	Dr. NandaKumar and	Preparing Budgets for a grant			100
	Dr. Rekha Shenoy				
3	Dr. K. Satyamoorthy.	Research grant opportunities in the area of Health Sciences	19-Apr-13	KMC, Mangalore	100

	Dr. Anand R	Ethics in Clinical Research			
4	Dr. Sreekumar Nair	Importance of Statistical Interpretation of Research Investigations	27-Apr-13	MCOPS, Manipal	100
	Dr. P.G. Shivananda	Effective mentorship and supervision of Ph.D. candidates			
	Dr. K Satyamoorthy	Guidelines and policies for Ph.D. supervision			
	Dr. K L Bairy	Ethics in research.			
	Dr. C Mallikarjuna Rao	Ethics in publication.			
	Dr. Shyamala Hande	Manipal university guidelines for Ph.D. guides and doctoral committee members.			
	Dr. Raviraj Adhikari	Registration protocol, presentation and screening of Ph.D. candidates			
5	Directorate of Research	Summer School	June 3- July 2, 2013	MCOPS, Manipal	140
6	Directorate of Research	Organization of Manipal University Students Research Forum	14-Nov-13	Interact, Manipal	150

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	4		9	14
Outlay in Rs. Lakhs	390.91		666.79	4851.71

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	20		10	62
Outlay in Rs. Lakhs	188.08		52.10	477.51

3.4 Details on research publications

	International	National	Others
Peer Review Journals	108	46	
Non-Peer Review Journals			
e-Journals			
Conference proceedings	10	2	

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

KMC Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects				
Study of drug resistance in pulmonary tuberculosis cases with and without HIV co-infection in Udupi District, Coastal Karnataka. – Dr. Kiran Chawla	3	Indian Council of Medical Research, New Delhi	3832956.00	1354549.00
To compare the efficacy, safety and effects of Caffeine Versus Aminophylline for Apnea of Prematurely in Indian Neonates. A prospective Randomized Control Trial – Dr. Leslie Lewis	3	Indian Council of Medical Research, New Delhi	1976176.00	585540.00
Effectiveness of Instrumental Indian	3	Indian Council of Medical	455,450.00	204,750.00

Classical music on serum cortisol concentrations of Preterm infants on assisted ventilation admitted to a tertiary level Neonatal Intensive Care Unit KMCH - A perspective Control Trial - Dr. Leslie Lewis		Research, New Delhi		
Understanding the Epidemiology of Antimalarial Drug Resistance in Plasmodium Vivax and Elucidation of Resistance Deterministic Host Factors For Antimalarial Drugs - Dr. Kavitha Saravu	3	Indian Council of Medical Research, New Delhi	2,644,673.00	1,322,336.00
Cissus Quadrangularis Linn (Asthisrinkala) as a regulator of bone progenitor cells in osteoporosis and diabetes induced bone disorders: cellular and functional basis for osteogenic regenerative medicine - Dr. Kumar MR Bhat	2	Council of Scientific and Industrial Research	1,363,000.00	769000.00
Biology and Molecular Mechanisms of Melanocyte Keratinocyte Interaction and Pigmentation an Approach toward Therapeutic Implication for Vitiligo - Dr. Kumar MR Bhat	4	Government of India, Ministry of Science & Technology, Department of Biotechnology , New Delhi	2,171,000.00	354,000.00
Monitoring and supervision of ICDS scheme under Central Monitoring Unit - Dr. Pawan Kumar	5	National Institute of Public cooperation and Child development	388,000.00	48,000.00
Evaluation of laser manipulated embryos for their hatching potential, metabolic charges and laser induced effects - Dr. Satish Kumar Adiga	3	Indian Council of Medical Research, New Delhi	2,425,500.00	821,850.00
Fertility preservation using	3	Indian Council	1,148,131.00	

Moringa oleifera/Leaf extract in Mice Treated with Chemotherapeutic Agents and its Nechanism of Action - Dr. Guruprasad Kalthur		of Medical Research, New Delhi		593,712.00
Diagnostic utility, clinical correlates and endophenotypic validity of facial emotion recognition deficits in schizophrenia versus Bipolar Disorder - Dr Rishikesh V Behere	3	Government of India, Ministry of Science & Technology, Department of Science & Technology, NewDelhi	1,188,000.00	100,000.00
Optimizing non-invasive markers for embryo selection - Dr Satish Kumar Adiga (Fellowship) - Ms Fiona Olvitta D'souza	3	Indian Council of Medical Research, New Delhi	157,333.00	157,333.00
Value of fetal autopsy and establishment of normal fetal radiologic anatomy - Dr K M Girisha	3	Indian Council of Medical Research, New Delhi	1,343,955.00	179,760.00
Behavioural biochemical and histopathological analysis of the effects of antiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBS) on learning and memory in male wister rats - Dr Veena Nayak	3	Indian Council of Medical Research, New Delhi	1,077,921.00	519,648.00
Assessment of risk Factors and predictors for spontaneous pre-term birth in a South Indian Antenatal Cohort - Dr Chythra R Rao	3	Indian Council of Medical Research, New Delhi	2,978,884.00	969,535.00
Evaluation of multiple ligation dependent probe amplification (MLPA) for diagnosis and carrier detection in families with a dystrophinopathy	3	Science and Engineering Research Board, New Delhi	2,100,000.00	400,000.00
Effect of biotin supplementation to sperm wash media on the	3	Indian Council of Medical Research, New	489,180.00	244,590.00

enhancement of sperm function and pregnancy outcome in intrauterine insemination programme - Dr Guruprasad Kalthur		Delhi		
Effect of antituberculosis drugs on gemete functional physiology, fertility potential and pre-implantation embryo developmental potential in mouse - Dr Guruprasad Kalthur	3	Indian Council of Medical Research, New Delhi	751,760.00	475880.00
Repeated superovulation induced changes in the oocytes, embryos and somatic cells - Dr Guruprasad Kalthur	3	Science & Engineering Research Board (SERB)	2,214,400.00	350,000.00
Adolescent health care in two districts of coastal Karnataka an exploratory study - Dr Asha Hegde	2	Indian Council of Medical Research, New Delhi	1,094,372.00	547,186
Intermediates of calcium signal process as oocyte activating agents and development of an optimum culture medium for mouse parthenotes - Dr Guruprasad Kalthur	3	Government of India, Ministry of Science & Technology, Department of Biotechnology	933,000.00	343,000.00
The lost focus on males in adolescent friendly health care services-a qualitative analysis- - Dr Veena Kamath	2	Indian Council of Medical Research, New Delhi	1,882,876.00	344,914.00
A clinico microbiological environmental and molecular approach to explore the epidemiology of neglected disease Meliodosis - - Dr Chiranjay Mukhopadhyay	3	Indian Council of Medical Research, New Delhi	1,516,240.00	908120.00
Strengthening the existing Monitoring and supervision Mechanism for ICDS scheme through NIPCCD - Dr Pawan Kumar	6	National Institute of Public cooperation and Child development	459,938.00	66,500.00

Evaluation of the mechanisms involved in wound healing properties of topical application of few Indian traditional Medicinal Preparations- Histopathological, biochemical, cellular, molecular and biomechanical analysis - Dr Kumar MR Bhat	3	Science & Engineering Research Board, New Delhi	1,635,000.00	800,000.00
Functional, Cellular and Molecular Evaluation of Hepatoprotective Property of Caesalpinia Bonduc (Kantakikaranjah): an in vitro study - Dr Kumar M R Bhat	3	Indian Council of Medical Research New Delhi	2,003,000.00	178,920.00
EX2211-3748 - Dr. Sudha Vidyasagar	5	Novo Nordisk India Pvt Ltd	7,000,000.00	30,000.00
PPD CV-185056 - Dr.Ganesh Kamath	5	PPD Pharmaceutica l Development India Pvt.Ltd	1,440,000.00	61,562.00
Quintiles C0524T18 - Dr.Ganesh Pai	2	Manipal Acunova Ltd	300,000.00	78,844.00
Protocol 01/Skin Irritancy/2012 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	343,200.00	171,600.00
Protocol 002/Burn Study/2012 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	327,000.00	163,500.00
Research Collaboration - Dr.Raviraj Acharya	2	Intel Technology India Pvt Ltd	325000.00	73,034.00
Protocol KMC/PHA/ZINCOVIT 007/2012 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	371,520.00	148,608.00
Protocol ID:KMC/PHA/Zincovit drops 005/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	544,200.00	326,520.00
Protocol ID:KMC/PHA/Zincovit	1	Apex Laboratories	482,400.00	289,440.00

drops 006/2013 - Dr.K L Bairy		Pvt Ltd		
Protocol ID:KMC/PHA/Zincovit drops 007/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	433,200.00	259,920.00
Protocol ID:KMC/PHA/Zincovit drops 008/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	620,400.00	372,240.00
Protocol ID:KMC/PHA/Zincovit syrup 001/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	544,200.00	326,520.00
Protocol ID:KMC/PHA/Zincovit syrups 002/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	482,400.00	289,440.00
Protocol ID:KMC/PHA/Zincovit syrups 003/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	433,200.00	259,920.00
Protocol ID:KMC/PHA/Zincovit syru ps 004/2013 - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	620,400.00	372,240.00
Protocol No P08388 - Dr.Pratap Kumar	2	G V K Biosciences Pvt Ltd	300,000.00	13,500.00
MK0524-A108-00 - Dr. Sudha Vidyasagar	2	Covance India Pharmaceutica l Services India Pvt. Ltd	1,026,500.00	25,704.00
TUXEDO-India Study - Dr. Ranjan Shetty	2	Escorts Heart Institute and Research Center Ltd	1,449,000.00	88,928.00
Zincovit Project - Dr.K L Bairy	1	Apex Laboratories Pvt Ltd	1,498,439.00	167,869.00
WSA-CS-004 study - Dr.Dipak Ranjan Nayak	7	Quintiles Research (India) Pvt.Ltd.	2,540,000.00	153,980.00
Protocol No. CACZ885M2301 Study - Dr. Tom Devasia	4	Novartis Healthcare Ltd	1,658,600.00	71,160.00
Protocol	2	Apex		

KMC/PHA/ZINCOVIT 005/2012 - Dr.K L Bairy		Laboratories Pvt Ltd	442,200.00	176,880.00
Protocol KMC/PHA/ZINCOVIT 006/2012 - Dr.K L Bairy	2	Apex Laboratories Pvt Ltd	390,873.00	156,349.00
Protocol 3Nethra Royal Clinical Trial Study - Dr.Lavanya G Rao	4 Months	Forus Health Pvt Ltd	500,000.00	250,000.00
Novartis CSPP100F2301 - Dr.Padma Kumar	4	Novartis Healthcare Pvt Ltd	855,000.00	9,000.00
Protocol NANO/INN/SUP/001 - Dr Ranjan Shetty	2	Innvolution Med System, New Delhi	200,000.00	12,000.00
OSKIRA 1- D4300C00001 and OSKIRA -X- D4300C00005 - Dr. Janardhana Aithala	2	Quintiles Research (India) Pvt. Ltd	1,079,250.00	47,517.00
Protocol ID:KMC/MED/001/2013 - Dr.K L Bairy	2	Apex Laboratories Pvt Ltd	1,216,000.00	608,000.00
Protocol ID:KMC/MED/002/2013 - Dr.K L Bairy	2	Apex Laboratories Pvt Ltd	1,216,000.00	608,000.00
Protocol ID:RGH-MD-06 Study - Dr.P.S.V.N.Sharma		Quintiles Research (India) Pvt.Ltd.	400,000.00	22,146.00
Protocol No:SPRL/OA/09- 10/001 STUDY - DR.Vivek Pandey	2	Manipal Acunova Ltd.	1,717,820.00	2,961.00
Sem Central Project - Dr Raviraj Acharya	5 months	Philips Electronics India Limited	200,000.00	100,000.00
Protocol 001/Burn study/2013 - Dr.K L Bairy	2	Apex Laboratories Pvt Ltd	294,340.00	147,170.00
Protocol No EFC11319 Study - Dr.Mukhyaprana Prabhu	5	Sanofi- Synthelabo(In dia) Ltd	3,50,000.00	50,000.00
Protocol NIS-CAP-XXX-	2	Max Neeman		

ANNUAL QUALITY ASSURANCE REPORT (AQAR)

2011/1:EPICOR ASIA Study - Dr.Tom Devasia		Medical International Ltd	250,000.00	11,000.00
Research Collaboration (Amendment on 9th July, 2013) - Dr.Raviraj Acharya	2	Intel Technology India Pvt Ltd	325000.00	1,46,068
Automated ECG Reporting Project - Dr Raviraj Acharya	4 months	Intel Technology India Pvt Limited	1,128,874.00	337,080.00
Protocol No:KMC/Zincoderm G/01/2013 - Dr.K L Bairy	1 Year 6 Month	Apex Laboratories Pvt Ltd	444,840.00	266,904.00
WSA-CS-008 - Dr Sudha Vidyasagar	7	Quintiles Reseach (India) Pvt Ltd	224,188.00	157,359.00
KMC/Nasal/02/2013 - Dr K L Bairy	2	Apex Laboratory Private Limited	330,000.00	165,000.00
Protocol:MICRO/03/12 - Dr Shashidhar	2	Apex Laboratories Private Limited	302,000.00	151,000.00
Protocol 01 /In vitro study/Pharmacology/2012 - Dr K L Bairy	2	Apex Laboratories Private Limited	428,400.00	214,200.00
Protocol 02/In vitro study/Pharmacology/2012 - Dr K L Bairy	2	Apex Laboratories Private Limited	220,200.00	110,100.00
KMC/Eye/02/2013 - Dr K L Bairy	2	Apex Laboratories Private Limited	354,400.00	177,200.00
KMC/Eye/01/2014 - Dr K L Bairy	2	Apex Laboratories Private Limited	302,400.00	302,400.00
Research Collaboration (Amendment on 09.07.2013) - Dr Raviraj Acharya	2	Intel Technology India Pvt Limited	365,170.00	73,034.00
Protocol No. ILO522D2301	1	Quintiles India		

