

प्रज्ञानं ब्रह्म



Manipal

INSPIRED BY LIFE

Annual Quality Assurance Report (AQAR)

2014 -15

**School of Information Sciences
Manipal**



Submitted to

Manipal Academy of Higher Education

Manipal 576104, Karnataka

Vision

To be the centre of excellence in the area of Very
Large Scale Integration (VLSI)
Design, Embedded Systems & Health Care IT.

Mission

Carry out training & research relevant to
industrial & social needs
Design & deliver post graduate programs
with Industry & International collaborations.

Values

Integrity
Transparency
Quality
Teamwork
Execution with passion
Humane touch

“Values are the principles and beliefs that guide the decisions
and actions of individuals, cultures and businesses”

Annual Quality Assurance Report (AQAR) in Accredited Institutions (Revised in October 2013)



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद्

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi, Bangalore - 560 072 India

(Please Note: AQAR is to be prepared for the Academic Year i.e., from July to June. You are requested to prepare 2 separate reports for the academic years 2013-14 & 2014-15 respectively)

The Annual Quality Assurance Report (AQAR) of the IQAC

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

Part – A

AQAR for the year (for example 2013-14)

July 1, 2014 – June30, 2015

1. Details of the Institution

1.1 Name of the Institution

School of Information Sciences
(SOIS)

1.2 Address Line 1

LG-02, Academic Block-5

Address Line 2

MIT Campus

City/Town

MANIPAL, UDUPI

State

KARNATAKA

Pin Code

576104

Institution e-mail address

office.sois@maipal.edu

Contact Nos.

+91 820 2925032

Name of the Head of the Institution:

Dr. Harishchandra Hebbar N

Tel. No. with STD Code:

Mobile:

Name of the IQAC Co-ordinator:

Mobile:

IQAC e-mail address:

1.5 Website address:

Web-link of the AQAR:

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

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	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

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

- i. AQAR _____ (DD/MM/YYYY)4
- ii. AQAR _____ (DD/MM/YYYY)
- iii. AQAR _____ (DD/MM/YYYY)
- iv. AQAR _____ (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)

1.11 Name of the Affiliating University (*for the Colleges*)

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

Autonomy by State/Central Govt. / University

University with Potential for Excellence UGC-CPE

DST Star Scheme	Nil	UGC-CE	Nil
UGC-Special Assistance Programme	Nil	DST-FIST	Nil
UGC-Innovative PG programmes	Nil	Any other (<i>Specify</i>)	Nil
UGC-COP Programmes	Nil		

2. IQAC Composition and Activities

2.1 No. of Teachers	14
2.2 No. of Administrative/Technical staff	2
2.3 No. of students	2
2.4 No. of Management representatives	1
2.5 No. of Alumni	2
2.6 No. of any other stakeholder and community representatives	2
2.7 No. of Employers/ Industrialists	1
2.8 No. of other External Experts	1
2.9 Total No. of members	25
2.10 No. of IQAC meetings held: 10	

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

Note: * IMS Meetings

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

2.14 Significant Activities and contributions made by IQAC

- **Study Abroad Program (SAP)** - Students from Efrei, France came to study four subjects from March 29, 2015 to June 6, 2015 in School of Information Sciences (SOIS), Manipal.
- **Center for Software Development [CSD]** - CSD is established as the in-house software development center at SOIS catering to the needs of application development for various functional units and Institutes of MAHE.
- Research Methodology course for researchers from 9/1/2015 to 17/1/2015
- National Conference on Information Science (NCIS-2014)
- Workshop on Medical Image Processing Using ITK and VTK on 6th September, 2014
- Workshop on VLSI Design using Cadence Design Suite on 6th September, 2014
- PyBerry Workshop - Application development on Raspberry Pi using Python on 5th and 6th September, 2014

