



**SELF ASSESSMENT REPORT (SAR) FORMAT UNDERGRADUATE
ENGINEERING PROGRAMS (TIER-II)**



Submitted by

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACHARYA INSTITUTE OF TECHNOLOGY
SOLEDEVANA HALLI, BANGALORE – 560107
Date: 11.3.2019**

Table of Contents

Sl. NO.	Item	Page No
PART A	Institutional Information	1-7
PART B	Criteria Summary	8
	Program Level Criteria	
1	Vision, Mission and Program Educational Objectives	9-15
2	Program Curriculum and Teaching – Learning Processes	16-85
3	Course Outcomes and Program Outcomes	86-121
4	Students' Performance	122-155
5	Faculty Information and Contributions	156-209
6	Facilities and Technical Support	210-219
7	Continuous Improvement	220-234
Institute Level Criteria		
8	First Year Academics	235-259
9	Student Support Systems	260-293
10	Governance, Institutional Support and Financial Resources	294-345
PART C	Declaration by the Institution	346
ANNEXURE-1	Program Outcomes (POs) & Program Specific Outcomes (PSOs)	
ANNEXURE-2	Calendar of Events	
ANNEXURE-3	Sample of minutes of meetings	

Part A: Institutional Information

1	Name and Address of the Institution	: Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road Achitnagar Post, Soladevanahalli, Bengaluru - 560107
2	Name and address of the affiliating university	: Visvesvaraya Technological University Jnana Sangam, Macche Belagavi-590018
3	Year of establishment	: 2000
4	Type of institution	: University <input type="checkbox"/> Deemed University <input type="checkbox"/> Government Aided <input type="checkbox"/> Autonomous <input type="checkbox"/> Affiliated <input checked="" type="checkbox"/>
5	Ownership Status	Central Government <input type="checkbox"/> State Government <input type="checkbox"/> Government Aided <input type="checkbox"/> Self - Financing <input checked="" type="checkbox"/> Trust <input type="checkbox"/> Society <input type="checkbox"/> Section 25 Company <input type="checkbox"/> Any Other (Please specify) <input type="checkbox"/> :

6. Other Academic Institutions of the Trust/Society/Company etc., if any

SL No	Name of the Institution(s)	Year of Establishment	Programs of Study	Location
1	Acharya Polytechnic	1991 -92	Diploma in Engg.	Acharya Dr. Sarvepalli Radhakrishnan Road, Soladevanahalli, Achitnagar Post, Bengaluru - 107
2	Acharya B M Reddy College of Pharmacy	1992- 93	Pharmacy	
3	Smt. Nagarathnamma School of Nursing	2003 - 04	BSc. Nursing, M.Sc. Nursing	
4	Acharya College of Education	2004 - 05	Diploma in Elementary Education, B.Ed.	
5	Acharya Institute of Graduate Studies	2005 - 06	BA - JOURNALISM, MARKETING, BSc., MSc., BCA, BBM, B. Com, Com, MFA, MIB, BSc. - PCM, PMF, MA	
6	Acharya Pre University College	2005 -06	PCMB, PCMC, PCME, CEBA	
7	Acharya School of Management	2009 - 10	PGDM	
8	Acharya NRV School of Architecture	2009 -10	B. Arch	
9	Acharya School of Law	2014 -15	BA LLB, BBA LLB, LLB	
10	Acharya School of Design	2015 - 16	Bachelor of Visual Arts, Painting, Sculpture, Graphic Design, Product Design, Furniture Design, Interior Design	
11	Acharya Institute of Allied Health Sciences	2018 -19	BSc. Programs	

Table A.6

7. Details of all the programs being offered by the institution under consideration:

S. No	Program Name	Name of the Department	Year of Start	Intake	Increase in intake, if any	Year of increase	AICTE Approval	Accreditation Status*
1	BE	Aeronautical Engg.	2011-12	60	-	-	Approved	Eligible but not applied
2	BE	Automobile Engg.	2011-12	60	-	-	Approved	Eligible but not applied
3	BE	Biotechnology	2002-03	30	60	2018-19	Approved	Provisionally Accredited from 2018 to 2020
4	BE	Civil Engg.	2009-10	60	120	2014-15	Approved	Applying first time
5	BE	Computer Science & Engg.	2000-01	60	90 120	2001-02 2011-12	Approved	Accredited for 3 years from 2009-2012 Not accredited vide visit dated 25 th to 27 th October 2013
6	BE	Construction Technology & Management	2011-12	60	-	-	Approved	Eligible but not applied
7	BE	Electrical & Electronics Engg.	2004-05	60	120	2012-13	Approved	Not accredited vide visit dated 25 th to 27 th October 2013
8	BE	Electronics & Communication Engg.	2000-01	60	90 120	2001-02 2012-13	Approved	Accredited for 3 years from 2008-2011 Not accredited vide visit dated 25 th to 27 th October 2013
9	BE	Information Science & Engg.	2000-01	60	90 120	2001-02 2013-14	Approved	Accredited for 3 years from 2009-2012 Not accredited vide visit dated 25 th to 27 th October 2013

10	BE	Mechanical Engg.	2002-03	60	90 120	2009-10 2012-13	Approved	Accredited for 3 years from 2008-2011 Not accredited vide visit dated 25 th to 27 th October 2013
11	BE	Mechatronics Engg.	2009-10	60	-	-	Approved	Applying first time
12	BE	Manufacturing Science & Engg.	2013-14	60	-	-	Approved	Eligible but not applied
13	BE	Mining Engg.	2013-14	60	-	-	Approved	Eligible but not applied
14	Business Administration	MBA	2007-08	60	120 240	2011-12 2012-13	Approved	Eligible but not applied
15	Computer Applications	MCA	2007-08	60	120 240 120	2011-12 2012-13 2018-19	Approved	Applied and with drawn vide visit dated 7 th to 9 th 2008
16	M.Tech.	Biotechnology	2010-11	18	-	-	Approved	Eligible but not applied
17	M.Tech.	Computer Network & Engg.	2012-13	18	-	-	Approved	Eligible but not applied
18	M.Tech.	Computer Science & Engg.	2011-12	18	24	2012-13	Approved	Eligible but not applied
19	M.Tech.	Cyber Forensics & Information Security	2014-15	18	-	-	Approved	Eligible but not applied
20	M.Tech.	Digital Communications	2010-11	18	-	-	Approved	Eligible but not applied
21	M.Tech.	Machine Design	2011-12	18	-	-	Approved	Eligible but not applied
22	M.Tech.	Power System Engg.	2011-12	18	-	-	Approved	Eligible but not applied
23	M.Tech.	Product Design & Manufacturing	2013-14	18	-	-	Approved	Eligible but not applied

Table A.7

8. Programs to be considered for Accreditation vide this application:

S. No.	Program Name
1	Civil Engineering
2	Computer Science & Engineering

3	Electronics & Communication Engineering
4	Mechanical Engineering
5	Mechatronics

Table A.8

9. Total number of employees in the institution:**A. Regular Employees (Faculty and Staff):**

Items	Gender	2018-2019		2017-2018		2016-2017	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	145	168	156	176	132	157
	F	83	100	78	96	68	89
Faculty in Maths, Science & Humanities	M	19	22	21	23	19	21
	F	12	12	10	12	6	14
Non-teaching staff	M	42	47	37	45	35	39
	F	24	27	23	29	25	31

Table A.9 a

B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A):

Items	Gender	2017-2018		2016-2017		2015-2016	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	Nil					
	F						
Faculty in Maths, Science & Humanities	M						
	F						
Non-teaching staff	M						
	F						

Table A.9 b

10.Total Number of undergraduate Engineering students.

Item	2018-2019	2017-2018	2016-2017
Total no. of boys	3077	2907	3205
Total no. of girls	952	924	930
	4029	3831	4135

Total no. of students			
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Total Number of Post graduate Engineering students.

Item	2018-2019	2017-2018	2016-2017
Total no. of boys	24	42	66
Total no. of girls	22	28	54
Total no. of students	46	70	120

Total Number of MBA students

Item	2018-2019	2017-2018	2016-2017
Total no. of boys	244	257	274
Total no. of girls	131	127	125
Total no. of students	375	384	399

Total Number of MCA students

Item	2018-2019	2017-2018	2016-2017
Total no. of boys	115	176	269
Total no. of girls	137	108	125
Total no. of students	252	235	394

11. Vision of the Institution:

Acharya Institute of Technology, committed to the cause of value-based education in all disciplines, envisions itself as a fountainhead of innovative human enterprise, with inspirational initiatives for Academic Excellence.

12. Mission of the Institution:

Acharya Institute of Technology strives to provide excellent academic ambiance to the students for achieving global standards of technical education, foster intellectual

and personal development, meaningful research and ethical service to sustainable societal needs

13. Contact Information of the Head of the Institution and NBA coordinator, if designated:

i. Name : Dr M.R. Prakash

Designation : Principal

Mobile No :9448864740

Email Id ; principalait@acharya.ac.in

ii. **NBA coordinator,**

Name : Dr Gopinath S M

Designation : Professor & Head, Department of BT, IQAC-Coordinator

Mobile No :8660793877

Email Id ; gopinath@acharya.ac.in

PART B: Criteria Summary**Name of the program: Electronics and Communication Engineering**

Criteria No.	Criteria	Mark/Weightage
Program Level Criteria		
1.	Vision, Mission and Program Educational Objectives	60
2.	Program Curriculum and Teaching – Learning Processes	120
3.	Course Outcomes and Program Outcomes	120
4.	Student's Performance	150
5.	Faculty Information and Contributions	200
6.	Facilities and Technical Support	80
7.	Continuous Improvement	50
Institute level Criteria		
8.	First Year Academics	50
9.	Student Support Systems	50
10.	Governance, Institutional Support and Financial Resources	120
Total		1000

CRITERION 1	Vision, Mission and Program Educational Objectives	60
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1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

1.1. State the Vision and Mission of the Department and Institute (5)

(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)

Vision of the Institute

Acharya Institute of Technology, committed to the cause of sustainable value based education in all discipline, envisions itself as a global fountainhead of innovative human enterprise, with inspirational initiative for Academic Excellence.

Mission of the Institute

Acharya Institute of Technology strives to provide excellent academic ambiance to the students for achieving global standards of technical education, foster intellectual and personal development, meaningful research and ethical service to sustainable societal needs.

Vision of the Department

To be a premier engineering department with excellence in teaching, research and innovation, to meet the global industrial standards and to have significant impact on the well being of the society.

Mission of the Department

1. To provide student centric learning environment, inculcate profound knowledge in both fundamental and applied areas of science and technology.
2. To train and mentor the students in developing leadership qualities and team building skill

1.2. State the Program Educational Objectives (PEOs) (5)

(State the PEOs (3 to 5) of program seeking accreditation)

Program Educational Objectives (PEOs) are

PEOs	Statements
PEO1	Students shall have a successful professional career in industry, academia, R & D organization or entrepreneur in specialized field of Electronics & Communication engineering and allied disciplines.
PEO2	Students shall be competent, creative and valued professional in the chosen field.
PEO3	Engage in life-long learning and professional development.
PEO4	Become effective global collaborator, leading or participating to address technical, business, environmental and societal challenges.

1.3. Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

(Describe where (websites, curricula, posters etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation)

Internal stakeholders may include Management, Governing Board Members, faculty, support staff, students etc. and external stakeholders may include employers, industry, alumni, funding agencies, etc.)

A. The Vision, Mission and PEOs are published at:

1. Institute website https://www.acharya.ac.in/acharya_institute_of_technology
2. Course plan emailed to the students
3. Alumni survey forms
4. Employer survey forms
5. Displayed in HOD's room
6. Displayed on notice boards in the corridors
7. Displayed on notice boards of laboratories, classrooms, and notice boards
8. Departmental Magazine SPECTRA
9. Institution/Department Information brochures

B. Process of dissemination among stake holders

The Vision, Mission of the institution, department and PEOs are communicated to faculty and students (new comers) in the introductory meeting. Faculties are made aware through discussions in regular meetings and Departmental Academic Committee (DAC) meetings.

Faculty includes Vision, Mission of the institute and the department and PEOs in their course file and also communicates same to the students. The same are brought to the notice of the employers, parents and alumni by through information brochure, departmental magazine and also discussed in the parent- teacher meetings. In addition, Faculty Development Programs (FDP) on Outcome Based Education (OBE) are organized as and when necessary.

1.4. State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

(Articulate the process for defining the Vision and Mission of the department and PEOs of the program)

A. Description of process involved in defining Vision and Mission of the Department:

The vision and mission statements of the department are established through a thorough consultation process by involving the stakeholders (internal and external) of the department. The inputs from Alumni Interaction, Exit Interview, Advisory Board Committee and department Strengths & Statistics is used in framing the **Vision & Mission Statements** of the dept. aligned with the institutional **Vision & Mission Statements**.

Step1: In the initial phase, the Head of the department along with the DAC members defines the vision and mission statements which are in alignment with the vision and mission of the institute

Step 2: The vision and mission statements, defined as stated in step-1 are shared with faculty, students, alumni, management and IQAC for the feedback

Step 3: The feedback so obtained by the stake holders in step-2 are discussed among DAC members before finalization

Step 4: The new vision and mission statements (outcome of the DAC meeting) are placed before Advisory Board (Departmental) and IQAC for recommendation.

Step 5: Once the vision and mission statements are recommended by the IQAC/Advisory board they are published in the website and other places stated in 1.3. Any comments

by the Internal/External stake holders are noted and considered for next cycle of revising the vision and mission statements

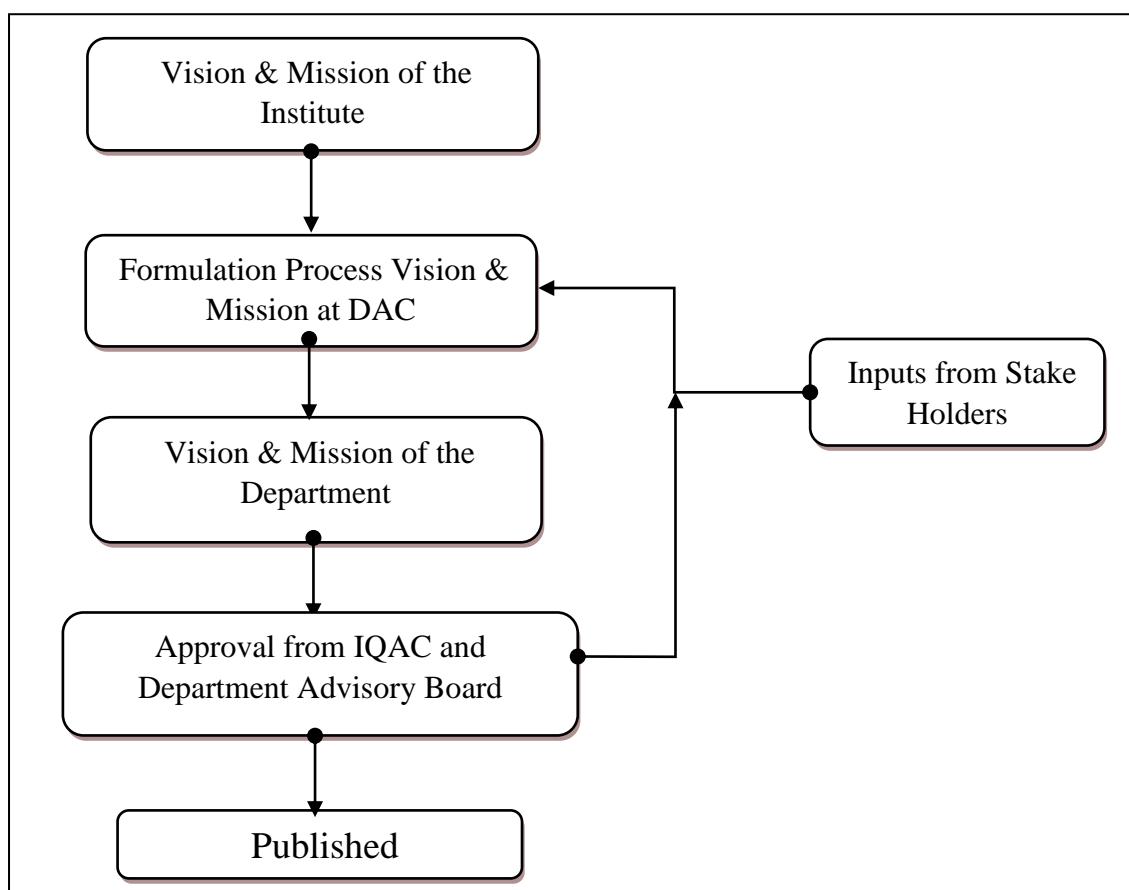


Fig. B.1.4.1 Process to establish department vision & mission

B. Description of process involved in defining PEOs of the Department:

The Program Educational Objectives are established through a consultation process involving the core constituents such as students, alumni, industries and faculty members.

The PEOs are established through the following steps:

Step 1: The PEOs are initially defined considering the following:

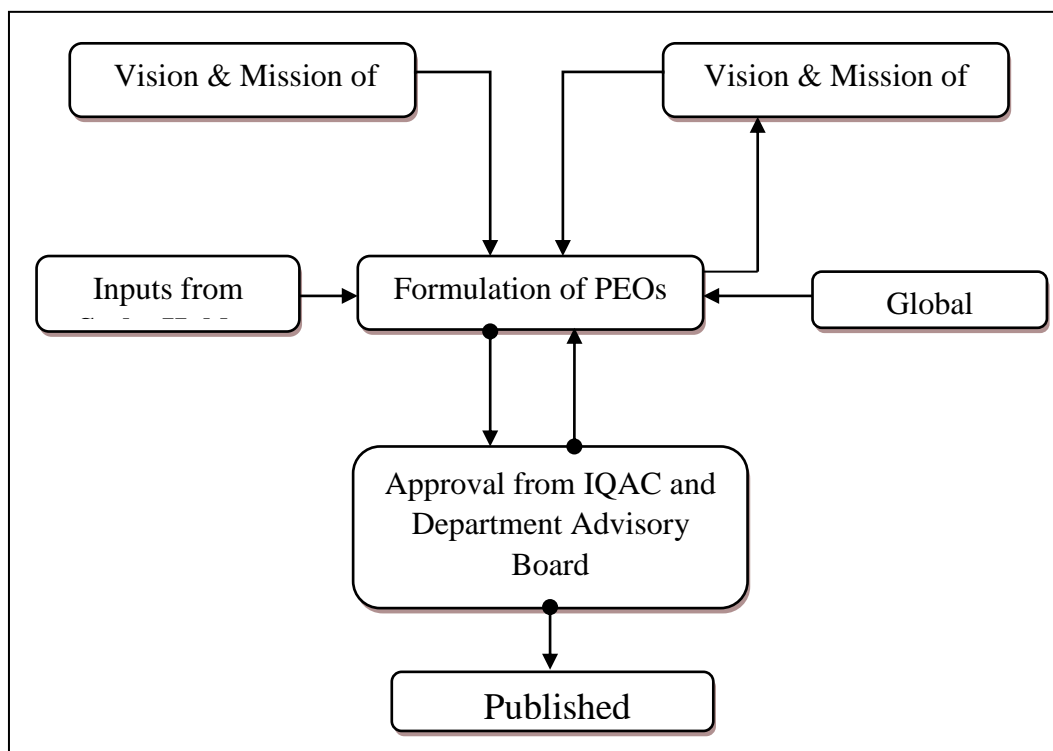
- Vision, mission statements of the institute/department, program outcomes
- Feedback from alumni (those who have 2 years of experience after graduation) and industry requirement
- Expectations of parents/aspirants of the program.

- The placement record of the graduates from the Training and Placement cell and higher education records
- Curricular analysis

Step 2: The PEOs so defined are discussed among faculty, current students, alumni, parents, departmental advisory board and members of DAC. The feedback from all of them is considered for refining the same.

Step 3: The PEOs from step 2 are put before IQAC and departmental advisory board for discussion and feedback. Once the advisory board and IQAC approve the PEOs, they will be published.

Step 4: Attainment of the stated PEOs is checked through surveying views of employers of our students and alumni. Their views are considered while modifying PEOs in next cycle.



1.5. Establish consistency of PEOs with Mission of the Department (15)
(Generate a “Mission of the Department – PEOs matrix” with justification and rationale of the mapping)

MISSION

MISSION	Statements
MISSION 1	To provide student centric learning environment, inculcate profound knowledge in both fundamental and applied areas of science and technology.
MISSION 2	To train and mentor the students in developing leadership qualities and team building skills along with professional ethics.

MAPPING OF PEOs V/s MISSION OF THE DEPARTMENT

1. Slightly (Low)
2. Moderate (Medium)
3. Strong (High)

PEOs	Mission of the Department		Justification
	M1	M2	
PEO1	3	2	<p>The dept. focus on Student centric learning environment in developing technical competency through quality education, collaborating with industries, setting up industry initiated laboratories, exposure to latest tools and technologies, Land to lab based learning, self learning through seminars and projects. This aids the graduates to have a successful professional career. Hence PEO1 strongly maps to M1.</p> <p>Creating a conducive environment wherein students are exposed to industrial/societal connects, self learning through seminars and projects, students made to organize technical events through departmental forum, makes them confident and allow them to</p> <p>lead organizations and or become effective team members with professional ethics. Hence PEO1 is moderately mapped to M2.</p>
PEO2	3	3	<p>Student centric learning, exposure to latest tools and technologies, learning experience through seminars and projects, imbibing interest in taking up research activities in the thrust areas of engineering with the support of the department research centre will make the students competent in their chosen field of career. Hence PEO2 are strongly mapped to M1 and M2.</p>
PEO3	2	2	<p>Exposing students to latest technologies and tools, its impact on the society, self learning skills through seminars, internships, projects will make students to engage in learning and professional development. Mission 1 & 2 Moderately support PEO3 because it focuses on the attainment of professional competencies related to</p>

			the latest technological advancement.
PEO4	2	3	Creating a conducive environment for student centric learning, with focus on professional development and technical competency will make the students confident in leading organizations and or become effective contributors in addressing challenges with an impact on the society at large. Hence M2 moderately and M3 strongly supports PEO4.

CRITERION 2	Program Curriculum and Teaching Learning Process	120
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2.1 Program Curriculum (20)

2.1.1. State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any (10)

The Department of Electronics and Communication Engg., Acharya Institute of Technology is affiliated to Visvesvaraya Technological University (VTU), Belagavi, and Karnataka. The program curriculum is as provided by VTU which is a composition of Basic science, humanities, professional courses and their distribution as core and electives with the specified breadth and depth of learning. The curriculum is formulated and reviewed once in 4 years through Board of Studies (BoS) of VTU comprising a Chairman, Senior Professors of ECE discipline and Industry representatives.

The composition of VTU curriculum for the program B.E (Bachelor of Engineering) in Electronics and Communication Engineering (ECE) is shown in table B.2.1.1.a. The table B.2.1.1.b shows extent of mapping of the courses to program outcomes and table B.2.1.1.c shows the mapping of the courses to program specific outcomes.

Table B.2.1.1.a Composition of courses

Sl No	Types of Course offered	No of subjects mapped	No of hours allotted	Weightage in Percentage	POs
1	Humanities & Social Sciences	02	52	02	7,8,12
2	Basic Sciences	08	396	12	1,2,3,4,6,7,12
3	Engineering Sciences	08	428	14	1-12
4	Professional Core subjects	37	1850	58	1,2,3,4,5,6,8,9,10,11,12
5	Elective	06	300	10	1,2,3,8,10,12
6	Project Work	01	84	03	1,3,4,5,8,9,10,11,12
7	Seminar	01	28	01	1,5,6,8,9,12
Total Hours		63	3138	100	

Table B.2.1.1.b Mapping of the courses to Program Outcomes

SUBJECT CODE	SUBJECT NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I Semester													
10MAT11	Engg Mathematics-1	✓	✓	-	-	-	-	-	-	-	-	-	-
10CHE12	Engg Chemistry	✓	✓	-	-	-	-	-	-	-	-	-	-
10CCP13	C Programming For Problem	✓	✓	-	-	-	-	-	-	-	-	-	-
10CED14	Computer Aided Engg Drawing	-	✓	✓	✓	✓	-	-	-	-	-	-	-
10ELN15	Basic Electronics	✓	✓	-	-	-	-	-	-	-	-	-	-
10CPL16	C Programming Laboratory	-	✓	✓	✓	-	-	-	-	-	-	-	-
10CHEL17	Engg chemistry Lab	✓	✓	-	✓	-	-	-	-	-	-	-	-
10CIV18	Environmental Studies	-	-	-	-	-	✓	✓	-	-	-	-	-
II Semester													
10MAT21	Engg Mathematics-2	✓	✓	-	-	-	-	-	-	-	-	-	-
10PHY22	Engg physics		✓	-	-	-	-	-	-	-	-	-	-
10CIV23	Elements of Civil Engg	✓	✓	-	-	-	-	-	-	-	-	-	-
10EME24	Elements of Mechanical Engg	-	✓	✓	-	-	-	-	-	-	-	-	-
10ELE25	Basic Electrical Engineering	✓	✓	-	-	-	-	-	-	-	-	-	-
10WSL26	Work shop Practices Lab	✓	-	✓	-	✓	-	-	-	✓	-	-	-
10PHYL27	Engg Physics Lab	✓	✓	-	✓	-	-	-	-	-	-	-	-
10CIP28	Constitution of India and	-	-	-	-	-	-	-	✓	-	-	-	✓
III Semester													
10MAT31	Engg Mathematics-III	✓	✓	-	-	-	-	-	-	-	-	-	-
10ES32	Analog Electronics	✓	✓										
10ES33	Logic Design	✓	✓	✓	-	-	-	-	-	-	-	-	-
10EC34	Network Analysis	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10IT35	Electronic Instrumentation	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC36	Field Theory	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10ECL37	Analog Electronics	✓	✓	✓	✓	-	-	-	-	-	✓	-	-
10ECL38	Logic Design Laboratory	✓	✓	✓	✓	-	-	-	-	-	✓	-	-
IV Semester													
10MAT41	Engg Mathematics-Iv	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC42	Microcontrollers	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC43	Control Systems	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC44	Signals & Systems	✓	✓	-	-	-	-	-	-	-	-	-	✓
10EC45	HDL	✓	✓	✓	✓	-	-	-	-	-	-	-	✓

SUBJECT CODE	SUBJECT NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC46	Linear Integrated Circuits	✓	✓	✓	-	-	-	-	-	-	-	-	-
10ECL47	Microcontroller Laboratory	✓	✓	✓	-	-	-	-	-	-	-	-	✓
10ECL48	HDL Laboratory	✓	✓	✓	✓	✓	-	-	-	-	-	-	-
V Semester													
10AL51	Management & Entrepreneurship				✓		✓		✓	✓		✓	
10EC52	Digital Signal Processing	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC53	Analog Communication	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC54	Microwave Radar	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC55	Information Theory & Coding	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC56	CMOS VLSI Design	✓	-	-	-	-	-	-	-	-	-	-	-
10ECL57	DSP Laboratory	✓	✓	✓	-	-	-	-	-	-	-	-	-
10ECL58	Analog Communication +	✓	✓	✓	-	✓	-	-	-	✓	✓	-	-
VI Semester													
10EC61	Digital Communication	✓	✓	✓	✓	✓	-	-	-	-	-	-	✓
10EC62	Microprocessors	✓	✓	-	-	-	-	-	-	-	-	-	-
10EC63	Microelectronics	✓	✓	-	-	-	-	-	-	-	-	-	-
10EC64	Antenna & Propagation	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC65	Operating System	✓	✓	-	-	-	-	-	-	-	-	-	✓
10EC662	Satellite communication	✓	✓	✓	✓	-	-	-	-	-	-	-	-
10EC665	Prog. Using C++	✓	✓	✓	-	-	-	-	-	-	-	-	-
10ECL67	Adv. Commn. Lab	✓	✓	✓	✓	✓	-	-	-	✓	✓	-	-
10ECL68	Microprocessor Lab	✓	✓	✓	✓	✓	-	-	-	✓	✓	-	-
VII Semester													
10EC71	Computer Communication	✓	✓	✓	-	-	-	-	-	-	-	-	-
10EC72	Optical Fibre Commutation.	✓	✓	✓	-	-	-	-	-	-	-	-	✓
10EC73	Power Electronics	✓	✓	✓	-	-	-	-	-	-	-	-	✓
10EC74	Embedded System Design	✓	✓	✓	✓	✓	-	-	-	-	-	-	✓
10EC751	DSP Architecture	✓	✓	-	-	-	-	-	-	-	-	-	-
10EC753	Image Processing	✓	-	-	-	-	-	-	-	-	-	-	-
10ECL77	VLSI Lab	✓	✓	-	-	-	-	-	-	-	-	-	-
10ECL78	Power Electronics Lab	✓	✓	-	✓	-	-	-	-	-	-	-	✓
VIII Semester													
10EC81	Wireless Communication	✓	✓	-	-	-	-	-	-	-	-	-	-

SUBJECT CODE	SUBJECT NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC82	Digital Switching System	✓	✓	-	-	-	-	-	-	-	-	-	✓
10EC831	Network Security	✓	✓	-	-	-	✓	-	-	-	✓	-	✓
10EC832	Multimedia Communication	✓	✓	✓	-	-	-	-	-	-	-	-	-
10EC85	Project	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10EC86	Seminar	✓	✓	-	-	✓	-	-	-	✓	✓	-	✓
Total		52	44	29	07	10	06	02	05	15	15	02	42
%		83	69	46	11	16	09	03	07	23	23	03	67

Table B.2.1.1.c Mapping of the courses to Program Specific Outcomes

Subject Code	Subject Name	PSO1	PSO2	PSO3
I SEMESTER				
14ELE15	Basic Electronics	✓	✓	✓
III SEMESTER				
10MAT31	Engg Mathematics-III			
10ESS32	Analog Electronics	✓	-	-
10ES33	Logic Design	✓	-	-
10EC34	Network Analysis	✓	-	-
10IT35	Electronic Instrumentation	✓	-	-
10EC36	Field Theory	✓ -	-	✓
10ECL37	Analog Electronics Laboratory	✓	-	-
10ECL38	Logic Design Laboratory	✓	-	-
IV SEMESTER				
10MAT41	Engg Mathematics-IV			
10ES42	Microcontrollers	-	✓	-
10ES43	Control Systems	✓	-	-
10EC44	Signals & Systems	-	✓	✓
10EC45	HDL	-	✓	-
10EC46	Linear Integrated Circuits	✓	-	-
10ECL47	Microcontroller Laboratory	-	✓	-
10ECL48	HDL Laboratory	✓	✓	-
V SEMESTER				
10AL51	Management & Entrepreneurship			
10EC52	Digital Signal Processing	✓	✓	-
10EC53	Analog Communication	-	-	✓
10EC54	Microwave Radar	-	-	✓
10EC55	Information Theory & Coding	✓	-	✓
10EC56	CMOS VLSI Design	-	✓	-
10ECL57	DSP Laboratory	-	✓	-
10ECL58	Analog Communication + LIC Lab	✓	✓	✓

Subject Code	Subject Name	PSO1	PSO2	PSO3
VI SEMESTER				
10EC61	Digital Communication	-	✓	✓
10EC62	Microprocessors	-	✓	-
10EC63	Microelectronics	✓	✓	-
10EC64	Antenna & Propagation	-	-	✓
10EC65	Operating System	-	✓	✓
10EC662	Satellite Communication	-	-	✓
10EC665	Prog. Using C++	-	✓	-
10ECL67	Adv. Commn. Lab	-	-	✓
10ECL68	Microprocessor Lab	-	✓	-
VII SEMESTER				
10EC71	Computer Communication Networking	-	-	✓
10EC72	Optical Fibre Commutation.	-	-	✓
10EC73	Power Electronics	✓	-	-
10EC74	Embedded System Design	-	✓	-
10EC751	Dsp Architecture	✓	✓	✓
10EC763	Image Processing	-	✓	-
10ECL77	VLSI Lab	✓	✓	-
10ECL78	Power Electronics Lab	✓	-	-
VIII SEMESTER				
10EC81	Wireless Communication	-	-	✓
10EC82	Digital Switching System	-	-	✓
10EC832	Network Security	-	-	✓
10EC841	Multimedia Communication Engg.	-	✓	✓
10EC85	Seminar	✓	✓	✓
10EC86	Project	✓	✓	✓

The percentage of mapping of Courses to POs shown in table B.2.1.1.d & B.2.1.1.e, provides curricular gaps and mapping beyond syllabus. Efforts are made to impart requisite knowledge by the way of “*content enhancement beyond syllabus*”

Table B.2.1.1.d Gaps in POs

Sl No	PO's	Description
1	PO4	Conduct investigation
2	PO5	Modern tool Usage
3	PO6	The Engineer & Society
4	PO7	Environment & Sustainability
5	PO8	Ethics
6	PO9	Individual & Team Work
7	PO10	Communication

Sl No	PO's	Description
8	PO11	Project Management & Finance

Table B.2.1.1.e Mapping of beyond syllabus activities

Matrix showing the mapping of beyond syllabus activities (by special groups) with the defined POs and PSOs:

Sl. No	Activities /groups	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO 12	PS O1	PS O2	PS O3
1	IEEE	✓	✓	✓		✓	✓	✓						✓	✓	✓
2	Student Forum (Spectra)	✓	✓	✓	✓	✓				✓	✓			✓	✓	✓
3	NSS										✓	✓	✓			
4	Placement Cell												✓	✓	✓	✓
5	Icare										✓	✓	✓			
6	Orientation Program								✓	✓	✓	✓	✓			
7	CII		✓	✓		✓	✓	✓						✓	✓	✓

2.1.2. State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs. (10)

Table B.2.1.2.a Content discussed beyond the syllabus to fill the curriculum gap

2018- 2019 (CAY)						
Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	% of Students Attended	Relevance to POs, PSOs
1	Use of modern tools and technologies	4 days Simulation and Modelling Series with MATLAB	23/2/2019 2/3/2019 9/3/2019 23/3/2019	ECE Faculty	33	PO1,PO2,PO5, PO9,PO12,PSO2, PSO3
2	Use of modern tools and technologies	3 days workshop on practical foundation on Artificial Intelligence	7/2/2019 to 9/2/2019	Mr, Suraj Jana Founder & Head of Research, Open cube Labs	52	PO1,PO2,PO5,P O9,PO12,PSO2, PSO3
3	Use of modern tools and technologies	3 days Training on Nvidia GPU based system for AI & Deep learning	20/2/2019 to 22/2/2019	Manish Software Engineer, Brain Grid Technologies	35	PO1,PO2,PO5,P O9,PO12,PSO2, PSO3

Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	% of Students Attended	Relevance to POs, PSOs
4	Use of modern tools and technologies	3 days workshop on Embedded System Design for IoT Applications using TI boards	16/1/2019 to 18/1/2019	Mr. Rajesh M, Sr. Application Engineer, Basavana Gowda Sr. Application Engineer Digital Shark Technology Pvt. Ltd	30	PO1,PO2,PO5,P09,PO12,PSO2, PSO3
5	Technical Skills in line with the requirements of the industry	Workshop on ROBOTIC, IOT, CPMA	29/8/2018 TO 1/9/2018	Microsoft Company	50	PO1, PO5,PO12,PSO2, PSO3
6	To choose career in different domain in Software development companies.	Technical talk on Prerequisites and different domain for career in software companies	30/10/2018	Mr. Vikram Shastry, Director, Uttara Info solutions, Bangalore.	60	PO12,PSO2
7	Technical Skills in line with the requirements of the industry	Workshop on ROBOTIC, IOT, CPMA	29/8/2018 to 1/9/2018	Microsoft Company	45	PO1, PO5,PO12,PSO2, PSO3
8	Industry readiness	Technical Talk Advances in Wireless Communication	27/8/2018	Dr. Muralidhar Kulkarni	80	PO2,PO12 PSO3
9	Enhance Technical Skills in line with the requirements of the industry	Infosys Company Specific Training	22/08/2018 to 25/08/ 2018	Q-spider	45	PO8,PO10,PO12
10	Enhance Technical Skills in line with the requirements of the industry	Soft skill Training	5/09/2018 to 8/09/ 2018	Innovation Unlimited	80	PO8,PO10,PO12
11	Enhance Technical Skills in line with the requirements of the industry	Soft skill Training	22/10/2018 to 24/10/ 2018	J V Global	70	PO8,PO10,PO12

2017- 2018 (CAY m1)						
Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	No. of Students Attended	Relevance to POs, PSOs
1	Industry readiness	Technical Talk VLSI Digital design and its practical applications	27/08/2018	Mr. Vaibhav Taraate, One Rupee Semiconductor Training, Pune	70	PO2, PO12, PSO2
2	Industry readiness	Entrepreneurship awareness Workshop	18/3/2017	<ul style="list-style-type: none"> Mr. Raj K Shankar Entrepreneur, EDII Mr. Anand Madan Gopal Cardiac Labs Mr. Pavan Kumar Founder, Workbench Projects 	70	PO8, PO10, PO12
3	Usage of modern tools, technologies & coding skills	Five days Workshop on System Design using Xilinx Vivado Design Suite and Zynq-7000 SOC	23/07/2018 to 27/07/2018	<ul style="list-style-type: none"> Mr. Prakash G, Lead Application Engineer, CoreEL Technologies Pvt Ltd. Mr. Vijendra V, Application Engineer, CoreEL Technologies 	45	PO3, PO5, PO12, PSO2
4	Industry readiness	Technical Talk on Semiconductor Industry Opportunities and Expectations.	14/2/2018	Mr. Arup Tripathy Member, Technical staff, CoreEL Technologies	80	PO2, PO12, PSO2
5	Usage of modern tools and technologies Individual and Team Work, Life Long Learning, Project Management	In House Internship Raspberry Pi and Arduino	31/1/2018 to 5/2/2018	Mr Sandeep Kumar K Assistant Professor Department of ECE Acharya I T Mr. Siddesh M B Assistant Professor Department of ECE Acharya I T	65	PO1, PO2, PO3, PO5, PO9, PO12 PSO2
6	Usage of modern tools & technologies, coding skills	2 days Workshop on Raspberry Pi and IoT	6/10/2017 to 7/10/2017	Nayan Mujadiya, R&D Engineer MaxPi Technologies	85	PO1, PO5, PO9, PO12 PSO2
7	Exhibit innovative research & product development projects to be an eye opener for pre-final year students	Open house Project Exhibition	17/5/2018	Dr, Mrinal Sarvagya Professor, Reva Univ.	95	PO8, PO9, PO10, PO11, PO12, PSO-3

Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	No. of Students Attended	Relevance to POs, PSOs
8	Industry readiness	Technical Talk on Trends and career building in semiconductor Industry	18/11/2017	Mr. Venkatesh, Project Lead, Analog Semiconductor PVT Ltd Bangalore Mr. Praveen R , Project lead, QUALCOMM India, Bangalore	60	PO12, PSO2
9	Usage of modern tools and technologies	Internship on Memory chip design using Cadence tool	24/1/2018 to 31/1/2018	Mrs. Jayalaxmi H, Associate professor Mrs. Sapna Kumari C, Assistant professor, Ms. Nagapushpa K P, Assistant professor, Mrs. Sumalatha S, Assistant professor Dept of ECE, Acharya I T	50	PO1, PO2, PO3 PO5, PO12, PSO2
10	Enhance Technical Skills in line with the requirements of the industry	Domain training on C++, JAVA, DP, MUP, DBMS, O/S	12/9/2017 23/9/2017 28/10/2017 11/11/2017	Cranes Softwares	85	PO1, PO2, PO5, PO12, PSO2
11	Industry readiness, usage of modern tools and technologies	VLSI Training And Academic Project	17/3/2018 to 28/4/2018	Techno Carve	70	PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO12, PSO2
12	Usage of modern technologies for societal benefits	IEEE sponsored Workshop on Smart Cities	14/9/2017 to 15/9/2017	<ul style="list-style-type: none"> Mr. Mahesh Mahajan, Vice President, Accenture Digital Dr. Gangaprasad Senior Director, C-DAC Dr. Pethuru Raj Chief Architect, Site Reliability Engineering (SRE) Division Mr. Viju N R VP T&D Solutions Mr. Abilash ET Nair Sr. Marketing Manager A T KISHORE Principal Consultant Telecom Anil K Dsouza Head Innovations 	75	PO6, PO7, PO12 PSO2, PSO3
13	Awareness of opportunities and Avenues in ECE Professional Ethics	Orientation Program	28/8/2017	Dr. Rajeswari Professor & HOD Dept. of ECE, AIT	80	PO8, PO12

Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	No. of Students Attended	Relevance to POs, PSOs
14	Environmental and Sustainability	Earth Day- Seed Bomb Program	28/4/2018	AIT	75	PO7
15	Professional Ethics	NSS Activity	9/4/2017	AIT	50	PO6, PO7, PO8, PO9
16	Professional Ethics	Seminar on Constitutional & Legal Rights	14/12/2018 to 17/12/2018	AIT	50	PO8
17	Usage of modern tools and Coding Skills	Spoken Tutorial	21/7/2018	IIT Bombay	40	PO5, PSO2
18	Industry readiness	Infosys Company Specific Training	2/9/2017 to 4/9/2017	10 seconds	43	PO8, PO10, PO12
19	Industry readiness	Soft skills training	17/9/2017	BIZOTIC	50	PO8, PO10, PO12
20	Industry readiness	CAPEGEMINI AND NTT DATA COMPANY SPECIFIC TRAINING	06/10/2017 & 10/10/ 2017	BIZOTIC	47	PO8, PO10, PO12
21	Industry readiness	Soft skills training	06/10/2017 07/10/2017 23/10/2017 24/10/ 2017 25/10/2017	BIZOTIC	70	PO8, PO10, PO12
22	Industry readiness	Soft skills training	30/10/2017 31/10/2017 2/11/ 2017	GENESYS	90	PO8,PO10,PO12
2016-17 (CAYm2)						
1	Practical Sessions are not included in Syllabus	One day Workshop on “Optimal Coding using C”.	9/5/2017	Mr. Nataraju A B Assistant Professor Department of ECE Acharya I T	60	PO5, PSO2
2	Most of the subjects like image processing, DSP does not have or has less lab support to understand the concepts in clear.	One day Workshop on Matlab and Simulink	6/5/2017	Mr. Devasis Pradhan Assistant Professor Department of ECE Acharya I T Mr. Siddesh M B Assistant Professor Department of ECE Acharya I T	50	PO3, PO5, PO6, PSO2
3	Motivation to build career Opportunities	Motivational Talk	13/3/2017	Prof B.A. Patil Director (R&D) , Think and Ink Education and Research Foundation	70	PO8,P10,P12, PSO1,pSO2, PSO3

Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	No. of Students Attended	Relevance to POs, PSOs
4	Opportunities and preparation for core companies	Career guidance program	22/2/2017	Niharika, Placement officer CoreEL Technologies	50	PO8,P10,P12, PSO1,pSO2, PSO3
5	Current trends in ECE	Technical talk on Advances in Electronics and Communication	26/8/2016	Mr. Nagabhushan GK, Director sales NichePro Technologies.	75	PO1, PO2, PSO1
6	Bridging gap between academics and industrial requirement	Open house Project	26/5/2017	ECE faculty	90	PO8, PO9, PO10, PO11, PO12
7	Practical approach is not included in syllabus	Videos on Fabrication process of IC	26/9/2016	ECE faculty	60	PO3, PO5, PO6, PSO2
8	Insight about the subjects, department, placements, ethics, responsibilities, team work.	Orientation Program	4/8/2017	ECE faculty	90	PO8
9	Enhancement of skills, leading to better employment opportunities	Labview	16/1/2017 to 20/1/2017	Mr. Sunil Kumar Trainer VI SOLUTION	90	PO3, PO5, PO6,
10	Enhancement of skills for better employability & Career Development.	Pre - Placement Training	6/8/2016 to 7/8/16	Blue Willet	70	PO8, PO10, PO12
11	Enhancement of skills for better employability & Career Development.	SOFT SKILL TRAINING	3/4/2017 to 5/4/2017	J V GLOBAL	80	PO8, PO10, PO12
12	Enhancement of skills for better employability & Career Development.	SOFT SKILL TRAINING	10/4/2017 to 12/4/2017	J V GLOBAL	85	PO8, PO10, PO12
13	Enhancement of skills for better employability & Career Development.	SOFT SKILL TRAINING	2/5/2017 to 4/5/2017	J V GLOBAL	80	PO8, PO10, PO12

2015 - 2016 (CAYm3)						
Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	No. of Students Attended	Relevance to POs, PSOs
1	Simulation tool is not included in syllabus	Workshop on “Analog and Digital Circuit Simulation Using PSPICE”.	7/11/2016	Mr. Raghunath B.H, Mr. Siddesh M.B and Mr. Sandeep kumar K Asst professor Department of ECE, Acharya Institute of Technology.	40	PO1, PO5, PSO1
2	Simulation tool is not included in syllabus	One Day Workshop on “Circuit Simulation Using Pspice”.	31/10/2016	Raghunath B.H, Siddesh M.B and Sandeep kumar K Asst professor Department of ECE, Acharya Institute of Technology.	40	PO1, PO5, PSO1
3	To enhance writing communication skills	One day Hands-on Session on “Technical Report Writing”	30/10/2016	Siddesh M B Manjunath R C Asst professor Department of ECE, Acharya Institute of Technology.	60	PO10
4	Embedded System Design Robotics is not part of the syllabus.	Overview of current trends in Image Processing. Overview of current trends in Robotics, Awareness in Preparation for placements	30/4/2016	Mr. Naveen H Software Product Application Engineer LAM Research Corporation Mr. Parswanath jain Analytics advisory specialist Accenture Dr. Prithvik Shekar Pagala Engineer R&D, KPIT	80	PO3, PO5, PO6, PSO2
5	Bridging gap between academics and industrial requirement	Technical Talk on “Error-correcting codes for Big data”	25/4/2016	P. Vijay Kumar, Professor, Dept of ECE, IISc	75	PO8, PO9, PO10, PO11, PO12
6	Recent Trends in VLSI which is not included in the syllabus.	Seminar on “Introduction to VLSI design and CMOS analog design flow”.	11/3/2016	Mr. Jaganath, Design Engineer, DNAE.	90	PO3, PO5, PO6, PSO2
7	Recent Trends in Embedded system design which is not included in the syllabus	Seminar on “Career awareness in Embedded system design”.	11/3/2016	Mr Arun Mathais, Asst Manager Training, Sandeepani School of Embedded system Design	90	PO3, PO5, PO6, PSO2
8	Industry readiness	Enhancement of skills for better employability & Career Development.	8/2/2016 to 1/3/2016	J. V. GLOBAL	65	PO9, PO10, PO12

Sl No.	Gap	Action Taken	dd/mm/yyyy	Resource Person with designation	No. of Students Attended	Relevance to POs, PSOs
9	Industry readiness	Enhancement of skills for better employability & Career Development.	29/2/2016 to 22/4/2016	J. V. GLOBAL	80	PO9, PO10, PO12
10	Industry readiness	SOFT SKILL	8/2/2016 to 1/3/2016	J. V. GLOBAL	80	PO9, PO10, PO12
11	Industry readiness	SOFT SKILL	22/8/2016 to 27/8/2016	J. V. GLOBAL	85	PO9, PO10, PO12
12	Industry readiness	SOFT SKILL	22/9/2016 to 24/9/2016	J. V. GLOBAL	85	PO9, PO10, PO12
13	Industry readiness	SOFT SKILL	13/10/16 to 15/10/16	J. V. GLOBAL	75	PO9, PO10, PO12
14	Industry readiness	SOFT SKILL	20/1/16 21/10/16 22/10/16 26/10/16 27/10/16 28/10/16	J. V. GLOBAL	90	PO9, PO10, PO12

2.2. Teaching - Learning Processes (100)

2.2.1. Describe Processes followed to improve quality of Teaching & Learning (25)

Every single individual student has a particularly way of learning, using distinctive modes for thinking, relating and creating. The notion of students having particular learning styles has implications for teaching strategies. This is because preferred modes of input and output vary from one individual to another, it is critical that teachers use a range of teaching strategies to effectively meet the needs of individual learners. The model being adopted by us for teaching & learning is depicted in Figure B.2.2.1a.