- DR P S V N Sharma		Pvt Ltd, Bangalore	575,888.00	75,000.00
Protocol No.SPRL/OA/09-10/001 - Dr Vivek Pandey	2	Manipal Acunova Ltd, Bangalore	1,717,820.00	2,112.00
Protocol No. EX2211-3748 - Dr Sudha Vidyasagar	5	Novo Nordisk India Pvt Ltd	7,000,000.00	30,000.00
WSA-CS-004 ,WSA-CS-003 - Dr. Dipak Ranjan Nayak	7	Quintiles Research (India) Pvt. Ltd	2,540,000.00	150,020.00
ILO522D2301 - Dr. P.S. V.N. Sharma	2	Quintiles Research (India) Pvt. Ltd	800,000.00	227,190.00
NIS-CAP-XXX-2011/1:EPICOR ASIA - Dr Tom Devaisa	2	MAX Neeman Medical International Limited	250,000.00	14,500.00
EFC11319 - Dr Mukhyaprana Prabhu	5	Sanofi - Synthelab India ltd	350,000.00	3,398.00
Research Collaboration (Amendment 5th - Jan 2014) - Dr Raviraj Acharya	2	Intel Technology India Pvt Limited	438,204.00	73,034.00
Department of Public Health	1	Karnataka Jnana Ayoga,B' Lore	3,88,500	3,88,500
Department of Public Health	1	District Child Protection Unit, Udupi District.	2,00,000	1,50,000
Department of Public Health	1	University of Alabama	3,35,000	3,35,000
Department of Public Health	1	NIMHANS BANGALOR E	1,90,000	1,90,000
PHD Students' Contribution to the Advancement of Knowledge: A Study of Teachers in Colleges and Universities of Karnataka State.	2 Years	ICSSR	4,32,688/-	70,437

Virology Department	2013-14	NCDC, ICMR, DBT, NVBDCP, DST, NIH-ITREOH, CDC, BRITISH COUNCIL DIVISION	1,71,21,598.00	1,71,21,598.00
Minor Projects				
Morphological changes in the testis and spermatozoa of rats treated with lamotrigine - Dr K Laxminarayana Bairy	2	Indian Council of Medical Research, New Delhi	84,000.00	63,000.00
Re-Survey of IDD (Iodine Deficiency Disorders) - Dr Veena G Kamath	2	Directorate of Health & Family Welfare Services, Bangalore	50,000.00	50,000.00
CAS study - Dr Rajgopal K V	6 mths	Philips Electronics India Limited	62,500.00	62,500.00
MRI Workflow Data Collection - Dr Rajgopal	18 days	Philips Electronics India Limited	16,854.00	16,854.00
Interdisciplinary Projects				
Industry sponsored	55 projects			
Projects sponsored by the University/ College				
Translational Virology Dr Arun Kumar	2 Years	MAHE University	10,00,000.00	10,00,000.00
Mendelian Genetics Dr. Girish K.M	2 Years	MAHE University	10,00,000.00	10,00,000.00
Fertility & Clinical Embryology Dr. Satish Kumar Adiga	2 Years	MAHE University	10,00,000.00	10,00,000.00
Inflammatory Bowel Diseases Dr. Ganesh Pai	2 Years	MAHE University	10,00,000.00	10,00,000.00
Students research projects <i>(other than compulsory by the University)</i>	19	ICMR - STS	1,90,000.00	1,90,000.00
Any other(Specify)				

SOAHS Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2011 - 2014	DST, Govt. of India	Rs. 27,00,000/-	Rs. 4,97,185
Major projects	2012-2015	DST, Govt. of India	Rs. 46,17,200/-	Rs. 29,76,960
Major projects	2012-2015	ICMR	Rs. 23,44,316/-	Nil
Major projects	2013-2015	ICSSR	Rs. 5,00,000	Rs. 3,50,000 (in 2013-2014)
Minor Projects	0.3	State Bank of India, Manipal	20000	20000
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	-	-	-	-
Students research projects (other than compulsory by the University)	0.8	India Vision Institute	24000	24000
Any other(Specify)	-	-	-	-
Total	-	-	Rs. 1,02,05,516	Rs. 38,68,145

SOLS Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	1-4 years	DBT, DST, ICMR, SERB, BRNS, VGST	915.26	120.42
Minor Projects	-	-	-	-
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-

Projects sponsored by the University/ College	-	-	-	-
Students research projects (other than compulsory by the University)	-	-	-	-
Any other(Specify) Travel	-	-	-	-
Total	-do-	-d0-	915.26	120.42

MCODS Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	01	Dentsply	\$3000	\$3000
Minor Projects				
Interdisciplinary Projects	-	-	-	-
Industry sponsored	02	Colgate Pamolive	5,00,000	-
Projects sponsored by the University/ College	02	MAHE (09nos)	88,000	-
Students research projects (other than compulsory by the University)	01	ICMR	90000	75000
Any other(Specify) Travel	01	CSIR	30000	30000
Total			9,03,000	3,00,000

MCON Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	01	Philips	1,00,000.00	1,00,000.00
		GFATM		31,65,000.00
Minor Projects	01	Fish marketing	10000.00	10000.00

		federation Udupi District		
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	-	-	-	-
Students research projects (other than compulsory by the University)	-	-	-	-
Any other(Specify)	-	-	-	-
Total	02	-	1,10,000.00	32,75,000.00

MCOPS Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects			17	17,163,466.00
Minor Projects			3	129,822.00
Interdisciplinary Projects				
Industry sponsored				
Projects sponsored by the University/ College				
Students research projects (other than compulsory by the University)				
Any other(Specify)				
Total				

MMMC Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects		Shantha Biotechnics Ltd	Rs. 19 lakhs	Yes
Minor Projects	01	BRNS	Rs.5,21,500/-	Yes

Interdisciplinary Projects				
Industry sponsored				
Projects sponsored by the University/ College				
Students research projects (<i>other than compulsory by the University</i>)				
Any other(Specify)				
Total			Rs 20,21,500/-	

KMC Mangalore

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned in lakhs	Received in lakhs
Major projects	2-4 years	ICMR, DST	223.45	110.71
Minor Projects	06months-4 years	MAHE, ICMR	2.83	2.31
Interdisciplinary Projects	-	-	-	-
Industry sponsored	2-3 years	Company/ Industry	21.89	14.1
Projects sponsored by the University/ College	1-3 years	MAHE	3.35	3.35
Students research projects (<i>other than compulsory by the University</i>)	1-3	ICMR	2.37	1.85
Any other(Specify)	6 months	TMA Pai Endowment Chair	15	15
Total			268.89	147.32

MCODS Mangalore

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2013-14	VGST	10,00,000/-	10,00,000/-

	2013-14	VGST	6,00,000/-	6,00,000/-
	2013-15	Boston University and Mazumdar Shaw Cancer Centre	1,20,000/-	60,000/-
	2013-16	Shree Kshetra Dharmasthala Rural Development Projects	3,50,000/-	1,00,000/-
Minor Projects	2013-14	ICMR -STS	50,000/-	50,000/-
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	-	-	-	-
Students research projects (other than compulsory by the University)	-	-	-	-
Any other(Specify)	-	-	-	-
Total	-	-	21,20,000/-	18,10,000/-

MIT Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant Sanctioned	Received
Major projects	2-4 years	Xerox, MU, DST & SERB-DST, DRDO, DAE-BRNS, Govt. of India,	157.31	100.5520
Minor Projects	1-3 years	DRDO, MU, VGST, Govt. of Karnataka	11.90	11.90
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-

Projects sponsored by the University/ College	2-3 years	MU	15.16	15.16
Students research projects (other than compulsory by the University)	-	-	-	-
Any other(Specify)	Travel grants	United Nations, Vienna, Austria; Committee on Space research, France	66.172	66.172
Total	1-4 years	Xerox, MU, DST & SERB-DST, DRDO, DAE-BRNS, Govt. of India, VGST, Govt. of Karnataka, United Nations, Vienna, Austria; Committee on Space research, France	250.547	193.789

SOC Manipal

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2	ICMR		3.49L
Minor Projects	Nil	Nil	Nil	Nil
Interdisciplinary Projects	Nil	Nil	Nil	Nil
Industry sponsored				
Projects sponsored by the University/ College	.3	Manipal University and Syndicate Bank Sports Department	*2,00,000 (estimated) *10,000 (estimated)	*2,00,000 (estimated) 10,000* (estimated)
Students research projects (other than compulsory by the University)	Nil	Nil	Nil	Nil
Any other(Specify)	.3	Philips BoP Mobile Snjeevini E-Fitness	10,000 10,000 10,000	10,000 10,000 10,000
Total				

SORM Bangalore:

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2013	DRDO, DBT,CSIR,ICMR,DST, ,DR.TMA PAI END	18	18

		CHAIR GRANT, Curtin University- India Initiative Fund, Daiichi Sankyo India Pvt. Ltd., Gurgaon, India, DST- SERB		
Minor Projects	13	NIL	NIL	NIL
Interdisciplinary Projects	NIL	NIL	NIL	NIL
Industry sponsored	NIL	NIL	NIL	NIL
Projects sponsored by the University/ College	1	DR.TMA PAI Endowment Chair Grant	NIL	NIL
Students research projects (other than compulsory by the University)	NIL	NIL	NIL	NIL
Any other(Specify)	NIL	NIL	NIL	NIL
Total	14	18	18	18

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

ii) Without ISBN

3.8 No. of University Departments receiving funds from

GC-SAP	<input type="text" value="Nil"/>	CAS	<input type="text" value="Nil"/>	DST-FIST	<input type="text" value="1"/>
DPE	<input type="text" value="Nil"/>			DBT Scheme/funds	<input type="text" value="2"/>
DST	<input type="text" value="3"/>	UGC	<input type="text" value="1"/>		

3.9 For colleges

Autonomy	<input type="text"/>	CPE	<input type="text"/>	DBT Star Scheme	<input type="text"/>
INSPIRE	<input type="text"/>	CE	<input type="text"/>	Any Other (specify)	<input type="text"/>

Not Applicable

3.10 Revenue generated through consultancy

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	19	50			24
Sponsoring agencies					

3.12 No. of faculty served as experts, chairpersons or resource persons **3.13 No. of collaborations** International National Any other **3.14 No. of linkages created during this year** **3.15 Total budget for research for current year in lakhs:**

From funding agency	<input type="text" value="2,160.38"/>	From Management of University/College	<input type="text" value="2,581.1"/>
Total	<input type="text" value="4,741.55"/>		

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	5
	Granted	1
International	Applied	
	Granted	1
Commercialised	Applied	Nil
	Granted	Nil

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
241	42	60	36	94	1	8

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:

University level State level
 National level International level

Please put VSO details

3.22 No. of students participated in NCC events:

University level State level
 National level International level

3.23 No. of Awards won in NSS:

University level State level
 National level International level

3.24 No. of Awards won in NCC:

University level State level
 National level International level

3.25 No. of Extension activities organized

University forum College forum
 NCC NSS Any other

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

KMC Manipal

- Adoption of school/Village by the social welfare committee
- Participating in Women and child health and social awareness programme
- Participation in national health programmes of the government
- Conducting camps at various places involving various departments of the hospital
- Conducting and participating in blood donation camps

SOAHS Manipal

- Hearing screening was conducted on 26-Feb-2014 at the Vagjyothi Deaf and Dumb Residential School, Mudubage (Dept. of Speech and Hearing)

- Hearing screening was conducted on 11-June-2014 at Udupi (Shamili Hall). It was organized by the G. Shankar Family Trust in collaboration with Audiology India (Mysore) and Dept. of Speech and Hearing, SOAHS. 46 hearing aids were given (sponsored by Audiology India)
- Diabetic camps were conducted for screening diabetic foot. (Dept. of Physiotherapy)
- Community outreach programmes were conducted in normal schools, special school, old age homes by the Dept. of Physiotherapy.

SOLS Manipal

- INSPIRE-Science camp and National Science Day Residential training program for school students to develop scientific temper
- Students' Forum activities to develop social awareness and soft skills among students
- Refresher Course for College teachers in Bioinformatics concepts
- Workshops and demonstrations arranged for students from schools and colleges in the state

MCODS Manipal

- College actively participated on Rural dental health care programs
- Awareness programs on Cancer, HIV, Women's oral health and Tobacco cessation
- Amchi project in Ladakh in association with European Dental Students Association
- Celebration of national science day and childrens' day.

MCON Manipal

- Students have a health and social welfare committee through which social service activities are organized regularly.
- Nursing students and faculty members are members of Voluntary Service Organization of Manipal University.
- Each department organizes an average of 4 to 5 outreach programme as a part of their curriculum; which includes special camps, school health programmes, awareness programmes, and national day celebrations every year.
- Faculty and students are actively involved in conducting regular health education in the clinical setting, community and school like, lactation counselling, psychoeducation, breast feeding, diabetes clinic, hemophilia etc.
- Faculty and students are actively involved in Blood donation camps, Eye Camp, Dental camp etc.
- Monthly two Morbidity clinics are conducted by Community Health Nursing department at Athrady and Marne Villages.

MCOPS Manipal

[ACPI](#) (Association of Community Pharmacists of India) activities. Promotion of role of pharmacist in public health

[KSPOR](#) (Kautilya's Society for Pharmacoeconomics and Outcomes Research) activities. Promotion of research activities on pharmacoeconomics.

MMMC Manipal

- Community service under Huluran Kasih - Our students make themselves free and available to render voluntary services to the underprivileged members of the society through our student based reach out program Huluran Kasih .
- Students and faculty of MMMC are members of haemophilia society which conducts annual camps for haemophilia patients

KMC Mangalore

- Visit to old age homes, orphanages and HIV/AIDS homes.
- VSO activities: Visit to orphanage/ HIV/AIDS homes.
- Organisation of blood donation camps through Helpline

MCODS Mangalore

- Treatment of patients through satellite clinics
- Treating patients in the rural area through Mobile clinics
- Active participation in social activities such as DISHA, Rastriya Ektha Divas, World Health day.

MIT Manipal

- Dr. Vibhor Agrawal, Assist. Professor, Dept. of Dept. of Physical Therapy/BME/Miami Vetrenas Affairs Medical Center, University of Miami, Florida 33136, USA. He delivered a lecture to the students and Faculty of the Dept. of BME.
- Prof. Markad V. Kamath, McMaster University, Hamilton, Ontario, Canada visited us to explore the possibility of collaborative projects; a meeting to discuss the same.
- Dr. Lalit K. Mestha, Principal Scientist, Xerox Research Center, Webster, Phillips Rd, MS 128-56E Webster, New York 14580, visited the Dept. to explore the possibilities of collaborating with the Dept., the “Cyber Vitals” Project. A meeting was held with the HOD, and the collaboration was initiated.
- Dr. Sastry Vedam, Assistant Professor, University of Texas M D Anderson, Cancer Center, USA delivered an invited talk “Radiotherapy: An introduction to Biomedical Engineers”.

- Prof. Raymond, NTU, Singapore addressed the final year UG and M.Tech. (Biomedical Engineering) students. He also interacted with the HOD and faculty members.
- Prof. Dr. Kyriacou of the City University, London, UK, visited the department and interacted with students of M.Tech (Biomedical Engineering).
- Organized a National Level Symposium on Sustainable Development Issues & Challenges
- A two day National Workshop on “Energy Efficient Lighting Solutions” was organised by the dept. in association with Society of Energy Engineers and Managers India
- Another Faculty Development Program was organised on “Graphical System Design using LabVIEW” for the benefits of faculty and research scholars
- Collaborative non funded projects such as Bio-signal Processing on clinical and nonclinical data, Radiation study on animals at School of Life Sciences; Gait analysis, Scoliosis study, 3D reconstruction using 2D data, Diabetic retinopathy, Design of compact Electro larynx in association with Kasturba Medical College, Manipal; Electronic interface for dental implants in association with College of Dental Sciences, Manipal. These are a few collaborative inter-institutional projects undertaken by the department.