2.15 Plan of Action by IQAC/Outcome

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

Plan of Action	Achievements
Industry defined mini-projects	Philips mini-projects – 15 Pace Wisdom mini-projects – 2 Applied Cognition mini-projects – 3 Tonse Technologies mini-projects - 6
Provide software solution	Centre for Software Development (CSD) – FOUR projects completed and FOUR projects sanctioned.
Conducting Research course	Research Methodology course for researchers from 9/1/2015 to 17/1/2015
Conducting workshops/ guest lecture for students	<ul style="list-style-type: none"> • Workshop on Medical Image Processing Using ITK and VTK on 6th September, 2014 • Workshop on VLSI Design using Cadence Design Suite on 6th September, 2014 • PyBerry Workshop - Application development on Raspberry Pi using Python on 5th and 6th September, 2014
Community service	<ul style="list-style-type: none"> • Mithra Association - Supported 2 students passed 10th Standard for their 10+1 and 10+2
Conducting national level conference	<ul style="list-style-type: none"> • National Conference on Information Science (NCIS-2014)
Conducting IMS audit	<ul style="list-style-type: none"> • Two IMS audits conducted
Conduct Workshop for faculty	<ul style="list-style-type: none"> • Not conducted
FDP for faculty	<ul style="list-style-type: none"> • Not conducted

* Attach the Academic Calendar of the year as Annexure.

2.16 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

Provide the details of the action taken

Nil

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	1	Nil	1	1
PG	8	Nil	8	8
UG	Nil	Nil	Nil	Nil
PG Diploma	Nil	Nil	Nil	Nil
Advanced Diploma	Nil	Nil	Nil	Ni
Diploma	Nil	Nil	Nil	Ni
Certificate	Nil	Nil	Nil	Ni
Others	Nil	Nil	Nil	Ni
Total	9	Nil	9	9
Interdisciplinary	9	Nil	9	9
Innovative	9	Nil	9	9

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

CBCS & Elective option

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	8
Trimester	-
Annual	1(PhD)

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

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

**Please provide an analysis of the feedback in the Annexure*

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

Structure and syllabus modified in M.Sc. Tech (EWT/ VIR). Subject contents modified in M.Sc. Tech (MSW/ VLSI). New electives added in all the branches of M.Sc. Tech and M.Sc. (IS) programs. Change of minimum internship duration of all the M.Sc. (Tech) programs effective from Jan 2015 admission batch.

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

No

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Project Coordinator	Professors	Others
	25	19	2	1	3	0

2.2 No. of permanent faculty with Ph.D.

4

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
0	0	0	0	0	0	0	0	0	0

2.4 No. of Guest and Visiting faculty and Temporary faculty

2 Guest faculty

0 Visiting

0 Temporary faculty

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	4	1	0
Presented papers	4	1	0
Resource Persons	0	0	0

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

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.

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

169

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

Change of minimum internship duration of all the M.Sc. (Tech) programs from EIGHT months to TEN months with effective from Jan 2015 admission batch.

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

11	9	2*
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2.10 Average percentage of attendance of students

Above 80%

2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
M.Sc. Tech (Medical Software)	22	*	*	*	*	100
M.Sc. Tech (VLSI Design)	69	*	*	*	*	94.2
M.Sc. Tech (Embedded Systems)	109	*	*	*	*	94.5
M.Sc. Tech (VLSI System Design and Verification)	5	*	*	*	*	100
M.Sc. Tech (Embedded and Wireless Technology)	6	*	*	*	*	100
M.Sc. Tech (IT Management)	5	*	*	*	*	100
M.Sc. Tech (Embedded Systems & Instrumentation)	19	*	*	*	*	68
M.Sc. Tech (Computing Technologies & Virtualization)	10	*	*	*	*	90

Note: * existing system uses TEN POINT grading system.

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

Contributions:

- Conduction of workshops and guest lectures to students
- Workshops for faculty members

Monitoring/ Evaluation:

- 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

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	2
UGC – Faculty Improvement Programme	0
HRD programmes	0
Orientation programmes	0
Faculty exchange programme	0
Staff training conducted by the university	0
Staff training conducted by other institutions	0
Summer / Winter schools, Workshops, etc.	3
Others – Seminar	5

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	4	0	0	0
Technical Staff	3	0	0	0

Criterion – III

3. Research, Consultancy and Extension

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

Research Methodology course for researchers from 9/1/2015 to 17/1/2015.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	4	0	4	0
Outlay in Rs. Lakhs	22.26	0	14.6	0

3.3 Details regarding minor projects - Nil

	Completed	Ongoing	Sanctioned	Submitted
Number	Nil	Nil	Nil	Nil
Outlay in Rs. Lakhs	-	-	-	-