An effective connected model to improve the quality of teaching and learning is being adopted which includes the following process:

- Planning & adherence to academic calendar
- Course Delivery
- Continuous learning assesement

- d) Support to weak and bright students
- e) Monitoring through -Academic Audits by DAC,IQAC
- f) Proctorial System.
- g) Professional activities -Skill Development and Technical awareness program.
- h) Feedback from stake holders and action taken

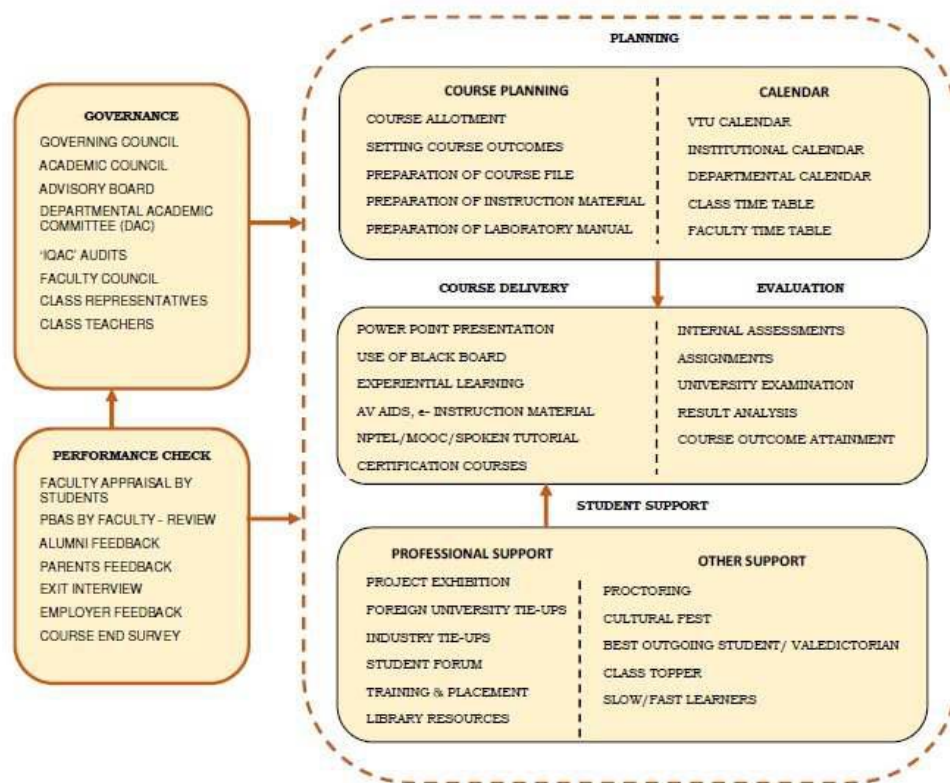


Fig B.2.2.1.a: Teaching and learning Process

Planning & Adherence to academic calendar:

Acharya Institute of Technology (AIT) is affiliated to Visvesvaraya Technological University (VTU), Belagavi. The Institution prepares the academic Calendar which includes the schedule of Internal Assessment, events at the institutional level, Committee meetings etc., in line with university calendar. The department later includes the activities like skill development workshops, faculty meetings, DAC meetings, industrial/exhibition visits etc., to prepare the dept. academic calendar “**Calendar of Events**” (CoE). The COE is circulated

among the faculty and students, well in advance before the commencement of the semester and strictly adhered. Sample calendar of events is shown in Fig. B.2.2.1.b.



Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2018-19			
FEBRUARY-2019			02
Day	Date	Department Activity	College Activity
FRI	1	Commencement of Even Semester BE IV/VIII SEM/MCA IV & VI sem MCA project	
SAT	2		
SUN	3		
MON	4		Holiday
TUE	5		IQAC Meeting to discuss NBA and NAAC documentations, Academic Council Meeting
WED	6		
THU	7		
FRI	8	3 Days Workshop on Practical Foundation on AI in collaboration with Open Cube Labs	1st proctorCoordinator Meeting
SAT	9		
SUN	10		Holiday
MON	11	I test for IV sem MTech	Library Committee meeting
TUE	12		
WED	13	Industrial Visit to TOYOTA KIRLOSKAR	
THU	14		
FRI	15	Last day to send IA marks and attendance of IV sem M Tech through SMS gateway	
SAT	16		3 rd Saturday
SUN	17		Holiday
MON	18		Commencement of IV MBA classes
TUE	19		
WED	20		
THU	21		
FRI	22		
SAT	23	Simulation and Modeling Series with MATLAB 11 (4 th sem)	
SUN	24	Industrial visit to KPTEL (8 th sem)	
MON	25	Workshop on IoT using Raspberry Pi	
TUE	26		Commencement of II Sem BE & II sem MBA classes
WED	27	Visit to BICC Bengaluru	
THU	28		

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2018-19			
MARCH -2019			03
Day	Date	Department Activity	College Activity
FRI	1	Commencement of II sem MCA and II sem M Tech Classes	
SAT	2	Simulation and Modeling Series with MATLAB 12 (4 th sem)	
SUN	3		Holiday
MON	4		Mahashivaratri
TUE	5		
WED	6		
THU	7		
FRI	8	Interim project evaluation Phase 2	
SAT	9	International Women's day	
SUN	10	Interim project evaluation Phase 2	
MON	11	[Submission of syllabus coverage / hard copy to be maintained in the department office, a soft copy to be mailed to Dean Academic & Principal]	
TUE	12		
WED	13		
THU	14	Interim project evaluation Phase 2	
FRI	15	Interim project evaluation Phase 2	Visit to MCF Hassan Karnataka
SAT	16		3 rd Saturday
SUN	17		Holiday
MON	18	First Faculty Appraisal Starts	
TUE	19	Submission of Attendance & IA marks through SMS gateway to parents	
WED	20	International Earth Day	
THU	21	World Poetry Day	
FRI	22		
SAT	23	First Faculty Appraisal Ends	
SUN	24	Simulation and modeling using PSPICE-1	
MON	25	Simulation and Modeling Series with MATLAB 13	Academic Council Meeting

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2018-19			
APRIL-2019			04
Day	Date	Department Activity	College Activity
MON	1	Start of IV sem MBA project report submission to VTU	
TUE	2		
WED	3		
THU	4		
FRI	5		IQAC Meeting
SAT	6		Ugadi
SUN	7		Holiday
MON	8		
TUE	9		
WED	10	III test for IV sem MTech	
THU	11	II Internal Tests for IV sem, VI Sem, VIII Sem BE and IV sem MCA classes	
FRI	12	I Internal tests for II Sem BE and II SEM MCA, II sem M Tech & II MBA classes	
SAT	13	Awareness on Menstrual Hygiene and Management and School Sanitation	
SUN	14		Holiday
MON	15	Last day to submit the IV sem MBA project report to VTU	
TUE	16		Academic Council Meeting
WED	17		
THU	18	Three days workshop on "AI and Machine Learning"	Library Committee meeting
FRI	19	Last day to submit IA marks through SMS gateway to parents	
SAT	20		3 rd Saturday
SUN	21		Holiday
MON	22		Proctor Coordinator meeting
TUE	23		
WED	24		
THU	25		
FRI	26	Final project evaluation	
SAT	27	Final project evaluation	Simulation and Modeling Series with MATLAB 14
SUN	28		Holiday

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2018-19			
MAY-2019			05
Day	Date	Department Activity	College Activity
WED	1		MAY DAY
THU	2	Second Faculty Appraisal Starts	
FRI	3	Briefing of Elective subjects of next semester	
SAT	4	Project competition for 1 st , 2 nd & 3 rd year	
SUN	5		Holiday
MON	6		
TUE	7	Second Faculty Appraisal ends	
WED	8		
THU	9	III Internal Tests for IV sem, VI Sem, VIII Sem BE and IV sem MCA classes	
FRI	10	II Internal tests for II Sem BE and II SEM MCA, II sem M Tech & II MBA classes	
SAT	11		Academic Council Meeting
SUN	12		Holiday
MON	13		
TUE	14	Project exhibition-Technotsava-2019	
WED	15		
THU	16	Photo session	
FRI	17	Graduation day	
SAT	18	3 rd Saturday, Armed Forces Day, Last working day for IV & VI sem MCA	
SUN	19		Holiday
MON	20	Technotsava	
TUE	21	Last day to send attendance and IA marks through SMS gateway to parents	
WED	22	Practical exam starts for IV MCA	
THU	23	Last working day for IV SEM, VI sem and VIII sem BE	
FRI	24	Paper Presentation	
SAT	25	End of practical exam for IV sem MCA & Start of VI Sem MCA project submission to VTU	
SUN	26		Holiday
MON	27	Practical exam starts for IV sem & VI sem BE, Theory exam starts for IV MTech	
TUE	28		
WED	29	End of VI Sem MCA project submission to VTU	
THU	30		
FRI	31	End of theory exam for IV sem MTech	

Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2018-19			
JUNE-2019			6
Day	Date	Department Activity	College Activity
SAT	1		
SUN	2		Holiday
MON	3	Commencement of theory exam for IV MBA & IV sem MTech Project report to VTU	
TUE	4		
WED	5	ID Uti Fitat	World Environment Day
THU	6		Library Committee meeting
FRI	7	Practical exam ends for IV sem & VI sem BE	
SAT	8		
SUN	9		Holiday
MON	10	Theory exam starts for IV sem & VI sem BE	III IA for II Sem BE and II Sem MCA, II MTech, II Sem MBA
TUE	11	Viva voce exam starts for VIII sem BE	III IA for II Sem BE and II Sem MCA, II MTech, II Sem MBA
WED	12		III IA for II Sem BE and II Sem MCA, II MTech, II Sem MBA
THU	13		
FRI	14		IQAC Meeting
SAT	15	3 rd Saturday End of IV sem MBA project report submission to VTU	End of theory exam for IV MCA
SUN	16		Holiday
MON	17	Last working day for II Sem BE & II Sem MBA, Viva Voce exam ends for VIII Sem BE	
TUE	18	End of IV sem MTech project report submission to VTU	
WED	19	Commencement of Practical exam for II sem BE	
THU	20	Commencement of theory exam for II MBA	
FRI	21	Last working day for II Sem MTech & II Sem MCA	
SAT	22		
SUN	23		Holiday
MON	24	Commencement of Practical exam for II sem MCA and II sem MTech	
TUE	25		Academic Council Meeting
WED	26		
THU	27		
FRI	28	End of theory exam for IV sem MBA	
SAT	29	End of Practical exam for II Sem BE	
SUN	30		Holiday

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2018-19			
JULY-2019			7
	Date	Department Activity	College Activity
MON	1	Commencement of theory exam for II Sem BE, II Sem MCA & II semMTech	
TUE	2		
WED	3		
THU	4	End of theory exam for II MBA	
FRI	5		
SAT	6		
SUN	7	Holiday	
MON	8		
TUE	9		
WED	10		
THU	11		
FRI	12	Theory exam ends for II semMTech and II Sem MCA	
SAT	13		
SUN	14	Holiday	
MON	15		
TUE	16	End of Theory exam for II Sem, IV sem & VI sem BE	
WED	17		
THU	18		
FRI	19		
SAT	20	3 rd Saturday	
SUN	21	Holiday	
MON	22	In House Internship on " Analog Design using Cadence Tool" 22-7-2019 to 27-7-2019	
TUE	23		Academic Council Meeting
WED	24		
THU	25		
FRI	26		
SAT	27	Commencement of ODD semester classes for the year 2019-20	
SUN	28	Holiday	
MON	29		
TUE	30		
WED	31		

Fig. B.2.2.1.b:Departmental Academic Calender

Course Delivery:

The course delivery is meticulously planned, delivered, monitored by the dept. through the course co-ordinator/instructor, DAC and the programme co-ordinator.

The course co-ordinator/instructor prepares the course file which includes course outcomes, lesson-plan, course materials well in advance to the commencement of the semester. The course outcomes and lesson plan written by the course instructors are checked by the module coordinators and are deliberated in the DAC meetings. The DAC comprises faculty members having expertise in specific domains, shown in Table B.2.2.1.a as module co-ordinators, the program chair as chairman, who handhold in ensuring the quality of teaching and learning process. The course plan prepared by the faculty is shared among the student through e-mail

before the commencement of the semester. The course plan and adherence to plan is continuously monitored by the HOD.

Table B.2.2.1.a Module Co-ordinators of DAC

Sl. No.	Domains	Courses	Module Coordinator(s)
1	Circuits & Systems	Basic Electronics, Analog Electronics, Electronic Instrumentation, Network Analysis, Power Electronics, Control Systems, AEC Lab, DEC Lab, LIC Lab	Dr. Shivashankarappa Mr. Siddesh Mr. Devasis Pradhan
2	Communication and Networking	Electromagnetic Theory, Information Theory Communication, Computer Communication Networking, Microwave Radar, Satellite Communication, Optical Fibre Communication, Wireless com., PCS, Digital Communication, Network Security, Multimedia Communication, Adv. Comm. Lab, CCN Lab	Dr. Sujatha BM Dr. Asha C N
3	Signal Processing	Digital Image Processing, Digital Signal Processing, Digital Signal Processing Architecture, Signal & Systems, DSP lab	Dr. Ganesh Rao Mr. Sandeep Kumar
4	VLSI and Embedded Systems	Operating System, Object Oriented Processing, Embedded System Design, Verilog HDL, VLSI Design, Microelectronics, Data structure, C++, Microprocessor, Microprocessor lab, ARM, ARMCORTEX lab, HDL Lab, VLSI Lab,	Mr. Nataraju AB Mrs. Jayalaxmi H.

The course co-ordinator/instructors use the following instructional methods :

1. Chalk and Black board
2. Power point presentation
3. Demonstration of concepts
4. Seminars by students
5. Group assignments & discussions
6. Peer learning
7. Mini/Major projects
8. Google Classrooms
9. Google forms for quiz

Apart from the listed methods, the students are initiated and motivated to learn from group activities such as group discussion, in-house internships, workshops conducted in the dept. The students are encouraged and supported with learning through MOOC, NPTEL courses, Spoken tutorials-IIT Bombay. The students are taken to international tech. exhibition in relevant domains for an update of modern tools and technologies. The course material, laboratory manual, question bank, power point presentation prepared by the course co-ordinator/instructor is shared with the students as and when necessary.

Continuous Learning Assessment:

Assessment of students learning is made on a regular basis through internal assessments, assignments, quizzes for theory courses and for practical courses assesment is made on a weekly basis (after the completion of every experiment). Learning difficulties of the students are disscussed with the Class Teacher/Proctor/HOD or in the faculty meeting and are addressed by improving TLP. Projects and Seminars are assessed based on the rubrics developed and notified to the students in advance.



Department of Electronics and Communication Engineering
Acharya Institute of Technology
Acharya Dr. Savanalli Radhakrishnan Road,
Bangalore-560107

Course File

A) Course Administrator Details

Course Title	Course Code	Core/Elective	Semester	Year
SIGNALS AND SYSTEMS	10EC44	CORE	04	2

Contact Hours/ week	Lecture	Tutorials	Practical
5	5	1	-

Department	Electronics and Communication Engineering
Name of the faculty with Designation and mail ID	SANDEEP KUMAR K, APG III sandeepkumar.k@acharya.ac.in

Prerequisites for the Course (exemption from the prerequisite is provided only in exceptional circumstances)	<ol style="list-style-type: none"> 1. Basics of integration and differentiation 2. Solution of difference and differential equation 3. Solution of equations using partial fraction method. 4. Basic linear algebra, knowledge of imaginary numbers, sum and series notation.
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Recommended Text Books: Simon Haykin and Barry Van Veen "Signals and Systems", John Wiley & Sons, 2001

Recommended Reference Materials

1. Alan V Oppenheim, Alan S. Willsky and A. Hamid Nawab, "Signals and Systems" Pearson Education Asia / PHI, 2nd edition, 1997. Indian Reprint 2002
2. H. P. Hsu, R. Rajan, "Signals and Systems", Schaum's outlines, TMH, 2006
3. B. P. Lathi, "Linear Systems and Signals", Oxford University Press, 2005
4. Ganesh Rao and Satish Tunga, "Signals and Systems", Sanguine Technical Publishers, 2004

Course Outcomes

- CO1: Analyze and identify different types of signal and system properties
- CO2: Determine the output of LTI system using Convolution integral/Sum and Impulse response
- CO3: Solve differential and difference equations for LTI systems.
- CO4: Apply Fourier representation to study the behavior of periodic and non-periodic signals.
- CO5: Apply Z Transform to study the behavior of Signals and systems.

Web URL:

1. <http://ocw.mit.edu/resources/res-6-007-signals-and-systems-spring-2011/>
2. <https://www.edx.org/course/discrete-time-signals-systems-ricex-elec301>
3. <http://iitvids.blogspot.in/2012/12/signals-and-system.html>

Support to Weak and Bright Students:

The course co-ordinator/instructor identifies weak/bright students in course based on several parameters such as performance in Continuous Internal Evaluation(CIE), interaction in classes and feedback from proctors as shown in table 2.2.1b and 2.2.1c. The course instructor helps weak students with additional coaching/remedial/bridge classes, learning material(s), counselling, monitors and discusses outcome with their proctors and parents. This enables the weak students to participate and perform better in understanding the concepts, internal assessment and university exams.

Course instructor identify the bright students and encourage them to learn beyond the syllabus related to concerned courses by attending conferences/ workshops/ seminars/ contests/ internship conducted in-house/outside by industry/institutes.

This enables the bright students:

- update themselves with the latest tools and technologies
- demonstrate critical thinking and take up innovative projects
- take up higher studies in the field of research and development enhance their skill and managerial quality to become a successful entrepreneur/employee.

Table B.2.2.1.b Process of identifying & probable action (weak students)

Sl. No.	Traits	Identified by	Remedy	Outcome
1	One has ability to learn but takes longer time to grasp new concepts	Course Instructor	Tutorial Class /Customized assignments	Able to explain concepts
2	One is not self-confident and gives up quickly	Course Instructor/Proctor	Counselling /Continuous monitoring	Able to perform better in tests/Behavioural Change

Sl. No.	Traits	Identified by	Remedy	Outcome
3	One has short memory and don't remember what has been taught to them in class	Course Instructor	Preparatory Tests /Customized assignments/Additional laboratory Classes	Able to perform better in tests and university exams
4	One has poor communication skills and writing skills	Course Instructor/Proctor	Customized Assignments /Group discussion	Able to participate in discussion in the class /writes better in tests and university exams
5	He/she is an experiential learner	Course Instructor	Use of ICT devices / Additional laboratory classes	Able to perform better in tests
6	One is irregular to the classes	Course Instructor	Counselling /Continuous monitoring	Attends classes regularly
7	One has poor academic background at the entry to the programme and do not perform well in initial tests	Course Instructor/Proctor	Bridge classes	Improvement observed (Marks may be a metric)

Table B.2.2.1.c Process of identifying & probable action (Bright students)

Sl. No.	Traits	Identified by	Remedy	Outcome
1	One has ability to grasp new concepts really fast	Course Instructor	Customize assignment	Demonstrates critical thinking.
2	One who completes laboratory exercises very fast and wait for additional exercises	Course Instructor	Additional laboratory exercises are given	Gets good grades in tests and examinations
3	One who participates actively in discussions that happen in the class room	Course Instructor/ Proctor	Encouraged to organize events	Able to lead and convince people

Sl. No.	Traits	Identified by	Remedy	Outcome
4	One has good academic background at the entry to the programme and does well in initial tests	Proctor	They are supported for internships at industries and are incentivised by giving academic flexibility.	Demonstrates assimilation of knowledge
5	One who is highly focused about his/her future	Proctor	Online access to research journal and study material required for higher learning is given	Demonstrates assimilation of knowledge
6	One who volunteer for attending additional training, workshops and internships	Proctor	They are encouraged to do innovative projects, seek funding from management/ external agencies (DST, KSCST etc,) and participate in project exhibitions	Emerges successful in carrying out innovative projects

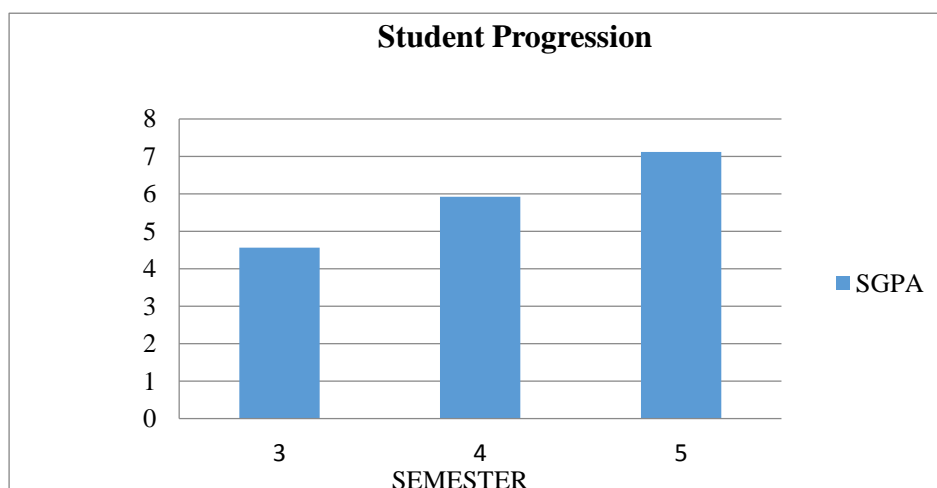


Fig.B.2.2.1.c Progression chart

❖ Professional Activities

- ✓ The department has a **IEEE** student branch and activities are conducted regularly in association with IEEE.
- ✓ The department has a student's forum named "**Spectra**", which aims at conduction of various technical activities helping the students to learn latest tools and technologies.

- ✓ The student development programs are organized on a regular basis by inviting external speakers drawn from the industries or other reputed institutions/Universities. The topic/theme (beyond curriculum) for student development programs is identified by the faculty or by the DAC members
- ✓ The Faculty Development Programs (FDP) are organized on a regular basis as and when required. Faculty are also deputed to attend FDPs, Workshops, Conferences and Seminars to other Institutes/Universities.

❖ **Funding proposals:**

The final year students are encouraged to apply for KSCST/TRIP funding every year. Department has a project coordinator who initiates the process of seeking proposals under themes mentioned by the KSCST and ensures proposals are submitted.

❖ **“Best out going student” award:**

Department selects one of the final year students as the “Best out-going student” of the program and student is suitably rewarded. Selection is done based on how many internships student undergo during his 4 years of study year, innovative projects undertaken and completed, MOOC courses studied, university marks, number of jobs offered and publications. The selection procedure is brought to the notice of the students in their first year of study or during the induction presented in table 2.2.1d and 2.2.1e.

Table B.2.2.1d : Best out going student award

Sl. No	Name of the student/USN	Academic year	Best out going student award/Valedictorian
1	Srujana S	2017-2018	Best out going student
2	Rahul Mamedkar	2016-2017	Best out going student
3	Kaveramma	2015-2016	Best out going student
4	Prem Kumar	2014-2015	Best out going student

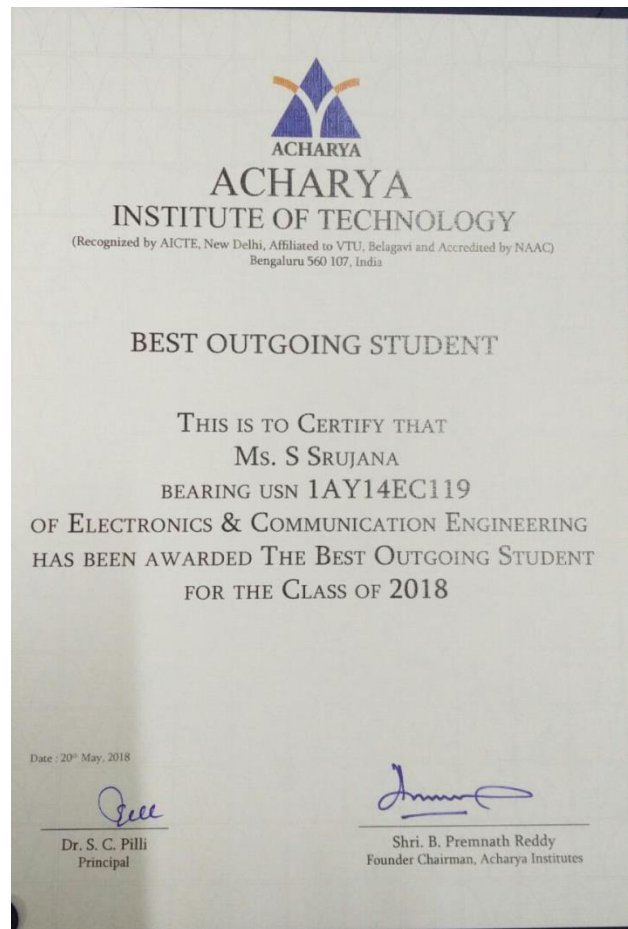


Fig.B.2.2.1c: Best Outgoing Certificate



Fig.B.2.2.1d: Best Outgoing Ceremony

Performance Check

❖ Faculty Appraisal by the students:

At the end of the course online feedback on faculty performance is obtained from the students and analysed. Faculty not meeting 70% of stated expectations are counselled and asked explanation for the same and faculty development is suitably planned. The sample format showing questionnaire is shown in Fig. B.2.2.1.e.

Date: 29-May-2018	Academic Year: 2018-19	
Semester: 6	Section: A	
Department: Electronics and Communication Engineering	Semester Type: EVEN	Feedback No.: First
Faculty Name: JAYALAXMI H	Subject Name: VLSI Design	
No. of Students Participated: 43	Average Appraisal: 90.5%	
PARAMETERS	AGGREGATE APPRAISAL IN PERCENTAGE	
1 . Adequacy of depth of coverage	94.0%	
2 . Audibility of faculty	90.2%	
3 . Lecturers make you think	89.8%	
4 . Encouraged to ask Questions	90.7%	
5 . Black board writing clarity and organization	91.2%	
6 . Punctuality of faculty to class	91.6%	
7 . Understanding the subject clearly	88.4%	
8 . Assignments are given	91.2%	
9 . Effective use of class time	90.2%	
10 . Challenging test questions and assignments	90.2%	
11 . The test and assignments valued in time	93.0%	
12 . Faculty good in communication	90.7%	
13 . Fairness in Evaluation	92.6%	
14 . Motivation to learn	92.1%	
15 . Meeting your expectations by the faculty	90.7%	
16 . Course coverage as per lesson plan	88.8%	
17 . Help in solving your academic difficulties	89.8%	
18 . Satisfaction in general about teaching	91.2%	
19 . Class room discipline	86.5%	
20 . You are provided with new knowledge/ recent developments	87.4%	

Fig.B.2.2.1.e: Sample Format

❖ Parent- Teacher meetings:

Formally Parent -Teacher Meeting is conducted once in a semester to communicate to parents about the academic progress of their children. Informal parent-teaching happens as and when necessary. The interaction helps to support the students in a better manner. The parent teacher meetings are coordinated by the proctoring coordinator of the department. Meeting starts with HOD briefing the activities and achievements of the department to the parents. The parents meet the respective proctor of their children to get the academic progress. The concern(s) if any are discussed with the proctor by the parents

and if HoD's intervention is necessary to address the concern(s) of the parents, then proctor arranges a meeting with the HoD. At the end of the meeting parents feedback is collected on quality of Teaching Learning Process and Program Educational




Fig. B.2.2.1.f: Parents Teachers Meet

❖ **Course end survey:**

At the end of the course, a survey is conducted among the students as to know to what extent faculty have achieved the stated course outcomes. This acts as an indirect assessment method. The course end survey sample format for the course Computer Organization is shown below:

Note: On a scale of 1 to 3 rate the following


ACHARYA INSTITUTE OF TECHNOLOGY
 Department of Electronics and Communication Engineering
 Course end survey

Batch: 2014-2018
 Academic Year: 2015-2016
 Subject: Signals and Systems (10EC44)
 Name of the student: AKSHATHA JOSHI, G.
 USN: 1A414EC008
 Note: Rating to be done on a scale of 1 to 3

1. Low 2. Moderate 3. High

Sl no	Question	Rating			CO's
		3	2	1	
1	To what extent you will be able to Analyze and identify different types of signal and system properties	✓			CO1
2	Will you be able to Solve differential and difference equations for LTI systems?	✓			CO2
3	To what extent you will be able to Determine the output of LTI system using Convolution integral/Sum?		✓		CO3
4	Are you able to Apply Z Transform and Fourier transform to study the behavior of Signals and systems?	✓			CO4, CO5



 Signature of Student

Fig B.2.2.1.g: Course End Survey

❖ **Exit survey:**

At the end of the program, graduates are asked to give feedback on level of accomplishment of stated Program Outcomes, Program Educational Objectives and Program Specific Outcomes (PSOs). This data is analysed to understand the improvements required in Teaching Learning Processes. The sample format is shown below:

Please respond to each artifact in this survey in the place provided.

Sl No	Artifacts	Strongly Disagree[0]	Disagree[1]	Agree[3]	Strongly Agree[4]
1	Your graduate experience had a significant positive effect on your professional development and creativity				✓
2	Your graduate experience had helped you in exploiting state of the art technologies and contemporary problem solving methods.			✓	
3	Your graduate experience offered you opportunities for advanced original and interdisciplinary work.			✓	
4	Your graduate experience prepared you to adapt to contemporary tools, technologies and processes in working environment.			✓	
5	Your graduate experience contributed significantly to your professional enrichment.				✓
6	Your graduate experience provided confidence level in becoming an entrepreneur		✓		
7	Your graduate experience provided to work together in respectful and collaborative manner with team members to complete the assigned task.			✓	
8	Your graduate experience equipped you in demonstrating time management and follow organizational code of conduct policies.			✓	

Fig. B.2.2.1.h: Exit Survey

Departmental Academic Council (DAC) & Internal Quality Assurance Cell (IQAC):

❖ **Monitoring through-Academic Audits by DAC, IQAC**

HOD constitutes DAC as per the guidelines issued by IQAC. The objective of the DAC is to ensure quality teaching & learning. The DAC members meet every month generally, however, special meeting is scheduled by the HoD if necessary. The DAC is responsible for:

Formulation of Vision, Mission and Program Educational Objectives

- Curriculum gaps identification and action plan
- Training need analysis for students and faculty
- Ensuring quality of internal assessment question papers & scheme of evaluation

d) Monitoring students progression

❖ **Internal Quality Assurance Cell (IQAC) Audits:**

The IQAC cell conducts two audits every semester one in the beginning of the semester and one in the end of the semester to verify conformance to the suggested procedures for framing quality course outcomes, setting up of quality questions for internal assessment, attainment of course/program outcomes, effectiveness of course delivery and best practices by the faculty. The audit report format is show in the Figure 2.2.1f.

Table B.2.2.1.f: Audit Report Format

Sl. No.	Faculty Name	Personal Time Table	Course Code	Course File		Notes/ Manuals	COs	CO-PO Mapping
				Staff	Student			
				S/SI/NS		S/SI/NS	S/SI/NS	S/SI/NS
	Remarks							
	Remarks							
	Remarks							

S : satisfactory, SI : Scope to improve, NS: Not satisfactory

Signature of Head of the Department

❖ **Departmental Advisory Board:**

The departmental Advisory Board comprises of knowledgeable and committed individuals drawn from both academia and industry, who are willing to volunteer their time for regular meetings and support the growth of the department. The DAB meets once in year to discuss strategy for academic excellence. The composition of the current advisory board is shown below:

Table B.2.2.1.g: Advisory Board Members

1	Chief Advisor	Dr. Prakash M.R Principal, Acharya Institute of Technology, Bengaluru
2	Chairman	Dr. Rajeswari Professor and Head Depat. Of Electronics and Communication Engineering
3	Member Secretary	Mr. Nataraju A B Asst. Professor G1, Dept. of ECE Bengaluru
4	Member	Dr. H C Nagaraju Principal, NMIT, Bengaluru
5	Member	Dr. Anil Kumar Head R & D, Dover India Pvt. Ltd. Bengaluru
6	Member	Dr. S K Murthy Patent Counsel, India Technologies, Bengaluru
7	Member	Mr. S Manjunath Project Manager, Robert Bosch, Bengaluru
8	Member	Mr. Venkatesh M Project Manager Techno Carve Pvt. Ltd, Bengaluru

❖ Proctorial System:

The Proctorial System has been introduced in institution, aims at improving curricular activities, disciplined behavior and personal development of the students.

The objective of this system introduced in department:

- a) To provide a healthy relationship between the teacher and student
- b) To provide supportive care and advice to the students and help them in solving their academic and administrative problems of his wards.
- c) To interact with parents and updating the improvement of their children.

❖ Professional Activities-Skill Development and Curriculum:

- a) The department conducts skill development and curriculum oriented courses such as workshops, inhouse internships, contests, Webinars, Leadership workshops, Technical

Talks by industry experts and faculty from reputed Institutions/universities under students forum named “SPECTRA”.

- b) The Institution has a registered “IEEE Student Chapter” and the department conducts activities helping the students to learn latest tools and technologies.

❖ **Feedback from stake holders and actions**

- a) **Course End Survey:** The course end survey at the end of each course is taken by the course coordinator/instructor to ascertain the extent of Course Outcome attainment. This provides information to the course instructor to customize/modify the course plan with necessary actions to improve the quality of Teaching and Learning.
- b) **Faculty appraisal by the students:** At the end of the course feedback on faculty performance is obtained online from the students and analysed. Faculty with an appraisal of <70% are counselled , undergo FDP on pedagogy, supported by senior faculty with expertise in specific field in the dept.
- c) **Parents feed back:** It is collected to improve the quality of Teaching Learning Process and attainment of Program Educational Objectives (PEOs).
- d) **Exit survey:** At the end of the program, graduates are asked to give feedback on level of accomplishment of stated Program Outcomes and same data is analysed to understand the improvements required in Teaching Learning Processes.
- e) **The alumni interaction series:** conducted regularly also supports peer learning environment which helps understanding the usage of modern tools and technologies. These inputs are taken in conducting skill development activities and crash courses to the students aiding in better placements.

- f) **Best out going student” award:** Department selects one of the final year students as the “Best out-going student” of the program and student is suitably rewarded. Selection is done based on how many internships student undergo during his 4 years of study year, innovative projects under taken and completed, MOOC courses studied, university marks, number of jobs offered and publications. The selection procedure is brought to the notice of the students in their first year of study or during the induction.

2.2.2. Quality of Internal Semester Question papers, Assignments and Evaluation (20)

(Mention the initiatives, implementation details and analysis of learning levels related to quality of semester question papers, assignments and evaluation)

- a) Internal Assessment marks are evaluated for both theory and lab subjects. 3 tests are conducted per semester according to the scheduled calendar of events.
- b) The department Internal Assessment Test committee consists of HOD, Test coordinators Module coordinators and Course coordinators.
- c) The test coordinators schedule the test time table, test invigilation allotment, room allotment and coordinate in smooth execution of the test in the scheduled time as per COE and display the same one week ahead on the notice boards. The test time table, seating arrangement are mailed to students.
- d) Assessment questions for both lab and theory are aligned with bloom’s taxonomy and the questions were decided as per the COs which are framed by the course coordinators according to the blooms level, verified by the module coordinators and approved by HOD. The internal process is shown in fig. B.2.2.2.a.
- e) The duration of the test is $1\frac{1}{2}$ hrs and the question papers are set to make the students to learn time management. Before each test one third of the syllabus is covered by course coordinator.

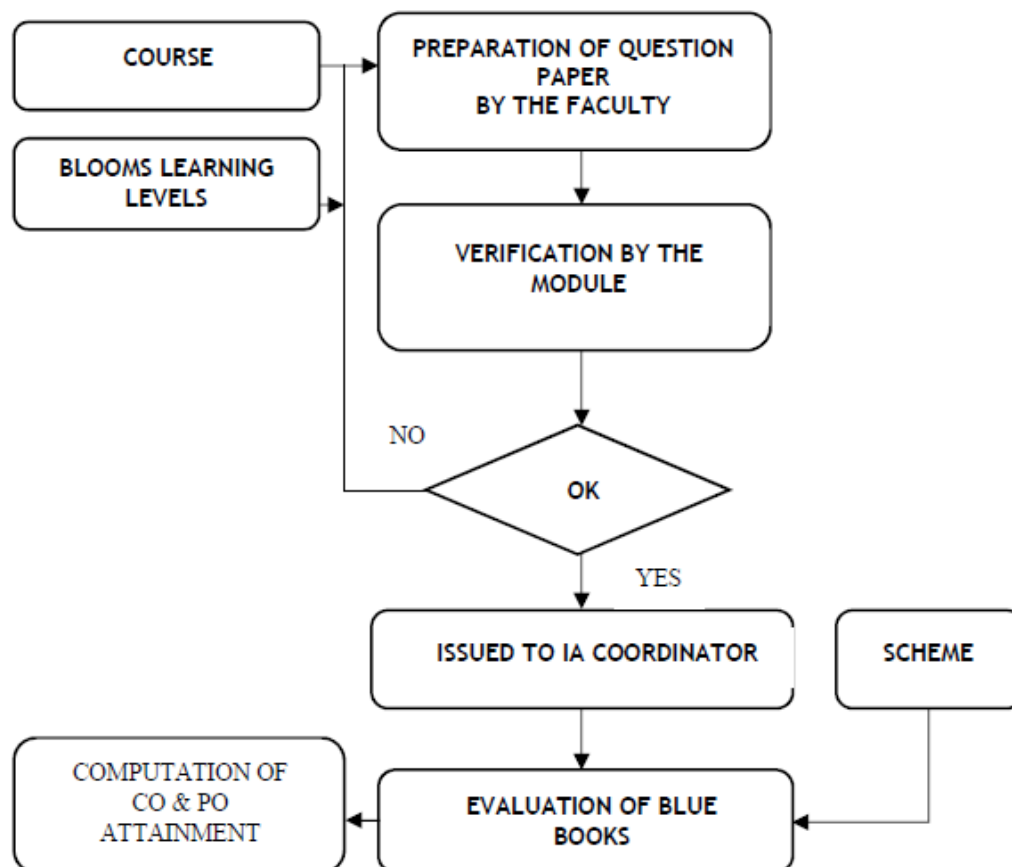


Fig B.2.2.2.a: Internal Assessment Process

I. Question Papers:

- a) While setting the question paper all previous university exam papers are taken into consideration.
- b) According to level of toughness the questions are prepared (viz., analyzing the problems, implementation of modern tools, formulating the problems etc), which is termed as Bloom's Taxonomy.