IEEE student chapter	Technical workshops, seminars, guest lectures.
IE (E & C) student chapter	Technical workshops, seminars, guest lectures.
ISTE student chapter	Technical workshops, seminars, guest lectures.
IAESTE , AIESEC	Student exchange programmes

Major interdisciplinary student Projects such as; PARIKSHIT, FORMULA MANIPAL, SOLAR MOBILE, ROBO MANIPAL, MANIPAL RACING.	Opportunity for the students to work in a large group, execute tasks with tight deadlines, develop leadership qualities and team spirit.
FDP, Guest talks, conferences and Workshops organized within and outside.	Faculty and students are encouraged to participate
“Tech Tatva” and “REVELS”	Technical paper presentations, competitions and cultural events.
Department of Sports for students	Sports and games

Faculty club

Sports, games and cultural events

- Annual conference of the department Control Instrumentation Systems Conference (CISCON)
- Workshop and Faculty development programme

FOA Manipal

Sensitivity towards the society, especially extending hands and hearts to the special children in & around Manipal. Social re-union for the specially abled and mentally challenged children.

Local community interaction through live studio projects based in the neighbourhood

SOC Manipal

- Namma Angadi
- Blood drive

SOIS Manipal

- Faculty Coordinator, Volunteer Service Organization
 - Visited Bijapur Slum area at Manipal, 5 times during year mentioned above
 - Organised Sparsh Cultural event.
- MITHRA Association

SOM Manipal

- Blood donation Camp, Lake side cleaning, Career orientation for school kids.

WGSHA Manipal

Sl. No.	CSR Activity
1	Manipal City & Guilds Skills Training for local community development
2	Activities by Volunteer Service Organization (VSO), Manipal University
3	Blood Donation Camps by WANASS Club, WGSHA
4	Beach Cleaning Activities by WANASS Club, WGSHA
5	Orphanage Visits by Students, Birthday Cakes contributions
6	Community Outreach Services and Growth Monitoring at Anganwadis by students of M. Sc Dietetics and Nutrition
7	Nutrition Education Exhibition cum Stall at the World Diabetes Day Awareness and Screening Expo. Conducted by the Dept. of Medicine at Kasturba Hospital, Manipal

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	690.985 acres		--	690.985 acres
Class rooms	392	0	--	392
Laboratories	340	4	Own funds	344
Seminar Halls	148	0	--	148
No. of important equipment's purchased (\geq 1-0 lakh) during the current year.	6518	382	Own funds	6900
Value of the equipment purchased during the year (Rs. in Lakhs)	51341.27	5415.86	Own funds	56,757.13
Others	--	--	--	--

4.2 Computerization of administration and library

Library is fully automated using Easylib Software.

All documents are barcoded

E-prints software is used for digital library

Purchase inventory module

Hospital information system

Patient Management System

Employee Self Service

Student Information System – Online attendance/Sessional mark

Financial Accounting System

Biometric attendance system for faculty

Telephone directory

E mail directory

EPAC (Public Access Catalogue) Library Search Engine

Digital Subscription: Health Science Library

Research data Management Portal

E learning – online learning

4.3 Library services:**Kasturba Medical College, Manipal**

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books & Reference Books	61827	4,21,45,80.21	2137	57,08,864.15	63964	4,78,54,669.36
e-Books	-	-	-	-	-	5,86,654.00
Journals & e-Journals	-	-	21	5,54,838.00	346	1,88,79,465.00
	-	-	6	93,199.00	330	2,20,22,449.00
Digital Database	-	-	-	-	-	57,68,083.00
	-	-	-	-	-	61,81,893.00
CD & Video	-	-	26	-	769	-
Others (specify)	-	-	-	-	-	-

Manipal Institute of Technology, Manipal

	Existing		Newly added (2013-14)		Total	
	No.	Value	No.	Value	No.	Value
Text Books	88037	36332646.35	2902	2187794.71	90939	38520441.06
Reference Books	12292	2404562.66	26	82347.29	12318	2486909.95
e-Books	478	99210.00	-	141918.00	478	241128.00
Journals		33158757.00	290	3672472.00		36831229.00
e-Journals		32593405.00	1320	8739704.00		41333109.00
Digital Database	1	88000.00	1	400000.00	2	488000.00
CD & Video	CD 4600 Video 764	312591.00	CD 450	-	CD 5050 Video 764	312591.00
Others (specify) NPTEL lectures		1,50,000.00	-	-		1,50,000.00

Kasturba Medical College, Mangalore

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	500	24,34,706.00	376	12,24,893.00	1093	36,59,599.00

Reference Books	107		110			
Journals	193	50,04,311.00			193	50,04,311.00
e-Books	1565		1565			
e-Journals	2035		2035			
Digital Database	5	86,11,745.00	-			86,11,745.00
CD & Video	30		62			
Others (specify)						

Manipal Center for Philosophy & Humanities

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	724	496208				496208
Reference Books	-		-			
e-Books	-		-		-	
Journals(Jan-Dec)	15	151291	-		15	151291
e-Journals	-				-	
Digital Database	1	\$2352.94	-		1	\$2352.94
CD & Video	5	1560.00	-		5	1560.00
Others (specify)	-		-		-	

School of Management, Manipal

	Existing(2012-2013)		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	450	4,15,720.00	1587	7,54,943.00	2037	11,70,663.00
Reference Books	59		11	-	70	-
e-Books	-	-	-	-	-	-
Journals	105	3,18,403.00	-	-	-	3,18,403.00
e-Journals	-	-	-	-	-	-
Digital Database	4	15,46,706.00			4	15,46,706.00
CD & Video	45	16,269.00	-	-	-	16,269.00
Others (specify)						

Welcomgroup Graduate School of Hotel Administration, Manipal

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	9236	4653251.48	562	313103.88	9797	4966355.36
Reference Books	764	-	07	-	771	-
e-Books	-	-	-	-	-	-
Journals	46	330553	-	-	46	330553
e-Journals	2248	-	-	-	2248	-
Digital Database	3	278834	-	-	3	278834
CD & Video	498	509449	44	00	542	509449
Others (specify)						

Manipal Center for Natural Sciences, Manipal

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	319	4,99,062.28	19	11,835.00	338	5,10,897.28
Reference Books	41	2,98,952.93	1	2,100.00	42	3,01,052.93
e-Books	16	Complementary				
Journals	13	1,55,675				1,55,675
e-Journals	22	33,62,914				33,62,914
Digital Database	1	44,81,411				44,81,411
CD & Video	18	13,114.59	-	-	-	13,114.59
Others (specify)	11(Project report)	--				

School of Communication, Manipal

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	10444		397	2.5lakh	10841	
Reference Books	250		10	10000	260	
e-Books	20		5		25	
Journals	55	2.75lakhs	0			2.75,000
e-Journals	4		0		4	
Digital Database	2	2.5lakhs	0		2	2,00,000

CD & Video	569	15lakhs	39	15000	608	15,15,000
Others –News papers	13	50000	0		13	50000

Dept. of European Studies

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	478	748580.00				
Reference Books	9	37257.00				
e-Books	-					
Journals	7	198062.00				
e-Journals						
Digital Database	-					
CD & Video	-					
Others (specify)	-					

School of Regenerative Medicine, Bangalore

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	490	21,18,669.41	2	7,264.00	492	
Reference Books	Nil	Nil	Nil	Nil	Nil	Nil
e-Books	Nil	Nil	Nil	Nil	Nil	Nil
Journals	8	Nil	Nil	Nil	Nil	8
e-Journals	Nil	Nil	Nil	Nil	Nil	Nil
Digital Database	Nil	Nil	Nil	Nil	Nil	Nil
CD & Video	Nil	Nil	Nil	Nil	Nil	Nil
Others (specify)	Nil	Nil	Nil	Nil	Nil	Nil

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	10599	2597	All desktops/Laptops are having network connectivity and internet access		164	772	6946	120
Added	757	211			0	34	508	4
Total	11356	2808			164	806	7454	124

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

Conducted regular training on technology upgradation to all the teaching and non-teaching staff members of the university on yearly basis. Provided high speed internet access to all the staff members.

4.6 Amount spent on maintenance in lakhs:

i) ICT	Rs. 602.14 lacs
ii) Campus Infrastructure and facilities	Rs. 2731.48 lacs
iii) Equipments	Rs. 1468.15 lacs
iv) Others	Rs. 5022.54 lacs
Total :	Rs. 9824.31 lacs

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

#	Institute	Contributions
1	KMC Manipal	<ul style="list-style-type: none"> • Student Orientation programme at the beginning of the academic programme • The institution publishes its updated prospectus and handbooks annually. The information content is disseminated to students at the beginning of every academic year. • Timely announcements of upcoming events, projects, and notices are displaced in notice board kept at vantage points. • Groups emails are sent to students and parents wherever necessary
2	SOAHS Manipal	<ul style="list-style-type: none"> • Facilitate / monitor/ conduct of orientation, counselling and psychology support services (individualized). Formation of committees within IQAC to provide information to students
3	SOLS Manipal	<ul style="list-style-type: none"> • Orientation programs conducted for new students
4	MCON Manipal	<ul style="list-style-type: none"> • Counselling to the students those who are poor academic performers. • Evening tutorials for 1st year B.Sc Nursing students and also for academically weak students. • Teacher Guardian for 1st year B.SC (N) students (1 Teacher Guradin for 12-13 students). • Class Coordinator and co-coordinator for monitoring the day to day curricular activities of the class. • Subject coordinator for coordinating each course • Clinical supervision in each of the clinical area
5	MCOPS Manipal	<ul style="list-style-type: none"> • Reviewing and ATR on the feedback
6	MMMC Manipal	<ul style="list-style-type: none"> • The information about SIS is given in student brochure and the same will be conveyed during orientation • Any new information comes on SIS will be informed to the class through announcements
7	KMC Mangalore	<ul style="list-style-type: none"> • The IQAC coordinates with DDSA and ensures that the teacher-guardian scheme is functioning smoothly. It also

		ensures that health needs of the students are taken care of.
8	MCODS Mangalore	<ul style="list-style-type: none"> • Student Orientation programme at the beginning of the academic programme • Orientation to Clinics • Handbook to First year students containing all the academic matters • Orientation to Ethical issues and Guideline to be followed in Research to newly joined PGs • Teacher Guardian mentorship • Alumni meeting
9	MIT Manipal	<ul style="list-style-type: none"> • The institution publishes its updated academic handbook and academic calendar every year. The book includes information about the institute, list of teaching and non-teaching staff, details about undergraduate and post graduate programmes, rules and regulation of the college and its library, internal assessment and the pattern of evaluation, the tutorial system, hostel facility etc. • The institution facilitates students to avail scholarship & other financial assistance from state government, central government and other authorities. • Enrichment of library by adding new books and journals. • Builds a culture of social responsibility through extension activities by students. • Grievance Redressal Cell is working for student support • Provides latest information and communication tools like Wi-Fi Campus, Internet Facility etc. • Keeps updating the information on the website on regular basis.
10	FOA Manipal	<ul style="list-style-type: none"> • Teacher guardian system for monitoring the progress of the student in attendance, studies and extra curricular activities and provide necessary counselling and support. • Various committee for students – Anti-ragging, disciplinary & grievances and redressal committee • Student feedback system • Complaint/Suggestion box • Student Information System for maintaining student records • Student counselling • Co-curricular activities

		<ul style="list-style-type: none"> • Student exposure to various forums • Training and placement of final year Students in reputed companies for practical training. • Guest lecture by alumni and experts from industry. • Educational tours
11	SOM Manipal	<ul style="list-style-type: none"> • Feedback system introduced for courses, Complaint/Suggestion box introduced, Student Information System introduced for maintaining student records, Student counsellor allotted for every student.
12	SOC Manipal	<ul style="list-style-type: none"> • Providing guidance for dissertation • Providing guidance for projects
13	SOIS Manipal	<ul style="list-style-type: none"> • Study abroad program opportunities for internship/ study • Workshops and invited talks on current trends to improve skill sets. • Internship placement support for second year students. • Conduction of bridge courses for the first semester students on industry standard C programming and industry standard hardware & software • Industry defined mini-projects • Seminar in each semester for all the students.

5.2 Efforts made by the institution for tracking the progression

#	Institute	Contributions
1	KMC Manipal	<ul style="list-style-type: none"> • All the department maintain document, compare and discuss the performance and progress of the students in their exams and other academic activities. • Every department maintains a register for recording the progress of students. • Each student is allotted a mentor and the mentor maintain a mentoring booklet in which he/she updates details of academic performance and curricular progress. Mentors offer academic counselling to students, recommend them for remedial coaching, if necessary, and also meet/communicate with parents of their mentees to update them on their progress.
2	SOAHS Manipal	<ul style="list-style-type: none"> • Teacher guardian system, mentoring / counselling • Placement committee - activities
3	SOLS Manipal	<ul style="list-style-type: none"> • Teacher-guardian for every student, Regular feedback to

		<p>students and parents (during the program)</p> <ul style="list-style-type: none"> Alumni cell and coordinator, contact via emails (after graduation)
4	MCODS Manipal	<ul style="list-style-type: none"> Monthly attendance of students Result analysis of the internal assessment and counselling of poor performers Facility to view attendance and performance of wards by parents online
5	MCON Manipal	<ul style="list-style-type: none"> Through the Alumni Cell graduates are contacted for tracking of their achievements Every year alumni meet is conducted and alumni are invited to participate
6	MCOPS Manipal	<ul style="list-style-type: none"> Feedback from students
7	MMMC Manipal	<ul style="list-style-type: none"> Every month internal audit is done and following which MRM is held in which academic related issues such as student results, faculty ratio, and publications are reviewed and tracking of institutional progression is done
8	KMC Mangalore	<ul style="list-style-type: none"> During the IQAC meetings this is discussed especially grievances.
9	MCODS Mangalore	<ul style="list-style-type: none"> Teacher Guardian Monitoring system Periodical tests and sessional examinations Online attendance and sessional mark Research Projects for advanced learners Financial support to present research papers in conferences Counselling service Feedback from students, faculty, parents and patients Participation and performance of students in academic, cultural and sports competitions at college level, university level and national level.
10	MIT Manipal	<ul style="list-style-type: none"> Through AMS-Academic Management System by checking attendance and student performance in Internal and External assessments. Through continual assessment of curriculum delivery throughout the semester vide assignments, internal class tests,