3.4 Details on research publications

	International	National	Others
Peer Review Journals	12	0	0
Non-Peer Review Journals	0	0	0
e-Journals	0	0	0
Conference proceedings	0	3	0

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

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

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	1	Massachusetts General Hospital, USA	US\$ 50,000	US\$ 20,000
Minor Projects	Nil	Nil	Nil	Nil
Interdisciplinary Projects	Nil	Nil	Nil	Nil
Industry sponsored	Nil	Nil	Nil	Nil
Projects sponsored by the University/ College	Nil	Nil	Nil	Nil
Students research projects <i>(other than compulsory by the University)</i>	Nil	Nil	Nil	Nil
Any other(Specify)	Nil	Nil	Nil	Nil
Total	-	-	US\$ 50,000	US\$ 20,000

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

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

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

3.9 For colleges

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

3.10 Revenue generated through consultancy

3.11 No. of conferences

organized by the Institution

Level	International	National	State	University	College
Number	0	1	0	0	0
Sponsoring agencies	-	DVOIS Broadband	-	-	-

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: 2.7

From Funding agency From Management of University/College

Total

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	2
	Granted	Nil
International	Applied	Nil
	Granted	Nil
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
1	1	Nil	Nil	Nil	Nil	Nil

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

2

6

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

0

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

JRF 0 SRF 0 Project Fellows 0 Any other 0

3.21 No. of students Participated in NSS events:

University level 0 State level 0

National level 0 International level 0

3.22 No. of students participated in NCC events:

University level 0 State level 0

National level 0 International level 0

3.23 No. of Awards won in NSS:

University level 0 State level 0

National level 0 International level 0

3.24 No. of Awards won in NCC:

University level 0 State level 0

National level 0 International level 0

3.25 No. of Extension activities organized

University forum	2	College forum	1		
NCC	0	NSS	0	Any other	0

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

- Volunteer Services Organization
 - Organized DaanUtsav – Joy of Giving Week in first week of October 2014.
 - Visited Bijapu Slum Area @ Manipal, 6 time during year mentioned above
- MITHRA Association
 - Supported 2 students passed 10th Standard for their 10+1 and 10+2

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	3013.82 sqm	Nil	MAHE	3013.82 sqm
Class rooms	8 (AC & ICT Enabled)	Nil	MAHE	8 (AC & ICT Enabled)
Laboratories	6	Nil	MAHE	6
Seminar Halls	1	Nil	MAHE	1
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	Nil	3*	MAHE/SOIS	3
Value of the equipment purchased during the year (Rs. in Lakhs)	Nil	17.7	MAHE/SOIS	17.7
Others	Nil	Nil	Nil	Nil

Note: * HP Desktop 202 g2 (40 numbers);
 Udoos kit + lpc 1769 expresso board (30 numbers)
 Kit - Zigbee Modules (1)

4.2 Computerization of administration and library

All the administration and library services are computerised.

- Students Information System (SIS)
- People soft services for employee
- e-mail communications for informing about BoS meetings, faculty/ staff meetings, time table, mini-project schedules, seminar schedule, placement related activities, scheduling of final project viva, conduction of sessional
- Online attendance system
- Library access to read e-journal papers
- To check the availability of books in the library

4.3 Library services: Centralized Library

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	658	290848.83	27	14851.00	685	305699.83
Reference Books	-	-	-	-	-	-
e-Books	-	-	-	-	-	-
Journals	-	-	-	-	-	-
e-Journals	-	-	-	-	-	-
Digital Database	-	-	-	-	-	-
CD & Video	-	-	-	-	-	-
Others (specify)	-	-	-	-	-	-

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	200	6	200 computers	No separate centre, students can use the lab	separate centre, students can use the lab	4	Each faculty is provided Labtop	Nil
Added	67	Nil	67	Nil	Nil	Nil	Nil	Nil
Total	267	6	267	Nil	Nil	4	Nil	Nil

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

All faculty members are having adequate knowledge in computer and Internet access. Faculty members attend workshops and conferences to upgrade the skills in their area of expertise.