II. Assignments:

- a) Assignment questions are prepared according to Bloom's Level.
- b) In order to improve the level of weak students are encouraged to involve themselves attending online video lecture and to solve previous year question papers related to the course.

- c) In order to bridge the gap in curriculum, bright students are motivated to deliver seminars related to subject and current trends.
- d) Assignment submission dates are announced by the respective faculty members.

III. Evaluation:

- a) The faculty member after each internal assessment test evaluates the test books as per the scheme of evaluation duly verified by module coordinators.
- b) The faculties after every internal assessment test they explain the solution of the questions in the class which will enable them to perform well in the final examination.
- c) For any genuine reasons, if a student was unable to perform well in the given three internal assessment tests, improvement test is given to him/her.
- d) The average of the marks obtained from any best two test is chosen for the award of internal assessment marks.
- e) If a candidate remains absent for all the tests conducted, the Internal assessment marks are marked as “Absent” in the result.
- f) Assignments are used as a tool for practice and evaluation is based purely on Internal Assessment Test.
- g) Students are allowed to check the correction and sign on the bluebooks. After one week of each IA test, progress reports which consist of test marks and attendance status are sent to parents through CARE s/w.

Figures B.2.2.2.b and B.2.2.2.c shows the sample question papers, got scrutinized by the question paper scrutinizing committee. Figure B.2.2.2.d to Figure B.2.2.2.f gives the sample scheme and solution for evaluation.



AIT/IOAC/Aca/17-18/IAQP

USN	1	A	Y							
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**ACHARYA INSTITUTE OF TECHNOLOGY
BENGALURU 560107**

II-INTERNAL ASSESSMENT (2017-18)

Date: 12/4/18

Sub/ Code: Microprocessor (15E C42)

Sem/Sec: 4th B & C

Max Marks: 15

Time: 90 Mins

Note: ANSWER ANY 3 FULL QUESTIONS. Each question carries same marks.

Qn. No.	Question	CO addressed	Marks
1.	Analyze how PUSH and POP instructions helps to improve the execution speeds of 8086 microprocessor. Also explain the hardware interrupts of 8086.	CO-4	5Marks
OR			
2.	List the different types interrupt instructions in 8086 and also list the sequence of action taken by 8086 when I/O device interrupts over INTR. line.	CO-4	5Marks
3.	Illustrate all string instructions of 8086, indicating the initialization required to use them.	CO-1	5Marks
OR			
4.	Illustrate any 8 assembler directives.	CO-1	5 Marks
5.	Make use of suitable addressing modes and instruction set to write a program to calculate square of BCD numbers 0 to 9 and store them sequentially from 5000h offset onward in a current data segment. The number and their squares are in the BCD format. Use a subroutine for the calculation of the square of a number.	CO-1	5 Marks
OR			
6.	Make use of suitable procedure in 8086 assembly language which computes the factorial of an 8-bit numbers passed through AL register. The factorial value (maximum 8-bit) is returned through AL register.	CO-1	5 Marks

Fig B.2.2.2.b Sample question paper

AIT/IQAC/Aca/17-18/IAQP

USN	1	A	Y						
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ACHARYA INSTITUTE OF TECHNOLOGY
BENGALURU 560107

II-INTERNAL ASSESMENT (2017-18) **Date: 12/4/18**

Sub/ Code: Microprocessor (15EC42) Sem/Sec: 4th B & C
Max Marks: 15 Time: 90 Mins

Note: ANSWER ANY 3 FULL QUESTIONS. Each question carries same marks.

Qn. No.	Question	CO addressed	Marks
1.	Describe the Stack structure of 8086 and the operation of PUSH and POP instruction. Also explain the hardware interrupts of 8086.	CO-1	5Marks
OR			
2.	Define Interrupt. Describe the classification of 8086 interrupts with example. List the sequence of action taken by 8086 when a device interrupts over INTR line.	CO-1	5Marks
3.	Explain the operation of the string instructions of 8086, indicating the initialization required to use them.	CO-2	5Marks
OR			
4.	Explain any 8 assembler directives with an example for each.	CO-2	5 Marks
5.	Write a program to calculate square of BCD numbers 0 to 9 and store them sequentially from 5000h offset onward in a current data segment. The number and their squares are in the BCD format. Write a subroutine for the calculation of the square of a number.	CO-3	5 Marks
OR			
6.	Write a procedure in 8086 assembly language which computes the factorial of an 8-bit numbers passed through AL register. The factorial value (maximum 8-bit) is returned through AL register.	CO-3	5 Marks

Fig B.2.2.2.c: Sample question paper, got scrutinized by the Question paper Scrutinizing Committee

AIT/IQAC/Aca/17-18/SoV

Acharya Institute of Technology
Bengaluru - 560107
SCHEME OF VALUATION
INTERNAL ASSESSMENT FOR THE ACADEMIC YEAR: 2017-18 (Even Sem)

Course: Code & Name: Microprocessor (15ECH2) Semester: 4th, B. C.
Max Marks: 16 Faculty: Kalpav. C.

B- Internal

Q. No	Solution	Marks
1.	<p>Definition of stack operation of PUSH } POP } with example. } 2m</p> <p>Types of Interrupts: Hardware & Software } 1m</p> <p> - NMI - INTR - INTA - INT N. </p> <p>Explanation for each } 2m</p>	
2.	<p>Definition of Interrupt classification: } 1m</p> <p>Action taken: Copying the values of PSW main CS } into main IP } stack. } 2m</p> <p>Types of Interrupt: → Type 0, Type 1, Type 2, Type 3, NMI, INTR, INT N. } 2m</p>	

1

Fig B.2.2.2.d: Sample of Scheme of Evaluation

Q. No.	Solution	Marks
3.	<p>String Instructions :</p> <ul style="list-style-type: none"> REP: movsb / movsw cmprsb scas lods stos <p>operation with: each example. } → 3m</p> <p>Initialization :</p> <ul style="list-style-type: none"> SI → Source Array : DS DI → Destination array: ES cx → Count CLI → Automatically increment 	<p>1m</p> <p>3m</p> <p>1m</p>
4.	<p>Assembler Directives :</p> <ul style="list-style-type: none"> DB: define Byte ; END: End of program DW: define word ; ENDP: End procedure DT: Define Ten byte ; ENDS: End segment. ASSUME: Assume logical seg. name EVEN: Align Even address EQU: Equate offset: offset of a label ORG: Origin PROC: procedure PTR: pointer 	<p>5m</p> <p>Any 8 Explanation.</p>

Fig B.2.2.2.e: Sample of Scheme of Evaluation

AIT/IQAC/Aca/17-18/50V

Acharya Institute of Technology
Bangalore - 560107.

Q. No	Solution	Marks																					
5.	<p>Program for calculating square of BCD numbers</p> <p>Logic:</p> <table border="1"> <thead> <tr> <th>BCD no.</th> <th>Square</th> <th>offset address</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>5000h</td> </tr> <tr> <td>1</td> <td>1</td> <td>5001h</td> </tr> <tr> <td>2</td> <td>4</td> <td>...</td> </tr> <tr> <td>3</td> <td>9</td> <td>...</td> </tr> <tr> <td>...</td> <td>...</td> <td>...</td> </tr> <tr> <td>9</td> <td>81</td> <td>5008h</td> </tr> </tbody> </table> <p>Program: _____</p>	BCD no.	Square	offset address	0	0	5000h	1	1	5001h	2	4	...	3	9	9	81	5008h	<p>1m</p> <p>4m</p>
BCD no.	Square	offset address																					
0	0	5000h																					
1	1	5001h																					
2	4	...																					
3	9	...																					
...																					
9	81	5008h																					
6.	<p>Factorial of a Number:</p> <p>Subroutine logic:</p> $5! = 5 \times 4 \times 3 \times 2 \times 1 = \text{(Result)}$ <p style="text-align: center;">↓ AX Register.</p> <p>Program & Explanation</p>	<p>1m</p> <p>4m</p>																					
	<p>Signature of HOD</p> <p>Signature of DAC</p> <p>Signature of Staff</p>																						

Department of Electronics and Communication Engineering, Acharya Institute of Technology Bangalore

Fig B.2.2.2.f: Sample of Scheme of Evaluation

IV) Laboratory Evaluation:

Laboratory In-charge faculty members are set by the Department for evaluation of laboratory programs. Laboratory experiments are conducted with assessment based on every experiment, procedure is to be written, executed and demonstrated to the lab In-charges. Fig. 2.2.2.g to 2.2.2.i shown the scheme and evaluation for laboratory.

The demonstration of the output is followed by oral viva-voce.

- a) For NON CBCS scheme (2010 Scheme):

$$\text{Total Lab Marks} = \text{Record (15M)} + \text{Lab internal test marks (10M)} = 25\text{M}$$

- b) For CBCS scheme (2015 Scheme):

$$\text{Total Lab Marks} = \text{Record (12M)} + \text{Lab internal test marks (08M)} = 20\text{M}$$

- c) For NON CBCS scheme (2017 Scheme):

$$\text{Total Lab Marks} = \text{Record (20M)} + \text{Lab internal test marks (20M)} = 40\text{M}$$

➤ **Laboratory:**

- The Internal Assessment marks shall be based on observation/record/viva/lab test is shown in table 2.2.2a.
- The laboratory in-charge will conduct the practical test.
- There shall be a maximum of 25 Internal Assessment Marks in each practical paper
- The evaluation procedure for laboratory courses are done by the laboratory In-Charge(s) based on the following parameters: Divided into three components: Continuous Assessment: 10 marks, Record: 5 marks and Internal Test: 10 marks

Table B.2.2.2.a: Laboratory Rubrics

Parameters	Marks Allocated	Rubrics
Observation/Procedure Writing	3	Low:(0 marks) Student does not write the procedure/program and the calculations Medium(1-2marks) Student incompletes the observations High: (3 marks) student completes the calculations and the observation books
Execution/Conduction	3	Low:(0 marks)-Student does not execute the program Medium: (1-2 marks) Student incompletes the execution with errors High: (3 marks) -student completes the execution of the program

Parameters	Marks Allocated	Rubrics
Record Submission	4	<p>Low: (0 marks) -Student does not write the program and outputs in the record book</p> <p>Medium: (1-2 marks) Student incompletes the record book</p> <p>High: (3 marks)-student records the calculations and the executed program in the record books</p>

ACHARYA
Laboratory Certificate

College.. Acharya institution
Department... Electronics and communication.

This Is to Certify That Smt. / Sri Chandana kumari

..... has Satisfactory Completed The Course Of Experiments
In Practical..... Digital electronics prescribed by The

For The Course In electronics & communication

at The Laboratory Of This College In The Year 20 - 20

Head of The Dept *Rajen m* Signature of Lecturer In Charge *PNPalsapm 28/11*

Examiners.....

Name Of The Student.....

Reg No.

Examination Center.....

Date of Practical Examination.....

34
40

28/11/18


Fig B.2.2.2.g: Sample of Scheme of Evaluation

Particulars of The Experiments Performed			
CONTENTS			
Date	Experiments	Page No.	Remarks
17/09/18	Realization of Basic Gates & Universal gates	1-5	09+10+10 29/30 R-10C-10, V-10 PMP 21/11
17/9/18	Demorgan's Theorem	6-8	09+10+10 29/30 PMP 21/11
26/9/18	Verification of SOP & POS expression	9-14	
03/10/18	Full adder & Full Subtractor	15-17	10+10+09 29/30 PMP 21/11
10/10/18	Parallel adder & Subtractor	18-19	10+10+09 29/30 PMP 21/11
10/10/18	magnitude Comparator	20-23	10+10+09 29/30 PMP 21/11
24/10/18	5-bit magnitude Comparator	22-23	
24/10/18	Realization of adder & Subtractor using IC 74153 [4:1] mux	24-28	09+10+09 28/30 PMP 21/11
31/10/18	Realization of 3 Variable boolean function using IC 74151 [8:1 mux]	33-35	
31/10/18	Decoder using IC 74139	29-32	09+10+09 28/30 PMP 21/11
31/10/18	master Slave JK, D, & T flip flop	35-37	09+10+09 28/30 PMP 21/11
14/11/18	Realize SISO, PIPO, PISO Johnson & Ring Counter using 7495 IC	38-40	09+10+09 28/30 PMP 21/11

Fig B.2.2.2.h: Sample of Scheme of Evaluation

ACHARYA INSTITUTE OF TECHNOLOGY

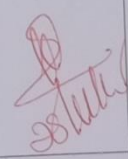
DEPARTMENT OF Electronics & Communication


ACHARYA

NAME: Chandana Kumari

SUBJECT: Digital electronics SUB CODE: 17 ECL38

SEC: C USN: A1T18BEEEC155

EXPERIMENT NO	MAXIMUM MARKS	CONDUCTION	VIVA	MARKS OBTAINED	SIGNATURE OF STAFF
PART A	10	04	01	05	
PART B	—	—	—	—	
TOTAL	10	04	01	05	

DATE: 28/11/18

SIGNATURE OF STUDENT
Chandana Kumari

SIGNATURE OF LAB INCHARGE
[Signature] 28/11/18

SIGNATURE OF HOD
[Signature]

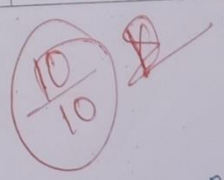


Fig B.2.2.2.i: Sample of Scheme of Evaluation

V) Seminar Evaluation

The seminar at pre-final and final years by the students will be on the current industry Needs. The seminar committee ensures that the students choose advanced concepts in allied research areas with a lot of relevance and applicability. The Department announces the final schedule and guide for the seminar. The guide along with other faculty assesses the Technical seminar presentations given by students. A sample format of Technical Seminar evaluation sheet is shown in Fig. B.2.2.2.j.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1		Acharya Institute of Technology, Bangalore																								
2		Department of Electronics and Communication Engineering.																								
3		Seminar (10ECS86)																								
4		Threshold Levels for attainment calculation:										>=60% ---->3					>=40% & <60%---->2					<40% ---->1				
5	Sl No.	Name	USN	Topic Relevance (10)	Presentation (15)	Viva (10)	Total (35)	Topic Relevance (10)	Presentation (15)	Viva (10)	Total (35)	Topic Relevance (10)	Presentation (15)	Viva (10)	Total (35)	CO1 avg (10M)	CO2 avg (15M)	CO3 avg (10M)	Report (10M) CO4	Use of ICT (5M) CO5	Total (50)	Threshold as per CO				
6				Evaluator 1				Evaluator 2				Evaluator 3										CO1	CO2	CO3	CO4	CO5
7	1	SHANU KUMAR	1AY12EC091	6	8	5	19	6	8	5	19	6	8	5	19	6	8	5	6	5	30	3	2	2	3	3
8	2	SOHIL PASHA	1AY12EC098	6	8	5	19	6	8	5	19	6	8	5	19	6	8	5	6	5	30	3	2	2	3	3
9	3	SPURTHI P	1AY12EC122	5	12	5	22	7	11	5	23	7	12	5	24	6	12	5	10	5	38	3	3	2	3	3
10	4	AKASH BAHETY	1AY13EC002	9	14	8	31	8	15	10	33	9	14	10	33	9	14	9	10	5	47	3	3	3	3	3
11	5	AKASH V B	1AY13EC003	6	8	5	19	6	8	5	19	6	8	5	19	6	8	5	6	5	30	3	2	2	3	3
12	6	AKSHAY J BHAT	1AY13EC008	6	8	5	19	6	8	5	19	6	8	5	19	6	8	5	6	5	30	3	2	2	3	3
13	7	AMIT ABHISHEK	1AY13EC009	8	9	6	23	9	13	6	28	7	10	6	23	8	11	6	10	5	40	3	3	3	3	3
14	8	ARJIT DUTTA	1AY13EC014	7	12	8	27	7	12	8	27	8	12	9	29	7	12	8	6	5	39	3	3	3	3	3
15	9	ASHWIN MURALI	1AY13EC017	6	8	5	19	6	8	5	19	6	8	5	19	6	8	5	6	5	30	3	2	2	3	3
16	10	CHANDANA S	1AY13EC022	9	13	8	30	9	13	8	30	9	13	7	29	9	13	8	6	5	41	3	3	3	3	3
17	11	ABHIRAM T	1AY13EC023	8	14	8	30	8	14	8	30	8	14	8	30	8	14	8	8	5	43	3	3	3	3	3

Fig. B.2.2.2.j Evaluation Sheet for Seminar

- One seminar will be conducted per student in the final year 8th semester by a committee consisting of the Head of the Department and three senior faculty members of the department whom shall be the Seminar Coordinator(s).
- Seminar topic shall be selected from the emerging technical areas
- The Department announces the final schedule and guide for the seminar.

- The Internal Assessment marks are given based on the evaluation done by the committee members (Head of the Department and Seminar Coordinator(s)) along with the guide and reviewer following the rubrics set by the department as follows in table 2.2.1b:

Table B.2.2.1b: Seminar Evaluation

Component	Marks	Criteria
Presentation	10	Clarity in presentation
	10	Understanding concepts
	10	Answering queries
	10	Organizing the presentation
Technical Seminar Report	10	Completeness of the report

2.2.3. Quality of Student Projects (25)

(Quality of the project is measured in terms of consideration to factors including, but not limited to, environment, safety, ethics, cost, type (application, product, research, review etc.) and standards. Processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes and enhancing the relevance of projects. Mention Implementation details including details of POs and PSOs addressed through the projects with justification)

Project Coordinators and Faculty members educate students carry out project works in different domains/areas of their interest. Coordinators sends circular for identifying the project works in their respective domains such as (not limited to)

- Internet of Things
- VLSI
- Artificial Intelligence and Machine Learning
- Image /Video/Speech Processing
- Computer Networks and Mobile Applications development
- Social/Environmental Relevant

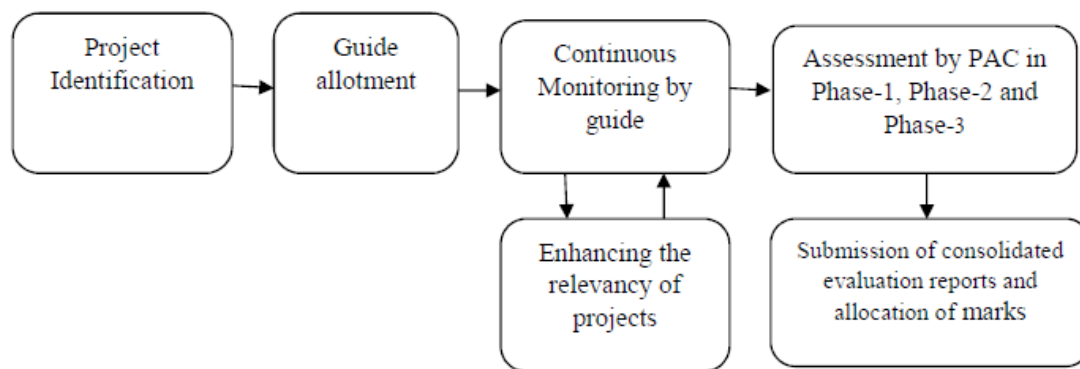


Fig B.2.2.3.a: Project Evaluation Process.

The department encourages students to undertake relevant, achievable, time bound projects either in the college or at the industry to solve problems in any of the above domains with social impact is shown in fig. B.2.2.3.a. Students can form group/team on their own, consisting of minimum 2 to maximum 4 members.

Topic Identification:

- a) The students are required to do a thorough literature survey on their area of interest, formulate the problem statement with a brief synopsis on the intended project work.
- b) The students are encouraged to consult experts from Industry/ Research labs/ Government Organizations to carry out their project work through proper channel.

Monitoring:

- a) Students have to submit the synopsis of the project work to the coordinators for scrutiny.
- b) The project work coordinators and the scrutiny committee will scrutinize the synopsis and give suggestions towards the improvements in strengthening the synopsis.
- c) Based on synopsis contents and areas of interest, the internal guides will be allocated to each project team.
- d) In case, the group of students taking projects from Public/Private sectors need to take approval by HOD and Letter of Reference sent to the concerned sector. A teacher of the

department functions as Internal Guide to such students and the scientist/researcher at the concerned sector functions as External Guide.

- e) Every week, the students should meet their concern guide and update their project work progress and have to take signature from guide, coordinator and HOD. The students/batch must give presentation on the project in front of the project work review committee as scheduled in Phase-1 & Phase-2 as shown in Table 2.2.3.a.
- f) Finally, the review committee evaluates the projects for respective domains.

Project work Review Schedule:

Table B.2.2.3.a Project Review Schedule

Project Group formation	Beginning of VIII semester (February 2 nd Week)
Submission of synopsis	VIII Semester (February 4 th Week)
Guide Allocation	VIII Semester (February)
Project Phase – I Review	VIII semester (March 2 nd Week)
Final Presentation and Demonstration	End of VIII Semester (April - May)
Submission of Draft report	April – May
Exhibit the project at college exhibition	May 2 nd Week
Submission of final report	May 3 rd Week
Final Viva voce	May – June

Project work Evaluation:

- a) **Internal Evaluation:** The project work and the report will be evaluated by internal committee at Phase-1, Phase-2 is presented in Fig. 2.2.3b.
- b) **External Evaluation:** The project work and the report will be evaluated by internal and external examiners appointed by the University.
- c) The external examiner will be from other VTU affiliated Institutions.
- d) The examiners will take presentation and demonstration followed by Viva-Voce on the project work carried out by students. The students need to defend their project work.

Based on the presentation and Viva-Voce, the marks will be awarded for the students, which will be sent to University.

Rubrics for Project Internal Evaluation:

The Rubrics for project evaluation is shown in Table B.2.2.3.b.

Table B.2.2.3.b Rubrics for Project Evaluation

Rubric 1 (R1): Phase -1 Evaluation (10 Marks)

Parameters	Low (0-35%)	Medium (36% - 65%)	High (66% – 100%)	Max Marks
Identification of Domain, Problem definition, and Objectives	Less clarity in the domain choosing and problem identification (1)	Having chosen the domain and needs more effort to define the problem (2-3)	Well defined problem with clarity of objectives (4-5)	5
Literature Survey	Inadequate survey of literature which can substantiate the objectives defined (1)	Survey of literature done with less relevant articles and needs to justify the existing work (2)	Extensive survey of literature survey and existing systems/methods (3)	3
Methodology proposed and time management	Not feasible method and lac of time management (0)	Moderate Proposed methodology and time schedule (1)	Well defined methodology and time schedule (2)	2
Total				10

Rubric 2 (R2): Phase -II Evaluation (20 Marks)

Criteria	Achievement Levels				
	Inadequate (0-35%)	Good (36% - 65%)	Excellent (66% – 100%)	CO	Max. Marks
Methodology followed and meeting of Time Schedules	Inadequate/non proposed methods followed with an extension of time schedule (0 – 1)	Followed different methodology and able to justify with little extension of time schedule. (2 – 3)	Strictly followed the methodology proposed and finished in the stipulated time. (4 – 5)	CO 1	5

Criteria	Achievement Levels				
	Inadequate (0-35%)	Good (36% - 65%)	Excellent (66% – 100%)	CO	Max. Marks
Use of Modern Tools	Has not used relevant modern tools for the design & experimentation (1)	Has used relevant modern tools with inadequate knowledge and has not obtained optimized results. (2-3)	Has applied tools effectively to design/ analyze/debug/ to get optimized solution for the problem. (4 – 5)	CO 2	5
Teamwork	Minimal contribution to the team. (1)	Contributed considerably to the team. (2)	Has effectively contributed in achieving optimized results (3 – 4)	CO 4	4
Lifelong Learning	No understanding of the requirements for lifelong learning in the engineering profession. (0)	Can present examples of the impact of lifelong learning in the engineering industry. (1)	Can present examples of the impact of lifelong learning, along with the requirement of skills updation in the modern engineering profession. (2)	CO 3	2
Communication	Unable to communicate the work carried out (1)	Could communicate the information to a limited extent (2)	Has effectively communicated the work carried out (3 – 4)		4
Total					20

Rubric – III: Fortnight progress (20 marks)

Parameter	Low	Medium	High	Max. Marks
Attendance (>85%)	Attendance (75% to 80%)	Attendance (80% to 85%)	Attendance (>85%)	10
Progress in Project	Progress not according to the schedule (0-2)	Progress not according to the schedule but with justification (3 – 6)	Progress as per the schedule (7 – 10)	10
Total				20

Rubric – IV: Project Evaluation by the guide**(20 marks)**

Parameter	Low	Medium	High	Max. Marks
Self motivation to learn new technologies	Less motivated to learn (0 – 3)	Moderately motivated to learn new technologies (4 – 6)	Highly motivated to (7 – 10)	10
Technical awareness of the project and working	Has less understanding about the working of the project (0-2)	Has the knowledge of the working of project and technology used (3 – 6)	Excellent knowledge of Project working and the technology used. (7 – 10)	10
Total				20

Rubric – V: Project Report Evaluation (20 marks)

Parameter	Low	Medium	High	Max. Marks
Quality of report with respect to format specified by the university	Report not meeting the specifications prescribed by the university (0-1)	Report does not deviate much from the specification but needs fine adjustments (2 - 3)	Report Meets the required specification and formats (4 – 5)	5
Content of report	The contents of the report does not completely explain the project or contains irrelevant materials (0 – 1)	The content of the report explains the project work with some unnecessary documents (2 – 3)	The report completely explains the project work and contains all relevant material. (4 – 5)	5
Analysis of results and conclusion	Report fails to do the result analysis/ improper conclusion (0-1)	Result analysis is done with less justification to the objectives defined and the conclusion is not appropriate (2)	Result analysis justifies the objectives defined with the proper conclusion (3)	3

Parameter	Low	Medium	High	Max. Marks
Language usage	Report has large number of spelling and grammatical errors (0)	Free of spelling errors and minor errors in grammar (1)	The language usage in the report is satisfactory (2)	2
Total				20

Projects are broadly classified as

1. Industry projects: Under this category, the project work is carried out in an industry or an external organization with identified internal and external guides.
2. In-house projects: Under this category, the project work is carried out under the supervision of a faculty from the department.

Table B.2.2.3.c: No. of Projects

Academic Year	Total No. of Projects	No. of In-house Projects	Industry Projects
CAY (2018 – 2019)	28	28	
CAY m1 (2017 – 2018)	36	35	1
CAY m2 (2016 – 2017)	36	36	
CAY m3 (2015 – 2016)	36	36	

Internal evaluation by faculty members is shown in Figure B.2.2.3.b.

Panel-1

Sl. No.	Name	Date	Project Title	Knowledge (10 marks)	Communication (10 marks)	Teamwork (10 marks)	Presentation (10 marks)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36

Panel-2

Sl. No.	Name	Date	Project Title	Knowledge (10 marks)	Communication (10 marks)	Teamwork (10 marks)	Presentation (10 marks)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36

Figure 2.2.3b: Project Evaluation

- a) Working Prototypes and Enhancing the Relevance of Projects
- b) The department of ECE encourages the students to take part in “Technotsava” In-house project exhibition, where all the students will exhibit their projects. Eminent personalities from industries and other institutes will select best two projects for the award of 1st and 2nd prize. The sample copy of project evaluation and Best project certificate are shown in Figure 2.2.3.c and Figure 2.2.3.d.
- c) The best projects identified from the project exhibition will be sent to different colleges/institute for participation in exhibition.
- d) The internal guide will help the students to publish their work in National/International Conference and Journal.

Figure B.2.2.3c: Project Progress Report Sample



Figure B.2.2.3d: Sample of Best Project Award Certificate

Projects funded by KSCST:**Table B.2.2.3d: KSCST Funded Projects**

2016-2017				
Sl. No	USN	Name	Guide	Project Title
1	1AY13EC094	Shashikumar M	Mrs. Jayalaxmi H	Smart Arm: Autonomous low cost device for smart agriculture
2	1AY14EC407	Jyothi S		
3	1AY13EC404	Deepa R		
4	1AY13EC414	Manasa H A		

2015 – 2016				
Sl. No	USN	Name	Guide	Project Title
1	1AY12EC022	Chetan M	Mrs. Jayalaxmi H	Farmbot – Smallscale, Low Cost Farming Automation System
2	1AY12EC007	Amaresh G		
3	1AY12EC013	Anudeep C		
4	1AY13EC411	Krishna		

2014-2015				
Sl. No	USN	Name	Guide	Title
1	1AY11EC050	Lachmi Prasad Sha	Siddesh M B	A Smart Wireless Attendance Monitoring System
2	1AY11EC058	Moti Kumar		
3	1AY11EC060	Md Zarif Husen		

Table B.2.2.3e: Best Projects Awarded

Prize	Title of the project	Students	Guide	Year
2017-18				
I	Automated Sprayer using Gantry Robot	Anusha A Pavan Kumar H N Naushir Miraz Nikhitha M H	Sandeep Kumar K	2017-2018
II	Smart chair for body posture analysis	Sushmitha C P Ramesh Siddalingappa Ramakanth	Ramzan Basheer	

Prize	Title of the project	Students	Guide	Year
2016-17				
I	Herbobot using Computer Vision	Tanya Sneha	Sandeep Kumar K	2016-2017
		Janardhan L R		
		Pritey Dey		
		Tejdeep K L		
II	Automatic Fruit Grading System	Akshatha Kanthraj	Sujatha B M	
		Ashika S		
		Y Pavithra		
		Rashmi B N		
I	Farmbot - Lowcost, Modular Farming Automation System	Amaresh Ganganagoudar	Jayalaxmi H	2015-2016
		Anudeep C Shetty		
		Krishna		
		Chetan M		
II	Land Combat Fighting Robot	Mona Heidaery Amin	Sevugarajan S	
		Asmita Roy		
		Nikunj D Patel		
		Sonal Darshan		

2015-16				
I	GPS and GSM Based Real-Time E-Bangle for Women Care	Somashekar B K	Sujatha B M	2014-2015
		Shashidhar G		
		Naveena A K		
		Kachcharabi Basavaraj		
II	A Smart Wireless Attendance Monitoring System	Lachhmi Prasad Sah	Siddesh M B	
		Moti Kumar		
		Md Zarif Husen		
I	GPS based aerial survey system using quadcopter (UAV)	Adarsh V K	Lakshmikanth S	2013-2014
		Akshay S Chouhan		
II	Smart Centralized e-garbage system	Yogesh H M	Manjunath R C	
		Uday M		
		Pavan K		
		Yogeesh H R		

Project Work Carried in Various Domains

Table B.2.2.3.f: Projects in Various Domains

Sl. No	Domain	No. of Projects		
		2017-2018	2016 – 2017	2015 – 2016
1	Embedded Systems	18	28	25
2	VLSI	6	2	3
3	Communication & Networking	2	-	1
4	Image Processing	6	2	1
5	IoT	2	3	2



Fig. B.2.2.3e: Project Exhibition

2.2.4. Initiatives related to industry interaction (15)

(Give details of the industry involvement in the program such as industry-attached laboratories, partial delivery of appropriate courses by industry experts etc. Mention the initiatives, implementation details and impact analysis)

The department of ECE has made efforts in the direction of making students ready for industry by enhancing their skill sets through training on recent tool and technologies. The said efforts are made through the following activities in collaboration with industry/research lab as shown in Table 2.2.4a.

- Invited talks- Resource person from industries in specific domain of ECE.
- Industry supported Laboratory.
- Industrial/International exhibition visits

- Student Development Programs- in collaboration of industry for skill/curriculum development.
- Internships
- Industry experts invited as judges for project Exhibition.
- Faculty Development Program – Faculty deputed to industries for training.
- Faculties are invited as resource person from academia/industry to provide training.

Table B.2.2.4.a: Initiatives related to Industry Interaction

Sl No.	Industry Interaction Initiative	Industry Involved	Outcome	Impact Analysis
1.	Invited talks from industry experts.	1. Accenture 2. BEL 3. KPIT 4. QUALCOMM India 5. DNAE etc.	Recent trends and career guidance for core industry.	Enrichment of knowledge as per current Industry needs.
2	Industry supported embedded system Laboratory.	1. Texas Instruments Innovation center. 2. Digital Shark Technology Pvt Ltd.	Use of Advanced Robotic Control and Internet of Things (IoT) using Texas Instruments processor based boards.	UG and PG Projects in the field of Embedded system and Internet of things.
3.	Industrial Visits	1. BHEL 2. Toyota Kirloskar Motors Limited. 3. ACE Designers. 4. Vaidyanateshwara Instruments 5. 400KV Power Substation, Nelamangala.	ure to Automation involved in Industry.	Experience the importance of working safety. Understand the current trends and Industry standards.

SI No.	Industry Interaction Initiative	Industry Involved	Outcome	Impact Analysis
4.	Exhibition visits Agritech Laser Photonics ELECARAMA Electronica India & Productronica India	1. Spraying Systems (India) Pvt Ltd 2. Jain Irrigation Systems Limited. 3. Genentech India. etc. 4. ABB 5. Synergy enterprises	Overview of advanced products and tools available	Exposure to problems associated in agriculture, Communication.
5.	Workshop conducted in association with industries. 1. 5 days System Design using Xilinx Vivado Design Suite and Zynq-7000 SOC 2. 2 days workshop on Smart cities. 3. 2 days Raspberry PI and Internet of Things	1. Accenture Digital. 2. C-DAC 3. Reliance JioInfocomm. Ltd. (RJIL) 4. ABB etc. 5. Xilinx 6. CoreEL Technologies	Use of Modern Engineering tool to complex engineering problems.	UG projects in Embedded system field.
6.	Placement oriented VLSI course with lab by Industry experts.	Technocarve solutions, Bangalore.	Exposure of CADENCE tool to students to work on projects.	Four students got placement in core VLSI company.
7	Internship program at college level to meet Industry standards.	1. Technocarve solutions, Bangalore. 2. CoreEL Technologies Pvt Ltd	Use of Modern Engineering tool to complex engineering problems.	UG projects in Embedded system field.

SI No.	Industry Interaction Initiative	Industry Involved	Outcome	Impact Analysis
8	MoU's signed with industries	1. Texas Instruments Innovation center. 2. NDRF 3. Council of Scientific and Industrial Research, National Aeronautics Ltd.(CSIR-NAL) 4. Infosys Campus Connect 5. SASKEN Communication Technologies Ltd 6. Peenya Industrial Association.	Exposure of Students and faculty to latest technologies	Internship opportunities. Placement opportunities. Faculty development program.
9	KenTechFest	SASKEN Technologies Ltd.	Exposure to Automation involved in Industry.	Understand the current trends and Industry standards.

Some Photographs of Industry Interactions



Fig. B.2.2.4.a: Industry Visit to Toyoto Kirloskar



Fig. B2.2.4.b: Industry Visit to Coroel



Fig. B.2.2.4.c: Presentation on Smart Cities workshop



Fig. B.2.2.4.d: Presentation on Product Design workshop



Fig. B.2.2.4.e: Presentation by Guest faculty



Fig. B.2.2.4.f: Group photo in workshop



Fig. B.2.2.4.g: Group photo in workshop



Fig. B.2.2.4.h: Group photo in workshop

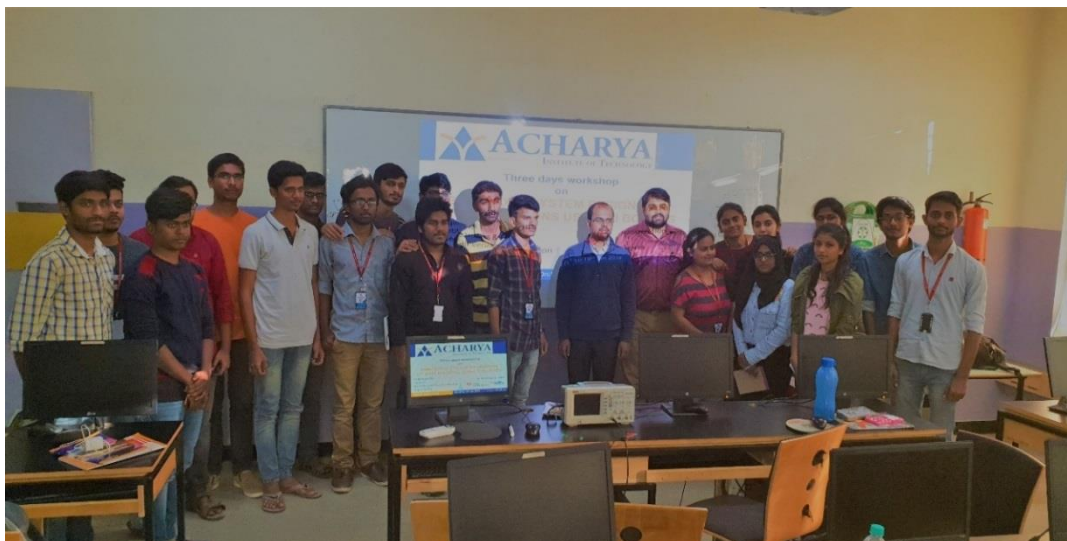


Fig B.2.2.4.i: Group photo in workshop

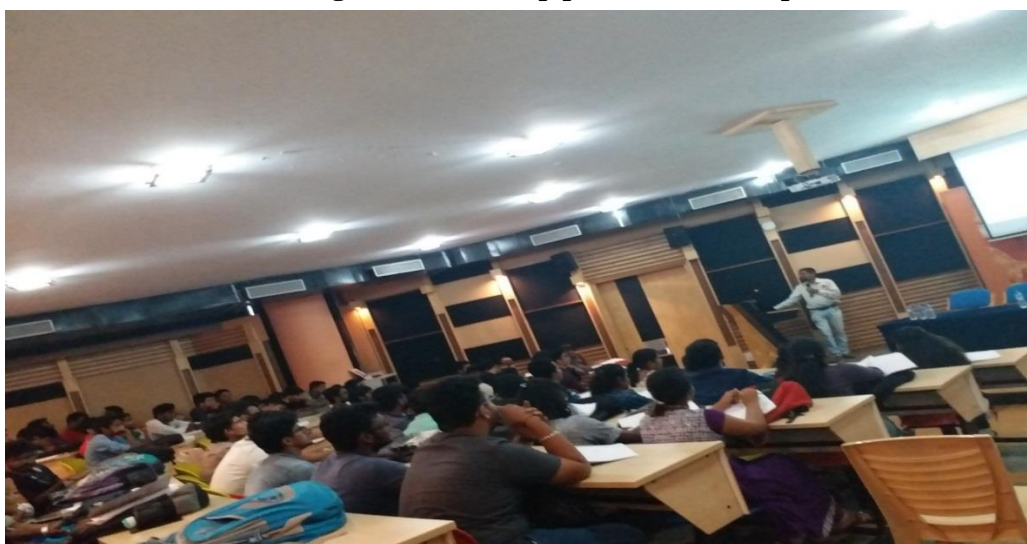


Fig. B.2.2.4.j: Group photo in workshop

2.2.5 Initiatives related to Internships/Summer Training (15)

• Initiatives

Acharya IT take up many initiatives to bridge the gap between academia and industry.

1. Initiatives by the placement department

The placement department approaches various companies at the beginning of every semester, to provide internships to the students. Some of the companies are mentioned below Table 2.2.5.a.

Table B.2.2.5.a: Companies Visited

Sl. No.	Company/Organization
1	Velankani Technologies
2	Nineleaps
3	NTT data
4	Avaya Technologies
5	Sanrad Medical Systems
6	Kennametal India pvt. Ltd.

The students are also provided training which helps them to face interviews/tests for the internship. The internship/placement trainings are scheduled during the semester

2 Initiatives by the department

- The department arranges workshops, In-house Internships and technical talks from eminent personalities from various organizations on a regular basis.
- Industrial visits are taken up regularly for value added learning which provides holistic learning.
- Students are encouraged to take up internships during their semester break.
- The faculty members interact with industrial experts and provide their suggestions and guidelines on internship programs to students shown in Table B.2.2.5.b.

- The faculty members provide the students with recommendation letters and other necessary supports.
- The alumni coordinator constantly interacts with alumni, who are working in various domains and requests them to provide necessary guidelines and support for their juniors' internship and placements.
- The seminar at pre-final and final years by the students will be on the current industry needs.
- The department has signed MOUs with Industries for internships. The sample copy of Internship Certificate is shown in Figure B.2.2.5.a.