		<p>in semester examinations etc.</p> <ul style="list-style-type: none"> • Interim reviews for Projects and Seminars
11	FOA Manipal	<ul style="list-style-type: none"> • Student Information System • Class committee meetings • BOS, Employer feedback of training batch
12	SOM Manipal	<ul style="list-style-type: none"> • Regular internal audits, Management review meetings for discussing
13	SOC Manipal	<ul style="list-style-type: none"> • Through Alumni cell
14	SOIS Manipal	<ul style="list-style-type: none"> • Continuous internal assessment and evaluation system includes theory tests, lab tests, theory assignments and lab assignments. Seminar, mini-project, and workshops and guest lectures to improve the skill set
15	WGSHA Manipal	<ul style="list-style-type: none"> • Every faculty functions as Teacher guardian/ mentors for about 10 to 15 students of the college. Every faculty functions as Teacher guardian/ mentors for about 10 to 15 students of the college. ITC has been supporting the student endeavours by offering scholarships to the meritorious students pursuing their program at WGSHA. Besides, the Manipal University offers scholarships to the students whose parents are working in University institutions. The Manipal University also offers Konkani scholarships to the meritorious students who have studied PUC at Academy of General Education colleges and are pursuing their professional degree programs at Manipal University.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
16425	4338	147	685

(b) No. of students outside the state

16739

(c) No. of international students

1931

No	%
12548	58

Men

No	%
9047	42

Women

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
20,286	-	-	-	-	20,286	21,595	-	-	-	-	21,595

Demand ratio: **1:17** (Average of all courses)

Dropout %: Lowest: **0%**; Highest: **5%**; Avg: **1.37%**

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

No. of students beneficiaries

NA

5.5 No. of students qualified in these examinations

NET	07	SET/SLET	NA	GATE	32	CAT	17
IAS/IPS etc	NA	State PSC	NA	UPSC	1	Others	92

5.6 Details of student counselling and career guidance

1	No students Counselling by Director Student Affairs	97
2	No students Counselling by Deputy Director Student Affairs	152
3	No of students counselling by Student Counsellor	747
Total		996

No. of students benefitted

694

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	
222	1645	1329	231	

KMC Manipal

<i>On campus</i>			<i>Off Campus</i>	
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed	
3	6	6	14	

MCON Manipal

<i>On campus</i>			<i>Off Campus</i>	
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed	
HCG (Healthcare Global Enterprises Ltd.) Group of Specialist Oncology Hospitals, Bangalore	84	52	Data not available	
Paras Hospital Patna	96	23		
Fortis Memorial Research Institute, New Delhi	50	35		
Kokilaben Deerubhai Ambani, Hospital and Medical Research Institute, Mumbai	100	84		
Kasturba Hospital Manipal	96	35		

SOAHS Manipal

<i>On campus</i>			<i>Off Campus</i>	
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed	
05	130	16	81	

SOIS Manipal

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
39	198	132	66

SOM Manipal

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
15	100	50	13

SOC Manipal

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
25	90	90	7

WGSMA Manipal

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
17	97	65	na

MCOPS Manipal

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
38	132	121	

MIT Manipal

<i>On campus</i>			<i>Off Campus</i>	
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed	
119	1123	1016	62	

FOA Manipal

<i>On campus</i>			<i>Off Campus</i>	
Number of Organizations Visited (involved)	Number of Students Participated	Number of Students Placed	Number of Students Placed	
99	72	-	72	

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

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

5.10 Scholarships and Financial Support

#	TYPE OF SCHOLARSHIP	2013-14	
		# Students	Amount (In Rs)
1	AGE SCHOLARSHIP	177	1,904,950
2	AICTE SCHOLARSHIP	328	37,181,000
3	AGE SCHOLARSHIP (For polytechnic students)	106	2,899,375
4	G SHANKAR FAMILY TRUST	3	172,521
5	INTEREST SUBSIDY ON EDUCATION LOAN	33	389,774
6	KONKANI SCHOLARSHIP	667	12,866,785
7	KUNDAPUR MOHAN & LATA BHANDARKAR SCHOLARSHIP	-	
8	SAGES	70	8,995,175
9	M-C-M SCHOLARSHIP (for BSc Nursing students)	20	933,500
10	SCHOLARSHIP FOR MERITORIUS STUDENT (SOIS students)	30	1,781,000
11	FREESHIP/MCM SCHOLARSHIP	220	51,153,700
	Total (A)	1,654	118,277,780
	From Manipal Foundation		
1	STAFF CHILD/SPOUSE SCHOLARSHIP	274	47,635,326
	Total (B)	274	47,635,326
	Grand Total (A+B)	1,928	165,913,106

5.11 Student organised / initiatives

Fairs : State/ University level	1	National level	3	International level	2
Exhibition: State/ University level	1	National level	NI	International level	NI

5.12 No. of social initiatives undertaken by the students **40**

5.13 Major grievances of students (if any) redressed: **07**

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

Global leadership in human development, excellence in education and healthcare

Mission

Be the most preferred choice of students, faculty and industry.

Be in the top 10 in every discipline of Education, Health sciences, Engineering and Management.

6.2 Does the Institution has a management Information System

Yes. We are having University Management Software

- Student Information System (SIS)
- HR Management System
- Financial Accounting System,
- Purchase and Inventory System,
- Hostel Management System,
- Library Management System
- Online attendance
- Online feedback
- Administrative procedures including finance, Student admission, Student records, Evaluation and examination procedures, Research administration, etc
- Patient Management System,
- Employee Self Service, Biometric attendance system for faculty etc..

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

6.3.1 Curriculum Development

KMC Manipal

1. Twice a year Board of Studies meeting to upgrade curriculum, Examination pattern, Teaching methodology
2. Inclusion of Subject Expert in the BoS from other University
3. Inclusion of Student Representative

4. Separate Board of studies for Pre, Para and Clinical departments and for PG and Super specialty departments
5. Feedback from students

SOAHS Manipal

- Conduct of BOS meetings
- Discussion in department meetings
- Student and faculty feedback

SOLS Manipal

Identify current areas of relevance and update the curriculum periodically

MCON Manipal

- Introduction of geriatric nursing as a subject to third year BSc Nursing and II year PBBS Nursing
- Introduction of Evidence Based Practice as part of Nursing Research in IV year BSc Nursing and II year PBBS Nursing
- Interchange of subjects Nursing Research and Statistics and Midwifery and Obstetrical Nursing between third year and fourth year BSc Nursing as per INC instruction

MMMC Manipal

Inputs from the existing medical curricula in India and Malaysia is taken with consultation with Malaysian health officials and medical educationists to define a curriculum that meets the health needs of the community and which would address the issue of social accountability

KMC Mangalore

The Curriculum for the Medical UG and PG is determined by the MCI. Curricular reforms can be adopted only for Curriculum delivery. Curricular reforms are deliberated in the curriculum committee meetings and then discussed in Board of studies meetings. Each BOS (Preclinical, preclinical and Clinical) meets regularly to the strategies for curricular improvement and approves it. In 2014, the Curriculum committee was reconstituted as per the specification of the regulatory body. In the year 2014, small group teaching was introduced across the pre-clinical subjects. Also lesson plans were introduced across the departments. All faculty taking classes have to prepare lesson plans and file the same. Feedback on curriculum is taken. Any difference in score of 0.2, the departments need to send the root cause analysis to the MEU and take corrective/ remedial measures

MCODS Mangalore

- Yearly twice Board of Studies meeting to upgrade curriculum, Examination pattern, Teaching methodology
- Inclusion of Subject Expert in the BoS from other University
- Inclusion of Student Representative
- Separate Board for each subject/year
- Feedback from students

MIT Manipal

- Maintained course plan / lecture plan and respective faculty will follow the same lecture in the class.
- Started conducting class committee meetings to know about the problems from the students in the respective subject in the presence of faculty and solution will be recommended by the department committee headed by the HOD and other members and the corrective measures will be communicated to the students.
- Each member of the faculty entitles for updating of the curriculum as and when required and report it to the course coordinator
- It is further recommended to Department Curriculum Committee (DCC) and forwarded to the Board of Studies (BOS), for suggestions/revisions and later approved by BOS/Academic Senate.
- Once in every 4 years curriculum is revised- Curriculum conclave held in February 2014
- **Class Committee:**
 - Separate class committees are constituted by the Head of the department for III to VIII semester of B.Tech programme and for every semester of M.Tech programme. Members: A senior faculty of the department as Chairman, Course Coordinators/Course Instructors of all courses and student representatives.
 - Functions of the Class Committee: The class committee will meet thrice in a semester. The first meeting will be held within two weeks from the commencement of the semester in which the course plan, evaluation plan etc. are discussed. The second meeting will be held two weeks after the first test to collect feedback and improve the effectiveness of the teaching learning process. Performance of the students in the tests may also be analysed. The chairman of the class committee should send the minutes of the class committee meeting to the Associate Director (Academic) through the Head of the Department after each class committee meeting.

- The third meeting is to be held to analyze the performance of the students in all courses of study and grade finalization. The Head of the department will declare the result of III to VIII semester B.Tech programme and I to III semester M.Tech programme.

- **Department Curriculum Committee (DCC)**
 - DCC consists of Program Coordinator Course Coordinator and faculty representatives.
 - Chaired by Program Coordinator, the committee monitors the attainment of program objectives.
 - Evaluates program effectiveness and proposes necessary changes.
 - Prepares periodic reports, records on program activities, progress, status or other special reports for management key stake holders.
 - Motivates the faculty and students towards attending workshops, developing projects, working models, paper publications and research.
 - Interact with students, faculty, and Program Coordinators, Module Coordinator and outside/community agencies (through their representation) in facilitating program educational objectives.
- DCC meets at least once in a Semester to review the program and submits report to BOS at the Institute level.
- Feed-back collected from experts from industry, R & D, alumni and students.
- Through industry initiated electives.
- Department Curriculum Committee looks after the curriculum and takes inputs from the faculty members and if any minor change in the curriculum is required, the same will be put forth in the DCC meetings and if approved will be put forth in the BOS meeting for approval
- The department, being a part of MIT, which is a constituent Institute of Manipal University, enjoys academic freedom. There are regular minor and major course revisions to the programmes. Minor revisions are being carried out at every semester and major revision is carried out once in four years. All faculty members are involved in the curriculum revision at the entry level. The syllabus and the revision will be framed by the senior faculty and discussed at the department meeting attended by all the faculty members. Department Curriculum Committee (DCC) at the entry level should approve the programme revision. The DCC constitutes of department experts, student representatives as-well-as representatives from industries and academic institutions of repute.
- The curriculum approved by the DCC at the Institute level passes through the BOS, which also consists of student representatives as-well-as experts from

industries and academic institutions of repute. Final approval is given by the Academic Senate.

- The last major revision of syllabus was implemented from the academic year 2014-2015.
- Semester scheme with 10-point Credit System.
- To appreciate the importance of knowledge existing in other domains, there is a provision of open electives wherein students can opt a set of subjects offered by different departments / Institutions under MU. Some such courses offered by our department are:
 - Consumer Electronics
 - MEMs Technology
 - Neural Networks and Fuzzy Logic etc.
- Consulted the students, industry personnel and member from academia during the framing of syllabus
- Based on the comments of alumni, and industrial experts comments syllabus undergoes a minor revision with the approval of DCC.
- Constant Revision of the Curriculum every few years with due inputs from industry experts and academicians (DCC Meetings, BOS meetings)
- Department curriculum committee has been formed
- Industry experts have been included
- Academicians from other Institute and other departments have been included
- The academic committee is in contact with the alumni and employers consistently and takes feedback during curriculum development. The feedback is incorporated in offering of newer open electives and programme electives during the curriculum revision, introduction of courses, or invited lectures on multi-disciplinary areas.
- Keeping in mind the Graduate attributes: Engineering knowledge, Problem Analysis, Conducting investigations of complex problems
- DCC members meet twice a year to review Curriculum in the department and makes a presentation to the Director, AD and external committee member.

FOA Manipal

- Feedback from Alumni, Industry and Employers in curriculum development.
- Board of Studies

SOM Manipal

Feedback from Alumni, Industry, Board of Studies and Employers.

SOIS Manipal

Curriculum developed based on the industrial requirements (feedback from Alumni who are working in industry).

WGSHA Manipal

A systematic and regular review of the curriculum is conducted twice during the Academic year and changes are incorporated after due approval at the Board of Studies and the Academic Senate of the University.

6.3.2 Teaching and Learning**KMC Manipal**

- ICT enabled teaching, didactic lectures, discussions, seminars, quiz contests, Case Based Learning
- Academic calendar prepared and given to students and strictly adhered
- Course outline and syllabus given to students in the form of Hand Book/Soft copy

SOAHS Manipal

- Subject experts attend teaching-learning workshops
- Use of advanced teaching methods such as problem based learning

SOLS Manipal

Set benchmarks to gauge student learning

MCON Manipal

- Innovative teaching learning method are adopted, e.g :Team based learning.
- Evidence Based Practice in M.Phil Nursing speciality subject is introduced for M.Phil Nursing students.

MMMC Manipal

The learning objectives are provided to students and faculty members at the beginning of the academic year. The curriculum is constructively aligned so that the teaching learning activities and assessment ensures the attainment of the objectives envisaged. The institution also collects extensive feedback from students time to time.

KMC Mangalore

The institution has a Medical education unit which is very active and conducts a number of Faculty development programmes which benefit the faculty and help them improve their instructional methods. In this year, institution has been successful in introducing

newer teaching methodologies (integrated teaching, PBL) and innovative methodologies (use of crossword, jumble, and case scenario discussions). In 2014 about 2 % of classes had innovation introduced in them. It was decided to increase innovative classes by 2.5% every year till it reaches 20%.

MCODS Mangalore

- ICT enabled teaching, didactic lectures, discussions, slide seminars, quiz contests, Objective Structured Practical Examination (OSPE), Objective Structured Clinical Examinations (OSCE), Objective and Descriptive type of Theory examination, Case Based Learning and Viva-voce
- Academic calendar prepared and given to students and strictly adhered
- Course outline and syllabus given to students in the form of Hand Book/Soft copy

MIT Manipal

- Mentor is appointed by the department and by Identifying weaker students and counselling them to improve their academics in the successive class.
- Learning is never ending process and faculty have been encouraged to attend faculty development programs, attending conferences, presenting papers, carry out research in their interested engineering field
- Regular black-board teaching supported by power-point presentations, assignments, quizzes, Peer-learning (through Tutors), and Tutorial Sessions. Setting appropriate question papers is also a part of the teaching-learning process
 - Tutorial based learning
 - Remedial classes conducted for identified week students
 - Mentoring system:
 - ❖ Faculty advisor to help at individual level at the department
 - ❖ Faculty advisor for professional activities (BMESI)
 - ❖ Subject coordinators
 - ❖ Placement coordinator for career guidance
 - Class committee meetings to address student issues pertaining to academics and others
 - Provision for psychiatric counselling for students if necessary by experts from KMC
- Induction programme will be conducted for newly joined faculty through Technology & Development cell in the Institute.
- A senior faculty will be a mentor the newly joined faculty in the department.
- Class Committees are formed for each semester comprising faculty members as well as student representatives, which meet to discuss the teaching-learning

process and also the result analysis of the sessional and the end semester examinations. Based on the inputs given by the faculty members the counselling of weaker students is taken up.