4.6 Amount spent on maintenance in lakhs :

i) ICT	Nil
ii) Campus Infrastructure and facilities	Nil
iii) Equipments	17.7 Lakhs
iv) Others	Nil
Total:	17.7Lakhs

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- 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

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.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
0	346	2	0

(b) No. of students outside the state

87

(c) No. of international students

0

Men	No	%	Women	No	%
	229	66.2		117	33.8

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
421	5	0	2	0	428	337	4	1	6	0	348

Demand ratio 22:1

Dropout % 0

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

Nil

No. of students beneficiaries

Nil

5.5 No. of students qualified in these examinations

NET	0	SET/SLET	0	GATE	0	CAT	0
IAS/IPS etc	0	State PSC	0	UPSC	0	Others	0

5.6 Details of student counselling and career guidance

- Conduction of meetings to highlight the opportunities about study abroad programs
- Pre-placement meetings to brief about the company visiting for internship/ job placements

No. of students benefitted

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
42	160	133	27

5.8 Details of gender sensitization programmes

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

	Number of students	Amount
Financial support from institution	23	11.84 Lakhs
Financial support from government	0	0
Financial support from other sources	0	0

Number of students who received International/ National recognitions 0 0

5.11 Student organised / initiatives

Fairs : State/ University level National level International level
Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

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

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision:
To be the centre of excellence in the area of VLSI Design, Embedded Systems & Health Care IT.
Mission:

- Carry out training & research relevant to industrial & social needs
- Design & deliver post graduate programs with Industry & International collaborations.

6.2 Does the Institution has a management Information System

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

6.3.1 Curriculum Development

6.3.2 Teaching and Learning

6.3.3 Examination and Evaluation

Change of minimum internship duration of all the M.Sc. (Tech) programs from 8 months to 10 months with effective from Jan 2015 admission batch. Update in “Letter Grading System” of Rules & Regulations; Update in the “Re-registration” of Rules & Regulations

6.3.4 Research and Development

- Promotion of externally funded research projects and journal publications
- All researchers to present their progress twice in a year – a follow up mechanism established

6.3.5 Library, ICT and physical infrastructure / instrumentation

Centralized Library

Lab equipped with 267 computers and other peripherals.

6.3.6 Human Resource Management

Performance Management system & Online line systems support system

6.3.7 Faculty and Staff recruitment

Faculty and staff are recruited as per the MAHE guidelines (people manual available online)

6.3.8 Industry Interaction / Collaboration

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.

6.3.9 Admission of Students

Through all India level common entrance examination (MUOET) for ME/ M. Tech.

6.4 Welfare schemes for

Teaching	<ul style="list-style-type: none"> • MAHE Accommodation facility • Scholarship on course fee of employees children and / or spouse • Reimbursement of the children's educational expense • Scholarship for Academy of General Education Students (SAGES) • Laptop facility • MAHE interest subsidy scheme on housing/ utility loan • Felicitation of employee • MARENA Sports facility • Valley club • Medicare facility
Non teaching	<ul style="list-style-type: none"> • MAHE Accommodation facility • Scholarship on course fee of employees children and / or spouse • Reimbursement of the children's educational expense • Scholarship for Academy of General Education Students (SAGES) • MU interest subsidy scheme on housing/ utility loan • Felicitation of employee • Medicare facility
Students	<ul style="list-style-type: none"> • Scholarship • Students to present their work in the education forum like conferences, provides the financial assistance to the students • MARENA Sports facility • Medicare facility

6.5 Total corpus fund generated

503.48 Lakhs

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	-	Yes	-
Administrative	Yes	-	Yes	-

External Audit by TUV, Bengaluru & Internal audit by Quality Dept. MAHE

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?

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

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

Suggested to conduct the examination & evaluation internally at SOIS

6.11 Activities and support from the Alumni Association

Alumni supports for the job and internship placement, guest lectures, training on latest technology.

6.12 Activities and support from the Parent – Teacher Association

No parent teacher association

6.13 Development programmes for support staff

Staff development programs conducted by Manipal University

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

SOIS is an ISO 14001 certified institute. EMS awareness program conducted. To reduce electricity consumption - Displayed stickers in the labs for “Switch off lights and AC when not in use”. To reduce water consumption - Displayed “save water” near the water taps and sprinklers are used in taps. To reduce paper consumption we are using back to back and one side used papers for printing.

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.

- Industry Sponsored labs
- Industry standard hardware and software
- 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.