Table B.2.2.5.b: Internship details 2018- 2019

Sl No	Student Name	Company and place	Duration
1	Kiran Kumar Av	CoreEL Technologies	4 Weeks
2	Hridya Unnikrishnan	CoreEL Technologies	4 Weeks
3	Chandana B N	CoreEL Technologies	4 Weeks
4	Bharath Raj S	Vantage Agora	4 Weeks
5	V Aiswarya	Sai tektronix ltd.	4 Weeks
6	Robin S	Coreel technologies	4 Weeks
7	Charan Kumar A M	Core El technologies	4 Weeks
8	Prasanna S	coreEL Technologies	4 Weeks
9	Omkar	CoreEL Technologies	4 Weeks
10	Adithya M	CoreEL Technologies	4 Weeks
11	Harish R	Old Dominion University,USA	4 Weeks
12	Suraj S Bilgi	CoreEL technologies	4 Weeks
13	Anoop S	Uday engineers	4 Weeks
14	Spandan Jain B P	Li2 innovation	4 Weeks
15	Sahil Sultania	Tata Motors, Jamshedpur	4 Weeks
16	Ayan Chatterjee	Nineleaps	4 Weeks
17	Vikrant Kumar	Internshala trainings	4 Weeks
18	Abhijyot Pandey	Internshala Trainings	4 Weeks
19	Deepshikha Baishya	CoreEL Technologies	4 Weeks
20	Anibesh M	Internshala training	4 Weeks
21	Gutta Greeshma	Uday Engineers	4 Weeks
22	Vinod Badiger	Technologies	4 Weeks
23	Poojitha	Vantage Agora	4 Weeks
24	V Aiswarya	CoreEl Technologies	4 Weeks
25	Harish R	BHEL-EPD	4 Weeks
26	Krithika.K	Inventeron technologies	4 Weeks

Sl No	Student Name	Company and place	Duration
27	Chetan	BSNL Patna(Bihar)	4 Weeks
28	Harsh Vatsa	BHE Lepd	4 Weeks
29	Mary Theresa Dominic	CoreEL technologies	4 Weeks
30	Chandana B N	CoreEL Technologies	4 Weeks
31	Anoop S	CoreEL Technologies	4 Weeks
32	Hridya Unnikrishnan	Fluxgen engineering technologies	4 Weeks
33	Tejaswini T M	Fluxgen Engineering Technologies	4 Weeks
34	Subhash Chander Verma	Uday engineer's	4 Weeks
35	Sumanth R	CoreEL technologies	4 Weeks
36	Ashwin R	ETDC, Bengaluru	4 Weeks
37	Sunil Shastry M	BSNL	4 Weeks
38	Meghana P	INVENTERON TECHNOLOGIES	4 Weeks
39	Naveenkumar H D	INVENTERON TECHNOLOGIES	4 Weeks
40	B Vishal	Inventeron Technologies	4 Weeks
41	Basavaraj Chiniwalar	Inventeron technologies	4 Weeks
42	Abubakar	BSNL	4 Weeks
43	Vikshith H G	Technofly solutions	4 Weeks
44	Sharanya Manohar	Electronic Test and Development Center	4 Weeks
45	C Sharath Kumar Reddy	Technofly solutions	4 Weeks
46	Sarvamangala	Tata	4 Weeks
47	Aman Raj	Inventeron Technologies	4 Weeks
48	Praveen S	Inventron Technologies	4 Weeks
49	Sagar	Inventeron technologies	4 Weeks
50	Pavan Kumar Reddy B	Inventron technology	4 Weeks
51	Vishnu R	ETDC	4 Weeks
52	Sanjay Shanbhag	Inventron technologies	4 Weeks
53	N Mallikarjuna	Inventeron	4 Weeks
54	Naveen Kumar	Uday engineers	4 Weeks
55	Vinay Prasad R	Technofly solutions	4 Weeks
56	Mattapalli Vinay	Inventeron technologies	4 Weeks
57	S.Pavan	Inventeron technologies	4 Weeks
58	Siddaling Biradar	Inventeron Technologies Benglore	4 Weeks
59	Upendracharya Puranik	Inventeron technology and businesses solutions	4 Weeks
60	Paresh	BHEL electronics division ,Mysore road, Bangalore	4 Weeks
61	Lakshman G	Electronic test and development centre	4 Weeks
62	Mallanagouda G	Aarica	4 Weeks
63	Satyam Saurav	IISc	4 Weeks
64	Priyanka G	Electronic Test and Development Center (ETDC)	4 Weeks
65	Akshay R	Techno fly solution	4 Weeks
66	Prasanna S	Aarica	4 Weeks
67	Tejashwini	Aarica	4 Weeks
68	Puja Rani	Indian institute of Technology, Bangalore	4 Weeks
69	Nisha Jha	CoreEL Technologies	4 Weeks

Students Internship: 2014-15 to 2017-18**Table B.2.2.5.c: Internship details 2014- 2017**

Year	Sl. No.	Student Name	Internship and Company Name
2017-18	1	Akshay R	Testing Protocols In a Metro Car BEML Limited, Bangalore.
	2	Nishanth R, Sanjay Shanbhag	Web designing using HTML 5 and CSS, APEX HI –Tech Institute, Bangalore
	3	Nishanth R	Testing on Fiber optic communication System APEX HI –Tech Institute, Bangalore
	4	Nishanth R	Embedded System Programming for Sensors and Wireless Devices, APTECH HI –Tech Institute, Bangalore
	5	Nishanth R	GSM and CDMA Mobile communication APTECH HI –Tech Institute, Bangalore
	6	Naushir Miraz	Java Basics, Classes and Graphics Modules Internshala Virtual Training Center.
	7	Naushir Miraz	MATLAB Onramp Online- self-paced training course.
	8	Anusha	The new era of DER Project Development Heat spring, Portland
	9	Naushir Miraz,	Internet of Things, IISc-MSME center of excellence, Bangalore.
2016-17	1	Kasukurthi Pavitra, Akshatha H Kedlai, Arpitha H Kedlai, Nivedita C Chonale, Sanjana C.S.	Embedded Linux and Linux Kernels, APEX HI –Tech Institute, Bangalore.
	2	Roshini .R, Vardhini R S, Megha K, Akshatha Joshi G, Anshuman Tiwari, Poonam, Shreya M Danaraddi, Dhanyashree A B, Tejashwini G, Pooja M, Rachana Rao Atigadda,	Embedded Projects development, APEX HI –Tech Institute, Bangalore.
	3	Arpitha H Kedlai, Megha K, Nivedita C Chonale, Varuna N K, Akshatha H Kedlai, Spoorthyshree A Shetty,	GSM and CDMA Mobile Communications, APEX HI –Tech Institute, Bangalore.
	4	Dristy Singh	Power electronics, Schneider India Pvt.Ltd Hyderabad
	5	Sanjana C.S	Web Designing using CSS, APEX HI –Tech Institute, Bangalore.
	6	Anush , Naushir Miraz	Antenna Design and Testing, APEX HI –Tech Institute, Bangalore.
	7	Anusha, Naushir Miraz	GSM and CDMA Mobile Communications, APEX HI –Tech Institute, Bangalore.
	8	Satyam Kumar	Winter training for Engineering, BSNL CTTC, Patna
	9	Poonam, Satyajeet Kumar Tiwari, Tejaswini, Rachana Rao Janhavi Jaiswal	C programming for Embedded Systems, APEX HI –Tech Institute, Bangalore.

Year	Sl. No.	Student Name	Internship and Company Name
2016 - 2017	10	Naushir Miraz, Varuna N K, Megha K, Pavithra K, Akshatha Joshi, Anusha, Vardhini R S, Akshatha H Kedlai, Arpitha H Kedlai, Niveditha C Chonale, Deepesh, Shreya M Danaraddi, Satyajeet K. Tiwari, Satyam, Sanjana C S, Roshini R.	RTL Design & Functional Verification, APEX HI –Tech Institute, Bangalore.
	11	Yashas P, Sanjana C S, Poonam, Arpitha H Kedlai, Kasukurthi .	C programming, Spoken tutorial project IIT Bombay.
	12	Naushir Miraz, Anusha	Antenna Design and Testing, Ministry of Skill Development and Entrepreneurship
	13	Poonam, Satyam Kumar ECE	C –Training, Spoken tutorial project IIT Bombay.
	14	Poonam, Satyam Kumar ECE	CPP –Training, Spoken tutorial project IIT Bombay.
	15	Sanjana C S, Anurag Jain, Satyajeet K Tiwari, Deepesh Kumar, Anshuman Tiwari, Satyajeet Kumar Tiwari Sanjana C.S, Poonam Janhavi Jaiswal Yashas P, Rachana Rao, Deepesh, Anshuman Tiwari, Tejaswini	JAVA Training, Spoken tutorial project IIT Bombay.
	16	Aishwarya V, Naveenan .S	Embedded Systems, Tryst, IIT Delhi
	17	Naveenan .S	Embedded Systems, DRDO , Bangalore.
	18	Anshuman Tiwari	Internship in Telecom technology. RTTC ,Mysore
	19	Satyajeet Kumar Tiwari	IBM Software Industry –oriented project KVCH Noida Sector-2
	20	Tejaswini, Roshini .R Rachana Rao, Pooja .M Satyam Kumar, Yashas P, Varuna N.K, Janhavi Jaiswal, Poonam, Anusha, Naushir Miraz	CPP –Training, , Spoken tutorial project IIT Bombay.
2015-16	21	Janhavi Jaiswal Rachana Rao, Poonam Anusha, Naushir Miraz	C programming, , Spoken tutorial project IIT Bombay.
	1	Satyajeet Kumar Tiwari	Career Oriented Pre placement training, JV Global , Bangalore.
	2	Satyajeet Kumar Tiwari	IBM Software Industry –oriented project, KVCH Noida Sector-2.
	3	Tejaswini, Anshuman Tiwari	Internship in Telecom technology, RTTC Mysore.
	4	Roshini .R, Pooja .M, Satyam Kumar, Yashas P, Varuna N.K	CPP training, Spoken tutorial project IIT Bombay.
2014-15	5	Janhavi Jaiswal, Poonam	Career Oriented Pre-placement, JV Global , Bangalore.
	1	Akshata	Traction System, Generator Controls, BSNL, Bangalore
	2	Jeseph Vijay Mermin	Explosion Protection techniques, Pepped & Fuchs, Bangalore

Year	Sl. No.	Student Name	Internship and Company Name
	3	Zishan Ali	Role of Electronics and Communication in central coalfields limited, E&T Department Central Coalfields Ltd., Ranchi
	4	Nipun Sharma	Oil & Natural Gas Co-operation LTD,ONGC, Mumbai.
	5	Mr.Md.Murshid Alam	Telecom Installation,BSNL, Kolkatta.
	6	Mayank Madhav, Joseph Vijay Merwin, Sourav Kumar, Md. Murshid Alam Kathiar, Manasa H A	Telecom Installation,BSNL, Kolkatta.
	7	Penchala Manjushee,	Internship,Centrum, Bangalore
	8	Nagarathana R,	Internship,Centrum, Bangalore
	9	Manasa H A,	OFC, Broad Band & Networking,RTTC, Mysore
	10	Ankush Saxena,	In-plant Training,ISTRAC, Belgaum.
	11	Dikshant Sheka,	Oil & Natural Gas Co-operation LTD,ONGC, Mumbai.
	12	Sushmitha K B, Anurag anand.	Embedded and Robotics. HP Education Services, Bangalore.

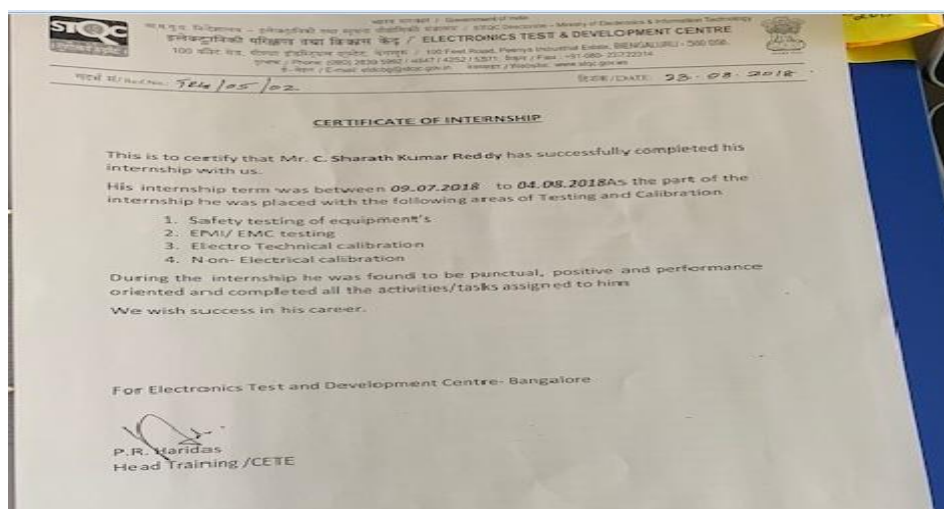


Table B.2.2.5.c: ODU Project List

Academic Year	Student Names	Topic	Guide Name
2018-19	Pruthviraj Patil	Tongue Drive System	Mrs. Sumalatha.S
	Spoorti		
	Fathima Hanif		
	Shaik Wasim		
	Md.Saifulla		

Academic Year	Student Names	Topic	Guide Name
2017-18	Chandana . B.N	Automatic Waste Segregator	Mrs. Sumalatha.S
	Hridya Unnikrishnan		
	Kiran Kumar A.V		
	Ganesh D.V		
	Robin	Activity monitoring system in Gym.	Mr.Sandeep kumar.k
	Md.Faizal		
	Sanjay.J		
	Sumanth.R	Text to voice conversion for blind people using image processing.	Mrs. Sumalatha.S Mr.Sandeep kumar.k
	Sunil Shasthry		
	Suraj		
	Nishanth.R		
2016-17	Mohith B Javali	Multipurpose Snake-bot	Mrs. Sumalatha.S
	Nikitha.M.H		
	Anusha		
	Sai Shankar		
2015-16	Md. Saifulla	Solar powered mobile battery	Mrs. Sumalatha.S
	Anil .T. Choudhary,		
	Shrinidhi,		
	Rakesh S.K		

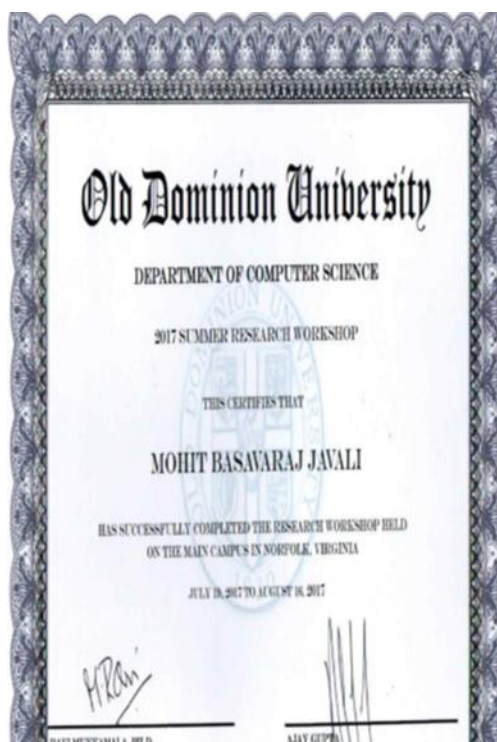


Fig. B.2.2.5.e: ODU Certificate

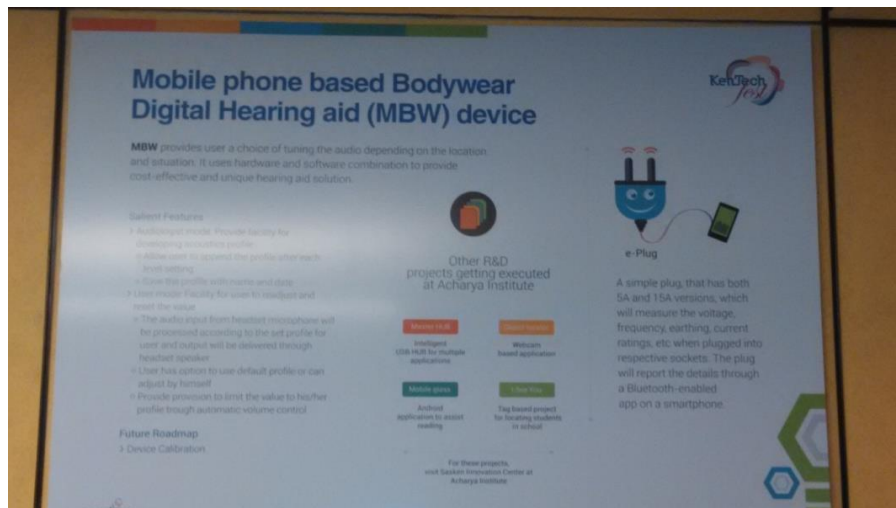


Fig. B.2.2.5.f: Industry Initiatives



Figure B.2.2.5.g Industry Interaction

• Impact Analysis

Taking up internships has helped students in various aspects such as:

- To get recruited by multinational companies and has aided them in getting admissions into MS programs in prestigious universities across the globe.
- To gain valuable industry knowledge and understand the work place culture.
- To align themselves to the needs of the industry.
- To cultivate team work and leadership skills.

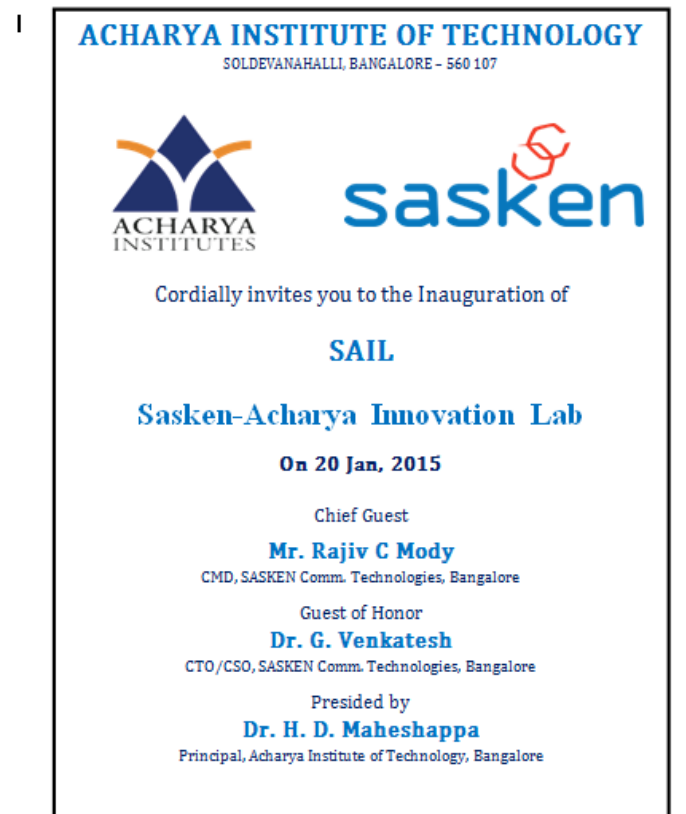


Figure B.2.2.5.h Industry Interaction Inauguration



Figure B.2.2.5.i TI Innovation Lab



Figure B.2.2.5.j TI Innovation Lab

CRITERION 3	Course Outcomes and Program Outcomes	120
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3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

3.1. Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

(Program Outcomes as mentioned in Annexure I and Program Specific Outcomes as defined by the Program)

PROGRAM OUTCOMES (POs)

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. **Analog / Digital Circuit Design:** Apply the conceptual knowledge in the analysis and/or design; evaluate analog/digital circuits and systems.
2. **VLSI, Signal Processing and Embedded Systems:** Demonstrate technical competency in the analysis, design, and validation of components in VLSI, Signal Processing, and Embedded Systems
3. **Communication and Networking:** Apply the domain knowledge in the implementation and performance analysis of Communication Systems and Computer Networks.

3.1.1. Course Outcomes (COs)

(05)

(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked)

The following tables **B3.1.1.1** to **B3.1.1.8** list the Course Outcomes of one course from each semester of study for the batch 2014-18.

Table: B.3.1.1.1

SEM:I	Sub Name: Basic Electronics
14ELN15.1	Describe the working of electronic devices and circuits
14ELN15.2	Compute circuit/performance parameters in various electronic circuits.
14ELN15.3	Describe the concepts of communication systems and its applications.
14ELN15.4	Simplify boolean expressions and realize using logic gates
14ELN15.5	Outline the features of microprocessor, microcontrollers and transducers.

Table B. 3.1.1.2

SEM: II	Sub Name: Engineering mathematics
14MAT21.1	Use partial derivatives to calculate rates of change of multivariate functions.
14MAT21.2	Analyze position, velocity, and acceleration in two or three dimensions using the calculus of vector valued functions.
14MAT21.3	Trace the curves which are useful in applications of integration in finding the length, area and volume.
14MAT21.4	Recognize and solve first-order ordinary differential equations, model simple electrical circuits, projectile motion and Newton's law of cooling and laws of decay and growth.
14MAT21.5	Use matrices, determinants and techniques for solving systems of linear equations in the different areas of Linear Algebra.

Table B. 3.1.1.3

SEM:III	Sub Name: Analog Electronic circuits
10ES32.1	Explain the diode parameters, stability of operating point and characteristics of FET.
10ES32.2	Analyse BJT & JFET Amplifiers using small signal model.
10ES32.3	Analyse the effect of the various capacitances on the frequency response of the BJT & FET amplifiers.
10ES32.4	Design analog Circuits using Diodes and transistors for a given specification.

Table: B3.1.1.4

SEM:IV	Sub Name: signals and systems
10EC44.1	Analyze and identify different types of signal and system properties
10EC44.2	Determine the output of LTI system using Convolution integral/Sum and Impulse response
10EC44.3	Solve differential and difference equations for LTI systems.
10EC44.4	Apply Fourier representation to study the behaviour of periodic and non periodic signals.
10EC44.1	Apply Z Transform to study the behaviour of Signals and systems.

Table: B3.1.1.5

SEM:V	Sub Name: CMOS VLSI
10EC56.1	Analyze the characteristics and parameters of MOS circuits in VLSI design.

10EC56.2	Discuss CMOS fabrication process, subsystems design and VLSI architectures.
10EC56.3	Apply design rules to draw schematic and layout of MOS circuits.
10EC56.4	Analyze the performance of CMOS in terms of memory, speed, power and area.

Table: B3.1.1.6

SEM:VI	Sub Name: Digital Communication
10EC61.1	Apply the concept of sampling, quantization, encoding and reconstruction in base band transmission system.
10EC61.2	Analyze the performance of Digital Modulation Schemes in terms of probability of Error, Spectral Efficiency and Power
10EC61.3	Determine quantization error, error rate, SNR and the power spectra of discrete PAM signal to estimate the performance of various signalling formats.
10EC61.4	Analyze the performance of optimum receivers by applying theory of estimation and infer the performance of various spread spectrum techniques.

Table: B3.1.1.7

SEM:VII	Sub Name: Embedded systems.
10EC74.1	Describe the various hardware components and principles of RTOS used in an Embedded systems.
10EC74.2	Classify and Compare the various types of memories, real time systems used in embedded systems.
10EC74.3	Select an appropriate life cycle and real time operating system for an embedded application development.
10EC74.4	Analyze the different addressing modes, algorithms used and performance of Embedded System Design

Table: B3.1.1.8

SEM:VIII	Sub Name: Network Security
10EC832.1	Choose suitable encryption / decryption algorithm for a given application.
10EC832.2	Identify suitable protocol stack to provide end-to-end secured communication.
10EC832.3	Apply security mechanism to handle specific threat.
10EC832.4	Analyze the basic concepts of network security to predict and classify attacks on network

3.1.2. CO-PO matrices of courses selected in 3.1.1**(05)***(six matrices to be mentioned; one per semester from 3rd to 8th semester)*

The following tables B3.1.2.1 to B3.1.2.6 CO - PO matrices one per semester from 3rd to 8th semester of study for the batch 2014-18

Table B.3.1.2.1

SEM:III	Sub Name: Analog Electronic circuits											
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10ES32.1	3	-	-	-	-		-	-	-	-	-	-
10ES32.2	3	2	-	-	-	-	-	-	-	-	-	-
10ES32.3	3	2	-	-	-	-	-	-	-	-	-	-
10ES32.4	3	2	2	-	-	-	-	-	-	-	-	-

Table B.3.1.2.2

SEM:IV	Sub Name: signals and systems											
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC44.1	3	2	-	-	-	-	-	-	-	-	-	-
10EC44.2	3	-	-	-	-	-	-	-	-	-	-	-
10EC44.3	3	-	-	-	-	-	-	-	-	-	-	-
10EC44.4	3	2	-	-	-	-	-	-	-	-	-	2
10EC44.5	3	2	-	-	-	-	-	-	-	-	-	2

Table B.3.1.2.3

SEM:V	Sub Name: CMOS VLSI											
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC56.1	2	3	-	-	-	-	-	-	-	-	-	-
10EC56.2	3	-	-	-	-	-	-	-	-	-	-	-
10EC56.3	3	-	-	-	-	-	-	-	-	-	-	-
10EC56.4	2	1	-	-	-	-	-	-	-	-	-	-

Table B.3.1.2.4

SEM:VI	Sub Name: Digital Communication											
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC61.1	3	-	-	-	-	-	-	-	-	-	-	-
10EC61.2	3	2	-	-	-	-	-	-	-	-	-	-
10EC61.3	3	2	-	-	-	-	-	-	-	-	-	-
10EC61.4	3	2	-	-	-	-	-	-	-	-	-	-

Table B.3.1.2.5

SEM:VII	Sub Name: Embedded systems											
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC74.1	3	-	-	-	-	-	-	-	-	-	-	1
10EC74.2	3	1	-	-	-	-	-	-	-	-	-	-
10EC74.3	3	1	-	-	-	-	-	-	-	-	-	1
10EC74.4	3	2	1	2	-	-	-	-	-	-	-	1

Table B.3.1.2.6

SEM:VIII	Sub Name: Network Security											
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
10EC832.1	3	-	-	-	-	-	-	1	-	-	-	2
10EC832.2	3	-	-	-	-	-	-	1	-	2	-	2
10EC832.3	3	-	-	-	-	-	-	1	-	2	-	2
10EC832.4	3	2	-	-	-	-	-	1	-	-	-	2

Note:

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 1: Slight (Low) 3: Substantial (High)

If there is no correlation, put “-”

2. Similar table is to be prepared for PSOs

(six matrices to be mentioned; one per semester from 3rd to 8th semester)

CO – PSO Mapping

Table B.3.1.2.7

SEM:III	Sub Name: Analog Electronic circuits		
COs	PSO1	PSO2	PSO3
10ES32.1	3	-	-
10ES32.2	3	-	-
10ES32.3	3	-	-
10ES32.4	3	-	-

Table B. 3.1.2.8

SEM:IV	Sub Name: signals and systems		
COs	PSO1	PSO2	PSO3
10EC44.1	-	3	-
10EC44.2	-	3	-
10EC44.3	-	2	-

10EC44.4	-	3	2
10EC44.5	-	3	2

Table B.3.1.2.9

SEM:V	Sub Name: CMOS VLSI		
COs	PSO1	PSO2	PSO3
10EC56.1	-	2	-
10EC56.2	-	2	-
10EC56.3	-	2	-
10EC56.4	-	2	-

Table B.3.1.2.10

SEM:VI	Sub Name: Digital Communication		
COs	PSO1	PSO2	PSO3
10EC61.1	-	1	2
10EC61.2	-	1	2
10EC61.3	-	1	2
10EC61.4	-	1	2

Table B.3.1.2.11

SEM:VII	Sub Name: Embedded systems		
COs	PSO1	PSO2	PSO3
10EC74.1	-	3	-
10EC74.2	-	2	-
10EC74.3	-	2	-
10EC74.4	-	3	-

Table B.3.1.2.12

SEM:VIII	Sub Name: Network Security		
COs	PSO1	PSO2	PSO3
10EC832.1	-	-	2
10EC832.2	-	-	2
10EC832.3	-	-	2
10EC832.4	-	-	2

3.1.3. Program level Course-PO matrix of all courses INCLUDING first year courses (10)**Table 3.1.3.1 CO - PO Matrix**

SUBJECT CODE	SUBJECT NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I SEMESTER													
14MAT11	Engg Mathematics-1	3	2	-	-	-	-	-	-	-	-	-	2
14CHE12	Engg Chemistry	2	1	1	-	-	1	2	-	-	-	-	-
14PCD13	C Programming For Problem Solving	2	1	2	-	1	-	-	-	-	-	-	1
14CED14	Computer Aided Engg Drawing	2	3	2	-	2	-	-	-	1	1	-	1
14ELN15	Basic Electronics	2	1	-	-	-	-	-	-	-	-	-	1
14CPL16	C Programming Laboratory	2	2	2	1	-	-	-	-	-	-	-	-
14CHEL17	Engg Chemistry Lab	2	2	1	-	-	2	2	1	-	-	-	-
II SEMESTER													
14MAT21	Engg Mathematics-2	3	2	-	-	-	-	-	-	-	-	-	2
14PHY22	Engg Physics	2	2	-	-	-	-	-	-	-	-	-	2
14CIV23	Elements of Civil Engg	3	3	-	-	2	1	-	3	-	2	1	-
14EME24	Elements of Mechanical Engg	3	-	-	-	-	-	1	-	-	-	-	1
14ELE25	Basic Electrical Engineering	3	2	-	-	-	-	-	-	-	-	-	2
14WSL26	Work Shop Practices Lab	2	2	2	-	2	2	-	-	2	-	-	3
14PHYL27	Engg Physics Lab	2	2	-	-	-	-	-	-	-	-	-	-
III SEMESTER													
10MAT31	Engg Mathematics-III	3	3	2	2	-	-	-	-	-	-	-	2
10ES32	Analog Electronics	3	2	2	-	-	-	-	-	-	-	-	1
10ES33	Logic Design	3	2	-	-	-	-	-	-	-	-	-	1
10ES34	Network Analysis	3	3	-	-	-	-	-	-	-	-	-	1
10IT35	Electronic Instrumentation	3	2	-	-	-	-	-	-	-	-	-	1
10EC36	Field Theory	3	2	1	-	-	-	-	-	-	-	-	-
10ECL37	Analog Electronics Laboratory	3	2	2	-	-	-	-	-	1	1	-	1
10ECL38	Logic Design Laboratory	3	3	2	2	-	-	-	-	1	1	-	1
IV SEMESTER													
10MAT41	Engg Mathematics-IV	3	3	2	-	-	-	-	-	-	-	-	2
10ES42	Microcontrollers	3	2	-	-	-	-	-	-	-	-	-	2
10ES43	Control Systems	3	3	-	-	-	-	-	-	-	-	-	1
10EC44	Signals & Systems	3	2	-	-	-	-	-	-	-	-	-	2
10EC45	HDL	3	2	2	-	-	-	-	-	-	-	-	1

10EC46	Linear Integrated Circuits	3	2	2	-	-	-	-	-	-	-	-	1
10ESL47	Microcontroller Laboratory	3	1	2	-	2	-	-	-	1	1	-	2
10ECL48	HDL Laboratory	3	2	2	3	3	-	-	-	1	1	-	2
V SEMESTER													
10AL51	Management & Entrepreneurship	-	2	-	-	-	2	-	2	2	1	2	2
10EC52	Digital Signal Processing	3	2	2	-	-	-	-	-	-	-	-	1
10EC53	Analog Communication	3	2	-	-	-	-	-	-	-	-	-	1
10EC54	Microwave Radar	3	2	-	-	-	-	-	-	-	-	-	1
10EC55	Information Theory & Coding	3	2	2	-	-	-	-	-	-	-	-	1
10EC56	CMOS VLSI Design	3	2	-	-	-	-	-	-	-	-	-	1
10ECL57	DSP Laboratory	3	2	2	-	2	-	-	-	1	1	-	1
10ECL58	Analog Communication + LIC Lab	3	-	2	-		-	-	-	1	1	-	1
VI SEMESTER													
10EC61	Digital Communication	3	2	-	-	-	-	-	-	-	-	-	1
10EC62	Microprocessors	2	3	2	-	-	-	-	-	-	-	-	2
10EC63	Microelectronics	-	-	-	-	-	-	-	-	-	-	-	-
10EC64	Antenna & Propagation	3	2	-	-	-	-	-	-	-	-	-	-
10EC65	Operating System	-	-	-	-	-	-	-	-	-	-	-	-
10EC662	Satellite Communication	3	-	-	-	-	-	-	-	-	-	-	2
10EC665	Prog. Using C++	2	-	2	-	-	-	-	-	-	-	-	2
10ECL67	Adv. Commn. Lab	2	1	1	-	-	-	-	-	1	1	-	1
10ECL68	Microprocessor Lab	3	1	2	-	2	-	-	-	1	1	-	2
VII SEMESTER													
10EC71	Computer Communication Networking	3	2	2	-	-	-	-	-	-	-	-	1
10EC72	Optical Fibre Commutation.	3	2	-	1	-	-	-	-	--	-	-	-
10EC73	Power Electronics	3	2	2		-	-	-	-	-	-	-	-
10EC74	Embedded System Design	3	2	1	2	-	-	-	-	-	-	-	1
10EC751	DSP Architecture	2	-	-	-	-	-	-	-	-	-	-	-
10EC763	Image Processing	3	2	-	-	-	-	-	-	-	-	-	2
10ECL77	VLSI Lab	1	2	2	-	2	-	-	-	1	1	-	1
10ECL78	Power Electronics Lab	2	2	-	2	-	-	-	-	1	1	-	1
VIII SEMESTER													
10EC81	Wireless Communication	2	-	-	-	-	-	-	-	-	-	-	1
10EC82	Digital Switching System	2	-	-	-	-	-	-	-	-	-	-	1
10EC832	Network Security	3	2	-	-	-	-	-	1	-	2	-	2

10EC841	Multimedia Communication Engg.	3	2	-	-	-	-	-	-	-	-	-	1
10EC85	Project	3	2	2	2	3	1	1	1	2	3	-	1
10EC86	Seminar	3	2	-	2	-	-	-	2	2	3	-	2

Note:

1. Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

It there is no correlation, put “-”

It may be noted that contents of Table 3.1.2 must be consistent with information available in Table 3.1.3 for all the courses.

2. *Similar table is to be prepared for PSOs*

Table B 3.1.3.2: CO PSO Matrix

Subject Code	Subject Name	PSO1	PSO2	PSO3
I SEMESTER				
14MAT11	Engg Mathematics-1			
14CHE12	Engg Chemistry			
14PCD13	C Programming For Problem			
14CED14	Computer Aided Engg Drawing			
14ELN15	Basic Electronics			
14CPL16	C Programming Laboratory			
14CHEL17	Engg Chemistry Lab			
II SEMESTER				
14MAT21	Engg Mathematics-2			
14PHY22	Engg Physics			
14CIV23	Elements of Civil Engg			
14EME24	Elements of Mechanical Engg			
14ELE25	Basic Electrical Engineering			
14WSL26	Work Shop Practices Lab			
14PHYL27	Engg Physics Lab			
III SEMESTER				
10MAT31	Engg Mathematics-III			
10ES32	Analog Electronics	3	-	-
10ES33	Logic Design	3	-	-
10ES34	Network Analysis	3	-	-
10IT35	Electronic Instrumentation	2	-	-
10EC36	Field Theory	-	-	2
10ECL37	Analog Electronics Laboratory	2	-	-
10ECL38	Logic Design Laboratory	3	-	-

IV SEMESTER				
10MAT41	Engg Mathematics-IV			
10ES42	Microcontrollers	-	3	-
10ES43	Control Systems	3	-	-
10EC44	Signals & Systems	-	3	2
10EC45	HDL	-	2	-
10EC46	Linear Integrated Circuits	2	-	-
10ECL47	Microcontroller Laboratory	-	2	-
10ECL48	HDL Laboratory	2	2	-
V SEMESTER				
10AL51	Management & Entrepreneurship			
10EC52	Digital Signal Processing	1	3	-
10EC53	Analog Communication	-	-	2
10EC54	Microwave Radar	-	-	2
10EC55	Information Theory & Coding	2	-	2
10EC56	CMOS VLSI Design	-	3	-
10ECL57	DSP Laboratory	-	2	-
10ECL58	Analog Communication + LIC Lab	3	2	2
VI SEMESTER				
10EC61	Digital Communication	-	1	2
10EC62	Microprocessors	-	3	-
10EC63	Microelectronics	2	3	-
10EC64	Antenna & Propagation	-	-	2
10EC65	Operating System	-	1	2
10EC662	Satellite Communication	-	-	2
10EC665	Prog. Using C++	-	1	-
10ECL67	Adv. Commn. Lab	-	-	2
10ECL68	Microprocessor Lab	-	2	-
VII SEMESTER				
10EC71	Computer Communication	-	-	3
10EC72	Optical Fibre Commutation.	-	-	2
10EC73	Power Electronics	2	-	-
10EC74	Embedded System Design	-	3	-
10EC751	Dsp Architecture	1	2	1
10EC763	Image Processing	-	2	-
10ECL77	VLSI Lab	1	2	-
10ECL78	Power Electronics Lab	2	-	-
VIII SEMESTER				
10EC81	Wireless Communication	-	-	2

10EC82	Digital Switching System	-	-	2
10EC832	Network Security	-	-	2
10EC841	Multimedia Communication Engg.	-	2	2
10EC85	Project	2	2	3
10EC86	Seminar	1	3	3

3.2. Attainment of Course Outcomes

(50)

3.2.1. Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

(Examples of data collection processes may include, but are not limited to, specific exam/tutorial questions, assignments, laboratory tests, project evaluation, student portfolios (A portfolio is a collection of artifacts that demonstrate skills, personal characteristics and accomplishments created by the student during study period), internally developed assessment exams, project presentations, oral exams etc.)

The key aspects in Outcome-Based Education (OBE) are the assessment of course outcomes. At the initial stage of OBE implementation, the Course Outcomes (CO's) for each course are defined based on the Programme Outcome (PO's) and other requirements. At the end of each course, the COs need to be assessed and evaluated, to check whether it has been attained or not. Assessment is one or more processes, carried out by the department, that identify, collect, and prepare data to evaluate the achievement of programme educational objectives and programme Outcomes. Attainment is the action or fact of achieving a standard result towards accomplishment of desired goals. Primarily attainment is the standard of academic attainment as observed by test or examination result. Attainment of the COs can be measured directly and indirectly.

Direct attainment basically displays the student's knowledge and skills from their performance. It can be determined from the performance of the students in all the relevant assessment instruments – like internal assessments, assignments, quiz and final university examination. These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning. Indirect methods such as surveys and interviews ask the stakeholders to reflect on student's learning. They assess opinions or thoughts about the graduate's knowledge or skills. Indirect measures can provide information about graduate's perception of their learning and how this learning is valued by different stakeholders. The Internal Assessment marks in theory papers shall be based on two tests generally

To record the attainment of course outcomes the following assessment tools are used.

A. DIRECT ASSESMENT

➤ Internal Tests:

- The Internal Assessment marks in theory papers shall be based on two tests generally conducted thrice in each semester as per the academic calendar stipulated by the affiliated university.
- There shall be a maximum of 25 Internal Assessment Marks in each theory subjects.
- Question papers for the corresponding course will be prepared by the respective course faculty and will be submitted to the Internal Test Coordinator well in advance.
- Students' performance in the IA test is evaluated as per the scheme and solution prepared by the corresponding course faculty.

Table B 3.2.1.1: Assessment Tools

Assessment Tools			Weightage	Frequency	Responsibility
Direct Assessment	Continuous Internal Evaluation (CIE)	Theory Internal Assessment	60%	3 in a semester	Department level
		Lab IA		Once in a semester	Department level
		Final year project		In 8 th Semester	Department level
		Technical Seminar		In 8 th Semester	Department level
	Semester End Exam (SEE)		30%	Once at the end of the semester	University level
Indirect Assessment	Course End Survey		10%	At the end of the semester	Department level

The Defined CO's are mapped with the internal question paper for Internal Assessment (IA) Evaluation.

The individual CO's are mapped to the PO's defined by the NBA council. The CO-PO matrices of a particular course along with PSO's are tabulated with the various target attainment levels. A sample of the CO-PO matrices is shown for each semester and tabulated.

The attainment levels defined for individual course are considered as the target for each course. After the Internal assessment evaluation the marks obtained by individual student in three consecutive Internals are considered and tabulated.

After the tabulation, the count of COs is taken and percentage level of target attained is calculated for student's performance. After the tabulation of CO count, CO's are mapped with the PO table to attain the required target. Based on the performance of student the direct attainment and indirect attainments are calculated by program exit survey.

➤ **Laboratory:**

- The Internal Assessment marks shall be based on observation/record/viva/lab test.
- The laboratory in-charge will conduct the practical test.
- There shall be a maximum of 25 Internal Assessment Marks in each practical paper
- The evaluation procedure for laboratory courses are done by the laboratory In-Charge(s) based on the following parameters: Divided into three components: Continuous Assessment: 10 marks, Record: 5 marks and Internal Test: 10 marks

Table B 3.2.1.2: Rubrics for Lab Assessment

Parameters	Marks Allocated	Rubrics
Observation/ Procedure Writing	3	Low:(0 marks) Student does not write the procedure/program and the calculations Medium(1-2marks) Student incompletes the observations High: (3 marks) student completes the calculations and the observation books
Execution/Co nduction	3	Low:(0 marks)-Student does not execute the program Medium: (1-2 marks) Student incompletes the execution with errors High: (3 marks) -student completes the execution of the program
Record Submission	4	Low: (0 marks) -Student does not write the program and outputs in the record book Medium: (1-2 marks) Student incompletes the record book High: (3 marks)-student records the calculations and the executed program in the record books

➤ **Student technical seminar evaluation:**

- One seminar will be conducted per student in the final year 8th semester by a committee consisting of the Head of the Department and three senior faculty members of the department whom shall be the Seminar Coordinator(s).
- Seminar topic shall be selected from the emerging technical areas
- The Department announces the final schedule and guide for the seminar.
- The Internal Assessment marks are given based on the evaluation done by the committee members (Head of the Department and Seminar Coordinator(s)) along with the guide and reviewer following the rubrics set by the department as follows:

Component	Marks	Criteria
Presentation	10	Clarity in presentation
	10	Understanding concepts
	10	Answering queries
	10	Organizing the presentation
Technical Seminar Report	10	Completeness of the report
Total Marks	50	

➤ **Project work evaluation:**

The final year students need to carry out project work (during VIII Semester for Non-CBCS and during both VII ad VIII semester for CBCS) as per the University academic requirement.

The students are allowed to form batches with a team size of minimum of two and maximum of four. The synopsis of the project work is screened by expert committee from the department along with coordinator and HOD before finalization of the project. The project work may be based on societal/Environmental needs or technology driven. Some projects are based on IEEE papers. The project work interaction is carried out on fortnight basis with the project guide, coordinator and the HoD for continuous improvement of the quality work carried out.

The project work internal evaluation is based on the rubrics and assessed with a panel of

expert committee members chosen from the department along with the coordinator and the HoD. The following are the different stages involved in project work evaluation.

a). Project Identification

- **Students Group formation**
 - Students with similar interests are allowed to form a group of minimum of 2 members or maximum of 4 members in a group.
- **Identify their Area of Interest/ Domain**
 - Students have the option to choose the areas in which they are interested to carry out the projects. The different areas which are given by the project coordinator/Professor, like Embedded system, IoT, Image processing, VLSI, etc..
 - The students will do a thorough literature survey on their area of interest, formulate the problem statement for carrying out their project work.
 - The students are allowed consult experts from industry/ research labs/ Government organizations or any other professor from the other department to carry out their project work through proper channel.
- **Synopsis submission**
 - The students are required to submit the synopsis as per the guide lines and format given by the project coordinators and synopsis will be scrutinized by committee.
- **Preliminary screening**
 - The students are required to give the preliminary presentation to the evaluation committee for approval of the project work. The committee will approve the project based on the understanding of the project by students and complexity/ current technology/ social relevance.

b). Allotment of Guide Based on specific domain expertise

- Project batches are allocated to the guides based on the specialization and Expertise of the Professors.
- **Display the Batches and Guide details**
- The students will be intimated on title of the project work and allocated guide through E-mails

c). Continuous Monitoring Process

The students meet their respective guides on the day intimated by the Guide or once in fortnight and update on the progress of the project work, get feedback and guidelines for improvement regularly. This will also be monitored by project work Coordinators and HoD.

d). Project Work Evaluation and Demonstration of working prototypes and enhancing the relevance of projects

The projects will be evaluated by the expert committee comprising guide, experts from industry and academia. The entire process of evaluation is being done through different phases. The date and schedule of evaluation will be mailed to the students well in advance.

- **Phase-I Evaluation**

The students have to give presentation on the progress of project work including fine tuned synopsis, literature review, problem statement, methodology adopted for execution, and percentage of completion of the project work.

- **Phase-II Evaluation**

The students have to give presentation on the progress of project work with system design and detailed design along with demonstration of the project work. The project will be evaluated by the committee and awarded marks based on their presentation skills, team involvement, methodologies used, test cases, results analysis and documented report.

▪ Evaluation at Technotsava

The department encourages the students to participate and present their project work at “Technotsava” conducted by the Institute during first/second week May. The projects will be evaluated by the experts from academia and industry. Two outstanding projects are chosen by the expert committee for the award of 1st and 2nd position with cash prize.

▪ Report Submission

Students must document their project work in their dissertation as per the guidelines and format given by the HoD and Coordinators in line with the University regulations. The final report must be signed by the Head of the Institution, HoD and the respective guide. The copy of the project report will be placed in department library.

e). External Project Evaluation

The project will be evaluated by the external and internal examiners appointed by the Visvesvaraya Technological University. The appointed examiners will observe the presentation and demonstration of the project work followed by Viva-Voce and award the marks which will be submitted to University.