- We have faculty advisor scheme (for higher semester students), where each faculty member monitors a set of students. The students can approach the faculty advisor regarding their academic problems. Faculty advisor forms an interface between his /her students and the faculty members/administrators concerned in solving students' problems.
- We have class committees represented by both teachers and students. The committee meets twice /thrice a semester to discuss and solve academic problems and other issues. There are section coordinators and lab- in- charges to try and resolve issues related to students in classes and laboratories. We have a process to address/counsel academically weak students. As per the process, an academically weak student needs to be identified and effort is made to see that they are going to be one in the mainstream.
- Inputs from the above are utilized for counselling teacher's as-well-as students by the HOD / senior faculty. With the support of teaching assistants and faculty, additional classes are conducted for academically poor students.
- At the end of the course work, feedback on teaching- learning is collected from the students for further improvement of academic process.
- The newly inducted faculty members are trained on teaching skills. Learning is achieved on attending various workshops within and outside the university
- Introduction of open electives, Remedial classes
- Concept of continuous evaluation is adopted where evaluation of student performance takes place throughout the semester in for of assignments, sessionals, and end semester examinations. Class committee meetings take place at regular intervals every semester where students and faculty members discuss learning objectives and their compliance, matters related to academics. Counselling of under achievers is done
- Maintaining Course plan
- Conducting Tutorials, assignment and sessional
- Counselling of weak students
- Academic committee has been constituted in the department to discuss matters pertaining to curriculum development and teaching - learning process.
- Illustrative teaching (simulations & animations where ever possible), power point presentations, problem based learning, quizzes, seminars, projects and tutorials

- Implementing various innovative pedagogies in the teaching process through use of audio-visual aids, think-pair strategy, brain storming and small group discussions

FOA Manipal

Industry-academia interface for practical knowledge, Integrated learning system, innovative teaching methods, hands on workshops, field trips, case studies, study tours, interaction with alumni, guest lectures.

SOM Manipal

Learning Management System Adopted. Online quizzes, Skype guest talks, Industry-academia interface for practical knowledge

SOC Manipal

Incorporating ICT methods, group seminars, interactive teaching, participating in field visits, film festivals

SOIS Manipal

Faculty members updating knowledge in the latest technologies by organizing and attending workshops, seminars and conferences

WGSHA Manipal

Teaching/Learning Methodologies: Lectures, Power point presentations, Discussion, Case studies, Student Presentations, Individual tasks/Group work, Videos, Hands on Training, etc.

Apart from these, the students are encouraged to involve in other research areas of their interest, participate in symposiums and conferences both inside and outside the university, and thereby help build the personal development and the university at large.

The Institution strives towards Continuous Innovation and updation of the teaching learning process to incorporate best practices of the Industry as well as the Academics

6.3.3 Examination and Evaluation

Adopted on Screen Marking System (OSM) for valuation of all the answer papers of University examinations

KMC Manipal

Most departments follow

- Objective Structured Practical Examination (OSPE)
- Objective Structured Clinical Examinations (OSCE)
- Objective and Descriptive type of Theory questions

- Problem solving type of questions
- Multiple choice questions
- Viva-voce examination

SOLS Manipal

To enhance student graduation rate (target: 1% better than average of three previous batches)

SOAHS Manipal

- Faculty Squad – for random checks

MCODS Manipal

Internal examination: Result analysis and counselling of poor performer

MCON Manipal

1. Examination invigilation : One teacher for 25 students
2. One exam chief superintendent for each day
3. Sessional examination question paper pattern is same like University examination
4. Students who are absent for the examination with health problems or any other genuine reasons repeat examination is conducted after two weeks

MMMC Manipal

In MMMC, department educational objectives are outcome based. Assessment procedures are aligned with educational objectives (learning outcomes) and teaching methods followed. The learning outcomes in must know, nice to know and desirable to know area have been identified based on their importance to clinical practice in primary health care condition and 75% of questions in essay come from must to know area and rest from other two areas. We set the questions based on a specification table which provides a fair and balanced coverage of the subject matter in both the semesters including in theory and practicals.

Each new question paper undergoes a rigorous and critical review by all faculty of the individual department before being approved.

Each examination has an essay component (Paper I) with 10-12 short essay questions of total 60 marks and multiple true/false question paper (Paper II) of 120 marks. Short essay question test students' subject knowledge, comprehension and application of this knowledge in solving clinical problems. The multiple true/false question paper is an objective method of evaluation which tests the students' ability to discriminate between

the correct and the incorrect statements and provides a broader coverage of the subject matter.

Objective structured practical examinations (OSPE) are used to assess the practical skills. The students are observed performing important biochemical tests and questions also test their interpretive skills.

KMC Mangalore

Sessional examinations both theory and viva are conducted in the same format as that of university examinations, at frequent intervals and the results are communicated to the students. Students are also permitted to see their answer script and discuss with the faculty on areas of improvement. In addition frequent formative evaluations such as table test, end posting viva, PBL presentation evaluations, integrated case scenario solving, logbook evaluations, seminar/ journal club evaluations and are done to assess the learning outcomes and give feedback to the students. It also helps us to evaluate the teaching methodologies. A percentage of the sessional performance is added to the university results as internal assessment which is calculated as per the standard procedure for internal assessment. 'r' value is calculated to see the concordance between the summative and formative exams. The target is to get a r value of 0.65 and above. The r value for 2014 was 0.68. University examinations are conducted and results announced within 10 days of last day of examination. Students who fail to score the minimum required marks will attend improvement classes and reappear for the university exams after 6 weeks and hence have a second chance to clear the exams.

MCODS Mangalore

1. Examination dates are strictly adhered to as given in the Academic calendar.
2. Continuous assessment of the students through regular sessional exams with 10% weightage as internal assessment in both Theory and Practicals/Clinicals for each subject
3. Students with minimum 75% Attendance and 30% Internal assessment only eligible to write University Exam
4. Evaluation is done in most transparent way with Double evaluation by coding the paper
5. On Screen Marking (OSM) evaluation

MIT Manipal

- Periodic assignments were given to the students where it is required to be submitted by the students within the stipulated time, subsequently corrections were carried out and evaluated assignments were given back to the students

- Internal assessment test (sessional) were conducted as per institution timetable twice a semester.
- Final exam (end sem.) conducted as per centralized timetable from institution.
 - Assignment evaluation: out of 10 marks
 - Sessional Test: 20 + 20= 40 marks
 - Final exam: out of 50 marks
- Through continuous evaluation of students through in-semester tests(two sessional tests , quizzes, assignments and end semester examination
- Periodic class committee meetings are also conducted to get feedback/suggestions from faculty members as well as students. Feedback from alumni is also taken.
- Result-analysis after examinations
- Counselling of poor-performers after each examination.
- Continuous evaluations of students will be done through assignments, tests and end semester examination.
- Students are evaluated relatively on a grade scale of 10. Every theory subject will have 50% of in-semester marks (continuous evaluation) and 50% of end semester marks. A minimum of 18 marks out of 50 is necessary in the end semester exam to obtain the credit for the course.
- Students have the provision to see their answer script and apply for re-evaluation as per university norms
- The academic performance of a student is assessed by the course instructor /s concerned.
- The student performance in each theory course is evaluated out of 100 marks, of which 50 marks are for in semester assessments and 50 marks are for end semester assessments. In semester assessment in theory courses is based on periodic tests, assignments, quizzes, case presentations, seminars etc, which shall be defined by the course instructor.
- The student performance in the laboratory courses is also evaluated out of 100 marks and is based on in semester assessment out of 60 marks and end semester examination for 40 marks.
- Course instructors are to give the complete course plan approved by the HOD, at the beginning of the semester. Course plan included lesson plan and evaluation plan of the course offered.
- The performance of the student in a course is reflected in the Letter Grade awarded
- Continuous evaluation adopted reducing the strain on the students. Questions are framed so that the range of result forms a Gaussian curve
- Introduction of Two compulsory sessional test

- Assessment techniques comprise of tests, assignments, quizzes and exams. Semester exam questions are set to target different course objectives. Student performance is then mapped to different course outcomes and an analysis of the same reveals the extent to which course outcomes are met. Necessary changes are then implemented accordingly.
- Scrutiny of Tutorial, Sessional and Semester Question paper
- Maintaining the schemes of Tutorial, Sessional and Semester Question paper
- Evaluating and processing the results as per Institute norms
- Tests are the preparations for the end semester examination and are conducted in the same manner, except for the duration, which is one hour against that of three hours for the examinations. Two tests will be conducted in each semester and the contents will be announced in the beginning of the semester while course plan is distributed to the students.
- Periodic Assignments and sessional examinations
- Continuous Evaluation, inclusion of MCQ in the Sessional Question paper.

FOA Manipal

- Progressive evaluation
- Double Valuation of End Semester Examination
- External examiners (academicians/professionals) for evaluation

SOM Manipal

Moodle based quiz/test.

Plagiarism check using software for assignments

SOC Manipal

Passing marks in internal assessment made compulsory to appear in external examination. Extra classes for students in need of special attention. Continuation of dual evaluation process

SOIS Manipal

Introduced preparation of detailed answer scheme for evaluation by the examiners and paper seeing provided with subject expert to provide clarification to students on marks awarded

WGSHA Manipal

The institution has a process of examination and evaluation with a lot of stress on Continuous Internal Assessment with a smaller component of the End term examination.

This enables a timely and regular feedback to the students enhancing their Academic performance

6.3.4 Research and Development

- An annual budget of more than 8 crore INR has been earmarked to promote research
- Provision to utilize matching grants, seed money, publication charges and other required research support.
- Facilitate sharing of specialized equipment and other resources like state-of-the-art laboratories, libraries, medical simulation center, teaching hospitals, innovation centre anatomy museum to support multidisciplinary research activities.
- Foster globalization of research activities through joint research in partnerships with industry and premier institutions within India and overseas
- Provide training and technical assistance to the researchers through mobility and exchange programme
- Disseminate of research output through scientific publications and scientific presentations
- Implementation of uniform research policy including intellectual property rights, ethics, academic dishonesty and plagiarism.
- Provide incentives for patents and research publications indexed in Scopus and Web of Science with a greater emphasis for journals with good impact factor.
- The points earned through this incentive are used for attending International Conferences by the faculty.
- Develop training modules to increase awareness about the importance of quality publications in Scopus and Web of Science indexed journals.
- Subscribing to databases like Scopus, Web of Science and access to publishers like Springer, Elsevier etc. to implement publication standards.
- Facilitate researchers to write joint and interdisciplinary proposals from public and private funding agencies.
- Recognize top researchers through incentive awards on a yearly basis (Gold Medal/Cash Prize)
- Facility to file intellectual property and commercialization
- Introduce bursary schemes for deserving undergraduate and postgraduate students and research scholars.
- Subscription to more than 570 periodicals in the year 2013
- Dr. T M A Pai endowment chair with worth of Rs. 10 lakhs were sanctioned for the 20 top researcher to foster high quality research

- Manipal University Student Research Forum

6.3.5 Library, ICT and physical infrastructure / instrumentation

- On Campus and Off Campus access to Online Journals and online databases have been provided. Library has a computer lab with Internet access.
- User feedback (online) mechanism is introduced
- Ezproxy technology is used for remote access of e-resources of the library
- Computer, scanner kiosk, printer, Photocopying Machine.

6.3.6 Human Resource Management

- Introducing a new software for talent banking & recruitment
- Upgrading to a new ERP module for HR-IS & payroll
- Recruitment through new technologies (telephonic & video conferencing)
- Reduction of paper consumption by using computers
- Interview call letters through emails/telephonic calls
- Training & Development programs
- Periodic revision of salary

6.3.7 Faculty and Staff recruitment

- Recruitment through new technologies (telephonic & video conferencing)
- Reduction of paper consumption by using computers
- Interview call letters through emails/telephonic calls
- Introducing a new software for talent banking & recruitment
- MAHE has been a pioneer in attracting and acquiring the best in class academic staff from all over the country without any prejudice with regard to Religion, Region, Sex, Caste etc.
- Every recruitment is through Selection Committee chaired by the Vice Chancellor/Registrar along with other members viz. Pro VC, HOI, HOD and Deputy Director – HR.

6.3.8 Industry Interaction / Collaboration

SOAHS:

Organizing seminar/Conference/Workshop in collaboration with industry and build up social relationship with industries through this platform

-Exploring the opportunities of internship with industry

-Build industry relationship through parents and alumni

-Interorganizational arrangements for pursuing collaborative R&D and Joint projects

SOLS Manipal - Promote more industry collaborations

Dept. of Stats:

The Department conducts Executive Education Program in Biostatistics for associates of Novartis Healthcare Pvt Ltd., Hyderabad

GSK, Bangalore give cash awards and medals to the two best outgoing students of M.Sc Biostatistics

MCON Manipal

- Campus selection opportunity given for various hospitals for recruiting the students.
- Faculty and students have opportunity to interact and collaborate with other institution and hospital during national and international conferences / seminars / workshops.

MCOPS, Manipal:

One industry institute interaction is planned every year for Industry interaction and collaboration. Usually during the month of February.

MCODS Mangalore

- MOU with International University
- Staff and Student exchange programme

MIT Manipal

- Continuous Increase in internship and placement for UG and PG programmes.
- Continuous Improvement in quality of companies visiting for internship and placement.

FOA Manipal

Eminent and established practitioners in the field of architecture, interior design and fashion design from various parts of the country were invited to interact and have extensive individual discussions with students during various academic related activities (studio projects, thesis, dissertation, viva-voce examinations) conducted at various times in the academic year:

- Ar. Nelson Joe Vijai Pais, Mangalore
- Dr. Harimohan Pillai, Thrissur, Kerala
- Dr. Paul Varghese, Principal, ganitARCH, Irinjalakuda, Kerala
- Dr. Rama Subrahmanian, Professor & Head, Dept. of Architecture, Dayanandsagar College of Engineering, Bangalore
- Ar. Om Prakash Bawane, Bangalore
- Ar. K R Madhuchand, Prof. & Head, Dept. of Architecture, BMS College of Engineering, Bangalore
- Dr. Ashish K Rege, Professor & Principal, Goa College of Architecture, Panaji

- Ar. Geetha Balakrishnan, Kolkata
- Ar. Subhas Chandra Basu, Hassan
- Ar. Praveen Saldanha, Saldanha Associates, Mangalore
- Ar. Girish Karnavat, Mangalore
- Prof. Mohammed Haris, Dean, Mohammed Sathak A J Academy of Architecture, Chennai
- Dr. Naseer M A, Professor, Dept. of Architecture, NIT Calicut
- Mr. Faidhan, U Define Interior Designers & Decorators, Mangalore
- Ms. Sonia Hegde, Mangalore
- Ms. Shilpa Shree Hegde, Mangalore
- Prof. Satyaprakash Varanasi, Sathya Consultants, Bangalore
- Ar. Anand V M, Principal Architect, Anand & Associates, Bangalore

- Prof. Harimohan Pillai from Thrissur Kerala gave lecture at FOA on “Issues and concerns for Research at Post Graduate level of Architecture” for III Semester M. Arch. Students on 3rd August 2013.