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

Plan of Action	Achievements
Industry defined mini-projects	Philips mini-projects – 15 Pace Wisdom mini-projects – 2 Applied Cognition mini-projects – 3 Tonse Technologies mini-projects - 6
Provide software solution	Centre for Software Development (CSD) – FOUR projects completed and FOUR projects sanctioned.
Invited talk for faculty	Research Methodology course for researchers from 9/1/2015 to 17/1/2015
Conducting workshops/ guest lecture for students	<ul style="list-style-type: none">• Workshop on Medical Image Processing Using ITK and VTK on 6th September, 2014• Workshop on VLSI Design using Cadence Design Suite on 6th September, 2014• PyBerry Workshop - Application development on Raspberry Pi using Python on 5th and 6th September, 2014

Community service	<ul style="list-style-type: none"> Mithra Association - Supported 2 students passed 10th Standard for their 10+1 and 10+2
Conducting national level conference	<ul style="list-style-type: none"> National Conference on Information Science (NCIS-2014)
Conducting IMS audit	<ul style="list-style-type: none"> Two IMS audits conducted
Conduct Workshop for faculty	<ul style="list-style-type: none"> Not conducted
FDP for faculty	<ul style="list-style-type: none"> Not conducted

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

- | |
|--|
| <ul style="list-style-type: none"> Project based learning (Industry defined mini-projects) The program and subjects are updated frequently based on industry feedbacks |
|--|

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

7.4 Contribution to environmental awareness / protection

Awareness is created to reduce electricity consumption, water consumption and paper consumption. Fire mock drill conducted.

7.5 Whether environmental audit was conducted? Yes No

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

Strength

1. Industry oriented programs
2. Alumni support for updating syllabi and students internship
3. Emphasis for Project based learning
4. Faculty with Industry experience
5. In house Centre for Software Development.

Weakness

1. Small percentage of faculty members with PhD.
2. Not having sufficient experience in research

Opportunity

1. Flexibility in curriculum design & delivery
2. Alumni support in curriculum design, delivery & Internship support
3. Study Abroad / International Programs with foreign universities.
4. Consultancy opportunity

Challenges

1. Getting research grants from government / Industry
2. Attracting best talents
3. Providing industry Internships to all students
4. Short period to train students to industry expectations

8. Plans of institution for next year

- International research grants
- Increase research enrolments
- Addition of industry partners in addition to the existing ones.
- Starting of new master's program in the latest area of technology.
- Expansion of Medical Imaging Research Suite (MIRS), a collaborative initiative with Dept. of Radio diagnosis, KMC, Manipal
- Strengthening student exchange programs
- Support student mobility with partner Universities
- Conduction of International conference and Workshops.
- Conduction of National workshops every year.
- Patents submissions.
- Addition of new foreign collaborations

Name _____

Name _____

Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

Annexure I

ACADEMIC CALENDAR (2014 – 15)

Events	Date/s
Odd Semester (August 2014 – December 2014)	
Commencement of classes for IV Semester M.Sc. Tech	July 28, 2014 (Monday)
Orientation Programme for III Semester M.Sc. Tech	August 1, 2014 (Friday)
C Program for III Semester	August 4 - August 8, 2014
First Internal Evaluation	September 11 – 13, 2014 (Thu, Fri, Sat)
Second Internal Evaluation	October 27 – 29, 2014 (Mon, Tue, Wed)
Last day of instructions (Students)	November 12, 2014
University & End Semester Examinations	November 17 – December 13, 2014
Last working day for faculty	December 20, 2014
Vacation for the faculty	December 21, 2014 to January 7, 2015
Even semester (January 2015 – July 2015)	
Orientation Programme for III Semester M.Sc. Tech	January 12, 2015 (Monday)
Commencement of classes for IV Semester M.Sc. Tech	January 12, 2015 (Monday)
C Program class for III Semester	January 13 – 17, 2015
First Internal Evaluation	February 19 – 21, 2015 (Thu, Fri, Sat)
Second Internal Evaluation	April 13 – 15, 2015 (Mon, Tue, Wed)
Last day of instructions (students)	April 22, 2015 (Wednesday)
University & End Semester Examinations	April 27 – May 23, 2015
Last working day for faculty	May 23, 2015
Vacation for the faculty	May 24 – July 4, 2015
Academic Year 2015 – 2016	
Commencement of classes	August 1, 2015 (Saturday)

Annexure II

Feedback Analysis

Feedback from Students, Alumni and Employer during July 2014- June 2015

1. Student feedback -2014

Online feedback on faculty members under the following parameters has been collected.