Table B 3.2.1.3: Rubrics for Evaluation of Project work

Rubrics	Agenda	Marks
R1	Project Synopsis/Phase – I	10
R2	Phase – II	20
R3	Fortnight Progress	20
R4	Project Evaluation by Guide	20
R5	Project Report Evaluation	20
Sub Total		100
External Evaluation		100
Total		200

Table B 3.2.1.4: Rubric 1 (R1): Phase -1 Evaluation (10 Marks)

Parameters	Low (0-35%)	Medium (36% - 65%)	High (66% – 100%)	Max Marks
Identification of	Less clarity in the	Having chosen the	Well defined problem	5

Domain, Problem and Objectives	domain choosing and problem identification (1)	domain and needs more effort to define the problem (2-3)	with clarity of objectives (4-5)	
Literature Survey	Inadequate survey of literature which can substantiate the objectives defined (1)	Survey of literature done with less relevant articles and needs to justify the existing work (2)	Extensive survey of literature survey and existing systems/methods (3)	3
Methodology proposed and time management	Not feasible method and lac of time management (0)	Moderate Proposed methodology and time schedule (1)	Well defined methodology and time schedule (2)	2
Total				10

Table B 3.2.1.5: Rubric 2 (R2)- Phase -II Evaluation (20 Marks)

Criteria	Achievement Levels				
	Inadequate (0-35%)	Good (36% - 65%)	Excellent (66% – 100%)	CO	Max. Marks
Methodology followed and meeting of Time Schedules	Inadequate/non proposed methods followed with an extension of time schedule (0 – 1)	Followed different methodology and able to justify with little extension of time schedule. (2 – 3)	Strictly followed the methodology proposed and finished in the stipulated time. (4 – 5)	CO 1	5
Use of Modern Tools	Has not used relevant modern tools for the design & experimentation (1)	Has used relevant modern tools with inadequate knowledge and has not obtained optimized results. (2-3)	Has applied tools effectively to design/ analyze/debug/ to get optimized solution for the problem. (4 – 5)	CO 2	5
Teamwork	Minimal contribution to the team. (1)	Contributed considerably to the team. (2)	Has effectively contributed in achieving optimized results (3 – 4)	CO 4	4

Lifelong Learning	No understanding of the requirements for lifelong learning in the engineering profession. (0)	Can present examples of the impact of lifelong learning in the engineering industry. (1)	Can present examples of the impact of lifelong learning, along with the requirement of skills updation in the modern engineering profession. (2)	CO 3	2
Communication	Unable to communicate the work carried out (1)	Could communicate the information to a limited extent (2)	Has effectively communicated the work carried out (3 – 4)		4
Total					20

Table B 3.2.1.6: Fortnight progress (20 marks)

Parameter	Low	Medium	High	Max. Marks
Attendance (>85%)	Attendance (75% to 80%)	Attendance (80% to 85%)	Attendance (>85%)	10
Progress in Project	Progress not according to the schedule (0-2)	Progress not according to the schedule but with justification (3 – 6)	Progress as per the schedule (7 – 10)	10
Total				20

Table B 3.2.1.7: Rubric – IV: Project Evaluation by the guide (20 marks)

Parameter	Low	Medium	High	Max. Marks
Self motivation to learn new technologies	Less motivated to learn (0 – 3)	Moderately motivated to learn new technologies (4 – 6)	Highly motivated to (7 – 10)	10
Technical awareness of the project and working	Has less understanding about the working of the project (0-2)	Has the knowledge of the working of project and technology used (3 – 6)	Excellent knowledge of Project working and the technology used. (7 – 10)	10
Total				20

Table B 3.2.1.8: Rubric – V: Project Report Evaluation (20 marks)

Parameter	Low	Medium	High	Max. Marks
Quality of report with respect to format specified by the university	Report not meeting the specifications prescribed by the university (0-1)	Report does not deviate much from the specification but needs fine adjustments (2 - 3)	Report Meets the required specification and formats (4 – 5)	5
Content of report	The contents of the report does not completely explain the project or contains irrelevant materials (0 – 1)	The content of the report explains the project work with some unnecessary documents (2 – 3)	The report completely explains the project work and contains all relevant material. (4 – 5)	5
Analysis of results and conclusion	Report fails to do the result analysis/ improper conclusion (0-1)	Result analysis is done with less justification to the objectives defined and the conclusion is not appropriate (2)	Result analysis justifies the objectives defined with the proper conclusion (3)	3
Language usage	Report has large number of spelling and grammatical errors (0)	Free of spelling errors and minor errors in gramming (1)	The language usage in the report is satisfactory (2)	2
Total				20

Below said attainment levels are considered in all methods of assessment.

Attainment Level 1: Students scoring less than or equal to 40% marks out of the relevant maximum marks is considered to be attainment level of “1”

Attainment Level 2: Students scoring 41-59 % marks out of the relevant maximum marks is considered to be attainment level of “2”

Attainment Level 3: Students scoring 60% or more than 60% marks out of the relevant maximum marks is considered to be attainment level of “3”

B. INDIRECT ASSESSMENT

➤ Course End Survey

A set of questions will be framed by the course coordinator. These questions will be scrutinized by the module coordinator and the HOD. Each question will be mapped to a particular Course outcome. At the end of the semester students will be asked to enter their rating for the course end survey questions. The attainment of the course end survey will be calculated and 10% of that will be considered for the total course attainment calculation. A sample copy of course end survey is shown in figure B.3.1

Finally, for calculation of the course outcome attainment 60% weightage is given to internal assessment and 30% weightage is given to semester end exam and 10% weightage is given to course end survey.

ACHARYA INSTITUTE OF TECHNOLOGY
Department of Electronics and Communication Engineering
Course end survey

Batch: 2014-2018
Academic Year: 2015-2016
Subject: Signals and Systems (10EC44)
Name of the student: AKSHATHA JOSHI, G.
USN: 1AY14EC008
Note: Rating to be done on a scale of 1 to 3

1. Low 2. Moderate 3. High

Sl no	Question	Rating			CO's
		3	2	1	
1	To what extent you will be able to Analyze and identify different types of signal and system properties	✓			CO1
2	Will you be able to Solve differential and difference equations for LTI systems?	✓			CO2
3	To what extent you will be able to Determine the output of LTI system using Convolution integral/Sum?		✓		CO3
4	Are you able to Apply Z Transform and Fourier transform to study the behavior of Signals and systems?	✓			CO4, CO5

Signature of Student

Fig. B.3.1: Sample of Course End Survey

3.2.2. Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

Program shall have set Course Outcome attainment levels for all courses.

(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the Course Outcomes of a course in addition to the performance in the University examination)

Measuring Course Outcomes attained through University Examinations

Target may be stated in terms of percentage of students getting more than the university average marks or more as selected by the Program in the final examination. For cases where the university does not provide useful indicators like average or median marks etc., the program may choose an attainment level on its own with justification.

Example related to attainment levels Vs. targets: (The examples indicated are for reference only. Program may appropriately define levels)

Attainment Level 1: 60% students scoring more than University average percentage marks or set attainment level in the final examination.

Attainment Level 2: 70% students scoring more than University average percentage marks or set attainment level in the final examination.

Attainment Level 3: 80% students scoring more than University average percentage marks or set attainment level in the final examination.

Attainment is measured in terms of actual percentage of students getting set percentage of marks.

If targets are achieved then all the course outcomes are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.

If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.

Measuring CO attainment through Internal Assessments: (The examples indicated are for reference only. Program may appropriately define levels)

Target may be stated in terms of percentage of students getting more than class average marks or set by the program in each of the associated COs in the assessment instruments (midterm tests, assignments, mini projects, reports and presentations etc. as mapped with the COs)

Example

Mid-term test 1 addresses C202.1 and C202.2. Out of the maximum 20 marks for this test 12 marks are associated with C202.1 and 8 marks are associated with C202.2.

Examples related to attainment levels Vs. targets:

Attainment Level 1: 60% students scoring more than 60% marks out of the relevant maximum marks.

Attainment Level 2: 70% students scoring more than 60% marks out of the relevant maximum marks.

Attainment Level 3: 80% students scoring more than 60% marks out of the relevant maximum marks.

Attainment is measured in terms of actual percentage of students getting set percentage of marks.

If targets are achieved then the C202.1 and C202.2 are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.

If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.

Similar targets and achievement are to be stated for the other midterm tests/internal assessment instruments.

Course Outcome Attainment:

For example:

Attainment through University Examination: Substantial i.e. 3

Attainment through Internal Assessment: Moderate i.e. 2

Assuming 80% weightage to University examination and 20% weightage to Internal assessment, the attainment calculations will be (80% of University level) + (20% of Internal level) i.e. 80% of 3 + 20% of 2 = 2.4 + 0.4 = 2.8

Note: Weightage of 80% to University exams is only an example. Programs may decide weightages appropriately for University exams and internal assessment with due justification.

Final attainment calculations are based on the following parameters.

60% weightage to Internal Assessments

30% weightage to University Examination

10% weightage to Course End Survey

Target 80%

Table B. 3.2.2.1 PO Attainment

Course Code	Course Outcome	CO attainment level	CO Percentage	Met/Not Met
I SEMESTER				
14MAT11	14MAT11.1	2.142	71.40	Not Met
	14MAT11.2	2.068	68.93	Not Met
	14MAT11.3	2.279	75.96	Not Met
	14MAT11.4	2.266	75.53	Not Met
	14MAT11.5	2.395	79.84	Not Met
14CHE12	14CHE12.1	2.474	82.47	Met
	14CHE12.2	2.319	77.29	Not Met
	14CHE12.3	2.179	72.64	Not Met
	14CHE12.4	2.068	68.91	Not Met
	14CHE12.5	2.265	75.48	Not Met
14PCD13	14PCD13.1	2.602	86.73	Met
	14PCD13.2	2.60	86.66	Met
	14PCD13.3	2.506	83.53	Met
	14PCD13.4	2.545	84.83	Met
	14PCD13.5	2.481	82.70	Met
14CED14	14CED14.1	2.606	86.86	Met
	14CED14.2	2.324	77.46	Not Met
	14CED14.3	2.269	75.63	Not Met
14ELN15	14ELN15.1	2.30	76.67	Not Met
	14ELN15.2	1.90	63.20	Not Met
	14ELN15.3	1.80	60.00	Not Met
	14ELN15.4	2.14	71.17	Not Met
	14ELN15.5	1.89	62.83	Not Met

14CPL16	14CPL16.1	2.782	92.74	Met
	14CPL16.2	2.804	93.46	Met
	14CPL16.3	2.807	93.56	Met
	14CPL16.4	2.777	92.56	Met
14CHEL17	14CHEL17.1	2.758	91.90	Met
	14CHEL17.2	2.788	92.90	Met
	14CHEL17.3	2.818	93.90	Met
II SEMESTER				
14MAT21	14MAT21.1	2.36	78.69	Not Met
	14MAT21.2	2.33	77.71	Not Met
	14MAT21.3	2.39	79.88	Not Met
	14MAT21.4	1.42	47.47	Not Met
	14MAT21.5	1.53	51.24	Not Met
14PHY22	14PHY22.1	2.42	80.70	Met
	14PHY22.2	2.36	78.80	Not Met
	14PHY22.3	2.17	72.56	Not Met
14CIV23	14CIV23.1	2.37	79.23	Not Met
	14CIV23.2	2.19	73.23	Not Met
	14CIV23.3	2.43	81.02	Met
	14CIV23.4	2.49	82.99	Met
14EME24	14EME24.1	2.25	75.10	Not Met
	14EME24.2	2.21	73.90	Not Met
	14EME24.3	2.04	68.30	Not Met
14ELE25	14ELE15.1	2.45	81.75	Met
	14ELE15.2	2.35	78.58	Not Met
	14ELE15.3	2.39	79.65	Not Met
	14ELE15.4	2.35	78.63	Not Met
14WSL26	14WSL26.1	2.85	95.18	Met
	14WSL26.2	2.87	95.91	Met
	14WSL26.3	2.80	93.48	Met
14PHYL27	14PHYL27.1	2.69	89.88	Met
	14PHYL27.2	2.73	90.90	Met
	14PHYL27.3	2.68	89.50	Met
III SEMESTER				
10MAT31	10MAT31.1	2.37	79.00	Not Met
	10MAT31.2	2.21	73.67	Not Met
	10MAT31.3	2.42	80.67	Met
	10MAT31.4	2.47	82.33	Met
	10MAT31.5	2.33	77.67	Not Met
	10MAT31.6	1.76	58.67	Not Met
10ES32	10ES32.1	2.19	71.30	Not Met
	10ES32.2	2.21	73.60	Not Met
	10ES32.3	1.96	65.63	Not Met
	10ES32.4	2.15	71.80	Not Met

10ES33	10ES33.1	2.40	79.87	Not Met
	10ES33.2	2.42	80.67	Met
	10ES33.3	2.50	83.23	Met
	10ES33.4	2.26	75.41	Not Met
10ES34	10EC34.1	2.03	67.77	Not Met
	10EC34.2	2.26	75.61	Not Met
	10EC34.3	1.95	65.06	Not Met
	10EC34.4	1.47	49.11	Not Met
10IT35	10IT35.1	2.51	83.67	Met
	10IT35.2	2.51	83.63	Met
	10IT35.3	2.47	82.47	Met
	10IT35.4	2.49	83.00	Met
10EC36	10EC36.1	2.46	81.89	Met
	10EC36.2	2.01	66.90	Not Met
	10EC36.3	2.18	89.66	Met
	10EC36.4	2.48	88.56	Met
10ESL37	10ESL37.1	2.49	83.00	Met
	10ESL37.2	2.49	83.00	Met
	10ESL37.3	2.49	83.00	Met
	10ESL37.4	2.49	83.00	Met
10ESL38	10ESL38.1	2.48	82.78	Met
	10ESL38.2	2.49	82.99	Met
	10ESL38.3	2.48	82.61	Met
	10ESL38.4	2.46	81.96	Met
IV SEMESTER				
10MAT41	10MAT41.1	2.34	78.02	Not Met
	10MAT41.2	2.22	73.83	Not Met
	10MAT41.3	2.04	67.99	Not Met
	10MAT41.4	2.22	73.88	Not Met
	10MAT41.5	1.99	66.39	Not Met
	10MAT41.6	1.71	57.16	Not Met
10ES42	10ES42.1	1.98	65.70	Not Met
	10ES42.2	2.16	71.93	Not Met
	10ES42.3	2.16	72.13	Not Met
	10ES42.4	2.31	77.09	Not Met
	10ES42.5	2.41	80.32	Met
10ES43	10ES43.1	2.55	85.07	Met
	10ES43.2	2.46	82.27	Met
	10ES43.3	2.53	84.53	Met
	10ES43.4	2.42	80.67	Met
10EC44	10EC44.1	1.92	63.85	Not Met
	10EC44.2	1.62	54.11	Not Met
	10EC44.3	2.05	68.46	Not Met
	10EC44.4	1.82	60.72	Not Met
	10EC44.5	2.00	66.78	Not Met

10EC45	10EC45.1	2.33	77.66	Not Met
	10EC45.2	2.43	80.97	Met
	10EC45.3	2.27	75.76	Not Met
	10EC45.4	2.71	90.21	Met
	10EC45.5	2.45	81.67	Met
10EC46	10EC46.1	2.14	71.30	Not Met
	10EC46.2	2.30	76.50	Not Met
	10EC46.3	2.42	80.60	Met
	10EC46.4	2.38	79.35	Not Met
10ESL47	10ECL47.1	2.29	76.38	Not Met
	10ECL47.2	2.28	76.08	Not Met
	10ECL47.3	2.30	76.83	Not Met
	10ECL47.4	2.29	76.23	Not Met
10ECL48	10ECL48.1	2.79	93.15	Met
	10ECL48.2	2.79	93.02	Met
	10ECL48.3	2.79	93.05	Met
	10ECL48.4	2.78	92.79	Met
V SEMESTER				
10AL51	10AL51.1	2.62	87.17	Met
	10AL51.2	2.66	88.54	Met
	10AL51.3	2.51	83.63	Met
	10AL51.4	2.53	84.35	Met
10EC52	10EC52.1	2.47	82.33	Met
	10EC52.2	2.29	76.33	Not Met
	10EC52.3	2.70	90.00	Met
	10EC52.4	2.00	66.66	Not Met
10EC53	10EC53.1	2.42	80.76	Met
	10EC53.2	2.33	77.77	Not Met
	10EC53.3	2.08	69.22	Not Met
	10EC53.4	1.76	58.73	Not Met
10EC54	10EC54.1	2.52	83.9	Met
	10EC54.2	2.50	83.37	Met
	10EC54.3	2.52	84.03	Met
	10EC54.4	2.52	84.15	Met
10EC55	10EC55.1	2.69	89.80	Met
	10EC55.2	2.78	92.60	Met
	10EC55.3	2.87	95.80	Met
	10EC55.4	2.93	97.70	Met
10EC56	10EC56.1	2.10	70.00	Not Met
	10EC56.2	2.10	70.00	Not Met
	10EC56.3	2.25	75.00	Not Met
	10EC56.4	1.80	60.00	Not Met
10ECL57	10ECL57.1	2.88	96.03	Met
	10ECL57.2	2.78	92.86	Met
	10ECL57.3	2.79	93.30	Met
	10ECL57.4	2.79	93.24	Met

10ECL58	10ECL58.1	2.82	94.02	Met
	10ECL58.2	2.84	94.62	Met
	10ECL58.3	2.83	94.40	Met
	10ECL58.4	2.81	93.74	Met
VI SEMESTER				
10EC61	10EC61.1	2.08	69.46	Not Met
	10EC61.2	2.58	86.26	Met
	10EC61.3	2.45	81.93	Met
	10EC61.4	2.20	73.48	Not Met
10EC62	10EC62.1	2.52	84.00	Met
	10EC62.2	2.38	79.00	Not Met
	10EC62.3	2.29	76.00	Not Met
	10EC62.4	2.42	81.00	Met
10EC63	10EC63.1	2.49	82.94	Met
	10EC63.2	2.36	78.74	Not Met
	10EC63.3	2.50	83.31	Met
	10EC63.4	2.41	80.50	Met
10EC64	10EC64.1	2.41	80.60	Met
	10EC64.2	2.47	82.40	Met
	10EC64.3	2.29	76.40	Not Met
	10EC64.4	2.41	80.60	Met
10EC65	10EC65.1	2.53	84.43	Met
	10EC65.2	2.47	82.18	Met
	10EC65.3	2.51	83.81	Met
	10EC65.4	2.38	79.18	Not Met
10EC662	10EC662.1	2.65	88.45	Met
	10EC662.2	2.66	88.82	Met
	10EC662.3	2.65	88.45	Met
	10EC662.4	2.67	89.10	Met
10EC665	10EC665.1	2.54	84.60	Met
	10EC665.2	2.45	81.70	Met
	10EC665.3	2.50	83.50	Met
	10EC665.4	2.56	85.30	Met
10ECL67	10ECL67.1	2.86	95.56	Met
	10ECL67.2	2.85	95.16	Met
	10ECL67.3	2.82	94.00	Met
	10ECL67.4	2.74	91.53	Met
10ECL68	10ECL68.1	2.70	90.13	Met
	10ECL68.2	2.72	90.66	Met
	10ECL68.3	2.72	90.66	Met
	10ECL68.4	2.71	90.33	Met
VIII SEMESTER				
10EC71	10EC71.1	2.49	83.17	Met
	10EC71.2	2.66	88.83	Met
	10EC71.3	2.61	87.17	Met
	10EC71.4	2.53	84.57	Met

10EC72	10EC72.1	2.63	87.70	Met
	10EC72.2	2.62	87.56	Met
	10EC72.3	2.47	82.33	Met
	10EC72.4	1.75	58.53	Not Met
10EC73	10EC73.1	2.37	79.14	Not Met
	10EC73.2	2.31	79.67	Not Met
	10EC73.3	2.34	81.50	Met
	10EC73.4	2.28	78.27	Not Met
10EC74	10EC74.1	2.64	88.00	Met
	10EC74.2	2.63	88.00	Met
	10EC74.3	2.61	87.00	Met
	10EC74.4	2.42	81.00	Met
10EC751	10EC751.1	2.54	84.80	Met
	10EC751.2	2.37	79.26	Not Met
	10EC751.3	2.53	84.50	Met
	10EC751.4	2.09	69.76	Not Met
10EC763	10EC763.1	1.98	66.00	Not Met
	10EC763.2	1.99	66.00	Not Met
	10EC763.3	1.86	62.00	Not Met
	10EC763.4	1.80	60.00	Not Met
10ECL77	10ECL77.1	2.88	96.06	Met
	10ECL77.2	2.88	96.06	Met
	10ECL77.3	2.88	96.06	Met
	10ECL77.4	2.88	96.06	Met
10ECL78	10ECL78.1	2.90	96.67	Met
	10ECL78.2	2.90	96.67	Met
	10ECL78.3	2.90	96.67	Met
	10ECL78.4	2.90	93.30	Met
VIII SEMESTER				
10EC81	10EC81.1	2.99	89.00	Met
	10EC81.2	2.18	73.00	Not Met
	10EC81.3	2.70	90.00	Met
10EC82	10EC82.1	2.59	86.43	Met
	10EC82.2	2.52	84.13	Met
	10EC82.3	2.55	85.10	Met
	10EC82.4	2.49	83.12	Met
10EC832	10EC832.1	2.57	85.60	Met
	10EC832.2	2.60	86.67	Met
	10EC832.3	2.59	86.19	Met
	10EC832.4	2.40	80.15	Met
10EC841	10EC841.1	2.02	67.44	Not Met
	10EC841.2	2.41	80.28	Met
	10EC841.3	2.34	77.99	Not Met
	10EC841.4	2.44	81.46	Met

10EC85	10EC85.1	2.707	90.24	Met
	10EC85.2	2.66	88.88	Met
	10EC85.3	2.44	81.38	Met
	10EC85.4	2.47	82.34	Met
	10EC85.5	2.86	95.46	Met
10EC86	10EC86.1	2.64	87.91	Met
	10EC86.2	2.66	88.56	Met
	10EC86.3	2.19	72.88	Not Met
	10EC86.4	2.66	88.56	Met

3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

3.3.1. Describe assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

(Describe the assessment tools and processes used to gather the data upon which the evaluation of each of the Program Outcomes and Program Specific Outcomes is based indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes and Program Specific Outcomes are attained and document the attainment levels)

Evaluation of attainment of PO's and PSO's is based on direct and indirect assessment tools. Direct assessment of PO's and PSO's is based on students' performance in internal assessments and university exams. Indirect assessment is based on exit survey of the particular outgoing batch students

To record the attainment of program outcomes the following assessment tools are used:


Assessment Tools		Weightage	Frequency	Responsibility
Direct Assessment	Course Outcomes Attainment	80%	End of the semester	Department level
Indirect Assessment	Exit Survey	20%	At the end of the program	Department level

1) Direct Assessment

• Course outcomes attainment

Performance of the students in internal assessments and university exams will lead to the attainment of Course Outcomes'. The course end survey also contributes to the Course Outcome attainment. Course Outcomes' of a particular subject will be mapped to the relevant PO's in the scale of 3, 2, and 1. Attainment for particular Program Outcome is calculated by taking weighted average of all course outcome attainment addressing that particular PO. Similar calculation will be done for all the POs and for every subject. The PO attainment for a batch of students will be calculated by taking the

sum of all attainments for a particular PO and dividing by the number of courses mapped to the same PO. A sample of copy CO attainment calculations is shown in figure B.3.3.1.

		ACHARYA INSTITUTE OF TECHNOLOGY																									
		Department of Electronics and Communication Engineering																									
Batch	2014-2018																		Total students		130						
Academic Year	2015-2016																		Weightage for Internals		60 Percent						
Subject	Signals and Systems																		Weightage for Externals		39 Percent						
Semester	IV																		Weightage for CES		10 Percent						
Subject code	10EC44																										

			Internals																	External		Course end survey				
			T1		T2			T3		Total Co's [*]					Threshold fo CO's [*]					Marks	Threshold	Q1	Q2	Q3	Q4	
Sl.	USN	NAME	CO1	CO2	CO3	CO2	CO5	CO5	CO4	CO1	2	3	CO4	5	CO1	CO2	CO3	CO4	CO5							
			30	20	30	10	10	30	20	30	30	30	20	40	3	3	3	3	3	100	3	3	3	3	3	
1	IAY14EC002	ABHISHEK SEN GUPTA			18	6	2	22	9		6	18	9	24		1	3	2	3	18	1	2	1	2	3	
2	IAY14EC003	ABISHEK M	15	0	16	9	8	23	3	15	9	16	3	31	2	1	2	1	3	53	2	2	1	2	3	
3	IAY14EC004	ADITHYA K E			21	0	4	20	20		0	21	20	24			3	3	3	36	1	2	1	3	3	
4	IAY14EC006	AKHILAN S M			14	3	1	23	6		3	14	6	24		1	2	1	3	10	1	1	1	2	1	
5	IAY14EC007	AKSHATHA H KEDLAI	29	3	25	10	7	18	17	29	13	25	17	25	3	2	3	3	3	59	2	3	3	3	3	

Fig.B.3.3.1: Sample of CO Attainment Calculation

2) Indirect Assessment

- **Exit Survey**

Acharya Institute of Technology has an Internal Quality Assessment Cell (IQAC) responsible for academic quality monitoring and assessment. IQAC prepares a set of questions relevant to the program outcomes/graduate attributes and also questions relevant to Program Specific Outcomes. These questions will be asked to get the various information regarding the opinion and observations about the program from the final year students. The questions will be rated by the outgoing batch in the range of 3, 2 and 1 and the exit survey attainment will be calculated accordingly.

Finally, PO attainment of a particular batch will be calculated by giving 80% weightage to the direct attainment and 20% weightage to exit survey.

Similar calculation will be done for PSO attainment

Exit survey questions

1. **Engineering knowledge:** Are you capable of applying your information to solve Engineering problems?
2. **Problem analysis:** Will you be able to Identify/Formulate/Analyze a solution for a given Engineering problem?

3. **Design/development of solutions:** Will you be able to design/Develop a solution or a system for a given Engineering problem with appropriate consideration for the benefit of the Society?
4. **Conduct investigations of complex problems** Are you capable of solving research based problems including analysis/interpretation/Synthesis of data with the knowledge gained by the courses of your program?
5. **Modern tool usage:** Can you apply appropriate techniques to solve a complex Engineering activity using modern tools?
6. **The engineer and society:** Are you able to apply/assess your knowledge related to engineering practice for the societal and Environmental issues?
7. **Environment and sustainability:** Are you able to understand the impact of engineering solutions for sustainable development of the society?
8. **Ethics:** Are you trained enough about ethical principles and commitments /norms of your Engineering practice?
9. **Individual and team work:** Can you manage a team or work as an individual in a multidisciplinary team?
10. **Communication:** Are you confident of writing reports/design documents and present effectively.
11. **Project management and finance:** Can you manage finances, deadlines and HR resources when working for a project?
12. **Life-long learning:** Are you adequately prepared to enhance your knowledge and engage in self-learning?

3.3.2 Provide results of evaluation of each PO & PSO**(40)**

(The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program level Course – PO & PSO matrix as indicated).

Table:3.3.2.1 PO Attainment

SUBJECTS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
14MAT11	2.23	2.23										
14CHE12	2.37	2.47	2.32			2.32	2.24					
14PCD13	2.55	2.54	2.50		2.55							2.57
14CED14	2.40	2.40	2.40		2.40				2.40	2.40		2.40
14ELN15	2.01	2.02										
14CPL16	2.79	2.79	2.78	2.79								
14CHEL17	2.79	2.82				2.82	2.82	2.82		2.79		2.76
14MAT21	2.01	2.01										
14PHY22	2.49	2.49			2.37	2.19		2.43		2.49	2.37	
14CIV23	2.49	2.49			2.37	2.19		2.43		2.49	2.37	
14EME24	2.20						2.25					2.17
14ELE15	2.39	2.36										2.35
14WSL26	2.80	2.84	2.84		2.87	2.84			2.83			2.84
14PHYL27	2.69	2.73	2.68									
10MAT31	1.88	2.23										2.23
10ES32	2.13	2.11	2.15									2.18
10ES33	2.40	2.43										2.53
10ES34	1.93	1.78										1.82
10IT35	2.49	2.48										2.66
10EC36	2.28	2.28	2.22									
10ESL37	2.49	2.49	2.49						2.49	2.58		2.58
10ESL38	2.48	2.48	2.48	2.48					2.48	2.48		2.48
10MAT41	2.10	2.05				2.07						2.08
10ES42	2.20	2.24										2.21
10ES43	2.49	2.47										2.51
10EC44	1.88	1.91										1.85
10EC45	2.44	2.41	2.33									2.38
10EC46	2.31	2.42	2.30									2.16
10ESL47	2.29	2.30	2.30		2.29				2.29	2.29		2.29
10ECL48	2.79	2.79	2.79	2.78	2.79				2.79	2.79		2.79

10AL51		2.62				2.60		2.59	2.66	2.78	2.78	2.78
10EC52	2.37	2.47	2.00									2.13
10EC53	2.10	2.06	0.00									2.31
10EC54	2.52	2.52	0.00									2.52
10EC55	2.82	2.86	2.93									2.52
10EC56	2.09	2.03	0.00									2.03
10ECL57	2.81	2.79	2.79		2.81				2.81	2.82		2.82
10ECL58	2.83		2.82						2.83	2.83		2.82
10EC61	2.33	2.41	0.00									2.39
10EC62	2.40	2.34	2.42									2.39
10EC63	2.44	2.42	2.46									
10EC64	2.40	2.41										
10EC65	2.47	2.45										2.45
10EC662	2.66											
10EC665	2.51		2.56									2.51
10ECL67	2.82	2.78	2.86						2.82	2.9		2.88
10ECL68	2.71	2.72	2.72		2.72				2.71	2.71		2.71
10EC71	2.56	2.53	2.53									2.61
10EC72	2.37	2.28		1.75								
10EC73	2.33	2.31	2.28									
10EC74	2.58	2.49	2.42	2.42								2.56
10EC751	2.37											
10EC763	1.92	1.99										1.9
10ECL77	2.88	2.89	2.88		2.88				2.88	2.81		2.8
10ECL78	2.89	2.89		2.89					2.32	2.3		2.87
10EC81	2.51											2.76
10EC82	2.54											2.52
10EC832	2.54	2.40						2.54		2.59		2.54
10EC841	2.32	2.39										2.61
10EC85	2.63	2.57	2.57	2.57	2.57	2.44	2.44	2.76	2.52	2.86	2.57	2.57
10EC86	2.54	2.50			2.50			2.66	2.54	2.51		2.65

SUM OF POS	146.01	131.15	70.81	17.69	31.12	21.56	9.75	18.23	39.35	47.09	9.87	112.63
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NUMBER SUBJECT MAPPED	60	54	28	7	12	9	4	7	15	18	4	46
DIRECT ATTAINMENT OF POS (A)	2.43	2.43	2.53	2.53	2.59	2.40	2.44	2.60	2.62	2.62	2.47	2.45
IN DIRECT ATTAINMENT OF POS (B)	2.50	2.50	2.50	2.40	2.40	2.30	2.10	2.10	2.20	2.20	2.20	2.40
FINAL PO ATTAINMENT (80% A+20 %B)	2.45	2.44	2.52	2.50	2.55	2.38	2.37	2.50	2.54	2.53	2.41	2.44
FINAL PERCENT AGE	81.56	81.43	84.11	83.38	85.16	79.23	79.00	83.43	84.63	84.43	80.43	81.29

Table:3.3.2.2 PSO Attainment

SUBJECTS	PSO1	PSO2	PSO3
14MAT11			
14ECH12			
14PCD13			
14CED14			
14ELN15	2.06		1.80
14CPL16			
14CHEL17			
14MAT21			
14PHY22			
14CIV23			
14EME24			
14ELE15			
14WSL26			
14PHYL27			
10MAT31	2.20	1.97	
10ES32	2.13		
10ES33	2.40		
10EC34	1.93		
10IT35	2.50		
10EC36			2.28
10ECL37	2.49		
10ECL38	2.48		
10MAT41	2.06	2.06	
10ES42		2.20	
10ES43	2.49		
10EC44		1.92	1.91
10EC45		2.44	
10EC46	2.31		

10ECL47		2.29	
10ECL48	2.79	2.79	
10AL51			2.54
10EC52	2.00	2.37	
10EC53			2.15
10EC54			2.52
10EC55	2.93		2.82
10EC56		2.06	
10ECL57		2.81	
10ECL58	2.82	2.82	2.83
10EC61		2.33	2.33
10EC62		2.40	
10EC63	2.46	2.44	
10EC64			2.40
10EC65		2.47	2.48
10EC662			2.66
10EC665		2.51	
10ECL67			2.82
10ECL68		2.71	
10EC71		2.57	2.59
10EC72			2.37
10EC73	2.33		
10EC74		2.57	
10EC751	2.54	2.38	2.45
10EC763		1.91	
10ECL77	2.88	2.88	
10ECL78	2.90		
10EC81			2.51
10EC82			2.54
10EC831			2.54
10EC841		2.39	2.30
10EC85	2.71	2.67	2.66
10EC86	2.54	2.56	2.56
SUM OF PSOs	53.92	60.52	54.08
NUMBER of SUBJECTS MAPPED	22	25	22
DIRECT ATTAINMENT OF PSOs (A)	2.45	2.42	2.46
IN DIRECT ATTAINMENT OF PSOs (B)	2.50	2.40	2.40
FINAL PSO ATTAINMENT (80% A+20% B)	2.50	2.40	2.45
FINAL PERCENTAGE	82.03	80.55	81.55

CRITERION 4	Students' Performance	150
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4. STUDENTS' PERFORMANCE

(150)

Table 4.a Admission details for past three years

Item (Information to be provided cumulatively for all the shifts with CAY CAYm1 CAYm2 explicit headings, wherever applicable)	CAY 2018-19	CAY m1 2017-18	CAY m2 2016-17
Sanctioned intake of the program (N)	120	120	120
Total number of students admitted in first year <i>minus</i> number of students migrated to other programs / institutions plus no. of students migrated to this program (N1)	116	101	110
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	NA	24	26
Separate division students, if applicable (N3)	NA	NA	NA
Total number of students admitted in the Program (N1 + N2 + N3)	116	125	136

CAY – Current Academic Year (2018-19)

CAYm1- Current Academic Year minus1= Current Assessment Year (2017-18)

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1(2016-17)

LYG – Last Year Graduate minus 1 (2014-15)

YGM1 – Last Year Graduate minus 1 (2013-14)

LYGm2 – Last Year Graduate minus 2 (2012-13)

Table 4.b Number of students who have successfully graduated without backlog

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of Study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
CAY	116				

(2018-19)					
CAY _{m1} (2017-18)	125(101+24*)	70			
CAY _{m2} (2016)	136(110+26*)	65	49(47+2*)		
CAY _{m3} (2015)	126(105+21*)	62	41(37+4*)	36(33+3*)	
CAY _{m4} (LYG) (2014-15)	135(110+25*)	57	59(51+8*)	52(44+8*)	52(44+8*)
CAY _{m5} (LYG _{m1}) (2013-14)	146(120+26*)	80	45(38+7*)	41(35+6*)	40(35+5*)
CAY _{m6} (LYG _{m2}) (2012-13)	140(113+27*)	84	84(76+8*)	64(60+4*)	64(60+4*)

Note: * indicates for lateral entry students

Table 4.c Number of students successfully graduated with backlog

Year of entry	N1 + N2+N3 (As defined above)	Number of students who have successfully graduated (Students with backlog in stipulated period of study)			
		I year	II Year	III Year	IV Year
CAY	116				
CAY _{m1} (2017-18)	125(101+24*)	99			
CAY _{m2} (2016-17)	136(110+26*)	95	93(76+17*)		
CAY _{m3} (2015-16)	126(105+21*)	92	89(71+18*)	89(71+18*)	
CAY _{m4} (LYG) (2014-15)	135(110+25*)	90	109(85+24*)	103(83+20*)	89(73+16*)
CAY _m (LYG _{m1}) (2013-14)	146(120+26*)	108	115(89+26*)	112(87+25*)	101(81+20*)
CAY _{m6} (LYG _{m2}) (2012-13)	140(113+27*)	100	122(97+25*)	114(93+21*)	111(92+19*)

Note: * indicates for lateral entry students

4.1 Enrolment Ratio

(20)

Enrolment Ratio = N1/N

Table 4.1 Students Enrolment Ratio

Item	CAY (2018-19)	CAY M1 (2017-18)	CAY M2 (2016-17)
N	120	120	120
N1	116	103	112
Enrolment ratio = N1/N	0.966	0.858	0.933
Average Enrolment ratio	$0.966+0.858+0.933 = 2.787/3=0.929=92.9 \%$		

Table B.4.1

Item (Students enrolled at the First Year Level on Average basis during the previous three academic years starting from current academic year)	Marks
>= 90 % students enrolled	20
>= 80 % students enrolled	18
>= 70 % students enrolled	16
>= 60 % students enrolled	14
>= 50 % students enrolled	12
Otherwise	0

4.2 Success Rate in the stipulated period of the program (40)

4.2.1 Success rate without backlogs in any semester / year of study (25)

SI= (Number of students who have graduated from the program without backlog)/Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = Mean of success Index (SI) for past three batches Success rate without backlogs in any year of study = 25 x Average SI

Table 4.2.1 Success rate without backlogs

Item	Last year of Graduate, LYG (CAYm4) (2014-15)	Last year of Graduate, minus 1, LYG1 (CAYm5) (20 13-14)	Last year of Graduate, minus 2 LYG 2 (CAYm6) (2012-13)
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Number of students admitted in the corresponding First year + admitted in 2 nd year via lateral entry and separate division, if applicable	135 (110+25*)	146 (120+26*)	140 (113+27*)
Number of students who have graduated without backlogs in the stipulated period	52(44+8*)	44(39+5*)	64(60+4*)
Success Index (SI)	0.385	0.301	0.457
Average SI	1.143/3 = 0.381		
<i>Success rate without backlogs in any year of study</i>	25 * Average SI = 25 *.381 = 9.525		

Note: * indicates for lateral entry students

4.2.2 Success rate with backlog in stipulated period of study

(15)

SI = (Number of students who graduated from the program in the stipulated period of course duration) / (Number of students admitted in the first year of that batch and actual admitted in 2nd year via lateral entry and separate division, if applicable)

Average SI = mean of Success Index (SI) for past three batches

Success rate = 15 x Average SI

Table 4.2.2 Success rate with backlog in stipulated period of study

Item	Last year of Graduate, LYG (CAYm4) (2014-15)	Last year of Graduate, minus 1, LYG1 (CAYm5) (2013-14)	Last year of Graduate, minus 2, LYG 2 (CAYm6) (2012-13)
Number of students admitted in the corresponding First year + admitted in 2 nd year via lateral entry and separate division, if applicable	135(110+25*)	146(120+26*)	140(113+27*)
Number of students who have graduated with backlogs in the stipulated period	89(37+52*)	105(65+40*)	111 (47+64*)
Success Index (SI)	0.659	0.719	0.792
Average SI	0.723		

Success rate with backlogs in any year of study	15 * Average SI = 15*.723 = 10.85
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Note 1: If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 and 4.2.2 will be applicable simultaneously.

Note 2 : * indicates for lateral entry students

4.3 Academic Performance in Third year

(15)

*Academic Performance = 1.5 * Average API (Academic Performance Index)*

*API = (mean of 3rd year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Third year / 10)) * (number of successful students / number of students appeared in the examination)*

Successful students are those who are permitted to proceed to the final year.

Table 4.3.1 Academic Performance in Third year

Academic Performance	CAYm1 (2014-15)	CAYm2 (2013-14)	CAYm3 (2012-13)
Mean of CGPA or Mean Percentage of all successful students (X)	60.07	60.74	62.16
Total no. of successful students (Y)	103(83+20)	112(87+25)	114(93+21)
Total no. of students appeared in the examination (Z)	110(85+25)	115(89+26)	122(97+25)
API = X * (Y/Z)	56.24 / 10 = 5.624	59.15/10 = 5.915	58.08/10 = 5.808
Average API	17.347 / 3 = 5.782		
Academic Performance	1.5 * Average API = 1.5*5.782 = 8.673		

Average API = (AP1 + AP2 + AP3)/3

4.4 Academic Performance in second Year (15)

*Academic Performance Level = 1.5 * Average API (Academic Performance Index)*

API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (mean of the percentage of marks of all successful students in Second Year/10) x (number of successful students / number of students appeared in the examination)

Successful students are those who are permitted to proceed to the Third year.