- Mr. Craig Semingson, eminent hospital designer from USA presented a special lecture at FOA on “Health and Research Programming, Planning & Design” on 5th November 2013.

- Centre for Green Building Material and Technology conducted a workshop on “Sustainable Architecture and Bamboo” for V semester students of Faculty of Architecture at Bangalore from 5th to 9th August 2013.

- Dr. Iraphne Childs from Australia conducted a guest lecture at FOA on Natural Hazards in Australia and Population change and Urban growth in India on January 14, 2014.

- Prof. Jayashree Deshpande, Professor and COA Expert from Pune gave a guest lecture at FOA on Expectations of the Profession and Architectural Education, and Outcome Based Architectural Pedagogy on January 14, 2014.

- Dr. David Leifer, Senior Professor, Bond University, Gold Coast, Australia conducted a lecture for students at FOA on developing BIM in Architecture and Design from 19th to 21st February 2014.

- Ms. Anindita Saha, Interior designer, Manufacturer, Exporter, Empaneled Designer at the Office of the Development Commissioner (Handicrafts), Ministry of Textiles, Govt. of India, Kolkata gave lecture for students at FOA on Design Process and Colour and Pattern Forecast on 4th March 2014.

- Ar. Colin Pinto, Practicing Architect from Mangalore conducted a seminar at FOA on Architectural Design on 19th March 2014.

SOC Manipal

Guest lectures and workshops by industry specialists. Students sent on industry internships

SOIS Manipal

All courses are started with inputs from industry for curriculum development. Industries have setup labs for teaching and learning. Industries have collaborated for offering mini-projects and internships. Industry experts visit institute to train the faculty and the students in the latest technologies on need basis. Industry experts participate in updation of curriculum.

Dept. of Commerce:

- Academic Interface Program (B.com Program) – Tata Consultancy Services
- BBM/B.Com Professional Course – Chartered Institute of Management Accounting & Association of Certified Chartered Accountants
- Centre for Excellence in Supply Chain – Confederation of Indian Industries
- Project for the Creation of Farmers Producer Organizations – National Bank for Agriculture and Rural Development
- Internship Tie ups – Goldman Sachs, Bangalore, Ernst & Young, Kochi, Canara Robeco, Bangalore

WGSHA Manipal

Faculty undergo refresher training in various hotels during the vacation period. Industry experts like the General Managers and Chefs are invited for Symposiums to give talks to our students. They are also invited as judges for various competitions. Our Placement Cell interacts with various Hotel Managers for campus recruitment and Industrial training

6.3.9 Admission of Students

- Introduced teachers' contact program as part of the promotional activity. The purpose was to invite teachers of other institutions to experience the versatility and breadth of our University and thereby recommend the same to their students
- Introduced a system of writing online entrance test twice. In this system, students were allowed to make a second attempt, if they were not satisfied with their performance in the first test. The better of two scores was considered for the merit list.

6.4 Welfare schemes for

	Provident Fund & EDLI Scheme
	Gratuity

Teaching	Employee State Insurance
	Medicare Facility to employees
	Medicare Facility to employee dependent parents
	Group Term Life Insurance for social security of family
	Scholarship on course fee of employees children/spouse studying in Manipal University/constituent institutions
	Reimbursement of children educational expenses studying in Manipal Group schools/institutions
	Scholarship for Academy of General Education students studying in Manipal University
	SODEXO Meal/Gift vouchers
	MARENA Sports Facility
	Reimbursement of higher education fee of employees
	Incentives for excellence teaching & research
	Best Teacher Award
	Seed money for research
	Dr. TMA Pai Gold Medal for outstanding research
	Incentives for preparing e-learning materials
	Reimbursement of subscription fee (subject to limit) of one professional society
	Laptop facility to teaching staff
	Institutional accommodation facility
	interest subsidy on housing / utility loans
	Valley Club/Faculty Club facility
	Leave Travel concession
	Conference Facility - financial assistance for attending conference / workshops
	Employee Grievance Redressal Committee
Sports & Cultural activities	
Non-Teaching	Provident Fund & EDLI Scheme
	Gratuity
	Employee State Insurance
	Medicare Facility to employees
	Medicare Facility to employee dependent parents
	Group Term Life Insurance for social security of family
	Scholarship on course fee for employee children/spouse studying in Manipal University/constituent institutions
	Reimbursement of children educational expenses studying in Manipal Group schools/institutions
	Scholarship for Academy of General Education students studying in Manipal University
	SODEXO Meal/Gift vouchers
	MARENA Sports Facility
	Reimbursement of higher education fee of employees
	Institutional accommodation facility
	Employee Grievance Redressal Committee
	Sports & Cultural activities
Students	Student Health Clinic

Teacher Guardian scheme
Counselling Support System
Student Grievance Cell
Anti-ragging Committee
Internal Complaints Committee
Workshops & Awareness Programs
Student Club Activities
Yoga Classes

6.5 Total corpus fund generated Rs. 2872.20

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	Yes	ISO Certification agency M/s TUV Rheinland Pvt. Ltd. B'lore	Yes	Internal Quality auditors certification
Administrative	Yes	-do-	Yes	-do-

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?

1. Registration for the examination, Generating hall tickets and sessional mark entry through Student Information System (SIS)
2. Valuation through On Screen Marking System (OSM) for all the answer papers of University examinations

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

1. Autonomy status has been given to few institutions like Manipal Institute of Technology, WGSHA, MMMC etc.
2. Process has been started to provide autonomy status to other institutions wherever possible within a span of two years.

6.11 Activities and support from the Alumni Association

KMC Manipal

Annual alumni meeting is held

Alumni meets are conducted at the department level periodically

Alumni visit departments and deliver guest talks

SOAHS:

-Organizing annual alumni meet.

-Alumnae are invited as resource person to address students

-Distinguished alumnae are felicitated on occasion of the institution annual day.

SOLS Manipal

Alumni kept abreast of activities of alma mater

Dept. of Stats:

Alumni contacts are used for finding internship placements in various industries for M.Sc Biostatistics students.

Alumni are regularly invited to train the M.Sc Biostatistics students in soft skills

Alumni are also invited as examiners for Biostatistics exams of various UG and PG courses of the University

Dept. of Public Health:

Alumni have been effective in placing students in reputed organizations.

MCOPS, Manipal:

At least two alumni meets are planned in a year. One during the annual and awards day (in the month of February) and the other during the Indian Pharmaceutical Congress (In the month of December).

FOA Manipal

The following eminent and established practitioners in the field of architecture from various parts of the country who are the esteemed alumni of the Faculty of Architecture were invited to interact and have extensive individual discussions with students during various times in the academic year:

- Ar. Rohit Menon, Bangalore

- Ar. A. S. Premlal, JLP Architects, Kochi, Kerala
- Ar. Vasudevan R Kadalayil, Director and Principal Architect, Ecumene Habitat Solutions Pvt. Ltd., Bangalore
- Ar. Prajosh Kumar, “Options”, Mangalore
- Ar. Sunil Nayak, Sunil Nayak Architects, Mysore
- Ar. Kireeti Ambedkar, Bangalore
- Ar. Sadanand Nayak, Architecture Plus, Mangalore
- Ar. Kanchana Pai, Red Earth, Manipal
- Ar. Arun Prasad, Arun Prasad and Associates, Architects and Planners, Coimbatore, Tamil Nadu
- Ar. Amit Shenoy, Amith Associates, Udupi
- Ar. Gulshan Roy, Gulshan Roy Architects, Mangalore
- Ar. Leslie Dias, Udupi
- Ar. Chetana Rao, Manipal
- Ar. Asif Mohammed, Mangalore
- Ar. Colin Pinto, Concept Evolve, Mangalore
- Ar. Ashok L P Mendonca, Mendonca Associates, Mangalore
- Ar. Deepak L A D’Souza, Architectural Consultant, General Corporation, Mangalore

The following Architectural firms headed by our alumni who have excelled in their professional practice have given our students the opportunity to do their internship with them:

- Keystone Architects, Bangalore – Ar. Venkatesh Rao
- 2PKM Architects, Mangalore – Ar. Asif Mohammed
- Stapati Architecture, Planning and Interiors, Calicut, Kerala – Ar. Tony Joseph
- Alex Jacob Architects, Bangalore – Ar. Alex Jacob
- Amith Associates, Udupi – Ar. Amith Shenoy
- Ecumene Habitat Solutions Pvt. Ltd., Bangalore – Ar. Satish Desai & Ar. Vasudevan R Kadalayil
- Gayathri & Namith Associates, Bangalore – Ar. Namith Varma

SOM, Manipal:

- Guest talks
- Help in Internship and Placement

SOC Manipal

- Annual Meet
- Internships, Placement

WGSHA:

Activities and support from the Alumni Association: WGSHA Alumni relations department is a constituent of Manipal University Alumni Department. In the Institution an Alumni meet is organized every year after the Annual day. The Graduating batch and alumni from other years take part in the meet. Manipal University organizes Annual Alumni meet in the month of December. Alumni are invited to give guest lectures to various courses they also are invited to judge various competitions. Every year we have a Distinguished Alumnus Award given to outstanding Alumnus selected by the top management of ITC and Manipal University outstanding Alumnus selected by the top management of ITC and Manipal University

6.12 Activities and support from the Parent – Teacher Association

NA

6.13 Development programmes for support staff

1. Conduct Training & Development programs like workshops/seminars; Fire Safety etc.
2. Awareness programs like Gender Sensitization are conducted
3. Microsoft office training through certified consultant
4. Communication Skills through professional language teacher
5. Support for Sports & Cultural Activities

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

Manipal University is a green campus with certification under ISO 14001: 2004 by TUV Rheinland. Continuous efforts are being put into monitoring and constant up gradation to meet the rapidly expanding infrastructure. Best practices and various initiatives have helped the University to develop an unparalleled ambience for students and residents from various countries.

Few areas where the University applies eco-friendly practices are

Waste Water Management: In order to treat waste water generated in the campus state of the art sewage treatment plants are installed with a capacity of 55 lakh liters per day. In addition, the distribution system for treated water has also been enhanced to ensure efficient reuse. Treated water is used for gardening and arboriculture reducing the burden on fresh water sources. Additionally grey water treatment plant treats feeds the flush system. Using recycled water lowers groundwater extraction costs and conserves on freshwater which can be used for domestic purposes. Sludge generated is dried and used as manure as soil remediation in the University gardens. Rain water harvesting is a continuous activity being carried out every monsoon. Due to these initiatives MU has been able to plant and develop green cover in the entire campus.

Raw Water Management: Keeping in mind the growing urbanization within the campus and increasing demand for water, two approaches have been adapted: Firstly, harvesting rain water from roof tops of buildings and using the same for domestic purposes. RWH units are affixed to down take pipes of roof drains which are in turn connected to underground sumps. Secondly, diverting storm water drains and from roof tops to bore wells. In the case of the first, rainwater is collected from roof tops from existing down takes, connected to a common header and led to a trickling sand filter having individual filtering capacity of 10000 liters /hour. The filtered water is then channeled to a nearby sump and used for domestic purposes. More recently the new version of rainy filters are used.

Solid Waste Management: which consists of domestic waste, a part of which is composted using earth worms and rest are recycled, food wastes are sent to piggeries. Biomedical Waste, hazardous waste and e- wastes are segregated and disposed in a scientific manner to minimize impact on the environment.

Lung spaces: are constantly created across the campus by planting trees wherever possible. 8000 trees were planted in the last three years on campus. World environment day is celebrated on June 5th every year. All the members of the management, students and faculty engaged in a march past with placards carrying messages on environmental conservation. This culminates in a tree planting session where all heads of institutions participate.

Air Quality: In order to minimize the air emissions with in the campus, restricted entry of vehicles is in place. Emission testing center has been set up for staff and public which delivers services at subsidized rates. Ambient air quality is monitored in the campus, stack emission tests are also conducted in house to keep track of emission from all sources.

Energy Management: Various initiatives in the areas of power efficient air conditioning systems are constantly being undertaken for all new projects in the campus. As per MU guidelines hot water requirement in all hostels is met with solar energy. Presently the installed capacity is 3.9 lakh liters per day. Replacement with energy efficient light fixtures, pumps, equipment's and appliances is a continuous process.

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.

KMC Manipal

Student and staff feedback system

Quality indicators are defined related to academic, research and environmental parameters

SOAHS Manipal

Video-conferencing and webinars

MCON Manipal

- Evidence Based Practice in the curriculum
- Geriatric Care research
- Meeting with the General body of students every year minimum of three times.

MCOPS Manipal

- Macro and micro academic management system
- Student information systems
- Online attendance/ marks
- Strict adherence to examination schedules
- Good teacher awards
- Award for audio visual aid for teaching

MMMC Manipal

Department of Pharmacology organised a Hands-on workshop on basic techniques of molecular biology on 11th October 2014. Training was provided to 24 faculty members. Path-Theater, an initiative of the department of Pathology was held in October 2014. This unique contest tests not just the conceptual understanding but also its application to dramatics.

KMC Mangalore

New Objectives were introduced to monitor Academic, Research and Environment.

In academic objectives, the following was included:

1. Curriculum delivery: Adherence to the time table (At least 90%), Use of innovative teaching-learning methods (Increase in the time by 2.5% every year till it reaches 20%)

2. **Assessment:** Correlation of formative and summative assessments (Increase the “r” value by 10% every year), Declaration of sessional results on time (Within 15 days of conduct of exams)

3. **Service delivery Process:** Student feedback on curriculum delivery (Minimum score of 3 on a scale of 5), Student feedback on assessment (Minimum score of 3 on a scale of 5), Overall student feedback (Minimum score of 3 on a scale of 5)

In Research Objectives:

1. Number of papers presented in National and International conferences (Minimum 5% increase every year)
2. Number of publications in Indexed journals (Minimum 5% increase every year)
3. Amount of research grants received (10% increase every year)

In EMS Objectives:

1. Paper consumption: (Minimum 5% over a period of 5 years)
2. Water consumption: (Minimum 5% over a period of 5 years)
3. Power consumption: (Minimum 5% over a period of 5 years)

Besides this, the teacher guardian scheme is also present where in the teachers are allotted 5 students, whose progress they need to monitor. The students also discuss grievances with their teacher guardian. **All these have a positive impact on the teaching and environment.**

MCODS Mangalore

1. Indigenous Patient Management System (PMS) and Orthodontic Patient Management System (OPMS)
2. Online student and staff feedback
3. Smart Identity Card for students and staff

MIT Manipal

- Slotted time table
- Open electives

FOA Manipal

- Mentoring faculty & Students
- Decentralization
- Integrated teaching systems
- Industry interface

SOM Manipal

Moodle learning management system introduced.