Parameters
Subject Knowledge
Lecture Content
Teaching style
Class Participation
Assignments
Assessment
Enthusiasm
Accessibility
Mentoring
Leadership qualities

The average out of 5 for all the faculty members are calculated as **4.23**

2. Alumni feedback 2014 (feedback given at the time of completing the course)

The feedback obtained from 165 students on the below mentioned 23 heads and average is given out of 5 as shown in the table:

	Service offered	Average out of 5
Q1	Quality of Teaching	4.21
Q2	Regularity of Teachers	4.47
Q3	Knowledge level of teachers	4.38
Q4	Lab assignments	4.04
Q5	Method of evaluation	4.20

Q6	Classroom facilities	4.63
Q7	Library facilities (at MIT)	4.56
Q8	Accommodation facilities (at MIT)	4.38
Q9	Sports facilities (at MAHE)	4.35
Q10	Lab facilities	4.48
Q11	Internet facility	4.45
Q12	Guest Lectures	3.69
Q13	Cooperation of office staff	4.60
Q14	Cooperation of technical staff	4.55
Q15	Cooperation of teaching staff in general	4.49
Q16	Cooperation of teaching staff in academics	4.48
Q17	Staff-Student relationship	4.48
Q18	Accessibility of teaching staff	4.45
Q19	Accessibility of Director	4.44
Q20	MCIS support in non-academics matter (sports, culture)	4.16
Q21	Placement support by MCIS	3.46
Q22	MCIS alumni support	3.79
Q23	Satisfaction level about your course	4.10

3. Student feedback -2015 (January - December 2015)

The feedback obtained from 79 students on the below mentioned 23 heads and average is given out of 5 as shown in the table:

	Service offered	Average out of 5
Q1	Quality of Teaching	4.41
Q2	Regularity of Teachers	4.56
Q3	Knowledge level of teachers	4.46
Q4	Lab assignments	4.24
Q5	Method of evaluation	4.42
Q6	Classroom facilities	4.83
Q7	Library facilities (at MIT)	4.85
Q8	Accommodation facilities (at MIT)	4.57
Q9	Sports facilities (at MAHE)	4.49
Q10	Lab facilities	4.76
Q11	Internet facility	4.63
Q12	Guest Lectures	3.81
Q13	Cooperation of office staff	4.59
Q14	Cooperation of technical staff	4.67
Q15	Cooperation of teaching staff in general	4.64
Q16	Cooperation of teaching staff in academics	4.57

Q17	Staff-Student relationship	4.53
Q18	Accessibility of teaching staff	4.60
Q19	Accessibility of Director	4.68
Q20	MCIS support in non-academics matter (sports, culture)	4.10
Q21	Placement support by MCIS	3.45
Q22	MCIS alumni support	3.79
Q23	Satisfaction level about your course	4.24

4. Employer feedback on students' performance during internship:

Project coordinator sends the following mail to the guides at industries where the students are doing internships and collect the feedback.

Feedback request mail format:

Dear Sir/Madam,

Kindly fill up the following table as a feedback on the candidate from MCIS, Manipal working as a Project Trainee under your valuable guidance. Please rate the candidate on a 10-point scale in each of the parameter.

Name of the Guide:

Designation:

Address:

Email Id:

Contact No:

Name of the Candidate:

Branch:

Sl #	Parameter	Rating (Max. 10)
1.	Regularity & Dedication	
2.	Ability to work Independently	
3.	Communication	
4.	Learning Ability	
5.	Leadership Quality	
6.	Ability to work in Groups	
7.	Design of Project Modules	
8.	Implementation of Designs	
9.	Testing of Implementations	
10.	Meeting Deadlines	
Total (Max. 100)		

From all the feedbacks obtained during 2014 – 15, the average performance calculated as **85.234 out of 100.**

Annexure III

Industry Defined Mini-Projects (July 2014 – June 2015)