Table 4.4.1 Academic Performance in second Year

Academic Performance	CAYm1 (2015-16)	CAYm2 (2014-15)	CAYm3 (2013-14)
Mean of CGPA or Mean Percentage of all successful students (X)	58.9	59.45	57.26
Total no. of successful students (Y)	89(71+18)	109(85+24)	115(89+26)
Total no. of students appeared in the examination (Z)	113(92+21)	120(95+25)	136(110+26)
API = X * (Y/Z)	46.39 / 10 = 4.639	54.00/10 = 5.4	48.41/10=4.841
Average API = (API1+API2+API3)/3	14.88 / 3 = 4.96		
Academic Performance	1.5 * Average API = 1.5*4.96 = 7.44		

4.5. Placement, Higher Studies and Entrepreneurship (40)

Assessment Points = 40 × average placement

Table 4.5.1 Placement, Higher Studies and Entrepreneurship

Item	2017-18	2016-17	2015-16
Total No. of Final Year Students (N)	103	112	114
No. of students placed in companies or Government Sector (x)	62	78	72
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	10	04	10

No. of students turned entrepreneur in engineering/technology (z)	03	01	04
$x + y + z =$	75	83	86
Placement Index: $(x + y + z)/N$	0.728	0.741	0.754
Average placement= $(P1 + P2 + P3)/3$	0.741		

4.5a. Provide the placement data in the below mentioned format with the name of the program and the assessment year:

Program and assessment year				
Electronics & Communication Engineering: 2018-19				
Sl No	Name of the student placed	Enrollment no.	Name of the employer	Appointment letter reference no. with date
1	AKSHAY R	1AY15EC007	L & T Infotech	2019
2	AMAN RAJ	1AY15EC008	Capgemini, Accord S/W	2019
3	ASHWINI K	1AY15EC019	Capgemini	2019
4	AYAN CHATTERJEE	1AY15EC020	Nine Leaps	2019
5	BINDU SHREE R	1AY15EC024	Infosys	2019
6	CHANDANA B.N	1AY15EC027	L & T Infotech	2019
7	CHARAN KUMAR AM	1AY15EC028	L & T Infotech	2019
8	HARSH VATSA	1AY15EC043	Byju's	2019
9	HRIDYA UNNIKRISHNAN	1AY15EC044	Infosys	2019
10	KIRAN KUMAR AV	1AY15EC047	Capgemini, Wipro	2019
11	MEGHANA.P	1AY15EC059	Capgemini	2019
12	MOHAMMED FAIZAL	1AY15EC060	Mindtree, muSigma	2019
13	R.NISHANTH	1AY15EC073	Wipro	2019
14	ROBIN S	1AY15EC076	Mindtree, TCS	2019
15	SANJAY.J.SHANBHAG	1AY15EC081	Accord S/W	2019
16	SUBHASH CHANDER VERMA	1AY15EC098	mPhasis, Wipro	2019
17	SUNIL SHASTRY M	1AY15EC100	L & T Infotech	2019
18	V AISWARYA	1AY15EC105	Mindtree	2019
19	PRIYANKA.G	1AY15EC117	Capgemini	2019

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Electronics & Communication Engineering: 2017-18				
Sl No	Name of the student placed	Enrollment no.	Name of the employer	Appointment letter reference no. with date
1	AKHILAN S M	1AY14EC006	UTC	2018
2	AKSHATHA H KEDLAI	1AY14EC007	Infosys	2018
3	AKSHATHA JOSHI G	1AY14EC008	Cognizant	2018
4	ANSHUMAN TIWARI	1AY14EC010	Cognizant	2018
5	ANURAG JAIN	1AY14EC011	Infosys	2018
6	ANUSHA	1AY14EC012	cognizant	2018
7	ANUSHA D	1AY14EC013	NTT Data	2018
8	ARPITHA H KEDLAI	1AY14EC016	Accenture	2018
9	CHARAN V P	1AY14EC019	Swiggi	2018
10	DEEPESH KUMAR	1AY14EC023	Wipro	2018
11	DHANYA A E	1AY14EC024	Insemi technologies	2018
12	DHANYASHREE A B	1AY15EC405	ASM Technologies	2018
13	DRISTY SINGH	1AY15EC408	Tessolve	2018
14	HIMANSHU SINGH	1AY14EC030	Genpact	2018
15	JANHAVI JAISWAL	1AY14EC032	Mindtree	2018
16	JAYAVARAM SAI RUSHIK	1AY14EC033	Capgemini	2018
17	KIRAN N	1AY14EC037	Accord Software	2018
18	KUMAR J P	1AY14EC039	Microland	2018
19	MANISH KUMAR SINGH	1AY14EC043	Tessolve	2018
20	MANOHARA T	1AY15EC410	kwik24	2018
21	MANTHAN GHOSH	1AY14EC044	WhatsurSkill	2018
22	MANTRALA ANIL KUMAR	1AY14EC045	Taking IES coachig	2018
23	MD.SHAMILUDDIN	1AY14EC047	CAPEGEMINI	2018
24	MEGHA BM	1AY15EC412	Infosys	2018
25	MEGHA K	1AY14EC048	Infosys	2018
26	NANDISH D	1AY14EC051	Microland	2018
27	NAUSHIR MIRAZ	1AY14EC052	Capgemini	2018
28	NIVEDITA C CHONALE	1AY14EC058	TCS	2018

29	P. YASHAS	1AY14EC118	paletro	2018
30	PAVAN KUMAR H N	1AY14EC059	Capital Via	2018
31	POOJA M	1AY14EC061	NTT DATA	2018
32	POONAM	1AY14EC062	Accenture	2018
33	PRACHI	1AY14EC063	sonata software	2018
34	PRAFUL KUMAR MISHRA	1AY14EC064	Amada India Pvt Ltd	2018
35	PRATHAP B R	1AY14EC065	Capgemini	2018
36	RACHANA RAO ATIGADDA	1AY14EC066	Capital Via	2018
37	RAKSHITHA R K	1AY14EC068	Capgemini	2018
38	REVANSIDDAYYA JALAKI	1AY15EC417	Siyacon Technologies	2018
39	RUDRAPPA SIDDAPPA KETANNAVAR	1AY14EC115	Accord Software and system	2018
40	S ADIL	1AY14EC073	cognizant	2018
41	S KARTHIK YADIYALA	1AY14EC074	Capgemini	2018
42	S SRUJANA	1AY14EC119	Mindtree	2018
43	SACHIN S K	1AY14EC076	Accord Software and system	2018
44	SAGAR SHETTY S L	1AY14EC077	Regrownature PVT ltd	2018
45	SANGAMNATH	1AY14EC080	Capgemini	2018
46	SANJANA C S	1AY14EC081	AT&T	2018
47	SANTOSH MAHTO	1AY14EC083	Aryavarta circuits pvt ltd	2018
48	SATYAM KUMAR	1AY14EC086	Cognizant	2018
49	SHIVAYOGAPPA	1AY14EC095	Progility Technologies Pvt Ltd	2018
50	SHREYA M DANARADDI	1AY14EC097	Accenture	2018
51	SHWETHA G M	1AY14EC098	Byju's	2018
52	SPOORTHYSHREE A SHETTY	1AY14EC099	L & T Infotech	2018
53	SURAKSHA N	1AY15EC422	Bajaj fin serve	2018
54	SUSHMA K R	1AY14EC102	Insemi technologies	2018
55	SUSHMITHA C P	1AY15EC423	Nagoba electronics	2018
56	SWATHI RAJ	1AY14EC104	Byju's	2018
57	TEJASHWINI G	1AY14EC105	ClearTax	2018
58	VARUNA N K	1AY14EC109	Silicon chip	2018

59	VIDEH SATYADAR SHI	1AY14EC110	Mindtree	2018
60	VIGHNESH	1AY14EC111	MSB Data Analytics	2018
61	VISHAL C	1AY14EC113	BridgeLabz Solutions	2018
62	RAMYA N	1AY15EC416	Accenture	2018

Electronics & Communication Engineering: 2016-17				
Sl No	Name of the student placed	Enrollment no.	Name of the employer	Appointment letter reference no. with date
1	ABHISHEK KUMAR SINHA	1AY11EC004	Geotel	2017
2	NITIN RAVI	1AY12EC054	Think & Learn Pvt Ltd (Byjus)	2017
3	CHAITRA C	1AY12EC124	Geotel	2017
4	AKARSH N	1AY13EC001	Netleisure Internet technologies	2017
5	AKSHAT SINGH THAKUR	1AY13EC004	VVDN Technologies	2017
6	ANJALI KUMARI	1AY13EC011	Sonata Software	2017
7	ANKIT KUMAR BHASKAR	1AY13EC012	Cognizant	2017
8	ARJUN SUDHEER	1AY13EC015	Accenture	2017
9	ASHIKA S	1AY13EC016	Tektronics	2017
10	CHANDAN SHARMA	1AY13EC021	L&T infotech	2017
11	CHINMAYA K	1AY13EC024	NTT Data	2017
12	DEEPA S	1AY13EC025	L & T Infotech	2017
13	DEEPAK KUMAR	1AY13EC026	Focus edumatia ado	2017
14	GAUTAM SINHA	1AY13EC029	Techmahindra	2017
15	GORAKATI CHARITHA	1AY13EC030	HP	2017
16	HARISH T	1AY13EC032	Techmahindra	2017
17	HARSHITH T R	1AY13EC034	Mindtree	2017
18	JUSTIN JOSE	1AY13EC040	capgemini	2017
19	JYOTSANA KUMARI	1AY13EC041	Infosys	2017
20	K PUNITH	1AY13EC043	Capgemini	2017
21	KATHI VIPLAV KUMAR REDDY	1AY13EC045	Interstellar Networks	2017

22	SHASHANK M R	1AY13EC048	24[7].AI	2017
23	MADHU V IAH	1AY13EC049	Azveenta technologies	2017
24	MADHUSOODANA	1AY13EC050	Ascenture	2017
25	MAHENDRAREDDY	1AY13EC051	Yarago software pvt ltd	2017
26	MANJUNATH C H	1AY13EC052	L&T Infotech	2017
27	MANJU PRASAD S NAYAK	1AY13EC053	capgemini	2017
28	MANOJ KASHYAP R	1AY13EC054	sonata software	2017
29	MEENAL SINHA	1AY13EC055	Temenos	2017
30	MOUNICA MAGAPU	1AY13EC056	Accenture	2017
31	MRINAL SINGH	1AY13EC057	HP Inc	2017
32	MURUDESHWARA	1AY13EC059	NTT Data	2017
33	NAMAN JOSHI	1AY13EC060	Cognizant	2017
34	NAVIN KUMAR	1AY13EC062	Geotel	2017
35	OMKAR Y	1AY13EC065	Techmahindra	2017
36	PARIBRITA DEY	1AY13EC066	Tinker Master	2017
37	PAVAN KUMAR	1AY13EC067	Bosch	2017
38	PAVANASHREE T A	1AY13EC068	Capgemini	2017
39	PRASHANTH RAO S G	1AY13EC072	arman International PVT ltd	2017
40	PRATHEEK J	1AY13EC073	Tech Mahindra	2017
41	PREETHI K N	1AY13EC074	Infosys	2017
42	RAHUL MAMDEKAR	1AY13EC076	Infosys	2017
43	RASHMI B N	1AY13EC080	Mindtree	2017
44	S NITHESH KRISHNAN	1AY13EC083	Test yantra software solutions	2017
45	SANGAMESH	1AY13EC089	temenos	2017
46	SARTHAK CHAUHAN	1AY13EC090	Infosys	2017
47	SATYAM AGGARWAL	1AY13EC091	Infosys	2017
48	SAUNDARYA SAURABH	1AY13EC092	Techmahindra	2017
49	SHIVAKUMARAYYA S PUJAR	1AY13EC095	cognizant	2017
50	SHUBHAM KUMAR	1AY13EC098	Legato health technologies	2017

51	SNEHA	1AY13EC101	National Institute of Design	2017
52	STANLEY SAGAR D	1AY13EC103	L & T	2017
53	STELLA ROSY S R	1AY13EC104	capgemini	2017
54	subrat	1AY13EC106	capgemini	2017
55	SUHAS BALLAL R	1AY13EC108	cognizant	2017
56	SUMAN G	1AY13EC109	Aarleo technologies	2017
57	SUNIL KUMAR	1AY13EC112	Huawei technologies (Quess)	2017
58	SURYAKIRAN S	1AY13EC113	Legato health technologies	2017
59	SUSHMA B	1AY13EC115	Tech Mahindra	2017
60	TANYA SNEHA	1AY13EC118	L and T InfoTech	2017
61	THOUQUEER AHMED	1AY13EC121	Maple labs	2017
62	VINAYAKA N	1AY13EC124	Accenture	2017
63	PRAVEEN MULIMANI	1AY13EC126	mobiveil	2017
64	ARCHANA	1AY14EC401	ICT SMS India Pvt ltd	2017
65	CHIDANANDA T	1AY14EC404	aryavartha	2017
66	JANARDHANA L R	1AY14EC406	silicon chip technologies	2017
67	KEERTHI KUMAR B G	1ay14ec408	Unisoft global services Pvt Ltd	2017
68	KIRAN H J	1AY14EC409	Aricent Technologies PVT Ltd	2017
69	LAGAMANNA P MAGENNI	1AY14EC410	neeyamo Enterprises	2017
70	MOHAMMED RASHAAD DAMDA FAQUI	1AY14EC412	Fintle Labs CNT India	2017
71	NANDAN KUMAR M L	1AY14EC413	Wipro	2017
72	PRAVEEN KUMAR T S	1AY14EC416	Mobiwill technologies	2017
73	PRITEY DEY	1AY14EC417	HP	2017
74	SHAMBHANNA HERUR	1AY14EC420	Siacon Semiconductor	2017
75	VEERANAGOWDA J M	1AY14EC424	Geotel	2017
76	HEMANDU KUMAR	1AY13EC035	Lumax Auto Technology	2017
77	RUDRESH LIPPIN C	1AY13EC082	Insnap Technologies Pvt	2017

			Ltd	
78	SHIVAKUMARAYYA S PUJAR	1AY13EC095	Cognizant	2017

Electronics & Communication Engineering: 2015-16				
Sl No	Name of the student placed	Enrollment no.	Name of the employer	Appointment letter reference no. with date
1	NIPUN SHARMA	1AY11EC077	Sanrad Medicals	2016
2	ABHINANDH J	1AY12EC002	Tech Mahindra	2016
3	ABHISHEK G	1AY12EC003	iGate	2016
4	ADITYA PULLAIAH THAMMINENI	1AY12EC004	Infosys	2016
5	AKSHATHA G	1AY12EC006	Cognizant	2016
6	AMARESH GANGANAGOUDAR	1AY12EC007	Cognizant	2016
7	ANIL RAJPUROHIT	1AY12EC009	Megachip Instrumentation	2016
8	ANKIT RAJ	1AY12EC011	L&T Infotech	2016
9	ANUDEEP C SHETTY	1AY12EC013	Cognizant	2016
10	ANURAG ANAND	1AY12EC014	Cognizant	2016
11	ANUSHREE SINGH	1AY12EC015	Microland	2016
12	ASMITA ROY	1AY12EC016	iGate	2016
13	AVANISH KUMAR	1AY12EC017	L&T Infotech	2016
14	AVINASH SHEKHAR	1AY12EC018	iGate	2016
15	AYESHA IRUM	1AY12EC019	Mu Sigma	2016
16	CHETAN M	1AY12EC022	Cognizant	2016
17	FAIZ ANWER	1AY12EC025	Cognizant	2016
18	HAJEERA KOUSER	1AY12EC026	Tech Mahindra	2016
19	HARIKRISHNA K	1AY12EC028	Infosys,Mu Sigma	2016
20	HIMANSHU SHEKHAR	1AY12EC029	NTT DATA	2016
21	KAVERAMMA P.G	1AY12EC034	Mu Sigma	2016
22	KRISHAN KANT AGARWAL	1AY12EC036	Cognizant	2016
23	KUSUMA N	1AY12EC037	Microland	2016

24	LAVANYA NAIR	1AY12EC039	Mu Sigma	2016
25	MAHALAKSHMI G	1AY12EC041	NTT DATA	2016
26	MAHESH M D	1AY12EC042	Cognizant	2016
27	MEGHANA B.	1AY12EC046	iGate	2016
28	MEGHANA L	1AY12EC047	Cognizant	2016
29	NAVEENA G	1AY12EC048	Cognizant	2016
30	NIKHIL GOWTHAM D	1AY12EC051	Sunrise Biztech Systems	2016
31	NISHANTH J	1AY12EC052	iGate	2016
32	PRASHANT MADGALLI	1AY12EC058	Tech Mahindra	2016
33	PRASHANT KUMAR MAHATO	1AY12EC059	Sanrad Medicals	2016
34	PRIYANKA KUMARI	1AY12EC060	iGate	2016
35	AMRUTHA R.	1AY12EC061	Infosys	2016
36	RAASHIKA S	1AY12EC062	HCL-TSS	2016
37	RAJNISH KUMAR	1AY12EC066	Infosys	2016
38	RAKSHIT A R	1AY12EC068	Cognizant	2016
39	RAVIVARMA Y.K	1AY12EC072	Cognizant	2016
40	RICHA BARIYAR	1AY12EC073	Cognizant	2016
41	ROHAN N H	1AY12EC075	Cognizant	2016
42	SACHIN D.S	1AY12EC076	Sonata Software	2016
43	SAGAR JOGALEKAR	1AY12EC077	Starmark Software Pvt Ltd	2016
44	SAGAR KUMAR MISHRA	1AY12EC078	Cognizant	2016
45	SAIKAT CHATTERJEE	1AY12EC080	Tech Mahindra, Cognizant	2016
46	SANDEEP SINGH MEHRA	1AY12EC081	iGate	2016
47	SANJAY L KUSTAGI	1AY12EC082	Sunrise Biztech Systems	2016
48	KARTHIK SUMAN	1AY12EC033	Intel	2016
49	SAURABH GOSWAMI	1AY12EC085	Cognizant	2016
50	SHAILAJA	1AY12EC087	Sonata Software	2016
51	SHAILESH CHANDRA MISHRA	1AY12EC088	NTT DATA	2016
52	SHALINI M	1AY12EC089	Infosys, Cognizant	2016
53	SHANTHI SWAROOP M G	1AY12EC090	Cognizant	2016

54	SHARATKUMAR SURYAVANSHI B	1AY12EC092	Infosys,Cognizant	2016
55	SHWETHA H.M.	1AY12EC094	Infosys	2016
56	SUSHIL R.S.	1AY12EC102	iGate	2016
57	SUSHMITHA K B	1AY12EC103	Cognizant	2016
58	TRIVENI KANNEKOLUR	1AY12EC105	Cognizant	2016
59	VARUN S.V	1AY12EC107	Mu Sigma	2016
60	VIDYA PRASAD S.	1AY12EC109	NTT DATA	2016
61	VINODKUMAR SULAHALLI S	1AY12EC112	Sunrise Biztech Systems	2016
62	VISHVARADHYA MALLINATH	1AY12EC113	Infosys	2016
63	VIVEK ANAND	1AY12EC115	Cognizant	2016
64	YATHISH B.P	1AY12EC116	Infosys	2016
65	SHRINIDHI S	1AY12EC119	Cognizant	2016
66	MOHAMMED SAIFULLA	1AY12EC120	Tech Mahindra	2016
67	RAKESH S K	1AY12EC121	Sunrise Biztech Systems	2016
68	GIRISH B G	1AY13EC406	HCL-TSS	2016
69	MAMATHA A C	1AY13EC413	HCL-TSS	2016
70	NEERAJ G B	1AY13EC416	Microland	2016
71	PRAVEEN V CHAVAN	1AY13EC419	HCL-TSS	2016
72	SUMA U R	1AY13EC425	HCL-TSS	2016

4.6. Professional Activities

(20)

4.6.1. Professional societies/chapters and organizing engineering events (5)

a) IEEE student chapter activities

b) Department Technical Forum Activities (SPECTRA)

c) CII-IWN activities

a) IEEE student chapter activities

IEEE (Institute of Electrical and Electronics Engineers)

Core Benefits - IEEE is the world's largest technical society, bringing members access to the industry's most essential technical Information, networking opportunities, career development tools, and many other exclusive benefits.

Establishing an IEEE student Branch requires the signatures of 12 IEEE student members on a petition. The petition must specify the Branch, and the Interim student chair and faculty member who will serve as Counselor of the branch. The petition must also be approved by department chair and two faculty members, who are also IEEE members above student grade.

The IEEE student branch benefits:

Members a part of IEEE entitles you to get an IEEE membership card with an IEEE Member number, with which you can get discounts at various IEEE seminars and conferences.

Get IEEE Spectrum magazine every month delivered to your doorstep. The magazine includes latest developments in technology in various areas.

Regular email updates on technology, information about various IEEE events and conferences are provided.

Chance to participate in IEEE INDIA events specially for students such as :

- IEEE Bangalore section annual symposium: IEEE Bangalore section conducts an annual symposium wherein people from the industry, researchers and students participate with original research papers.
- IEEE Annual Member Meet: A chance to interact with all members of the IEEE Bangalore section, especially researchers and people from the industry.
- IEEE Industry Day: A chance to meet people from the industry. Includes various informative talks, interactive sessions, presentations, etc.

- IEEE Bangalore section annual symposium: IEEE Bangalore section conducts an annual symposium wherein people from the industry, researchers and students participate with original research papers.

Aims and objectives of IEEE student branch:

- To contribute towards the advancement of theory and practice of electricity, electronics, communication and information processing.
- Dissemination of knowledge and skills including vocational training.

IEEE Student Chapter at AIT

IEEE AIT Student Branch was set up in 2014 with 22 members. Since then we have achieved a lot. The branch conducts several workshops, technical fests, events and project exhibitions for the benefit of student members and other students of the college.

The workshops conducted under IEEE :

- Product design & innovation on 21st and 22nd February 2014.
- International Conference on ‘Trends in Automation, Communication and Computing Technologies’ (ITACT-15) on 21st to 22nd December 2015.
- Smart Cities work shop on 14th & 15th September 2017.

Product design & innovation on 21st and 22nd February 2014.

A 2-Day Workshop on “Product Design & Innovation” was held at Acharya Institute of Technology (AIT) on 21st & 22nd February 2014. The workshop was conducted by Electronics and Communication Engineering Department, AIT in association with IEEE students Branch, AIT. The workshop’s inaugural ceremony was held on 21st February 2014 at MBA Seminar Hall, AIT.

The objective of this workshop is to provide a platform for the students to upgrade their knowledge and skills in the area of product design. Thought provoking technical sessions was presented by eminent resource persons from IISc, CDAC, NID, Tektronics, I2R Designs and Wizardry Designs.

The technical sessions made the students to get an insight of the product design cycle that will enable them to convert their projects to products. Question & Answer session followed the talks allowing the attendees a chance to inquire and gain additional information about career opportunities available in the field of product design. The entire workshop was designed to gain and updated their knowledge in the following topics.

A The entire workshop was designed to gain and updated their knowledge in the following topics.

- New Paradigm - Design and Innovation
- Embedded Mindset to Flexible Thinking
- Product Design – an overview
- Product Expression and Emotional design
- Digital Design/Interactive design methods
- Prototyping – Digital design
- Concepts Prototyping and Evaluation
- Product development as a part of corporate strategy – Agile concepts
- Product Design - Creating a Competitive strength
- Design for the Real world – Case studies
- Product design Case studies – Distributed Sensor Networks
- Product design Case studies – Industrial Automation

Resource persons delivering technical talk:



Prof. Achutha Rao



Prof. T. V. P. Chowdry



Mrs. Jagriti P Galphade



Mr. Suresh Navandar



Mrs. Mamta Rao



Mr. Suresh C



Mr. Subashis Bera



Mr. Ganga Prasad



Prof. Saleem Ahmed



Mr. Srinivas Kumar K. S



Mr. Kaushik Nanda

International Conference on 'Trends in Automation, Communication and Computing Technologies' (ITACT-15).

ITACT-15 is devoted to the dissemination of new ideas, research and works in progress within the fields of automation, communication, power systems, bioinformatics, avionics controls and computer information systems.

ITACT-15' Conference aims to bring together researchers, industry experts, scientists, educators, policy makers, employers and all other related parties from around the world to exchange knowledge and experience and discuss current issues, recent developments, standards, techniques, challenges, theories, and good practices in the latest development of engineering and information technology.

The first International Conference on 'Trends in Automation, Communication and computing Technologies'(ITACT-15) was conducted by Acharya Institute of Technology. This conference was technically co-sponsored by IEEE Bangalore Section and financially supported by Indian Space Research Organization and JMJ Education Society.

Pre-Conference tutorials were conducted on the new trends in 'Big Data Analytics' and 'Connected Car' these tutorials were presented by Dr. Sithu Sudarshan of ABB Research and Mr. Vijay Anand of Aricent Technologies. Certificates were issued to participantsITACT-15 received research papers from countries including Africa, Fiji, Egypt, Australia and USA. The program committee had followed a rigorous process of review and filtered only 54 papers out of 237 paper submissions for the conference. Selected papers were printed as conference proceedings and distributed to the delegates.

The shortlisted papers are being forwarded to IEEE Xplore Digital library.The conference was inaugurated by the Chief Guest Shri.M.N. Vidya Shankar (IASRetd.), President, India Electronics and Semiconductor Associations (IESA) and presided over by Dr. H.D. Maheshappa Principal, Acharya Institute of Technology. The selected papers were presented in 10 technical sessions chaired by 20 session chairs. The quality of the technical sessions and content of papers were well appreciated by the session chairs and audience.

A valedictory function was organized to conclude the two days conference D r H. D Maheshappa presided over the function and gave his concluding remarks. The delegates expressed their positive opinion and feedback about the successful organizing of this conference



**Smart
Cities
work**

shop on 14th & 15th September 2017.

A 2-Day Workshop on “Smart Cities” was held at Acharya Institute of Technology (AIT) on 14th & 15th September 2017. The workshop was conducted by Electronics and Communication Engineering Department and Electrical and Electronics Department, AIT in association with IEEE students Branch – AIT. The workshop’s inaugural ceremony was held on 14th September 2017 at MBA Seminar Hall, AIT.

The objective of the workshop is to bring together students, researchers and practitioners both from academia and industries with the goal to discuss, identify and share experiences surrounding construction of smart city systems and its applications and deployment experiences. To create

awareness about the smart grid /smart cities, this workshop pave way to enhance the knowledge of faculty, Students, Industry Professionals and Research Community in reaching their objective.

The technical sessions made the students to get an insight about the recent technology trends in the modern communication systems and smart grids in Smart Cities. Question & Answer session followed the talks allowing the attendees a chance to inquire and gain additional information about construction and development of Smart Cities.



SL No	Activity	Date
1	Technical Talk on VLSI Digital design and its practical applications, Mr. Vaibhav Taraate, One Rupee Semiconductor Training	27/08/2018
2	Technical Talk on “Wireless Communications, MIMO, 5G Technologies and Networks” by Dr. Muralidhar Kulkarni, Professor, Department of ECE, NITK, Surathkal.	27 /08/2018
3	Industrial visit to BHEL Electronics Division -Bengaluru	29/8/18
4	Exhibition visit to Agritech India 2018 –BIEC Bengaluru	1/09/18
5	Three-Day workshop on “Embedded system design for IoT applications using TI boards” by Mr. Basawana Gowda, Senior Application Engineer & Mr. Rajesh.M, Senior Application	16/01/19 to 18/01/ 19

	Engineer -Digital Shark Technology	
6	Three days Workshop “Practical Foundation on Artificial Intelligence” by 1. Mr. Suraj Jana, Founder and Head of Research, Opencube Labs 2. Mr. Bhaskar M, Chief product officer, Heymedy Healthtech LLP	7/2/19 to 9/2/ 2019
6	Industrial visit to Toyota Kirloskar Motor –Pvt. Ltd	13/02/19

For the year 2017-18:

SL No	Activity	Date
1	Workshop on Smart cities	14/9/2017 to 15/9/2017
2	2 days Workshop on Raspberry Pi and IOT	6/10/2017 to 7/10/2017
3	In House Internship Raspberry Pi and Arduino	31/1/2018 to 5/2/2018
4	Technical Talk on Semiconductor Industry Opportunities and Expectations.	14/2/2018
5	Visit to ISRO satellite center Bangaluru	24/4/2018
6	Five days Workshop on System Design using Xilinx Vivado Design Suite and Zynq-7000 SOC	23/07/2018 to 27/07/2018
7	Industrial visit to CoreEL Technologies Pvt. Ltd.	27/7/18

For the year 2016-17:

SL No	Activity	Date
1	Technical talk on Advances in Electronics and Communication	26/8/2016
2	Career guidance program	22/2/2017
3	Motivational Talk	13/3/2017
4	One day Workshop on Matlab and Simulink	6/5/2017
5	One day Workshop on “Optimal Coding using C”.	9/5/2017
6	Technocracy 2017	18/5/2017

For the year 2015-16:

SL No	Activity	Date
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1	Awareness cum Lecture series on Embedded computing technologies, Radar signal processing, Image processing avenues.	15/9/2015
2	Seminar on “Career awareness in Embedded system design”.	11/3/2016
3	Seminar on “Introduction to VLSI design and CMOS analog design flow”.	11/3/2016
4	Technocracy 2016	25/4/2016 to 26/4/2016
5	Technical Talk on “Error-correcting codes for Big data”	25/4/2016
6	Overview of current trends in Image Processing. Overview of current trends in Robotics, Awareness in Preparation for placements	30/4/2016
7	One day Hands-on Session on “Technical Report Writing”	30/10/2016
8	One Day Workshop on “Circuit Simulation Using Pspice”.	31/10/2016
9	Workshop on “Analog and Digital Circuit Simulation Using PSPICE”.	7/11/2016

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Sl.No	Date	Event Name	Resource persons	No. of participant's
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1.	31-7-2018 to 2-8-2018	FDP on “Semiconductor devices and their application”	Prof. Shivashankarappa N ,ECE dept Acharya Institute of Technology ,Bengaluru	25
2.	27-8-2018	Advances in Wireless Communication	Dr. Muralidhar Kulkarni, Prof. NITK Suratkal	40
3.	11/10/2018	Technical Talk on “VLSI Digital design and its practical applications”	Mr. Vaibhav Taraate, One Rupee Semiconductor Training, Pune	80
4.	21/10/2018	Technical Talk on Prerequisites and different domain for career in Software companies	Mr.Vikram Shastry, Director, Uttara Info Solutions, Bangalore	50
5.	16/1/2019 to 18/1/2019	FDP on Embedded system design for IoT applications using TI boards.	1.Mr.Basavana Gowda ,Senior Application engineer, Digi Shark Technology ,Bangalore 2.Mr.Rajesh , Senior Application engineer, Digi Shark Technology ,Bangalore	
6.	7/2/2019 to 9/2/2019	Workshop on Practical Foundation on Artificial Intelligence.	1. Mr. Suraj Jana, Founder and Head of Research, Opencube Labs 2. Mr. Bhaskar M, Chief product officer, Heymedy Healthtech LLP	

WORKSHOPS ORGANISED 2017-2018

Sl. No	Date	Name of the Work Shop	Resource persons	No. of participant's
1	14/09/2017 & 15/09/2017	IEEE Sponsored Workshop on Smart Cities	1. Mr. Mahesh Mahajan, Vice President - Connected Operations – IIOT, Accenture Digital. 2. Mr. Anil K Dsouza, Head Innovations, BESCO. 3. Dr. Ganga Prasad, Senior Director, C-DAC 4. Mr. Ramesh Kasinathan, Asst. Vice President, Head - Bids & Proposals, Power Generation, ABB 5. Mr. Abhilash E T Nair, Senior Marketing Manager Microgrids & EV Infrastructure, ABB 6. Dr. Pethru Raj, Site Reliability	120 members

			Engineering (SRE) Division, Reliance Jio Infocomm. Ltd. (RJIL). 7. Mr. A T Kishore, Principal Consultant Telecom UTL Technologies 8. Mr. Viju N R, VP T&D Solutions, Kalkitech	
2	6/10/2017 7/10/2017	Raspberry Pi	Mr. Nayan Mujadiya ,MaxPi Technologies , Bangalore	81 members

Sl. No	Sl. No	Name of the seminar/ Workshop/conference/ symposium organised	Date & Month	Source of Financial Support	No. Of Participants	Event
1	1	Workshop on Aurdino	Technical Lead , Applied Materials India Pvt Ltd, Bengaluru 31-3-2018 14-2-2018	Self	60	
	2	National Conference on Wireless Communication Awareness on Choosing relevant domain in career”	Mr. Parshwanath Analytical advisory Specialist 31-7-2018	Management Contribution + Registration fees AIT	Dept. of ECE	
	3.	System Design using Xilinx Vivado Design Suite and Zync-7000 SOC	Management consulting company, Bengaluru 27-7-2018	In house	50	
2	1-2-2018 to 3-2-2018	FDP on “Programming with ARM Cortex M3 Microcontroller”	Mr. Harish Nadig, CEO of Vasundhara Technologies Pvt. Ltd, Bengaluru	30	AIT	Dept. of ECE

WORK SHOPS ORGA NISED

2016-2017

Sl. No	Date	Name of the Work Shop	Resource persons	No. of participant's
1	6/5/2017	One day Workshop on Mat lab and Simulink	1. Dr. Rajeswari, HOD, Department of ECE, AIT 2. Mr. Siddesh M B, Assistant professor, Department of ECE, AIT	40 members

			3. Mr. Sandeep Kumar K, Assistant professor, Department of ECE, AIT 4. Mr. Devasis Pradhan, Assistant professor, Department of ECE, AIT	
2	9/5/2017	One day workshop on Optimal programming	Mr. Nataraju A B, Assistant professor, Department of ECE, AIT	40 members
3	8/02/2017 to 10/02/2017	FDP on Linear Integrated Circuits and its applications	Prof. Shivashankarappa , Department of ECE, AIT	30 members
4	22/02/2017	Career Awareness in VLSI Design and Embedded systems	Mrs Niharika, Placement officer, Coreel technologies,Bangalore	50 members
5	19/02/2017	RTL Design and functional verification	Mr. Sivakumar , CEO Maven Silicon, Bangalore	25 members
6	13/03/2017	Technical excellence and leadership mantra	Prof. B.A. Patil Director, Think and ink educational research founder, Bangalore	70 members

WORKSHOPS ORGANISED 2015-2016

Sl. No	Date	Name of the Work Shop	Resource persons	No. of participant's
1	15/9/2015	Awareness-Cum-Lecture Series Programme by BEL	1. Mr. ASHISH KANSAL, Head-Corporate Communications at Bharat Electronics Central .Research Laboratory 2. Mrs. SANGEETHA SRIVATSAVA, Member (Sr. Research Staff) at Central Research Laboratory, BEL. 3. Mr. NAVEEN NAMBOODRI, Member (Sr. Research Staff) at Central Research Laboratory, BE. 4. Mr. DAMODAR KADABA, Member (Sr. Research Staff) at Central Research Laboratory,	30 members

			BEL.	
2	30/10/2015	One day Hands-on Session on “Technical Report Writing”	<ol style="list-style-type: none"> 1. Prof Siddesh M.B , Assistant Professor, Dept of ECE, Acharya IT 2. Prof Manjunath R.C, Assistant Professor, Dept of ECE, Acharya IT 3. Prof Sandeep kumar K, Assistant Professor, Dept of ECE, Acharya IT 	40 members
3	31/10/2015	One Day Workshop on “Circuit Simulation Using Pspice”.	<ol style="list-style-type: none"> 1. Prof Raghunath B H, Assistant Professor, Dept of ECE, Acharya IT 2. Prof Siddesh M.B , Assistant Professor, Dept of ECE, Acharya IT 3. Prof Sandeep kumar K, Assistant Professor, Dept of ECE, Acharya IT 	
4	7/11/2015	One Day Workshop on “Analog and Digital Circuit Simulation Using Pspice”.	<ol style="list-style-type: none"> 1. Prof Raghunath B H, Assistant Professor, Dept of ECE, Acharya IT 2. Prof Siddesh M.B , Assistant Professor, Dept of ECE, Acharya IT 3. Prof Sandeep kumar K, Assistant Professor, Dept of ECE, Acharya IT 	40 members

5	21/12/2015 TO 22/12/2015	ITACT 2015- International Conference, Technically sponsored by IEEE		80 members
6	11/3/2016	Seminar on Carrier awareness in Embedded System design	Mr Arun Mathais, Asst Manager Training, Sandeepani School of Embedded system Design .	90 members
7	11-3-2016	Seminar on introduction to VLSI design and CMOS analog design flow	Mr. Jaganath, Design Engineer, DNAE,Bangalore	90 members
8	25-4-2016	Technical Talk on Error correcting codes for big data	P. Vijay Kumar, Professor, ECE, IISc,,Bangalore	120 members

c) CII-IWN activities:

Sl. No	Date	Event	Venue	Facilitator	No of Participants
1	17-11-18	Conscious Leadership - An Interactive Workshop	AIT Seminar Hall Mechanical Block	Ms. Archana Krishnamurthy, Founder, Conscious Living Center (CLC), Certified Executive Coach, Advisor, Mentor, Spiritual Seeker, Author, Trainer and Motivational Speaker	50
2	21/12/18	Management of Physical & Emotional Health	AIT MBA Seminar Hall ,	Life Transformation Coach, Mindful Leadership Facilitator Professional Trainer & Coacher	80

4.6.2 Publication of technical magazines, newsletters, etc.

(5)

Publications	Academic Year	Issue	Title	Editors	Chief-Editor
Dept. of ECE	2018-2019	1	E-Spectra	Priyanka K.C, Devasis Pradhan	Dr. Rajeswari, Prof & HOD ECE

Dept. of ECE	2017-2018	2	E-spectra	Priyanka K.C, Devasis Pradhan	
Dept. of ECE	2016-2017	2	E-spectra	Priyanka K.C, Devasis Pradhan	
Dept. of ECE	2015-2016	1	E-spectra	Dr Sevugarajan.s, Sagar T.D	

4.6.3. Participation in inter-institute events by students of the program of study(10)

Academic Year	Name of the Students	Date	Name of the event	Name of the sports participated	Prizes won (if any)
2018-19	Khushnaaz Soni	Aug-18	Karnataka Senior state Aquatic Championship 4 x 100m free style	Swimming	II Place
	Khushnaaz Soni	Aug-18	Karnataka Senior state Aquatic Championship 50m free style	Swimming	III Place
	Suma L	Oct-18	21 st Inter colligate Athletic Meet-18	Athletic	IV Place
	Ankitha M S	Oct-18	21 st Inter colligate Athletic Meet-18	Athletic	III Place
	Khushnaaz Soni	Oct-18	VTU Inter colligate Swimming Competition	Swimming	I Place
			50m free style		
			100m free style		
			200m free style		
			400m free style		
			800m free style		
			50m butter fly		
			100m butter fly		
	Khushnaaz Soni	Oct-18	Dasara Games CM cup	Swimming	I Place
			50m free style		
			100m free style		
	Khushnaaz Soni	Nov-18	All-India Inter university	Swimming	IV Place
			50m free style		
			100m free style		

			50m butter fly		
	Khushnaaz Soni	Nov-18	All-India Inter university	Swimming	VI Place
			4 x 100m free style		
2017-18	Khushnaaz Soni	Aug-17	VTU intercollegiate Swimming Championship	Swimming	
			50m Freestyle		Gold
			100m Freestyle		Bronze
			400m Freestyle		Silver
			800m Freestyle		Silver
			50m Butterfly		Silver
			100m Butterfly		Silver
	Khushnaaz Soni	Sep-17	Karnataka State Level Dasara Meet	Swimming	
			100m Freestyle		Bronze
			4x100m Freestyle		Gold
	Mohammed Parvez	Nov-17	Inter-Collegiate Zonal Tournament	Soft Ball	I Place
	Mohammed Pervez	Nov-17	Inter Zonal/Single Zonal Tournament	Soft Ball	I Place
2016-17	Charan V P	2016	VTU Intern zone Table Tennis	Men's Table Tennis	III Place
	Charan V P	2016	VTU Inter zone Table Tennis-Tumkur	Men's (College representation) Table Tennis	III Place
	Charan V P	2016	Karnataka State Ranking Table Tennis Tournament	Men's Single Table Tennis	II Place
	Charan V P	2017	Karnataka State Olympics Table Tennis	Men's Single Tennis	II Place
	Charan V P	2017	Karnataka State Olympics Table Tennis	Double Table Tennis	III Place
	Charan V P	2017	Kreedotsav (Sports festival)	Table Tennis	Best Player
	Charan V P	2017	Kreedotsav –Mukherjee Memorial Tournament	Table Tennis	I Place

	Charan V P	2017	Karnataka State Olympics -2017, Dharwad	Table Tennis	Sliver in Singles +Bronze in doubles
2015-16	Charan V P	2015	VTU North zone Table Tennis	Table Tennis	II Place
	Charan V P	2016	Karnataka State ranking Table Tennis Tournament	Men's Single Table Tennis	II Place
	Charan V P	2016	VTU North Zone Table Tennis	Men's Single Table Tennis	I Place
2014-2015	Vikas Kumar	2014	State Level Softball Tournament	Softball	I Place
	Mahalakshmi and Team	2014	Inter Collegiate Inter zone Tournament	Softball	III Place
	Pavan S	2014	Bangalore North zone Table Tennis	Table Tennis	I Place
	Charan V P	2014	Bangalore North zone Table Tennis	Table Tennis	I Place
	Charan V P	2014	South zone Table Tennis	Table Tennis	III Place
	Charan V P	2014	All India Inter University Competition	Table Tennis	IV Place
	Mahalakshmi G	2015	VTU Inter collegiate Women's Softball Tournament	Softball	I Place
	Sushmitha Bhat	2015	VTU Inter collegiate Women's Handball Tournament	Handball	III Place

Suma L: 21st Inter colligate AthleticAnkitha M S: 21st Inter colligate Athletic

Meet-18 Athletic -IV place



Khushnaaz Soni: Dasara Games CM cup
Swimming I Place

Meet-18 Athletic - III Place



Khushnaaz Soni: Karnataka Senior state
Aquatic Championship Swimming- II Place

Criteria 5	Faculty Information & Contributions	200
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5. Faculty Information & Contributions (200)

Table B.5.a Faculty Information 2018-19

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date Leaving case Currently Associated is ("No")	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Dr. Rajeswari	Ph D	VTU	2015	Y	Professor	17/01/2017	2/1/2002	ECE	Speech Processing	3	4	-	Y	Regular
Dr. Ganesh Rao	Ph D	Rani Durgavati Vishwavidyalaya	1996	Y	Professor	7/7/2018	7/7/2018	ECE	Antenna Engineering	-	-	-	Y	Regular
Dr. N Shivashankarappa	Ph D	Jain University	2018	Y	Professor	9/8/2018	31/8/2016	ECE	Communication Engg.	1	-	1	Y	Regular
Dr. B M Sujatha	Ph D	Bangalore University	2017	Y	Professor	1/7/2018	9/2/2002	ECE	Image Processing	-	-	-	Y	Regular
Mrs Jayalakshmi H	M.Tech	VTU	2006	Y	Associate Professor	1/1/2013	11/2/2004	ECE	VLSI & Embedded Systems	2	-	-	Y	Regular
Mr. Krupaprasad K R	M.Tech	Mysore University	1996	Y	Associate Professor	18/7/2013	18/7/2013	ECE	Signal Processing	1	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date Leaving case Currently Associated is("No")	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Dr. C N Asha	Ph D	VTU	2018	Y	Associate Professor	1/8/2018	16/8/2007	ECE	Wireless Networks	-	-	1	Y	Regular
Dr. Lakshmikanth S	Ph D	VTU	2015	Y	Associate Professor	1/8/2018	1/8/2018	ECE	Signal processing	-	-	-	Y	Regular
Mr.Raghunath B H	M.Tech	VTU	2006	Y	Asst Professor G1	-	4/6/2005	ECE	VLSI design & Embedded systems	2	-	-	Y	Regular
Mr. Siddesh M B	M.Tech	Kuvempu	2007	Y	Asst Professor G1	-	9/5/2005	ECE	Power Electronics	-	-	-	Y	Regular
Mr. Sandeep Kumar K	M E	Bangalore University	2010	Y	Asst Professor G1	-	20/07/2011	ECE	Electronics & Communication	1	-	-	Y	Regular
Mr.Nataraju A B	M E	Bangalore University	2002	Y	Asst Professor G1	-	20/7/2010	ECE	Wireless Networking	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date Leaving case Currently Associated is("No")	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Wilfred John Vaz	M.Tech	Mangalore University	1997	Y	Asst Professor G1	-	25/09/2018	ECE	Wireless Communication	-	-	-	Y	Regular
Mr. Lakshmikanth Reddy	M. Tech	VTU	2015	Y	Asst Professor G1	-	1/8/2016	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Mr. Karthik	M. Tech	VTU	2016	Y	Asst Professor G1	-	27/2/2017	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Ms.Nagapushpa K P	M.Tech	VTU	2008	Y	Asst Professor G2	-	7/8/2006	ECE	VLSI design & Embedded systems	-	-	-	Y	Regular
Mr.Shailesh M L	M.Tech	VTU	2003	Y	Asst Professor G2	-	1/7/2008	ECE	Bio Medical Electronics	-	-	1	31/01/2019	Regular
Mrs.Veena Sanath Kumar	M. Tech	VTU	2015	Y	Asst Professor G2	-	8/7/2015	ECE	VLSI & Embedded System Design	-	-	-	Y	Regular
Mrs.Sapna Kumari C	M. Tech	VTU	2008	Y	Asst Professor G3	-	16/8/2007	ECE	VLSI & Embedded System Design	3	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date Leaving case Currently Associated is("No")	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Vasanth Kumar T R	M. Tech	VTU	2010	Y	Asst Professor G3	-	1/8/2009	ECE	Digital Communication and Networking	-	-	-	2/11/2018	Regular
Mrs.Sumalatha. S	M. Tech	VTU	2010	Y	Asst Professor G3	-	26/7/2010	ECE	VLSI Design	-	-	-	Y	Regular
Mr. Bhargav N	M. Tech	VTU	2012	Y	Asst Professor G3	-	23/07/2012	ECE	Digital Communication and Networking	-	-	-	19/11/2018	Regular
Ms. K. C Priyanka	M. Tech	VTU	2013	Y	Asst Professor G3	-	5/7/2017	ECE	VLSI Design	2	-	-	Y	Regular
Mr. Devasis Pradhan	M. Tech	NIT, Rourkela	2015	Y	Asst Professor G3	-	3/2/2017	ECE	ESC	1	-	-	Y	Regular
Mrs. Kalpavi C Y	M. Tech	MCE, Hassan	2008	Y	Asst Professor G3	-	31/7/2017	ECE	Digital Electronics and Communication System	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date Leaving case Currently Associated is ("No")	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Mohan N	M. Tech	UBDTCE, Davanagere	2015	Y	Asst Professor G3	-	8/8/2017	ECE	Digital Communication and Networking	-	-	-	Y	Regular
Mrs. Mamatha S V	M. Tech	VTU	2012	Y	Asst Professor G3	-	5/1/2018	ECE	Signal Processing	-	-	-	Y	Regular
Mrs. Pranita Niraj Palsapure	M. Tech	Nagpur Univeristy	2007	Y	Asst Professor G3	-	1/8/2018	ECE	Electronics Engg.	-	-	-	Y	Regular
Mr. Vishwanath V	M. Tech	Bangalore University	2010	Y	Asst Professor G3	-	13/11/2018	ECE	Power Electronics	1	-	-	Y	Regular
Dr. Amir	Ph D	VIT	2018	Y	Asst Professor G3	-	17/12/2018	ECE	Machine Learning	2	-	-	Y	Regular
Mrs. Kruthika K R	M. Tech	VTU	2011	Y	Asst Professor G3	-	7/1/2019	ECE	Information Technology	2	-	-	Y	Regular