SOC Manipal

RTI filing Drive initiated.

SOIS Manipal

- Industry Sponsored labs
- Industry standard hardware and software laboratories
- Opportunities to work on industry defined mini-projects
- Opportunity to study abroad
- The industry linkages and practical oriented curriculum
- Regular workshops and invited talks from faculty, engineers and researchers on current trends to improve skill sets.
- The program and subjects are updated frequently (once in six months) based on industry feedbacks.
- Internship support for getting 10-12 months internship in an industry for second year.
- Bridge course (C program, exploration of hardware & software available) for the first semester students
- Industry proposed - Mini-project and seminar in each semester for all the students.

WGSHA Manipal

•Student / Faculty Research: The college has established the Centre for Excellence in Hospitality and Tourism Research (CEHTR) to focus on research, consultancy and continuing professional development initiatives in the area of hospitality and tourism management within the college. Extensive involvement of faculty and students in research projects demonstrate continual quality improvement in all its academic and co-curricular activities to achieve global competency through research

•WGSHA is the only college in India to offer Sommelier programme from the International Sommelier Guild (ISG) with its two levels of wine fundamentals certifications. This is also integrated with the existing F & B curriculum of BHM and BA in Culinary Arts. International faculty representing ISG, train the students in this global certification which adds value to our students learning

•Skills training for unemployed youth from the local community are imparted through Manipal City & Guilds as our CSR initiative. Many short term courses in hospitality are offered as part of the programme

SORM Bangalore

Demonstration of chick embryo culture within a shell and in shell less model to understand development

Demonstration of beating cardiomyocytes derived from mESCs

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

Please refer Q. no. 2.15 in Part A

7.3 Give two Best Practices of the institution (please see the format in the NAAC Self-study Manuals)**Best Practice # 1****1. Title of the Practice**

Manipal Centre for Professional and Personal Development (MCPD)

2. Objectives of the Practice

- Providing a platform for students: To nourish their creativity
- Fostering academic skills of faculty: To enhance their scholarship
- Nurturing professional growth of staff and students: To support career advancement
- Strengthening personal skills :To enable individual growth and attainment of full potential
- Building collaborative skills: To promote team building and leadership for organizational development

3. The Context

In the year 1985, Medical Education Department was established at Kasturba Medical College, Manipal. In the year 2011, its activities got expanded and converted into Manipal Centre for Professional and Personal Development. Over the years, a need was felt to have an internal faculty development centre to build up the competencies of the newly joined and younger faculty members and enhance their capabilities to impart education using latest pedagogies. In 2011, University established the Manipal Centre for Professional and Personal development (MCPD) to meet its training needs at all

levels including non-teaching staff. The Centre has a vision to empower the students, faculty members and non-academic staff of all the constituent units of University. MCPD will back community-driven initiatives at University aimed in improving the quality of human life working in coordination with voluntary and self-help organizations at University. These initiatives are primarily aimed in empowering the weaker sections of the society. MCPD looks forward to inculcating civic responsibility among our students and staff, which would help in nation building.

4. The Practice

During the last four years the centre has held several professional and personal development programmes as per the following details of activities:

Sl#	Name of the workshop	Dates	Participants	College/university	Number of participants
	Pedagogic and personal effectiveness workshop	4-6 January, 2012	Faculty	SoIS	22
2.	E-learning workshop	10 January, 2012	Health sciences faculty	University	36
3.	Teacher as leader - academic leadership workshop	17 January, 2012	Faculty from constituent colleges	University	43
4.	Teacher as leader - academic leadership workshop	19 January, 2012	Faculty from constituent colleges	University	37
5.	Teacher as leader - academic leadership workshop	20 January, 2012	Faculty from constituent colleges	University	38
6.	Theatre workshop on medical humanities	27-29 January, 2012	MBBS students	KMC	32
7.	Professional and personal effectiveness workshop	17-18 February, 2012	Non-teaching staff	University	37
8.	Professional and personal effectiveness workshop	24-25 February, 2012	Non-teaching staff	University	37

9.	Professional and personal effectiveness workshop	2-3 march, 2012	Non-teaching staff	University	35
10.	Professional and personal effectiveness workshop	16-17 march, 2012	Non-teaching staff	University	35
11.	Teacher as leader - academic leadership workshop	22 march, 2012	Faculty from Constituent Colleges	University	34
12.	Professional and personal effectiveness workshop	23-24 march, 2012	non-teaching staff	University	37
13.	Professional and personal effectiveness workshop	30-31 march, 2012	non-teaching staff	University	34
14.	Professional and personal effectiveness workshop	12-13 April, 2012	junior executives	University	36
15.	Professional and Personal effectiveness workshop	19-20 April, 2012	Junior executives	University	44
16.	Frame it - workshop on designing instructional objectives	22 June 2012	Faculty members	University	36
17.	Frame it - workshop on designing instructional objectives	23 June 2012	Faculty members	University	41
18.	Pedagogic and personal effectiveness workshop	10-14 July, 2012	Faculty members	University	32
19.	Pedagogic and personal effectiveness workshop	24-28 July, 2012	Faculty members	University	40
20.	Ink talk	24 august,	Faculty members	University	450

	programme	2012	and students		
21.	“search” - a workshop on information literacy	27 august, 2012	Faculty members	University	30
22.	“search” - a workshop on information literacy	28 august, 2012	Faculty members	University	41
23.	Palliative care workshop	7-8 September, 2012	Bangalore		
24.	Dental workshop	21-23 September, 2012	Members of Indian society of periodontology	South India	31
25.	PG orientation programme	5-6 October, 2012	Postgraduates	MCOADS, Manipal	33
26.	Harmony: body - mind balancing	27-30 October, 2012	Faculty members	University	45
27.	Teacher as communicator	15-17 November, 2012	Faculty members	University	111 (41+38+32)
28.	Team building	4December, 2012 (half day)	Marena staff members	University	16
29.	Pedagogic workshop	7-8 December, 2012	Palliative care faculty members	Ernakulum	55
30.	Guest lecture by Dr N De Jong, Maastricht University, Netherlands	19 December, 2012	University faculty members	University	30
31.	Pedagogic and Personal Effectiveness workshop	20-22 December, 2012	Health science teachers, KLE university, Belgaum	Belgaum	40
32.	Guest lecture by Dr.Veerabadra Gowda	1January, 2013	Mu faculty members	University	40
33.	Pedagogic and Personal Effectiveness Workshop	4-7 January, 2013	MSAP faculty members	University	32
34.	Workshop on assessment in higher education	10-12 January, 2013	University faculty members	University	55

35.	Teacher as communicator	24January, 2013	University faculty members Mangalore	University	55
36.	Teacher as communicator	25January, 2013	University faculty members Manipal	University	21
37.	Pedagogic and personal Effectiveness workshop	21-26 February, 2013	University faculty members	University	43
38.	Pedagogic and personal Effectiveness workshop	22-23 March, 2013	AJ Shetty Dental college, Mangalore	Mangalore	48
39.	Pedagogic & Personal Effectiveness Workshop	10th & 11th April, 2013	Faculty of MES Dental College Perinthalmanna	Perinthalmanna	45
40.	Pedagogic & Personal Effectiveness Workshop	19th to 21st April, 2013	Members of the Indian Society of Periodontology	Mumbai	60
41.	National Workshop on Assessment in Higher Education	17th & 18th May, 2013	MU, Faculty	MU	28
42.	Ethical Issues in Biomedical Research	29th & 30th May, 2013	MU Faculty	MU	51
43.	Teacher Training Programme	12th & 13th June, 2013	Canara College, Mangalore	Mangalore	60
44.	VIPASSANA workshop	15th June 2013	MU Faculty	MU	53
45.	Pedagogic & Personal Effectiveness Workshop	21st to 23rd June, 2013	Members of the Indian Society of Periodontology	Kottayam	35
46.	Pedagogic & Personal Effectiveness Workshop	2nd to 4th July 2013	Dubai Campus	MU	60

47.	Workshop Curriculum Design	9th July, 2013	MU Faculty	MU	63
48.	Pedagogic & Personal Effectiveness Workshop	15th to 19th July, 2013	MU faculty	MU	37
49.	Pedagogic & Personal Effectiveness Workshop	22nd to 26th July, 2013	MU faculty	MU	37
50.	PBL workshop	26th July, 2013	Nursing faculty	MU	30
51.	VSO workshop	24th August, 2013	VSO members	MU	25
52.	Research Methodology	29th August, 2013	Interns of Dental College	MCODS	60
53.	Assessment workshop	17th September, 2013	Dental College	MCODS	35
54.	Pedagogic & Personal Effectiveness Workshop	7th & 8th October, 2013	SVS Institute of Dental Sciences, Mahabubnagar	Hyderabad	50
55.	Pedagogic & Personal Effectiveness Workshop	2nd to 4th December, 2013	Architecture and MIC faculty	MU	30
56.	Palliative Care workshop	7th & 8th December, 2013	Palliative Care members	Bangalore	35
57.	Effective Electronic Presentation	21st, 28th December, 2013 and 4th January, 2014	MU faculty	MU	145
58.	Enhancing English Language	8 Friday's (from 17th January onwards)	MU Non-teaching staff	MU	30
59.	Research Methodology Workshop	11th January, 2014	Dental PG Students –	MCODS, Manipal	35
60.	Teacher Effectiveness	25th January, 2014	MU Faculty	MU	67

	workshop				
61.	National workshop on MCQ (DESIGN)	17th & 18th February, 2014	Faculty	MU & other faculty members	80
62.	Enhance English Language Skills	14 hours	MU Non-Teaching staff	MU	30
63.	Pedagogic & Personal Effectiveness workshop	24th – 26th February, 2014	Wayanad	Kerala	30
64.	Professional and Personal Effectiveness workshop	6th to 8th March, 2014	M.Sc/PG students	Biochemistry	24
65.	Patent Filing Camp	22nd March, 2014	Faculty	MU Faculty	44
66.	Personality Development Workshop	24th, 26th and 29th March, 2014	Non-Teaching Staff	MU	109
67.	Relationships.. with yourself and other self	31st March, 2014	Faculty	MU Faculty and Staff	50
68.	Personality Development Workshop	9th, 16th, 23rd & 30th April, 2014	Non-Teaching Staff	MU	120
69.	Enhancing English Language	15th, 16th, 22nd, 25th & 29th April, 2014 and 2nd & 6th May (14 hours)	Non-Teaching Staff	MU	30
70.	Mini-workshop on Knowledge, Memory and Learning	26th April, 2014	Faculty	MU	60
71.	Curriculum Committee Meeting	9th May, 2014	Faculty	MU	45
72.	Research Methodology Workshop	10th, 17th and 24th May, 2014	Students of MMMC	MMMC	142
73.	Evolution of Teaching and Learning in Higher Education	15th May, 2014	Faculty	MU	46
74.	Mini-workshop on	16th May,	Faculty	MU	10

	Virtual Patients in Health Professions Education	2014				
75.	Guest Lecture by Partha Dabke	24th July, 2014	Faculty	MU	20	
76.	Guest Lecturer by Dr. Sheetal	30th July, 2014	Faculty	MU	30	
77.	Mini-Workshop on Emotional Intelligence	9th August, 2014	Faculty	MU	35	
78.	IPR workshop	14th August, 2014	Faculty	MU	60	
79.	Pedagogic & Personal Effectiveness workshop	25th to 28th August, 2014	Faculty	MU	52	
80.	Enhancing English Language	14 hours	Non-Teaching Staff	MU	26	
81.	Teachers' Day Programme	5th September, 2014	Faculty	MU	200	
82.	A workshop on power of collective energy	18th September, 2014	VSO Members	MU	30	

5. Evidence of Success

Feedback Analysis of the various programmes conducted:

Review and Impact of Training Programme

Held for the nonteaching staff of Manipal University, Manipal

The consolidated details of the training programme and its feedback analysis was presented in the MRM held during January 2015.

A glimpse of the training programme is detailed here below:

Non-teaching Staff				
#	Batch No.	Number of employees	Dates of Training (8 hrs)	Overall Average score of Feedback on the training programme conducted (out of 5)
1	Batch - I	37	March 24, 2014	4.5
2	Batch - II	33	March 26, 2014	4.4
3	Batch - III	38	March 29, 2014	4.4
4	Batch - IV	39	April 9, 2014	4.4
5	Batch - V	36	April 16, 2014	4.5

6	Batch - VI	38	April 23, 2014	4.6
7	Batch - VII	22	May 07, 2014	4.7

Overall remarks: Good and useful session

Summary of Training Effectiveness Analysis for the year 2014 - 2015

(Feedback on Training Effectiveness collected from the supervisors in November 2014)

#	Particulars	Average Score (Out of 5)		Total Average Score
		Executive Level	Administrative Staff Level	
1	Duration of the training per day	4.3	4.4	4.4
2	Selection of topics / course	4.4	4.3	4.3
3	Coordination of training by HR Team	4.5	4.5	4.5
4	Improvement of general efficiency	4.4	4.3	4.3
5	Positive change in their attitude	4.4	4.3	4.3
6	Ability to complete the given task	4.3	4.4	4.4
7	Participating as a team member	4.3	4.3	4.3
8	Motivating / encouraging other team members	4.1	4.2	4.1
9	Communicate effectively at work place	4.3	4.4	4.3
10	Punctually in work and commitment	4.4	4.5	4.4
	Overall Average Score	4.34	4.36	4.33

6. Problems Encountered and Resources Required

There were no problems encountered by the centre in implementation aspects. The centre is headed by a Director with support from Deputy Director, staff, suitable physical and IT infrastructure is created for smooth functioning of the centre. The centre utilizes the services of internal as well as external trainers for its programmes. The centre coordinates with the Heads of Constituent Units in publicizing its programmes among staff and identifying competent faculty members as trainers.

Best Practice # 2

1. Title of the Practice

Waste water treatment for reuse.

2. Objectives of the Practice

The objectives of the practice: As water is a basic necessity for functioning of a society it becomes imperative that the resource is protected and nourished, more the so in today's context of water scarcity across geographies. Being a private university and located in an area without public infrastructure capable to cater to the needs of basic sanitation compelled the University to pioneer in setting up an underground drainage system to collect waste water generated. This is then used for creating green spaces in the campus. Hence turning waste into a resource.

3. The Context

As with any new project to be implemented there were challenges in the areas of technology applicable to the current situation, identification of the right agency with requisite expertise to execute the project, identify and obtain all legal clearances from relevant authorities etc. Each of this was addressed and an implementation plan brought about. Finally budget approval was obtained for execution of works.