Following are the list of mini-projects offered by the industry

Philips mini-projects

Contact person: Dinesh Rao

1. Smart metering - Accurate power parameter measurement for system performance monitoring
2. Accurate Battery State of Charge monitoring algorithms for power systems with battery backup.
3. Intelligent Grid charge control for solar power systems with battery backup.
4. Smart power theft detection system.
5. Wireless Solar power parameter measurement (solar insolation, panel temperature and power output),
6. Home Energy Server with power availability and consumption management.
7. Networked lighting with Power-line communications (exploratory study to gather system performance metrics)
8. Easy commissioning platform for networked lighting (non-IR based).
9. Intelligent control of power and lighting systems – solar, DG, utility source management for cost optimization
10. System performance prediction – solar and DG
11. Smart User interfaces – local and remote
12. Utilizing DSP capabilities of controllers for Image processing – presence, motion and contour detection, power quality analysis
13. ECG data analysis for diagnostics
14. Blood constitution spectral analysis to detect clinical conditions
15. Semantic web application for smart lighting controls

Pace Wisdom mini-projects

Contact person: Sreepathy HV

Project -1:

To setup a zigbee wireless mesh network, commissioned in the Home Automation profile.

Analyze network parameters, over the following end Node profiles:

1. Generic
2. Lighting
3. HVAC

Test Configuration : 1 gateway, 1 coordinator, 2 End Nodes. Topology : Star.

Project -2:

Design a circuit to drive a string of LED's to work for 25V to 30V varying DC voltage and provide digital closed loop control for the circuit.

LED STRING SPECIFICATIONS

25v dc, 350mA current
CONVERTER SPECIFICATIONS
Choose appropriate converter
Select switching frequency of MOSFET to be 60khz.

Applied Cognition Systems Mini-projects:

Contact person: Sandeep, APCOG sandeepatilhg@gmail.com, 9916824091

Area: Application Development

Technology: Java Script, C#, MS SQL, Android

Number of Projects - 3

- 1) Optical character recognition module for APCOG
 - 2) Rehabilitation module for Alzheimer patients
 - 3) Application module for health monitoring devices
-

Tonse Technologies mini-projects

Contact person: Yunus Tonse, Tonse Tech.; mytonse@gmail.com, 9900413744

SN	Project Title	Team	Project ID	Technology Spec.Tags
1.	MWiki Hybrid App – Client End	3	8132014A001	HTML5, MongoDB, App Studio, IOS/Android/Windows
2.	AWM Hybrid App – Client	3	8132014A002	HTML5, MongoDB, PhoneGap
3.	AWM Android Application		8132014A003	Java, Android, SQLite, MYSQL
4.	Standalone IP Server	2	8132014EB001	Raspberry Pi, Python , Socket Programming
5.	Sensor Applications	2	8132014EB005	Android,Aurduino, Various Sensors
6.	AWM Server Application	2	8132014A004	PHP,Redis,Cloud

Annexure IV

Program and subjects updates

Following are the program and subjects updated during July 2014 – June 2015

List of BoS Members:

Sl No	Name of BoS Member	E-mail ID
Internal Members		
1	Prof. Harishchandra Hebbar, Offig. Director, SOIS, Manipal – Chairperson	harish.hebbar@manipal.edu
2	Mr. C S Ramashesha, Project Coordinator, SOIS, Manipal-Member	csr.shesha@manipal.edu
3	Mr. Prashanth Kumar Shetty, Associate Professor – Senior Scale, SOIS, Manipal- Member	pk.shetty@manipal.edu
4	Mr. B. Dinesh Rao, Associate Professor, SOIS, Manipal-Member	dinesh.rao@manipal.edu
5	Dr. Keerthana I, Associate Professor, SOIS, Manipal-Member	keerthana.prasad@manipal.edu
6	Mr. Arockiaraj S, Asst. Prof. - Selection Grade, SOIS, Manipal-Member	araj.s@manipal.edu
7	Mr. Shridhara Nayak, Asst. Prof. - Selection Grade, SOIS, Manipal-Member	shridhar.n@manipal.edu
8	Mr. Sundaresan C, Asst. Prof. - Selection Grade, SOIS, Manipal-Member	sundaresan.c@manipal.edu