Table B.5.b Faculty Information 2017 - 2018

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving case Currently Associated is ("No")	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Dr. Rajeswari	Ph D	VTU	2015	Y	Professor	17/01/2017	2/1/2002	ECE	Speech Processing	2	4	-	Y	Regular
Dr. H D Maheshappa	Ph D	IISc, Bangalore	2001	Y	Professor	16/8/2010	16/8/2010	ECE	Instrumentation	-	3	-	31/9/2018	Regular
Dr. S Sevugarajan	Ph D	IISc, Bangalore	2005	Y	Professor	4/8/2013	4/8/2013	ECE	Instrumentation	2	-	-	31/7/2018	Regular
Mr. N Shivashankarappa	M.Tech	Bangalore University	1990	Y	Professor	31/8/2016	31/8/2016	ECE	Communication Engg.	2	-	-	Y	Regular
Dr. B M Sujatha	Ph D	Bangalore University	2017	Y	Professor	1/7/2018	9/2/2002	ECE	Image Processing	-	-	1	Y	Regular
Mrs Jayalakshmi H	M.Tech	VTU	2006	Y	Associate Professor	1/1/2013	11/2/2004	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Mr. Krupaprasad K R	M.Tech	Mysore University	1996	Y	Associate Professor	18/07/2013	18/7/2013	ECE	Signal Processing	-	-	-	Y	Regular
Dr. Roopa Manjunath	Ph D	VTU	2014	Y	Associate Professor	1/8/2018	20/12/2017	ECE	Instrumentation	1	-	-	10/10/2018	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case (Y/N)Currently Associated is ("No")	Nature of Association(Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr.Raghunath B H	M.Tech	VTU	2005	Y	Asst Professor G1	-	4/6/2005	ECE	VLSI design & Embedded systems	-	-	-	Y	Regular
Mr.Siddesh M B	M.Tech	Kuvempu	2007	Y	Asst Professor G1	-	9/5/2005	ECE	Power Electronics	-	-	-	Y	Regular
Mr. Lakshmikanth Reddy	M. Tech	VTU	2015	Y	Asst Professor G1	-	1/8/2016	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Mr. Karthik	M. Tech	VTU	2016	Y	Asst Professor G1	-	27/2/2017	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Ms.Nagapushpa K P	M.Tech	VTU	2008	Y	Asst Professor G2	-	7/8/2006	ECE	VLSI design & Embedded systems	-	-	-	Y	Regular
Mr.Shailesh M L	M.Tech	VTU	2003	Y	Asst Professor G2	-	1/7/2008	ECE	Electronics	-	-	-	Y	Regular
Mr.Nataraju A B	M E	Bangalore University	2002	Y	Asst Professor G2	-	20/7/2010	ECE	Electronics & Communication	-	-	-	Y	Regular
Mrs. C N Asha	M. Tech	VTU	2017	Y	Asst Professor G2	-	16/8/2007	ECE	Wireless Network	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mrs.Veena Sanath Kumar	M. Tech	VTU	2015	Y	Asst Professor G2	-	8/7/2015	ECE	VLSI & Embedded System Design	-	-	-	Y	Regular
Mrs.Sapna Kumari	M. Tech	VTU	2008	Y	Asst Professor G3	-	16/8/2007	ECE	VLSI & Embedded System Design	2	-	-	Y	Regular
Mr. Vasanth Kumar T R	M. Tech	VTU	2010	Y	Asst Professor G3	-	1/8/2009	ECE	Digital Communication and Networking	-	-	-	Y	Regular
Mrs.Sumalatha. S	M. Tech	VTU	2010	Y	Asst Professor G3	-	26/7/2010	ECE	VLSI Design	-	-	-	Y	Regular
Mr. Sandeep Kumar K	M E	Bangalore University	2010	Y	Asst Professor G1	-	20/07/2011	ECE	Electronics & Communication	1	-	-	Y	Regular
Mr. Bhargav N	M. Tech	VTU	2012	Y	Asst Professor G3	-	23/07/2012	ECE	Digital Communication and Networking	-	-	-	Y	Regular
Mrs. Sushma T M	M. Tech		2005	Y	Asst Professor G3	-	28/7/2014	ECE	Networking & Internet Engg.	-	-	-	11/6/2018	Regular
Ms. K. C Priyanka	M. Tech	VTU	2013	Y	Asst Professor G3	-	5/7/2017	ECE	VLSI and Embedded System Design	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Devasis Pradhan	M. Tech	NIT, Rourkela , Orissa	2015	Y	Asst Professor G3	-	3/2/2017	ECE	ESC	2	-	-	Y	Regular
Mrs. Kalpavi C Y	M. Tech	MCE, Hassan	2008	Y	Asst Professor G3	-	31/07/2017	ECE	Digital Electronics and Communication System	-	-	-	Y	Regular
Mr.Ramzan Basheer	M. Tech	IIT Bombay	2015	Y	Asst Professor G3	-	16/8/2017	ECE	Communication engineering	-	-	-	14/7/2018	Regular
Mr. Vishal Kulkarni	M. Tech	VTU	2017	Y	Asst Professor G3	-	28/8/2017	ECE	Digital Electronics and Communication System	-	-	-	14/7/2018	Regular
Mr. Mohan N	M. Tech	UBDTCE, Davanagere	2015	Y	Asst Professor G3	-	8/8/2017	ECE	Digital Communication and Networking	-	-	-	Y	Regular
Mrs. Mamatha S V	M. Tech	VTU	2013	Y	Asst Professor G3	-	5/1/2018	ECE	Signal Processing	-	-	-	Y	Regular

Table B.5.c Faculty Information 2016-17

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor /Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving case Currently Associated is ("No")	Nature of Association(Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Dr. Rajeswari	Ph D	VTU	2015	Y	Professor	17/01/2017	2/1/2002	ECE	Speech Processing	-	4	-	Y	Regular
Dr. H D Maheshappa	Ph D	IISc, Bangalore	2001	Y	Professor	16/8/2010	16/8/2010	ECE	Instrumentation	1	3	-	Y	Regular
Dr. S Sevugarajan	Ph D	IISc, Bangalore	2005	Y	Professor	4/8/2013	4/8/2013	ECE	Instrumentation	2	-	-	Y	Regular
Mr. N Shivashankarappa	M.tech	Bangalore University	1990	Y	Professor	31/8/2016	31/8/2016	ECE	Communication Engg.	1	-	-	Y	Regular
Mrs. Sujatha B M	Ph D	Bangalore University	2017	Y	Professor	1/7/2018	9/2/2002	ECE	Image Processing	2	-	-	Y	Regular
Mrs Jayalakshmi H	M.Tech	VTU	2006	Y	Associate Professor	1/1/2013	11/2/2004	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Mr. Krupaprasad K R	M.Tech	Mysore University	1996	Y	Associate Professor	18/07/2013	18/7/2013	ECE	Signal Processing	-	-	-	Y	Regular
Mr.Raghunath B H	M.Tech	VTU	2005	Y	Asst Professor G1		4/6/2005	ECE	VLSI design & Embedded systems	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr.Siddesh M B	M.Tech	Kuvempu	2007	Y	Asst Professor G1	-	9/5/2005	ECE	Power Electronics	-	-	-	Y	Regular
Mr. Lakshmikanth Reddy	M. Tech	VTU	2015	Y	Asst Professor G1	-	1/8/2016	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Mrs. Prathiba Vani	M. Tech	VTU	2010	Y	Asst Professor G1	-	1/8/2016	ECE	Information Technology	-	-	-	2/8/2017	Regular
Mr. Srinivas K	M. Tech	VTU	2002	Y	Asst Professor G1	-	15/7/2016	ECE	Electronics	-	-	-	31/5/2017	Regular
Ms.Nagapushpa K P	M.Tech	VTU	2008	Y	Asst Professor G2	-	7/8/2006	ECE	VLSI design & Embedded systems	-	-	-	Y	Regular
Mr.Shailesh M L	M.Tech	VTU	2003	Y	Asst Professor G2	-	1/7/2008	ECE	Electronics	-	-	-	Y	Regular
Mr.Nataraju A B	M E	Bangalore University	2002	Y	Asst Professor G2	-	20/7/2010	ECE	Electronics & Communication	-	-	-	Y	Regular
Mrs. C N Asha	M. Tech	VTU	2017	Y	Asst Professor G2	-	16/8/2007	ECE	Digital Communication and Networking	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mrs.Veena Sanath Kumar	M. Tech	VTU	2015	Y	Asst Professor G2		8/7/2015	ECE	VLSI & Embedded System Design	-	-	-	Y	Regular
Mr. Manjunath R C	M. Tech	Jain	2008	Y	Asst Professor G2		13/8/2007	ECE	Communication Engg.	-	-	-	4/2/2017	Regular
Mrs.Sapna Kumari	M. Tech	VTU	2008	Y	Asst Professor G3		16/8/2007	ECE	VLSI & Embedded System Design	1	-	-	Y	Regular
Mr. Vasanth Kumar T R	M. Tech	VTU	2010	Y	Asst Professor G3		1/8/2009	ECE	Digital Communication and Networking	-	-	-	Y	Regular
Mrs.Sumalatha. S	M. Tech	VTU	2010	Y	Asst Professor G3		26/7/2010	ECE	VLSI Design	-	-	-	Y	Regular
Mr. Sandeep Kumar K	M E	Bangalore University	2010	Y	Asst Professor G1		20/07/2011	ECE	Electronics & Communication	-	-	-	Y	Regular
Mr. Bhargav N	M. Tech	VTU	2012	Y	Asst Professor G3		23/07/2012	ECE	Digital Communication and Networking	-	-	-	Y	Regular
Ms. K. C Priyanka	M. Tech	VTU	2013	Y	Asst Professor G3		5/7/2017	ECE	VLSI Design	2	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Vijay Kumar Reddy	M. Tech	VTU	2013	Y	Asst Professor G3		8/1/2013	ECE	VLSI & Embedded Systems	-	-	-	19/1/2017	Regular
Mr. Shashi Kumar	M. Tech	VTU	2015	Y	Asst Professor G3		1/9/2015	ECE	VLSI & Embedded Systems	-	-	-	17/7/2017	Regular
Mr. Devasis Pradhan	M. Tech	NIT, ROURKE LA , ORISSA	2015	Y	Asst Professor G3		3/2/2017	ECE	ESC	2	-	-	Y	Regular
Mr. Sagar T D	M. Tech	VTU	2014	Y	Asst Professor G3		1/2/2016	ECE	VLSI & Embedded System Design	-	-	-	18/8/2017	Regular
Mrs. Lavanya Pathuri	M. Tech	Qaboos Univ.	2016	N	Asst Professor G3		6/2/2017	ECE	Communication Engg.	-	-	-	26/7/2017	Regular
Mrs. Sushma T M	M. Tech	VTU	2005	Y	Asst Professor G3		28/7/2014	ECE	Networking & Internet Engg.	-	-	-	Y	Regular
Mrs. Resmi K N	M. Tech	VTU	2016	Y	Asst Professor G3		4/9/2015	ECE	Power System Engg.	-	-	-	11/8/2017	Regular

Table B.5.d Faculty Information 2015-16

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Dr. Rajeswari	Ph D	VTU	2015	Y	Professor	17/01/2017	2/1/2002	ECE	Speech Processing	1	-	-	Y	Regular
Dr. H D Maheshappa	Ph D	IISc, Bangalore	2001	Y	Professor	16/8/2010	16/8/2010	ECE	Instrumentation	3	3	-	Y	Regular
Dr. S Sevugarajan	Ph D	IISc, Bangalore	2005	N	Professor	4/8/2013	4/8/2013	ECE	Instrumentation	1	-	-	30/7/2018	Regular
Mrs. Sujatha B M	Ph D	Bangalore University	2017	Y	Professor	1/7/2018	9/2/2002	ECE	Image Processing	1	-	-	Y	Regular
Mrs Jayalakshmi H	M.Tech	VTU	2006	Y	Associate Professor	1/1/2013	11/2/2004	ECE	VLSI & Embedded Systems	-	-	-	Y	Regular
Dr. Shoba Rani	Ph D	Kuvempu		N	Associate Professor	1/1/2013	1/2/2008	ECE	Communication	1	-	-	12/4/2016	Regular
Mr. Krupaprasad K R	M.Tech	Mysore University	1996	Y	Associate Professor	18/07/2013	18/7/2013	ECE	Signal Processing	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case Currently Associated is("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr.Raghunath B H	M.Tech	VTU	2005	Y	Asst Professor G1	1/1/2013	4/6/2005	ECE	VLSI design & Embedded systems	2	-	-	Y	Regular
Mrs. Renukar R Kajur	M E	VTU		N	Asst Professor G1	--	5/9/2005	ECE	Communication	-	-	-	23/1/2016	Regular
Mr.Siddesh M B	M.Tech	Kuvempu	2007	Y	Asst Professor G1	-	9/5/2005	ECE	Power Electronics	-	-	-	Y	Regular
Dr Prithvi Shekar Pagal	Ph D	MU		N	Asst Professor G1	-	15/12/2014	ECE	Robotics	-	-	-	26/11/2015	Regular
Ms.Nagapushpa K P	M.Tech	VTU	2008	Y	Asst Professor G2	-	7/8/2006	ECE	VLSI design & Embedded systems	-	-	-	Y	Regular
Dr Lakshmikanth S	Ph D	Jain		N	Asst Professor G2	-	20/12/2006	ECE	Speech processing	-	2	-	23/1/2016	Regular
Mr.Shailesh M L	M.Tech	VTU	2003	Y	Asst Professor G2	-	1/7/2008	ECE	Electronics	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving case (Y/N) Currently Associated is ("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr.Nataraju A B	M E	Bangalore University	2002	Y	Asst Professor G2	-	20/7/2010	ECE	Electronics & Communication	3	-	-	Y	Regular
Mrs. C N Asha	M. Tech	VTU	2017	Y	Asst Professor G2	-	16/8/2007	ECE	Digital Communication and Networking	1	-	-	Y	Regular
Mrs.Veena Sanath Kumar	M. Tech	VTU	2015	Y	Asst Professor G2	-	8/7/2015	ECE	VLSI & Embedded System Design	-	-	-	Y	Regular
Mr. Manjunath R C	M. Tech	Jain	2008	N	Asst Professor G2	-	13/8/2007	ECE	Communication Engg.	-	-	-	4/2/2017	Regular
Mrs.Sapna Kumari	M. Tech	VTU	2008	Y	Asst Professor G3	-	16/8/2007	ECE	VLSI & Embedded System Design	-	-	-	Y	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case (Y/N)Currently Associated is ("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Vasanth Kumar T R	M. Tech	VTU	2010	N	Asst Professor G3	-	1/8/2009	ECE	Digital Communication and Networking	-	-	-	2/11/2018	Regular
Mrs.Sumalatha. S	M. Tech	VTU	2010	Y	Asst Professor G3	-	26/7/2010	ECE	VLSI Design				Y	Regular
Mr. Sandeep Kumar K	M E	Bangalore University	2010	Y	Asst Professor G1	-	20/07/2011	ECE	Electronics & Communication				Y	Regular
Mr. Bhargav N	M. Tech	VTU	2012	N	Asst Professor G3	-	23/07/2012	ECE	Digital Communication and Networking				19/11/2018	Regular
Mr. Vijay Kumar Reddy	M. Tech	VTU	2013	N	Asst Professor G3	-	8/1/2013	ECE	VLSI & Embedded Systems				19/1/2017	Regular

Name of the faculty member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)Date of Leaving case (Y/N) Currently Associated is ("No")	Nature of Association (Regular / Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper & Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Mr. Shashi Kumar	M. Tech	VTU	2015	N	Asst Professor G3	-	1/9/2015	ECE	VLSI & Embedded Systems	1			17/7/2017	Regular
Mr. Sagar T D	M. Tech	VTU	2014	Y	Asst Professor G3	-	1/2/2016	ECE	VLSI & ES				Y	Regular

5.1 Student-Faculty Ratio (SFR) (20)

- No. of UG Programs in the Department (n): 01
- No. of PG Programs in the Department (m): 01
- No. of Students in UG 2nd Year= **u1**
- Students in UG 3rd Year= **u2**
- Students in UG 4th Year= **u3**
- Students in PG 1st Year= **p1**
- Students in PG 2nd Year= **p2**

No. of Students = Sanctioned Intake + Actual admitted lateral entry students

S = Number of Students in the Department = UG1 + UG2 +... +UGn
+PG1+PG2+...PGn

F = Total Number of Faculty Members in the Department (excluding first year faculty)

Table B.5.1.a Students Faculty Ratio

Student Teacher Ratio (STR) = S / F			
Year	2018 – 2019	2017 – 2018	2016 – 2017
U1.1 – 2 nd year	120 + 24 = 144	120 + 24 = 144	120 + 24 = 144
U1.2 – 3 rd year	120 + 24 = 144	120 + 24 = 144	120 + 24 = 144
U1.3 – 4 th year	120 + 24 = 144	120 + 24 = 144	120 + 24 = 144
UG1 = U1.1+U1.2+U1.3	432	432	432
P1.1 – 1 st year	18	18	18
P1.2 – 2 nd year	18	18	18
PG1 = P1.1+P1.2	36	36	36
Total No. of Students in the Department (S)	468	468	468
No. of Faculty in the Department (F)	25	27	26
Student Faculty Ratio(SFR)	18.72	17.33	18
Average SFR	18.01		

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

Table B.5.1.b Details of Regular and Contractual faculty

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY (2018 – 2019)	28	0
CAYm1 (2017 – 2018)	30	0
CAYm2 (2016 – 2017)	29	0

5.2 Faculty Cadre Proportion

(25)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

F1: Number of Professors required = $1/9 \times$ Number of Faculty required to comply with 20:1. Student-Faculty ratio based on no. of students (N) as per 5.1

F2: Number of Associate Professors required = $2/9 \times$ Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F3: Number of Assistant Professors required = $6/9 \times$ Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

Table B.5.2 Faculty Cadre Proportion

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2018–2019)	3	4	5	2	16	22
CAYm1 (2017–2018)	3	3	5	2	16	25
CAYm2 (2016–2017)	3	3	5	0	16	26
Average Numbers	RF1 = 3	AF1= 3.33	RF2 = 5	AF2=1.33	RF3 = 16	AF3= 24.33

$$\text{Cadre Ratio Marks} = \left\{ \left(\frac{3.33}{3} \right) + \left(\frac{1.33}{5} \right) * (0.6) + \left(\frac{24.33}{16} \right) * (0.4) \right\} * 12.5 = 23.47$$

5.3. Faculty Qualification

(25)

$$FQ = 2.5 \times [(10X + 4Y)/F]$$

X = No. of regular faculty with Ph.D

Y = No. of regular faculty with M.Tech.

F = No. of regular faculty required to comply 20:1

Faculty Student ratio (no. of faculty and no. of students required are to be calculated as per 5.1)

Table B.5.3 Faculty Qualifications

Year	X	Y	F	$FQ = 2.5 * [(10X + 4Y)/F]$
CAY (2018–2019)	7	21	24	16.04
CAYm1 (2017–2018)	5	25	24	15.62
CAYm2 (2016–2017)	3	26	24	13.95
Average Assessment				15.20

5.4. Faculty Retention

(25)

Table B.5.4 Faculty Retention

Year	CAY m2 2016-2017	CAYm1 2017-2018	CAY 2018-2019
No. of Faculty in the base year (2015-16)	26	26	26
No. of Faculty Retained	18	18	13
Faculty Retention in %	69.23	69.23	50
Average	62.82		

5.5. Innovations by the Faculty in Teaching and Learning

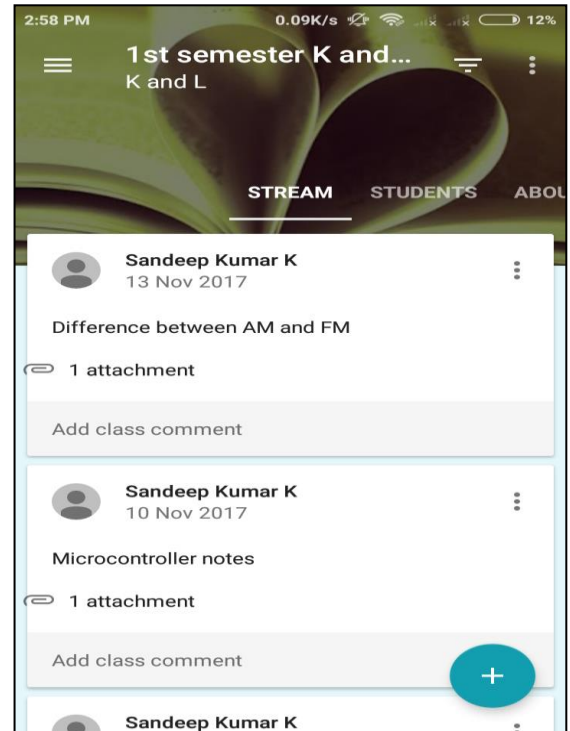
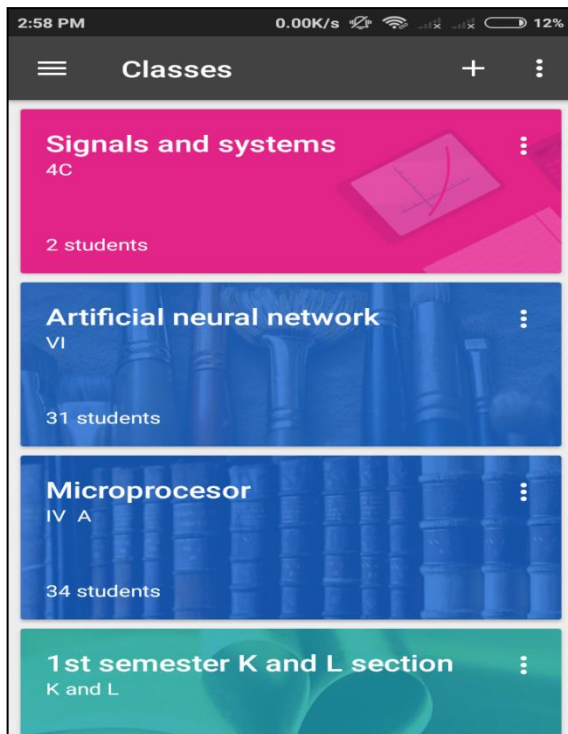
(20)

Faculty members of department of ECE department follows innovative teaching methodologies in the classroom in addition to the conventional methods like, Blackboard teaching, sharing learning materials and questioning in every class. These innovative methods employed helps the students to actively involve in the classroom.

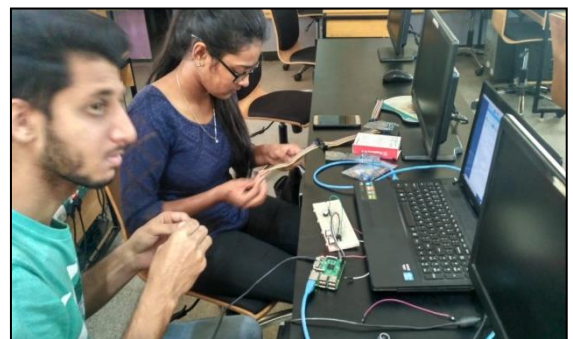
- NPTEL Courses as extensive learning and assignments-Students are motivated and supported to take up MOOC courses and NPTEL courses in order to enhance learning
- Spoken Tutorials for skill development- The dept. conducts spoken tutorial certified courses by collaborating with IIT Bombay for enhancing coding skills in Python, C++, Java etc.,
- Inhouse Internships for Skill Development and technical proficiency-The dept. organises inhouse internship during the vacation period of each semester in the areas

of VLSI, Embedded systems, Artificial Intelligence etc., for which the dept. has collaborated with Texas Instruments, Open Cube Labs etc.,

- Interactive learning through google classrooms and google forms for quiz- Faculty members involve the students to an active learning mode through google classrooms and conduct analytical quiz through google forms.

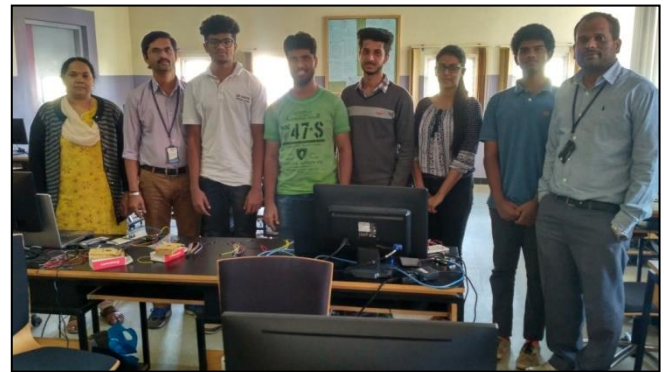


- Simulation based learning for theoretical concepts and use of latest tools- The students are encouraged for simulation based learning for better understanding of the subject.

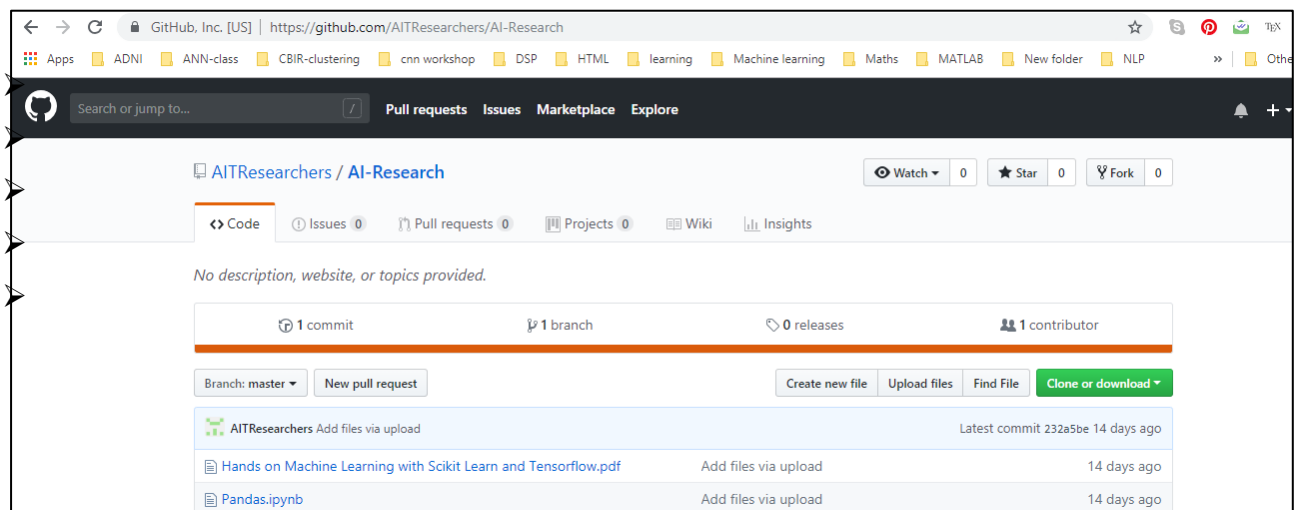


- Open book test to improve analytical and critical thinking skills of the subject
- Project based and self learning- Students are encouraged to group in the various domains of ECE like VLSI, Artificial Intelligence, Embedded Systems etc., take up

research related projects as per industrial requirements contributing to the society at large.



- Faculty encourage the use of community websites like GitHub, Open source Hardware and Software while carrying out student projects.



- Students are exposed to latest developments through regular visits to industry and exhibitions.





5.6. Faculty as participants in Faculty development/training activities/STTPs (15)

- ❖ A Faculty scores **maximum five points** for participation
- ❖ Participation in **2 to 5 days Faculty development program: 3 Points**
- ❖ Participation **>5 days Faculty development program: 5 points**

Sl. No.	Name of the Faculty	CAY17-18	CAY16-17	CAY 15-16
		Aug17- July-18	Aug16- July-17	Aug15- July-16
1	Dr. Rajeswari	2	5	3
2	Dr.Maheshappa H D	2	5	0
3	Dr. Ganesh Rao	0	0	0
4	Mr.Shivashankarappa	2	2	0
5	Dr. Sujatha B.M	3	3	3
6	Mrs Jayalaxmi.H	5	3	3
7	Dr.Asha C.N	3	2	3
8	Mr.Krupaprasad K.R	5	3	3
9	Mr. Wilfred John Vaz	0	0	0
10	Mr.Raghunath B.H	5	5	5

Sl. No.	Name of the Faculty	CAY17-18	CAY16-17	CAY 15-16
		Aug17- July-18	Aug16- July-17	Aug15- July-16
11	Mr.Siddesh M.B	2	5	0
12	Mr. Sandeep Kumar K	2	3	5
13	Ms. Nagapushpa K.P	3	3	3
14	Mr. Shailesh M.L	3	3	3
15	Mr. Nataraju A.B	3	2	3
16	Mrs. Veena Sanath Kumar	3	3	0
17	Mrs. Sapna Kumari .C	3	2	3
18	Mrs. Sumalatha.S	2	2	3
19	Dr. Lakshmikanth S	2	2	3
20	Mr. Vijay Kumar Reddy	0	2	0
21	Mr.Shashi Kumar N	0	3	2
22	Mr. Sagar T.D	0	0	0
23	Mr. Vasanth Kumar	5	0	0
24	Ms.Priyanka K C	3	0	0
25	Mr.Devasis Pradhan	0	0	2
26	Mrs. Kalpavi. C.Y	3	0	0
27	Mr. Mohan N	0	0	0
28	Mr. Vishwanath V	0	0	0
29	Dr. Amir	0	0	0
30	Mrs. Pranita Niraj Palsapure	0	0	0
31	Mrs. Mamatha S V	0	0	0
32	Mrs. Kruthika	0	0	0
33	Mr. Laxmikanth Reddy	3	0	0
34	Mr. Karthik	2	0	0
35	Mrs. Sushma K	0	0	0
	Sum	66	59	47

	RF= Number of Faculty required to comply with 20:1 Student-Faculty ratio as per 5.1	24	24	24
	Assessment = $3 \times (\text{Sum}/0.5\text{RF})$ (Marks limited to 15)	$3*(66/(0.5*24))$	$3*(59/(0.5*24))$	$3*(47/(0.5*24))$
		16.5	14.75	11.75
	Average assessment over three years (Marks limited to 15) =	14.33		

5.7. Research and Development**(30)****5.7.1. Academic Research****(10)**

Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.

Table B.5.7.1 PhD Guidance- VTU Research Centre- Department of ECE

Sl. No.	Research Guide	Name of Scholar	Topic of Research	University & Year of Registration	Status
1	Dr. H. D Maheshappa Professor, ECE,	Krupaprasad K R Associate Professor	Reconfigurable Architecture MIMO Systems	VTU, Belgaum June 2012	Comprehensive viva
		Kruthika K R Research Scholar	Segmentation & Classification of brain MRI images	VTU, Belgaum December 2014	Submitting Thesis
		Nataraju A B APG –I	Novel Algorithms for scalable wireless mesh networks	Jain University Bangalore January 2013	Experimental work
2	Dr. Rajeswari Professor and HOD, Department of ECE, AIT, Bangalore	Sandeep Kumar K APG –I	Computer Vision for automatic weed detection & herbicide spraying control in horticulture plantation.	VTU, Belgaum December 2015	Experimental work
		VeenaSanath Kumar APG –II	Efficient VLSI Architecture for ray tracing.	VTU, Belgaum December 2016	Pursuing Course Work
		Sumalatha S APG-III	Design & Implementation of High Performance Micro Architecture for video Codec	VTU, Belgaum December 2015	Experimental work

Sl. No.	Research Guide	Name of Scholar	Topic of Research	University & Year of Registration	Status
3	Dr. Viswanatha V M, HOD, ECE Department, SLN College Raichur	Bhargav N APG-III	Novel based evoked potential for visual extraction	VTU, Belgaum January 2014	Comprehensive Viva Completed
4	Dr. Arvindha H S, Prof. and HOD,ECE JSS Academy , Bangalore	Raghunath B H APG-I	Fault Tolerant Technique for SRAM-Based FPGA using partial dynamic reconfiguration in safety critical system.	VTU, Belgaum March 2015	Course Work Completed
		Shivapanchakshari T G, Associate Professor, CIT, Bangalore	Analysis of radar signature of various soil in different season using RF pattern of GPR through standard RF reflectometry.	VTU, Belgaum March 2013	Experimental work
5	Dr. Siva Yellampalli Professor, UTL Technologies Bangalore	Lakshmikanth Reddy APG - I	Design of MEMS sensor to detect contaminants in automobile LPG using COMSOL Multi - physics.	VTU, Belgaum December 2018	Pursuing course Work

Table B.5.7.2 - Ph.D. awarded during the assessment period while working in the institute

Sl. No.	Name of faculty	Details of Faculty	University	Title of Research	Year of Completion
1	Mr. Shivashankarappa N	Professor, ECE, AIT Bangalore	Jain University	Synergy of auto sequence measurement & missing data in wireless sensor network	2018
2	Mrs. Sujatha B M	Professor, ECE, AIT Bangalore	Bangalore University	Efficient algorithms for face recognition based on spatial and transform domain techniques.	2017
3	Mrs. Asha C N	Associate Professor, ECE, AIT Bangalore	VTU, Belgaum	Design and performance analysis of Scalable MAC and routing protocol for wireless mesh networks	2018
4	Mr. Shailesh M L	APG -I, ECE, AIT Bangalore	Pacific Academy of Higher Education & Research University Jaipur	Evoked potential estimation in noisy environment using different techniques	2018

Table B.5.7.3 Faculty Pursuing PhD

Sl. No.	Faculty Name	Research Topic	University	Guide Details	Date of Registration & Status
1	Mrs. Jayalaxmi H Associate Professor	VLSI Design for Color Mosaic Pictures.	JNTU, Hyderabad	Dr. S Ramachandran Professor, Department of ECE, SJBIT, Bangalore	August 2009
					Thesis Submitted
2	Mr. Krupaprasad K R Associate Professor	Reconfigurable Architecture MIMO Systems	VTU, Belgaum	Dr. H. D Maheshappa Professor, ECE, AIT Bangalore	June 2012
					Comprehensive viva
3	Mr. Raghunath B H APG-I	Fault Tolerant Technique for SRAM-Based FPGA using partial dynamic reconfiguration in safety critical system.	VTU, Belgaum	Dr. Arvindha H S, Prof & Head, Department of ECE, JSS Academy , Bangalore	March 2015
					Course Work Completed
4	Ms. Nagapushpa K P APG –II	Novel verification approach for evaluating mixed signal logic using neural network.	VTU, Belgaum	Dr. Chitra Kiran N Professor, HOD, Alliance University Bangalore	December 2015
					Completed Course Work
5	Mr. Nataraju A B APG –I	Novel Algorithms for scalable wireless mesh networks	Jain University Bangalore	Dr. H. D Maheshappa Professor, ECE, AIT Bangalore	January 2013
					Experimental work
6	Mr. Sandeep Kumar K APG –I	Computer Vision for automatic weed detection & herbicide spraying control in horticulture plantation.	VTU, Belgaum	Dr. Rajeswari Professor, HOD, Department of ECE, AIT, Bangalore	December 2015
					Course work Completed
7	Mrs. VeenaSanath Kumar APG –II	Efficient VLSI Architecture for ray tracing.	ECE,AIT Bangalore	Dr. Rajeswari Professor, HOD, Department of ECE, AIT, Bangalore	December 2016
					Pursuing Course Work
8	Mrs. SapnaKumari C APG-III	Study on AES algorithm and its VLSI implementation.	Jain University Bangalore	Dr. K V Prasad, Professor, HOD Department of ECE, BIT, Bangalore	August 20112
					Thesis Write Up
9	Mr. Vasanth Kumar T R APG-III	Studies of channel estimation in wireless network.	Jain University Bangalore	Dr. K V Prasad, Professor, HOD Department of ECE, BIT, Bangalore	August 20112
					Thesis Write Up
10	Mr. Bhargav N APG-III	A novel approach for extraction of visual evoked potential using comparative analysis	VTU, Belgaum	Dr. Viswantha V M, HOD, ECE Department, SLN College Raichur	January -2014
					Comprehensive Viva Completed

Sl. No.	Faculty Name	Research Topic	University	Guide Details	Date of Registration & Status
11	Mrs. Sumalatha S APG-III	Design & Implementation of High Performance Micro Architecture for video Codec	VTU, Belgaum	Dr. Rajeswari Professor, HOD, Department of ECE, AIT, Bangalore	December -2015
					Experimental work
12	Mr. Shashi Kumar APG-III	Implementation of Audio logical measurement to implement the performance of hearing impairment using mobile phone	VTU, Belgaum	Dr. H S Sheshadri	December 2015
13	Mrs. Kalpavi Y C APG-III	Energy efficient big data gathering in cluster based wireless sensor network	VTU, Belgaum	Dr. Veena C S Professor, Department of ECE, SaIT, Bangalore	December 2016
					Pursuing Course Work
14	Mrs. Kruthika K R Research Scholar ECE, AIT	Segmentation & Classification of brain MRI images	VTU, Belgaum	Dr. H. D Maheshappa Professor, ECE, AIT Bangalore	December 2014
					Submitting Thesis

Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc.