4. The Practice

As mentioned earlier, Manipal town even today does not have a public underground system in place to cater to the growing needs of development.

Hence this it is a unique achievement being a private entity. During the last decade the university has set up three major treatment units that cater to all buildings like institutions, staff quarters, hostels, canteens and messes. Challenges in any system once operational are the maintenance and repairs. This is a continuous process the maintenance crew is engaged in.

The waste water generated in the campus is treated in state of the art sewage treatment plant of capacity 1500 cubic meter /day and 2 Sullage treatment plants of capacity 160 & 200 cubic meters /day within the campus. Treated water from the Sullage treatment plant is re-circulated back to the flush system. Dried sludge generated is used as manure for gardens. Treated water is used for gardening and arboriculture reducing the burden on fresh water sources. To keep pace with the ever expanding infrastructure, two new sewage treatment plants of capacity 2000 cubic meters /day each have been commissioned. Hence total installed capacity is 5500 Kilo liters per day as against current sewage generation of 5000 Kilo liters per day.

5. Evidence of Success

50,000 Cubic meters of sewage generated in the campus today is reused in arboriculture. The green cover development has led to an improved ambience for teaching and learning process. The entire gardening activity in the campus does not use a single drop of fresh water hence conserving the resource. This is visible evidence for one to see as one enters the campus. Further initiatives are in progress where treated sullage water is going to substitute fresh water used in cooling towers of air conditioners apart from the flush systems currently practiced. All treatment systems comply with the norms set up by the Pollution Control Board and constant monitoring through chemical and biological analysis in the in house laboratory keeps a check on water quality.

Frequently samples are also collected by the Authorities to check compliance to the laid down limits and these are found to be satisfactory.

6. Problems Encountered and Resources Required

With the introduction of this project during the start there were apprehensions with regard to the generation of odor leading to unhygienic conditions. This was put to rest once the plants were commissioned and the plants started stabilizing over a period of time. This was a challenge as any waste treatment system is bound to have some amount of odor generation. At the end of the day it is only the human ingenuity that was needed to address most of the challenges that arose due to project implementation.

7.4 Contribution to environmental awareness / protection

Awareness is given to staff and students on the need for conservation and measures undertaken. During World environment day students from nearby schools carry out the green march along with placards depicting current issues like global warming, Ozone depletion etc. The heads of Institutions along with the top management and students engage in a tree planting session. This culminates in a formal address by the Universities top management and Institutional Heads.

Trainings are given to all staff members on key aspects like Hazardous / Biomedical / other waste management, University objectives of reduction in paper, water and power consumption etc.

5 Whether environmental audit was conducted? Yes No

Yes. MAHE is ISO 14001:2004 certified institution and hence, regular Environment Management System internal audit is being conducted by in house certified Internal auditors and once in a year an audit is conducted by the certifying agency - M/s TUV Rheinland Co. Pvt. Ltd. Bengaluru

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

SWOC Analysis					
1	Curricular Aspects	Strengths	Weakness	Opportunities	Challenges
1.1	Curriculum Design and Development	Strong Curriculum Design and Development Process. Syllabus updated on periodic basis based on inputs from different stakeholders.		Further strengthening of curriculum development process by more industry-academia collaborations	Restrictions imposed by the Regulatory bodies like MCI, DCI etc.
1.2	Academic Flexibility	Open electives, Practice schools	Different examination / evaluation patterns for the programmes	Implementing Choice Based Credit System	Constraints from Regulatory bodies / operational difficulties in implementation
1.3	Curriculum Enrichment	Curriculum is enriched by involvement of inputs from various stakeholders		More collaborations with academic / industry in identifying relevant inputs	Curriculum developed by regulatory bodies may have time lag in implementing the dynamic changes required
1.4	Feedback on Curriculum	Feedback collected at various levels from different stakeholders in the process	Capturing feedback from alumni is in the developmental stage. Efforts are in progress to implement their valuable inputs	Avoid redundancy	
2	Teaching Learning and Evaluation	Strengths	Weakness	Opportunities	Challenges
2.1	Student Enrolment	Diverse student profile involving		Recession in Europe / US	Growing number of

		and Profile	several states in India and 59 other countries		encouraging students to study in India	educational institutions and universities in India
2.2	Catering to Diverse Needs of Students	Strong infrastructure and necessary support services to cater to the curricular, co-curricular and extracurricular needs of students		Student diversity helps in identifying new locations for campus expansion and also helps marketing team to tap these markets to increase student base		
2.3	Teaching Learning Process	Strong academic processes, which are reinforced with continual improvements, identified through periodic audits				Rigid framework of some of the regulatory bodies
2.4	Teacher Quality	Faculty with blend of industry and academic experience with strong research outputs		More opportunities for innovations in pedagogy.		Since the university is located in a semi urban location, attracting and retaining faculty is a challenge
2.5	Evaluation Process and Reforms	Strong and Robust Evaluation Process. Double valuation with a provision for third valuation. Timely declaration of results		PhD registration and evaluation process is undergoing several reforms, which can lead to high quality research output.		Getting external examiners in some specified areas

	2.6	Student Performance and Learning Outcomes	Well defined learning outcomes implemented through hands on training and multidisciplinary projects evaluated through the demonstration of skills and knowledge acquired in the teaching learning process.	Implementation of the process in all streams.		
3		Research, Consultancy and Extension	Strengths	Weakness	Opportunities	Challenges
	3.1	Promotion of Research	University has established the Directorate of Research to nurture and promote research activities of global standards. Research is encouraged through attractive incentive and awards' scheme and also by integrating it as a requirement for promotion to higher designations	The full benefits of Research facilities are yet to be realized, specially the inter-disciplinary research.	Availability of PhD guides in all major streams	Attitude of the funding agencies towards self-financing universities
	3.2	Resource Mobilization for Research	Research Directorate encourages constituent units to apply for research grants	Being self-financed university, there are limitations in allotting large budgets for	Opportunities are available to apply for research grants from different agencies /	Attitude of the funding agencies towards self-financing institutions.

			under different schemes.	research activities. Inadequate commercialization of patents.	institutions.	
3.3	Infrastructure for Research	Excellent state-of-the-art infrastructure in the form of high-end research equipment / machinery is available.	Lack of optimal utilization of high-end research facilities.	More research grants can be attracted.	Maintenance and calibration of these high end equipments is a major challenge	
3.4	Research Publications and Awards	MAHE has been ranked number one among private universities for its research publications output by a Spanish agency. Faculty members have won several awards for best paper/poster presentations in conferences in India and abroad High scopus and H index rating.	Limited high impact publications	Several opportunities for publications are available in journals with high impact factors. More awareness and efforts from faculty can lead to more research output in the form of highly rated publications		
3.5	Consultancy	Availability of expertise to extend consultancy services. Attractive scheme to promote consultancy in the University.	Under marketing of the Consultancy services.	Opportunities for consultancy can be explored with different models.	Geographical disadvantage.	
3.6	Institutional social responsibility and extension	Strong involvement of management, faculty, staff and students in several	Limited financial resources.	Opportunities for the students for the holistic development.	Negative perception about the private organization	

		activities	social responsibility projects and extension activities.			
	3.7	Collaboration	Several MoUs with industry / academic institutions in India/abroad in diverse areas of research.	Limited translation of MoUs into implementation.	Several more opportunities are available to collaborate with industry / academic institutions in India / abroad.	Restricted freedom due to the regulations.
4		Infrastructure and Learning Resources	Strengths	Weakness	Opportunities	Challenges
	4.1	Physical Facilities	State-of-the-art infrastructure to support academic, research, administrative, curricular and extracurricular activities. ICT enabled classrooms		To increase the number of programs and research activities.	Growing demand for air-conditioned and other sophisticated facilities in hostels, classrooms etc.
	4.2	Library as Learning resource	Well-equipped library with excellent collection of text books, reference books, journals, periodicals and digital subscriptions / databases. Availability of e-learning facilities.	Under -utilization of the facilities created.	To create more digital facilities in terms of e-books and e-learning applications.	Storage space and discontinuing the hard copies.
	4.3	IT Infrastructure	Strong IT infrastructure support with	Underutilization of web mail	To go for paper less	Financial implication for upgrading the

		re	excellent backup facility. All faculty members are provided with individual laptop computers.	facility.	administration.	software at a frequent interval. Requirement of sophisticated Data security system
	4.4	Maintenance of Campus Facilities	Outsourced		Improved efficiency with cost reduction.	Supervising the outsourced agency.
5		Student Support and Progression	Strengths	Weakness	Opportunities	Challenges
	5.1	Student Mentoring and Support	Strong mentoring/counseling support at institution level and University level monitored by the Director - Student Affairs	Disconnect between the decision making and implementing. Lack of optimal utilization of counselling facility by students	Student involvement in decision making process for better acceptance.	With growing student strength and also with raising expectations from parents, it may require more training for the counsellors to handle complex situations.
	5.2	Student Progression	Students get excellent opportunities for pursuing higher education in India and abroad. High profile companies visit University campus for recruitment and providing internship opportunities	Higher level of coordination between constituent units can bring more synergy into placement process	Increased interaction with industries for improved employability. Increasing the post graduate training programs.	Location away from metro cities is a big challenge for placement process
	5.3	Student participation and activities	University and its constituent units conduct several extracurricular and	In some of the programs the “academic demands”	Students from parent campus, off campus and offshore campus	Organizing common events are becoming

			co-curricular activities including sports with extensive participation by the students.	hinders student participation in other activities	get opportunities to meet each other. Off campus and Offshore campus students get a chance to see the parent campus at Manipal.	increasingly difficult with increasing student strength and to fix the schedules to match the academic calendar.
6	Governance, Leadership and Management	Strengths	Weakness	Opportunities	Challenges	
6.1	Institutional vision and leadership	All constituent units are focused on University vision. Strong leadership supports the progress towards achieving the vision		With expansion in the form of off campus and offshore campuses, there is an opportunity to groom leaders at parent campus for suitable positions at the other campuses and also sharing of resources and rationalizing the same.		
6.2	Strategy development and deployment	University has well-structured governance system, which develops long term and short term strategies and enables their effective implementation	Financial constraints.	University experience in developing campuses / institutions in national and international level is a knowledge asset in developing and deploying future strategies	With changing regulations from national and international regulators, it becomes difficult to standardize strategies across campuses	

					for expansion	
6.3	Faculty empowerment strategies	Balance of centralized and decentralized approach in decision making to ensure adequate empowerment of faculty	Reluctance to own the decision making process	Faculty empowerment has encouraged a culture of entrepreneurship in University	With growing diversity of disciplines, standardization becomes very difficult and impracticable	
6.4	Financial management and resource mobilization	Self-financed programs delivered at optimal cost. Availability of competent and experienced faculty members as per regulatory requirements	Not able to attract significant endowments	To attract more research grants, consultancy work and better commercialization of patents.	Increasing cost of education and availability of competent and qualified faculty may prove to be a challenge in future	
6.5	Internal Quality Assurance System	University is ISO 9001:2008 certified for Quality Management System (QMS) & 14001:2004 for Environmental Management System (EMS). Central Quality & Compliance (Q&C) cell at MAHE to monitor quality and compliance at constituent units through periodic audits. Environmental Cell to monitor compliance to various legal and statutory requirements	Storage and retrieval of data during the transitional phase from paper to digital information system	Strong documentation maintained as a requirement of this system will help in continual improvement and application for various accreditations and ranking especially with University focusing on placing itself in the list of top globally ranked universities	To comply with the frequently changing regulations	

7	Innovations and Best Practices	Strengths	Weakness	Opportunities	Challenges
7.1	Environment Consciousness	University has won Golden Peacock Award for Environmental Management System .It stands second in India among Universities as per UI Green metric ranking. University is ISO 14001:2008 Certified by TUV Rheinland	Even though the University has been certified for Environmental Management System, still there is a long way to go in terms of making each and every employee environment conscious	Compliance to requirements of EMS has led to rationalizing of resources like paper, electricity and water and with growing student strength this becomes very critical, as every unit of resource saved is equivalent of resource created	To fulfil the expectations of the Pollution control Board.
7.2	Innovations	University has several examples of innovations in its processes, which includes the process of examination, counselling, infrastructure development, environmental management, teaching-learning etc.	Effective implementation of the innovations	With availability of multi-disciplinary faculty members, more innovative projects can happen in the university and the same can be shared with its off campuses and off shore campuses.	Effective implementation of multi-disciplinary approach for better outcomes
7.3	Best Practices	University is winner of several awards as an acknowledgement of its Best practices	Sharing of Best practices across constituent units need to be more vibrant	Availability of several forums at national and international level to showcase best practices and further build the Manipal brand	

8. Plans of institution for next year

Academic: Quality of intake

#	Quality Objective	Target
1	Cut off ranking at admission level	Lower as compared to previous year
2	Diversity of students	Better representation as compared to previous year
3	International / NRI students	Increase in 5% over previous bench mark till it reaches the permissible quota
4	Increase in number of applications, National and International.	National: Not Defined International: Target 5%

Examination Results:

#	Quality Objective	Target
1	Increase in pass percentage over the previous bench mark	average of previous 3 years
2	Declaration of results on time	Within a month of conduct of exams

Service delivery Process:

#	Quality Objective	Target
1	Student feedback of faculty	Minimum of 3 on a scale of 5
2	Student feedback on infrastructure	Minimum of 3 on a scale of 5
3	Student feedback on academic program	minimum of 3 on a scale of 5
4	Patient feedback on services	minimum of 3 on a scale of 5

Research:

#	Quality Objective	Target
1	Number of papers presented in National and International conferences	Minimum 5% increase every year

2	Number of publications in National and International, Indexed and non indexed journals	Minimum 5% increase every year
3	Amount of research grants received	5% increase every year
4	No of patents applied for	at least one patent more than the previous year
5	Number of Ph D registrations	at least 5% increase every year

Purchase:

#	Quality Objective	Target
1	To reduce the period of identification of the required capital items from the date of receipt of indent in consultation with end user	Reduction
2	To reduce procurement time for capital equipments from the date of identifying the item to delivery of the item	Reduction
3	To reduce procurement time from the date of receipt of indent to delivery of the item for indigenous / imported spares/accessories/ consumables	Reduction
4	To improve customer satisfaction level by improving quality of service	Improvement
5	To maintain cost effectiveness in the purchase of items	Savings
6	Timely processing of Annual Maintenance Contract	No delay

EMS Objectives:

#	Quality Objective	Target
1	Reduction in paper consumption	Minimum 5% over a period of 3 years
2	Reduction in water consumption	Minimum 5% over a period of 3 years
3	Reduction in power consumption	Minimum 5% over a period of 3 years
4	Closure of 80% of reported environmental incidents within 48 hrs	80% within 48 hrs.

5	Implement research studies in areas of environment	Consider inclusion of this objective after online software is ready.
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Name: **Dr. K. Ramnarayan**



Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