9	Mr. Mohan Kumar J, Asst. Prof. - Selection Grade, SOIS, Manipal-Member	mohan.js@manipal.edu
10	Mr. Sudhakar Upadya, Asst. Prof. – Senior Grade, SOIS, Manipal-Member	sudhakara.upadya@manipal.edu
11	Dr. Kumara Shama, Prof., Dept. of E&C, MIT, Manipal-Member	shama.kumar@manipal.edu electronics@manipal.edu
12	Dr. Dinesh Acharya, Prof., Dept. of CSE, MIT, Manipal-Member	dinesh.acharya@manipal.edu computer@manipal.edu
13	Registrar, MU, Manipal	reg.mahe@manipal.edu gk.prabhu@manipal.edu
14	Registrar-Evaluation, MU, Manipal - Laxminarayana Rao P [Manipal University]	evaluation@manipal.edu pln.rao@manipal.edu
15	Deputy Registrar – Academics (Technical), MU, Manipal	dreg.mahe@manipal.edu cs.adiga@manipal.edu
External Members		
1	Mr. Manjunatha Maiya, Senior Project Manager, Philips Healthcare – Member	manjunatha.maiya@manipal.edu
2	Mr. Goverdhan P V, Manger, Academic Central, MaGE, Bangalore – Member	pv.goverdhan@manipalglobal.com
3	Dr. Laxminidhi, Asst. Prof., Dept. of E&C, NITK, Surathkal, Karnataka	laxminidhi_t@yahoo.com
4	Dr. Niranchan U C, Director R&T MDN, Manipal.	ucniranjan@yahoo.com

5	Mr. Sandeep Patil H G, Applied Cognition Systems Pvt. Ltd., Bangalore Mobile: 9916824091	sandeepatilhg@gmail.com
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Board of Studies meeting held on November 15, 2014:

1. Change in the Educational Process of Rules and Regulations of all M.Sc. (Tech – Specialization) programs of SOIS to be implemented from January 2015 admission batch onwards. (details are given in Rules & Regulations: 4.1.5)

- a. Increasing the minimum duration of second year internship of all M.Sc. (Tech – Specialization) programs of SOIS from 8 months to 10 months.

Change in the Rules & Regulation of 4.1.5 is as follows

Existing Rule 4.1.5	Modified Rule 4.1.5
Second year (third and fourth semesters) of the program is exclusively for project work / internship. The minimum duration of the project work / internship is 8 months from the date of commencement of the project work / internship.	Second year (third and fourth semesters) of the program is exclusively for project work / internship. The minimum duration of the project work / internship is 10 months from the date of commencement of the project work / internship.

Board of Studies meeting held on March 18, 2015

1. Change of nomenclature from Master of Science in Technology - M.Sc. Tech to Master of Engineering – ME
2. Modification of syllabus in the subject “Low Power VLSI Design” - II Semester ME (VLSI Design)
3. Modification of structure and syllabus - Master of Science - M.Sc. (Information Science)
4. Adding new elective subjects in III Semester of existing M.Sc. (IS) Program (August 2014 admission batch):
 - a. Adding “MSC 665.6: Software Engineering” in Elective-III
 - b. Adding “MSC 667.8: Mobile Application development using Android” in Elective-IV

These two are existing subjects in ME – (Medical Software) Program. [MMS 607 – Software Engineering; MMS 614 – Mobile Application Development using Android]

5. Modification of rules and regulations regarding “re-registration”

Abbreviations:

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



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2. VEDA IIT, Hyderabad
3. Centre for Development of Advanced Computing (C-DAC)
4. IISc, Bangalore
5. BITS, Pilani
6. University of Pune
7. NIT, Tiruchirappalli
8. NIT Rourkela
9. Netaji Subhas Institute of Technology (NSIT)
10. Manipal Centre for Information Science
11. Punjab University, Chandigarh
12. IIIT, Hyderabad
13. Delhi University
14. Anna University
15. VJTI Mumbai
16. PSG College of Engineering, Coimbatore
17. Jadhavpur University

Times of India

INSTITUTE WATCH

- IIT Kharagpur
- IIT Madras
- IIT Delhi
- IIT Mumbai
- VEDA IIT, Hyderabad (industry-academia institution)
- C-DAC (conducts a diploma in VLSI Design)
- The Indian Institute of Science, Bangalore
- BITS, Pilani
- IIT Guwahati
- University of Pune
- NIT, Tiruchirappalli
- Manipal Centre for Information Science (offers an MS VLSI CAD course in a tie-up with Synopsys Inc)
- Punjab University, Chandigarh, in collaboration with Semiconductor Complex Limited, Mohali (conducts an MTech course in Microelectronics)
(Indicative examples)