(6)

Table B.5.7.4 Publication Details Journals/Conference/Book

Publication Details				
Year	Journals	Conference	Books	Book Chapters
2016-2017	12	11	-	01
2017-2018	10	04	-	02
2018-2019 (till date)	10	06	01	02

Table B.5.7.5 Publication Details Journals/Conference/Book

Year -2016							
Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2016	A Device Pair Classification based Channel Slot Re-Utilization Optimization for Scalability Enhancement in Wireless Mesh Network	International Journal of Computer Science and Telecommunications [Volume 7, Issue 2, February 2016]	Asha C. N., and T. G. Basavaraju	IJ	ISSN 2047-3338	Feb	3.2
2016	Compression based Face Recognition using DWT and SVM	Signal & Image Processing : An International Journal (SIPIJ) Vol.7, No.3, June 2016	Sujatha BM, Chetan TippannaMadiwal ar, Suresh Babu K, Raja K B, Venugopal K R	IJ	DOI : 10.5121/sipij.2016.7304	Jun	2.9
2016	Distortion Estimation of A Loudspeaker Using Knock Off Filter	International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering	Shivarajkumar Hosur, Raghunath	IJ	ISSN:2278 – 8875	Jun	6.392
2016	Synergy of Filtering with Delayed States and Missing Data in Measurement Level Fusion	International Journal of Enhanced Research in Science, Technology & Engineering, ISSN: 2319-7463, Vol.5 Issue 6, June-2016	N Shivashankarappa , J. R. Raol,	IJ	ISSN: 2319-7463, Vol.5 Issue 6, June-2016	Jun	4.052
2016	Quantitative Analysis Of Hwmp Based Wireless Mesh Networks Using Ns-3	International Journal of Latest Research in Engineering and Technology (IJLRET) , NC3PS-2016, pp.1-7	A.B Nataraju, Dr. H D Maheshappa, Amar Devkatte	IJ	ISSN: 2454-5031	Jul	2.265
2016	SOM based Face Recognition using Steganography and DWT Compression Techniques	International Journal of Computer Science and Information Security, ISSN: 1947-5500, Vol. 14, No. 9, pp. 806-826, September 2016	Sujatha B M, NayinaRamapur, ShubhangiLagali, K Suresh Babu, K B Raja and Venugopal K R,	IJ	ISSN: 1947-5500	Sep	2.6

Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2016	Reversible Logic-MUX-Multiplier Based Face Recognition using Hybrid Features	IOSR Journal of VLSI and Signal Processing, ISSN: 2319 – 4200, Vol. 6, Issue 6, PP. 48-64, December. 2016.	Sujatha B M, ShubhangiLagali, NayinaRamapur, K Suresh Babu, K B Raja and Venugopal K R	IJ	ISSN: 2319 – 4200,	Dec	2.82
2016	A Novel Communication Architecture and Control System for TeleBot:A Multi-Modal Telepresence Robot for Disabled O cers	International Journal of Next-Generation Computing, Vol. 7, No. 3, November 2016. pp. 222-237	Sevugarajan Sundarapandian*, Jong-Hoon Kim, Shadeh Ferris-Francis, Hunter Michko, Christopher Charters, Jerry Miller, NagarajanPrabaka r,	IJ	ISSN: 2229-4678 (Print) and 0976-5034 (Online),	Nov	4.693
2016	FPGA Implementation of AES algorithm for Image, Audio and Video Signal	Book series on Advances in Intelligent systems and computing, (AISC, volume 632)	SapnaKumari C, K V Prasad	IC	ISSN: 2194 -5357	Nov	

Year 2017							
Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2017	Robust Digital Invisible Watermarking For Copyright Protection Of Image Using Dct (Discrete Cosine Transform)	International Journal of Advances in Science, Engineering and Technology(IJASEAT) Volume-5, Issue-1 (2017) (Jan, 2017)	Devasis Pradhan and Rabi Narayan Panigrahi	IJ	ISSN: 2321-9009	Jan	3.15
2017	Circular Patch with Circular Slit Patch Antenna used for Ultra Wide Band Application	International Journal Of Electrical, Electronics And Data Communication Volume-5, Issue 2	Devasis Pradhan	IJ	ISSN: 2320 -2084	Feb	3.46
2017	Decisive Analysis of AMBA AHB-APB Bridge	Imperial Journal of Interdisciplinary Research (IJIR) Vol-3, Issue-3, 2017 (Special Issue) ,	Priyanka K.C, Shailesh M.L	IJ	ISSN: 2454-1362	Feb	3.7

Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2017	Comparative Analysis of SNR Improvement for Evoked Potential Estimation Using Different Wavelet Transforms	Imperial Journal of Interdisciplinary Research (IJIR) Vol-3, Issue-3, 2017 (Special Issue) ,	Shailesh M L, Dr.AnandJatti, Sunitha N S, Priyanka K C	IJ	ISSN: 2454-1362	Feb	3.7
2017	Data Fusion Algorithms with State Delay and Missing Measurements	Int. Journal of Engineering Research and Application www.ijera.com ISSN : 2248-9622, Vol. 7, Issue 6, (Part -6) June 2017, pp.62-68	N Shivashankarappa, Raol J. R	IJ	ISSN : 2248-9622, Vol. 7, Issue 6, (Part -6) June 2017, pp.62-68	Jun	1.632
2017	Stochastic Motion Planning for the Telebot	International Journal of Next-Generation Computing, Vol. 8, No. 1, March 2017. pp.99-107	YonahElorza, Sevugarajan Sundarapandian*, Jerry Miller,	IJ	ISSN: 2229-4678 (Print) and 0976-5034 (Online),	Mar	4.693
2017	Circular Patch with Circular Slit Patch Antenna used for Ultra Wide Band Application	International Journal Of Electrical, Electronics And Data Communication, ISSN: 2320-2084 Volume-5, Issue-2, Feb.-2017	DEVASIS PARDHAN	IJ	ISSN: 2320-2084	Feb	3.46
2017	Robust Digital Invisible Watermarking for Copyright Protection of Image using DCT (Discrete Cosine Transform)	International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE) Vol 4, Issue 3, March 2017	DEVASIS PARDHAN, RABINARAYAN PANIGRAHI	IJ	ISSN (Online) 2394-6849	March	3.689
2017	Implementation of Invisible Digital Watermarking Technique for Copyright Protection using DWT-SVD and DCT	International Journal of Advanced Engineering Research and Science (IJAERS)[Vol 4, Issue7, July-2017]	DEVASIS PARDHAN	IJ	ISSN: 2349-6495	July	4.178
2017	Invisible Digital Audio Watermarking using DWT-DCT based Transform	IOSR Journal of Electronics and Communication Engineering (IOSR-JECE) Volume 12, Issue 5, Ver. II (Sep.-Oct. 2017), PP 14-19	DEVASIS PARDHAN	IJ	ISSN: 2278-8735	SEP	1.645

Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2017	Nonlinear Observers for Systems with State Delay and Randomly Missing Measurements	International Journal of Applied Engineering Research ISSN 0973-4562 Volume 12, Number 20 (2017) pp. 10158-10163	N Shivashankarappa, Raol J. R	IJ	ISSN 0973-4562 Volume 12, Number 20 (2017) pp. 10158-10163	Nov	2.692
2017	Nonlinear Observers for Data Fusion based on Robustness norm for System with Delay and Missing Measurements	Control and Data Fusion-CADF e-Journal	N Shivashankarappa, Raol J. R	IJ	Vol.2 No.1, pp.1-10	Nov	2.12

Year – 2018							
Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2018	Analysis of power reduction and implementation on FPGA for AES 128 bits using BEDT schemes	IJET, International Journal of Engineering and Technology, UAE. Vol.7, 2018, pp.126-134	SapnaKumari C, K V Prasad	IJ	ISSN: 2227-524X	JAN	2.5
2018	The Reliability of Polyvinylidene Fluoride Sensor for Intra- and Intersession Measurements	Indian Journal of Otolaryngology and Head & Neck Surgery (2018). Pp.1-5 https://doi.org/10.1007/s12070-018-1349-9	Manjunatha, R.G., Prakash, S. & Rajanna, K	NJ	Online: 0973-7707 Print: 2231-3796	APRIL	3.6
2018	FPGA implementation of Stellar-matrix based on mix column AES standard	Journal of Advanced Research in Dynamical and Control Systems, Vol.10, (special issue 2018)	SapnaKumari C, K V Prasad	IJ	ISSN: 1943-023X	APRIL	2.65
2018	Convolution neural network based weed detection in horticulture plantation	International Journal of scientific research and review, Vol.7, pp.41-47	Sandeep Kumar K, Dr. Rajeswari	IJ	ISSN: 2279 543X	JUN	3.89

Year	Title of Research Paper	Journal (Name, Volume, Issue & Page Nos)	Authors & Co Author	IJ/ NJ	ISSN / ISBN & Country	Month	Impact Factor/ SCOPUS index
2018	An Efficient Hardware Realization of DCT Based Color Mosaicing system on FPGA	Advances in Intelligent Systems and Computing	Jayalaxmi H. and Ramachandran S.	IJ	Springer Scopus indexed, web of science paper in , © Springer Nature Switzerland	Sep	Scopus
2018	Massive MIMO Technique used for 5th Generation System with Smart Antenna	International Journal of Electrical, Electronics and Data Communication (IJEEDC)	Devasis Pradhan	IJ	ISSN(p): 2320 - 2084, ISSN(e): 2321 - 2950	Sep	3.46
2018	Multilevel Home Security System using Arduino & GSM	Journal for Research	Viswanatha V. Venkata Siva Reddy R. Ashwini Kumari P.	IJ	Journal for Research, volume 04, issue 10, SSN : 2395-7549	Dec	1.64
2018	Multistage classifier-based approach for Alzheimer's disease prediction and retrieval	Informatics in Medicine Unlocked, Elsevier	K.R. Kruthika (Research Scholar)*, Rajeswari (Professor), H.D. Maheshappa (Professor)	IJ	Informatics in Medicine Unlocked, https://doi.org/10.1016/j.imu.2018.12.003	Dec	SCOPUS
2018	Reconfigurable filter bank structure for low complexity digital channelizer using fractional interpolation and MFIR filters with cosine modulation	International Journal Electronic Communication (AEU), Elsevier	A Amir et.al	IJ	Doi.org/10.1016/j.aeue.2018.07.11	August	Elsevier

Table B.5.7.6 Last 3 Years Conference Details

2016	A Cross Layer Based Scalable Channel Slot Re-Utilization Technique for Wireless Mesh Network	The Second International Conference on Computer Science, Engineering and Information Technology (CSITY 2016) Chennai, India, April 02~03, 2016	Asha C. N., and T. G. Basavaraju	IC	ISBN : 978-1-921987-49-6	Apr
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2016	Translation based Face Recognition using Fusion of LL and SV Coefficients	Twelfth International Multi-Conference on Information Processing-2016 (IMCIP-2016)	B. M. Sujatha, B. V. Venukumar, Chetan TippannaMadiwalar, N. C. AbidaliMunna, K. Suresh Babu, K. B. Raja and K. R. Venugopal	IC	doi: 10.1016/j.procs.2016.06.077	Aug
2016	Steganography based Face Recognition using DWT, LBP and SOM	ASAR- IRF International Conference, ISBN:978-93-86083-84-5, pp. 64-68, August 2016	Sujatha B M, NayinaRamapur, ShubhangiLagali, K Suresh Babu, K B Raja and Venugopal K R	IC	ISBN:978-93-86083-84-5	Aug
2016	VLSI Architecture for Color Mosaic Image/Video Sequences	IEEE International Conference on Inventive Computation Technologies (ICICT 2016) RVS Technical Campus, Coimbatore	Jayalaxmi H. and Ramachandran S.	IC	IEEE, RVS Technical campus	Aug
2016	Performance Analysis of HWMP Protocol for Wireless Mesh Networks Using NS3	IEEE TENCON 2016 — Technologies for Smart Nation, held at Singapore on 22nd-25th Nov '16. pp.1593-1598	A.B Nataraju, H D Maheshappa, Amar Devkatte	IC	ISBN: 978-1-5090-2597-8	Nov
2016	FPGA Implementation of AES algorithm for Image, Audio and Video Signal	International Conference on Intelligent Computing and Applications (ICICA 2016)	SapnaKumari C, K V Prasad	IC	DY Patil College of Engg, Pune. Springer	Nov
2017	Comparative Analysis of SNR Improvement for Evoked Potential Estimation Using Different Wavelet Transforms	International Conference on Current Trends in Engineering, Science & Technology	Shailesh M L, Dr.AnandJatti, Sunitha N S, Priyanka K C	IC	Ku Home Kasetsart University, Bangkok	Jan
2017	Decisive Analysis of AMBA AHB-APB Bridge	International Conference on Current Trends in Engineering, Science & Technology	Priyanka K C, Shailesh M L	IC	Ku Home Kasetsart University, Bangkok	Jan
2017	Robust Digital Invisible Watermarking For Copyright Protection Of Image Using Dct (Discrete Cosine Transform)	International Conference on Emerging Trends in Engineering, Science and Technologies. 18-20 Mar 2017, (ICETEST - 2017)	Devasis Pradhan	IC	ISBN : 978-81-932966-3-9, SUV College of Engineering, Tirupati, Andhra Pradesh	Jan

2017	Implementation of Invisible Digital Watermarking Technique for Copyright Protection using DWT-SVD and DCT	International Conference on Wearable Technologies -2017 (presented on May - 4th, Paper ID:ICOWT_40321)	Devasis Pradhan	IC	Dayananda Sagar University, School of Engineering, Bangalore	May
2017	Classification of Alzheimer and MCI phenotypes on MRI data using SVM	3rd International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS '17)	Kruthika, Rajeswari, H D Maheshappa	IC	Manipal Institute of Technology, Manipal	Sep
2017	A Review Paper on Extraction of Visual Evoked Potential Techniques	International conference on Signal, Image Processing, Communication and Automation (ICSIPA '17), JSSATE, Bangalore, 6th and 7th July 2017.	Bhargav N , Dr. Viswanatha V.M	IC	JSSATE, Bangalore	July
2017	Fault Tolerant Techniques for FPGAs - A Review	International conference on Signal, Image Processing, Communication and Automation (ICSIPA '17), JSSATE, Bangalore, 6th and 7th July 2017.	Raghunath B.H, DrAravind H S	IC	JSSATE, Bangalore	July
2018	Convolution neural network based weed detection in horticulture plantation	International conference on "Multimedia processing, Communications and Information Technology-MPCIT 2018"	Sandeep Kumar K, Dr. Rajeswari	IC	JNNCE, Shimoga	Jun

All relevant details shall be mentioned.

5.7.2. Sponsored Research

(5)

Funded research:

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Table B.5.7.7 Details of Sponsored Research

Research Proposals Submitted/Sanctioned – Faculty							
Sl. No	Name of the Faculty	Title	Scheme	Year	Remarks	Budget	Duration
1	Dr. Rajeswari Devasis Pradhan	Design & Development of efficient smart antenna array for data collection and monitoring aquatic environment by minimizing the acoustic noise for Marine Applications.	AICTE, RPS	2017-18	Submitted	25 Lakhs	3 years
2	Dr.Roopamanjunatha Dr. Rajeswari	Smart nasal airflow measuring device	SERB	2017-18	Submitted	35 Lakhs	3 years
3	Dr.Roopamanjunatha Dr. Rajeswari	Design and Development of Screening Device for Lung Cancer	DBT-ECR	2017-18	Submitted	60 Lakhs	3 years
4	Dr.Rajeswari Dr.Sevugarajan S Mr.Nataraju A B	An Integrated Smart System for Healthcare and Agriculture using Deep Learning and GPU's	DST-ICPS	2016-17	Submitted	43 Lakhs	3 Years
5	Dr.Sevugarajan S Dr. Sandeep Siwach	Development of a laboratory to investigate efficiency, technicalities, and limitations of a small scale (sub-10 kW) Organic Rankine Cycle based power plant for electricity generation from waste heat and biomass	SERB	2017-18	Submitted	20 Lakhs	3 Years
6	Dr. Sujatha BM	Modrobs for Analog Electronics lab	AICTE	2016-17	Submitted	15 Lakhs	1 Years
7	Mrs.Jayalaxmi H	Skills and Personality Development Program Centre for SC/ST students	AICTE, RPS	2016-17	Submitted	25 Lakhs	1 Years

Sanctioned an on-going Project						
Financial Year	Name of Faculty(PI)	Name of Funding Agencies	Title of Project	Sanctioned Order No.	Sanctioned Date	Amount Received
2016-2017	Prof.(Dr) Rajeswari	VGST-KFIST Level 2	Development of Automatic Weed Detection and Herbicide Spraying Control in Horticulture Plantation	KST EPS/VGST/05/K-FIST/2015-2016	01/01/2017	20 Lakhs

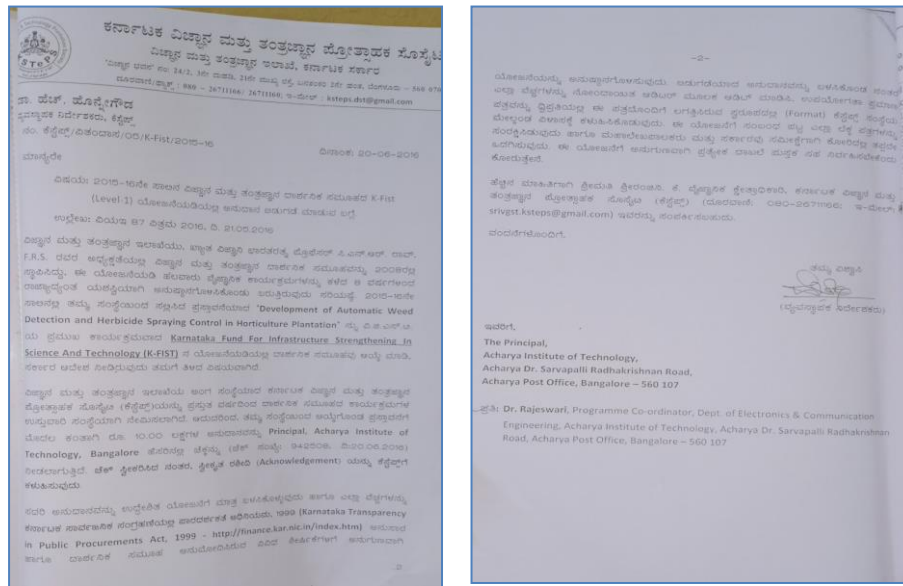


Fig. B.5.7.7 Details of Sponsored Research Letter from VGST-KFIST

GOVERNMENT OF KARNATAKA
View Group on Science and Technology
Department of Information Technology, Biotechnology and Science & Technology
Karnataka Government Secretariat, No.702, 7th Floor, 4th Stage, M. S. Building, Dr. Ambedkar Veedhi, Bangalore-560 001
Phone: 080-2203 2013, E-mail: viewgroup.st@karnataka.gov.in, Website: www.vgst.in

No /VGST/GRD -492 /2015-16/ 344

To, 31-01-2018

The Principal,
Acharya Institute of Technology, Soladevana Halli, Hesaraghatta Main road,
Chickabannavara Post, Bengaluru - 560 107.

Dear Sir,

Subject : Approval for the submission of PART -A for purchase the Equipment .- GRD 492.

With reference to the approval of GRD -492 Acharya Institute Of Technology, Bengaluru under the scheme K-FIST(L1) the project titled "Development of automatic weed detection herbicide spraying control in horticultural plantation" was released the grant of Rs 10.00 lakhs for 2nd Instalment in the FY : 2016-17 (Cheque no : 054802 Dt :09-11-2017)

As submitted the PART - A of GRD by the Grantee Institution requesting for the purchase of Equipments for the Second and Final Instalment the details are as follows .

2nd Instalment - Non Recurring Budget Estimate under E- Tendering Process for the FY: 2016-17.

SI NO	Submitted in PART -A under Non -Recurring (ETP) Budget Estimate by Grantee Institution	Amount (Rs)
1	AI / Deep Learning Server with NVIDIA P100 12GB GPU 2Nos 64 GB DDR4 RAM , Intel Xeon Processor along with associated Software's and Accessories	9,00,000.00
Total		9,00,000.00

2nd Instalment - Recurring Budget Estimate for the FY : 2016-17

SI NO	Submitted in PART -A under Recurring Budget Estimate by Grantee Institution	Amount (Rs)
1	Chemicals	15,000.00
2	Glassware Plastic ware	
3	Biological Spare Parts	
4	Electrical and Electronics	25,000.00

5	Mechanical Spare parts	10,000.00
5	Contingency	20,000.00
6	Books	5,000.00
Total		75,000.00

The submitted Financial status performa (FSP) and PART - A document details are as follows

Previous year Balance according to the FSP	86,099 .00
Grant Amount	10,00,000.00
TOTAL	10,86,099 .00
NON RECURRING	
E-tendering (ETP)	9,00,000.00
TOTAL	9,00,000.00
RECURRING	
Consumables and Contingency	75,000.00
Approval as per (PART - A submitted by GI / PC)	9,75,000.00
BALANCE AMOUNT NOT APPROVED	1,11,099.00

In this view , as mentioned in the procurement document (PART-A) , you may purchase the equipments through E-Tendering and Manual Tendering . Please do not deviate the purchase procedure for the procurement of equipments . Please submit the PART-B (Purchase Documents) to the VGST office after completion of the process . This is for your kind information .

With thanks and regards ,
Yours sincerely,

(Dr.S.G.Sreekantheshwara Swamy)
Consultant

CC : Dr. Rajeswari, Electronics & Communication Engineering Acharya Institute of Technology, Soladevana Halli, Hesaraghatta Main road Chickabannavara Post, Bengaluru - 560 107.

5.7.3. Development activities

(10)

1. Research laboratories: ECE VTU -Research Center -approved from the year-2010.
2. Research laboratories were set up in order to enhance the knowledge and skill set of students:

Table B.5.7.8 Details of Research Lab

Sl. No	Research Laboratories	Facilities Available
1	Texas Instruments Technology Lab	<ol style="list-style-type: none"> 1. TI Boards – for IoT application and robotics 2. RF Booster Packs 3. Solar Energy Harvesting Development Tool 4. Wireless MCU Launch-pad.
2	AI Lab	<ol style="list-style-type: none"> 1. GPU Based Deep Learning Server 2. Latest computer algorithms, Compiler Design, Computer Networks, and Artificial Intelligence. 3. Tensorflow pytorch – Library software used for deep learning application.

Table B.5.7.9 Details R & D Labs

Sl. No.	Lab	No. of Components	Cost in Rs.
1.	Texas Instruments Technology Lab	89	4,24,151/-
2.	AI Lab	09	17,98,291/-

Fig. B.5.7.9 Details of Product Purchase for TI Lab

Tax Invoice

Digital Shark Technology Private Limited
No. 11, 7th Block, 2nd Stage,
Hesaraghatta Main Road,
Chikbanavara, Bangalore - 560090
GSTIN: 29AFC1692P12Z
CIN: U72200KA2018PTC007608
Contact: 9616633456
E-Mail: ashwini.m@digitalshark.in
http://digitalshark.in

The Principal
Acharya Institute of Technology
No. 89/90, Soladevanahalli, Hesaraghatta Main Road,
Chikbanavara, Bangalore - 560090
PANIT No.
State Name : Karnataka, Code : 29

Invoice No: **DST/2018-19/054**
Dated: **20-Nov-2018**
Delivery Note
Mode/Terms of Payment
After Completion of Lab Setup & Training
Supplier's Ref.
Other Reference(s)
Training Dept.
Buyer's Order No: **AIT/18/115**
Dated: **30-Aug-2018**
Despatch Document No.
Delivery Note Date
Despatched through
Destination
Terms of Delivery

Sl. No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	MSP 5529 Launch Pad	10 Nos	1,800.00	Nos		18,000.00
2	MSP-EXP430G2ET	10 Nos	1,050.00	Nos		10,500.00
3	Educational Booster Pack MKII	3 Nos	5,000.00	Nos		15,000.00
4	Simple Link Wifi CC3100 Booster Pack	10 Nos	2,900.00	Nos		29,000.00
5	MSP430F5529 USB Experimentor's Board	1 Nos	18,500.00	Nos		18,500.00
6	Sensor Hub BoosterPack for TIWA C	3 Nos	5,850.00	Nos		17,550.00
7	TM4C129E Crypto Connected LaunchPad for IoT	4 Nos	3,500.00	Nos		14,000.00
8	Tiva C Series EK-TM4C123GXL	8 Nos	1,800.00	Nos		14,400.00
9	Simple Link CC2640R2F Wireless MCU Launchpad	4 Nos	3,700.00	Nos		14,800.00
10	CC110L RF Booster Packs	9 Nos	1,900.00	Nos		17,100.00
11	Grove Starter Kit	3 Nos	7,850.00	Nos		23,550.00
12	CC3228SF-LAUNCHXL	4 Nos	5,800.00	Nos		23,200.00
13	Launchxl - CC1310	4 Nos	3,600.00	Nos		14,400.00

continued ...

SUBJECT TO BENGALURU JURISDICTION
This is a Computer Generated Invoice

2018/1740

Tax Invoice(Page 2)

Digital Shark Technology Private Limited
No. 11, 7th Block, 2nd Stage,
Hesaraghatta Main Road,
Chikbanavara, Bangalore - 560090
GSTIN: 29AFC1692P12Z
CIN: U72200KA2018PTC007608
Contact: 9616633456
E-Mail: ashwini.m@digitalshark.in
http://digitalshark.in

The Principal
Acharya Institute of Technology
No. 89/90, Soladevanahalli, Hesaraghatta Main Road,
Chikbanavara, Bangalore - 560090
PANIT No.
State Name : Karnataka, Code : 29

Invoice No: **DST/2018-19/054**
Dated: **20-Nov-2018**
Delivery Note
Mode/Terms of Payment
After Completion of Lab Setup & Training
Supplier's Ref.
Other Reference(s)
Training Dept.
Buyer's Order No: **AIT/18/115**
Dated: **30-Aug-2018**
Despatch Document No.
Delivery Note Date
Despatched through
Destination
Terms of Delivery

Sl. No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount	
14	MSPEXP430FR4133	5 Nos	1,800.00	Nos		9,000.00	
15	MSPEXP430FR6889	4 Nos	2,450.00	Nos		9,800.00	
16	RSK-Robotic System Learning Kit -Basic Kit	14 Nos	14,250.00	Nos		71,250.00	
17	MSP430 Solar Energy Harvesting Development Tool	2 Nos	19,700.00	Nos		39,400.00	
						3,59,450.00	
CGST @ 9%						32,350.50	
SGST @ 9%						32,350.50	
Total						89 Nos	₹ 4,24,151.00

Amount Chargeable (in words) **INR Four Lakh Twenty Four Thousand One Hundred Fifty One Only**

HSN/SAC	Taxable Value	Rate	Amount	State Tax	Central Tax	Total			
	3,59,450.00	9%	32,350.50	9%	32,350.50	64,701.00			
Total						3,59,450.00	32,350.50	32,350.50	64,701.00

Tax Amount (INR) **INR Sixty Four Thousand Seven Hundred One Only**

DECLARATION
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

SUBJECT TO BENGALURU JURISDICTION
This is a Computer Generated Invoice

2018/1741

Company's Bank Details
Bank Name : Yes Bank
A/c No. : 01583380002946
Branch & IFS Code : Malleshwaram & YESB0000156
for Digital Shark Technology Private Limited

Authorized Signatory

PURCHASE ORDER

Invoice To: JNU EDUCATION SOCIETY, 8088 90, SOLADEVANAHALLI, BANGALORE - 560107, E-Mail: purchase@acharya.ac.in, Supplier: CONEL TECHNOLOGIES (I) PVT LTD, #21, 7th Floor, 1st Main, Koramangala, Bangalore-560034

Invoice No: AIT16-17189, Dated: 23-Nov-2016, Mode/Terms of Payment: After Delivery, Supplier's Ref./Order No.: VOST/2016-17/IND406, Other Reference(s):, Dispatch through: Equipments for ECE Dept, Destination: Equipments for ECE Dept

Terms of Delivery: 1)Tax: Inclusive, 2)Delivery: Immediate, 3)Transportation: Inclusive in total amount, 4)Need of Conditions as per the tender documents

Sr	Description of Goods	Quantity	Rate	Per	Disc. %	Amount
1	Xilinx Vivado Design Suite (23 Users Photopack)	1.00 Nos	1,37,150.00	Nos		1,37,150.00
2	SDWC Development Environment	1.00 Nos	42,200.00	Nos		42,200.00
3	HDMI Input/output FMC Module	2.00 Nos	33,750.00	Nos		67,500.00
4	Python 100C-C Camera Module	2.00 Nos	95,410.00	Nos		1,90,820.00
5	Xilinx Zynq 7000 AP SOC ZC702 Evaluation Kit	1.00 Nos	1,31,875.00	Nos		1,31,875.00
6	Xilinx Zynq 7000 AP SOC ZC706 Evaluation Kit	1.00 Nos	3,27,080.00	Nos		3,27,080.00
Total:		8.00 Nos				₹ 8,36,615.00

Amount Chargeable (in words): **NR Eight Lakh Thirty Six Thousand Six Hundred Fifteen Only**

Remarks: The bill may be prepared in favor of the Principal, Acharya Institute of Technology

for JNU EDUCATION SOCIETY, Acharya Institute of Technology

Acharya Dr. Sarvepalli Radhakrishnan Road, Acharya P.O., Bangalore 560 107, Koramangala, India • www.acharya.ac.in • Ph: +91 80 225 555 55 • Fax: +91 80 227 062 42 • Email: info@acharya.ac.in

Commercial Invoice

Boston Limited, Unit 5 Curo Park, Frognome, St Albans, Herts, AL2 2DD, Tel: +44 (0) 1727 876 100, E-mail: sales@boston.co.uk, Web: www.boston.co.uk, VAT Reg No: GB578703994

BOSTON
Servers | Storage | Solutions

Document Date	Document No.	PO No.	VAT	Payment Terms	Currency
08/11/2016	203359	AIT/18/67	0.00%	30 DAYS NETT	USD

Shipping Date	Shipment Terms	Carrier	Service Level	AWB/Tracking No.
08/11/2016	CIP Bangalore	ROHLIG	AIR FREIGHT	

Bill To: Acharya Institute of Technology, Acharya Dr. Sarvepalli Radhakrishnan Road, Acharya P.O., Soladevanahalli, 560 107 Bangalore, INDIA

Consignee: Acharya Institute of Technology, Acharya Dr. Sarvepalli Radhakrishnan Road, Acharya P.O., Soladevanahalli, 560 107 Bangalore, INDIA

Contact Details: Name: Mr. Balaji, Tel: 986 225 555 55 / 9860975858, Email: info@acharya.ac.in, mahadev@bangprid.ac.in

Item Code	Item Description	Qty	Unit Price	Net Price
BOSTON 888	SERVER (All Deep Learning Server) and monitor	1	13,750.00	13,750.00
	800 Code - 84713088, Origin - UK, 8008 - 84713088, License No. NO LICENSE REQUIRED			
Total				13,750.00

Export Licence No.: NO LICENCE REQUIRED

Comments:

Bank Details: Currency: USD Currency Account Only, Account Name: Boston Limited, Bank: HSBC, Branch: 140 High Street, Barnet, EN5 5XW, Sort: 40-12-75, Account No: 36638470, IBAN: GB548400127636638470, Swift Code: HSUKGB33

Shipper's Acknowledgement: Name: A. ELBE, Sign: *[Signature]*

Damaged/misleading goods must be notified in writing upon receipt of goods. Do not remove any tags/labels attached to products. Returned goods will not be accepted without an RMA number. Goods will not be accepted for credit without authentication and may be subject to a re-inspection fee. Goods are not sold on a sale or return basis and remain the property of Boston Limited until paid for in full. All goods sold according to the standard Terms and Conditions.

Fig. B.5.7.10 Details of Product Purchase for AI Lab

Table B.5.7.10 Instructional materials

Sl. No.	Scheme	Subjects	Availability of Manual
1	2010	AEC LAB, Logic Design Lab, Microcontroller Lab, HDL Lab, DSP Lab, Analog communication Lab, LIC Lab, Advance Communication Lab, Microprocessor Lab, VLSI Lab, Power Electronics Lab	Soft Copy as well as Hard Copy is available
2	2015	AEC LAB, Digital Electronics Lab, LIC and Communication Lab Microprocessor Lab, HDL Lab, DSP Lab, Embedded controller Lab, Computer Network Lab, Advance Communication Lab, VLSI Lab.	Soft Copy as well as Hard Copy is available

Best Project Outcome of Research Lab set up in Department

1. Project Title - GPS and GSM Based Real-Time E-Bangle for Women Care

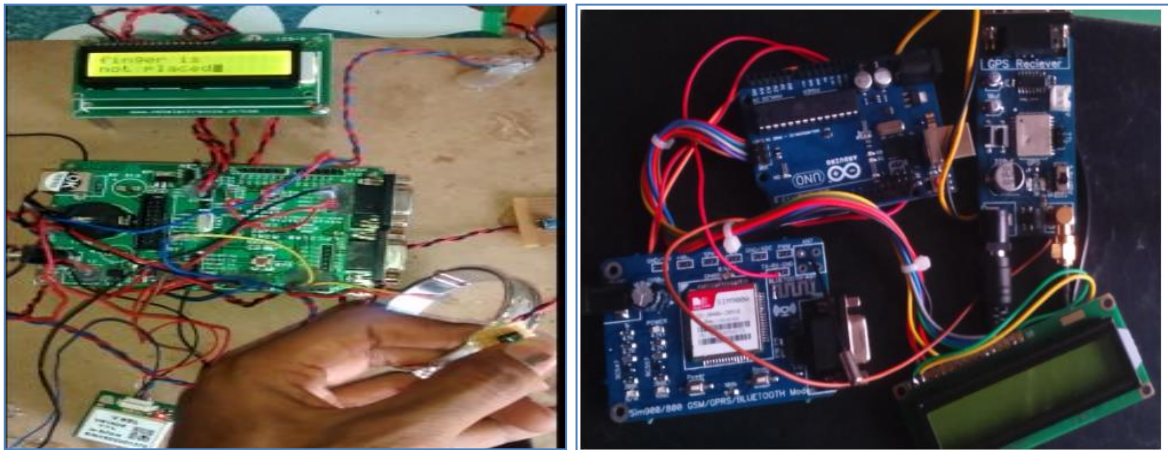
This Project presents a women safety detection system using GPS and GSM modems. The system can be interconnected with the alarm system and alert the neighbors. This detection and messaging system is composed of a GPS receiver, Microcontroller and a GSM Modem. GPS Receiver gets the location information from satellites in the form of latitude and longitude.

The Microcontroller processes this information and this processed information is sent to the user using GSM modem. A GSM modem is interfaced to the MCU. The GSM modem sends an SMS to the predefined mobile number. When a woman is in danger and in need of self-defense then she can press the switch which is allotted to her. By pressing the switch, the entire system will be activated then immediately a sms will be sent to concern person with location using GSM and GPS.

Students Name- SOMASHEKAR B K SHASHIDHAR G

NAVEENA A K KACHCHARABI BASAVARAJ

Guide – Mrs. Sujatha B M, Associate Professor, ECE Department



2. Project Title - A Smart Wireless Attendance Monitoring System

With the ever growing trends in technology its has become essential to develop smart systems in each field which give more output in less involvement of man power. The proposed model not only overcomes the drawbacks of conventional attendance monitoring manually but also proves better than other technologies introduced till date by maintaining the confidentiality and security of the system. Concept of NFC technology is implemented through RFID card. This project uses a Microcontroller to store the database, RFID TAG to store the identification data, RFID Reader to transmit and receive

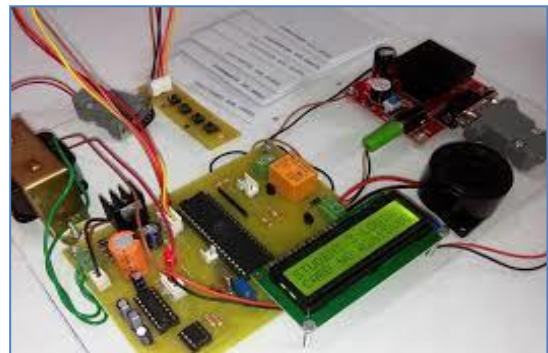
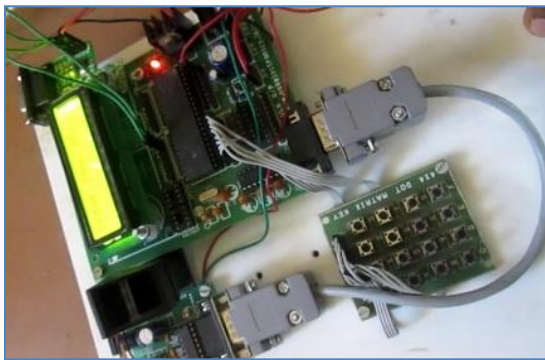
the data through microcontroller, a display device to display the information and a Zig-Bee module to make the whole system wireless and handy to use.

Students Name- LACHHMI PRASAD SAH

MOTI KUMAR

MD ZARIF HUSEN

Guide – Mr. Siddesh M B , Assistant Professor –I, ECE Department



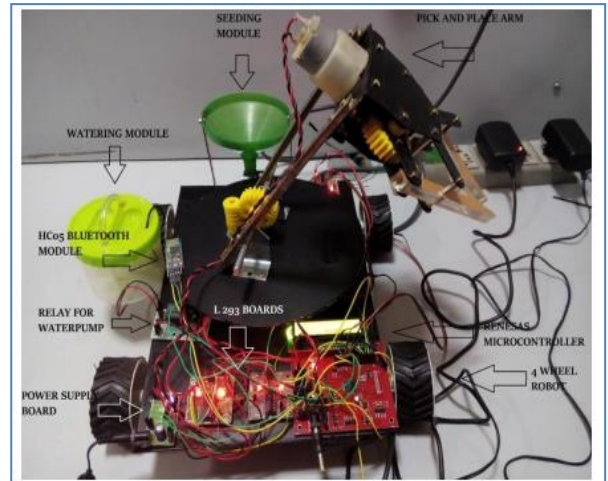
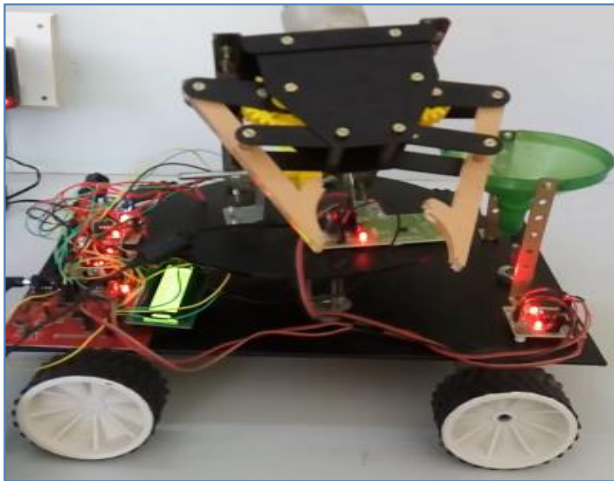
3. Project Title - Farmbot - Lowcost, Modular Farming Automation System

The main objective of the system is to design and implement a scale model of a cheap and open source agriculture automation system that conforms to principles of Autonomous Robot Architectures (AuRa) mainly concentrating on modular structure, centralized control. This system also proves as a base on which much more complex systems might be designed. The system uses Bluetooth for communication in this model for debugging purposes but in real-time implementation this can be replaced by mobile GSM networks that require no special modification on network infrastructure, or even no need for network infrastructure at all. Here, Android mobile phone which acts as the server that bridges user and the appliances the user wishes to control. This suitable for personal farming but in case of large scale this can be easily replaced by a program for windows giving much more data processing capabilities to the organization for further research and development. The Android application is to be written in Java and the Android

Development Kit SDK can be used to rapid prototype a basic GUI that provides a convenient user interface to control the system.

Students Name- AMARESH GANGANAGOUDAR ANUDEEP C SHETTY
KRISHNA CHETAN M

Guide – Mrs. Jayalaxmi H, Associate Professor, ECE Department

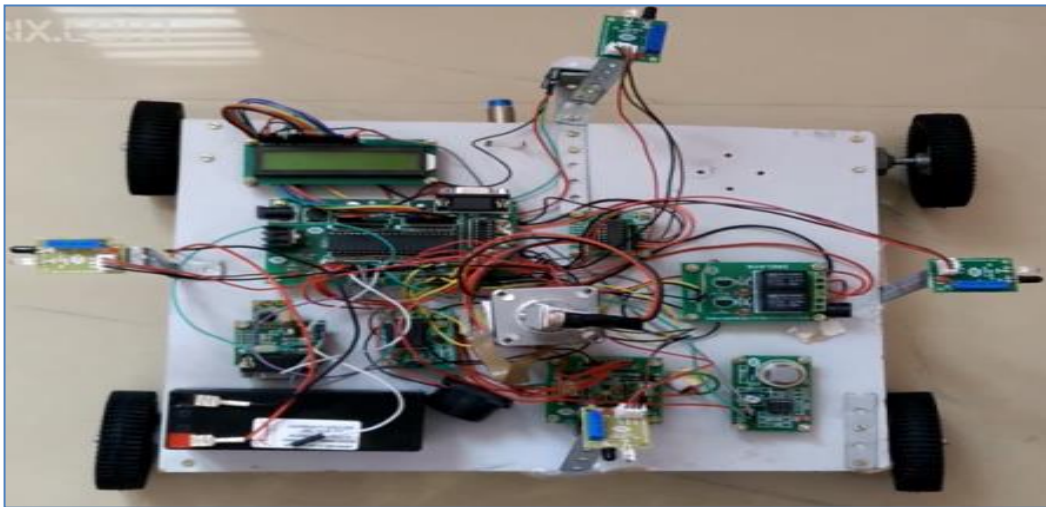


4. Project Title - Land Combat Fighting Robot

The principles used in this design are such that enable our robot to be extended to a more robust system to be used to combat actual fires in residential or commercial settings. The main requirement of this project is to create a robot that is fully autonomous. This means that once the robot is started by the user, it navigates, searches for, and extinguishes the fire on its own, with no assistance or input from the user. In order to reach this goal, we made many critical decisions on motors, sensors, fire extinguishing mechanical parts and general design for our robot. Lastly, we wanted our robot to not only accomplish these requirements, but also be able to do so quickly and accurately.

Students Name- MONA HEIDAERY AMIN ASMITA ROY
NIKUNJ D PATEL SONAL DARSHAN

Guide – Dr. Sevugarajan S , Professor, ECE Department



5. Project Title - Herbbot using Computer Vision

The purpose of this project was to develop the hardware for the current HERBBOT to perform its primary functions, and to create a template for a system that would be adaptable for future users and developers. The scope of the project included creating a universal tool mount, a seeding system, and a watering and nutrient mixing system. Functional parts were incorporated onto the HERBBOT; all the created parts were designed for 3D printability. While this project was a small part of the whole HERBBOT, it helped pave the way for future development of each subsystem.

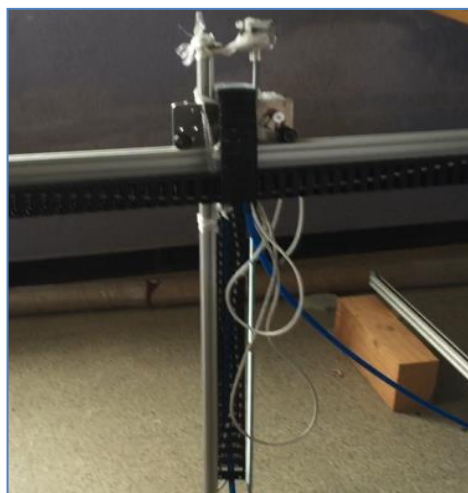
Students Name- TANYA SNEHA

JANARDHAN L R

PRITEY DEY

TEJDEEP K L

Guide –Mr. Sandeep Kumar K Assistant Professor-III, ECE Department



6. Project Title - Automatic Fruit Grading System

Ripening is the methodology of maturing fruit to become more palatable. The ripening procedure of mango contains different stages in which a mango develops. There is a specific example in which the way toward maturing of mango is satisfied. In this paper, we are developing a technique for identifying the different ripening stages of Climacteric fruit like mango by utilizing an Arduino framework which will predict the quality of mango and show the total ripening procedure as per the color changing stages with the help of MATLAB. The HSV color space is used to read the color changes of mango and the information about the ripening is send to the user via GSM module using Arduino.

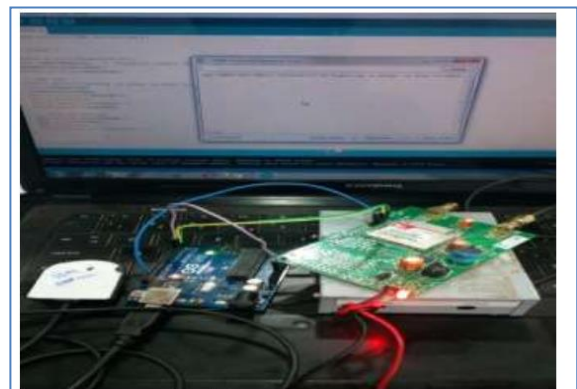
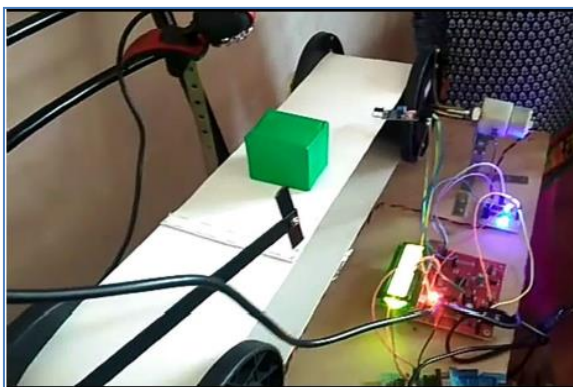
Students Name- AKSHATHA KANTHAJ

ASHIKA S

Y PAVITHRA

RASHMI B N

Guide – Mrs. Sujatha B M, Associate Professor, ECE Department



7. Project Title - Automated Sprayer using Gantry Robot

The Automated Sprayer Using Gantry Robot is an automated precision farming machine designed to revolutionize the farming sector in the present era of automation. The outcome of the project is a simple robot capable of moving in the Cartesian direction to sense the soil moisture content and spray water if required. Similar to 3D printers and CNC milling machine, the robot hardware employs linear guides in the X, Y and Z directions. The hardware is designed to be simple and scalable. The movement of the

robot is done by NEMA 17 stepper motors which are controlled using Arduino Mega 2560. A soil moisture sensor is attached to the tool mount in the Z direction shaft to know the moisture level of the soil. If the moisture level is found to be less than the threshold level which the respective plant needs then the water pump attached sprinkles water and henceforth maintains the proper moisture content in the soil.

The prototype designed and the practical implementation may have some changes. There is a vast future scope of the project like integration of seed sowing system, pesticide detection system, fertilizer spraying system, powering the system through solar power, integration of rain water harvesting system for water supply etc. In large scale, this robot is very well capable of helping farmers in their intensive field work and in small scale, it can help normal people who wish to do farming at their home

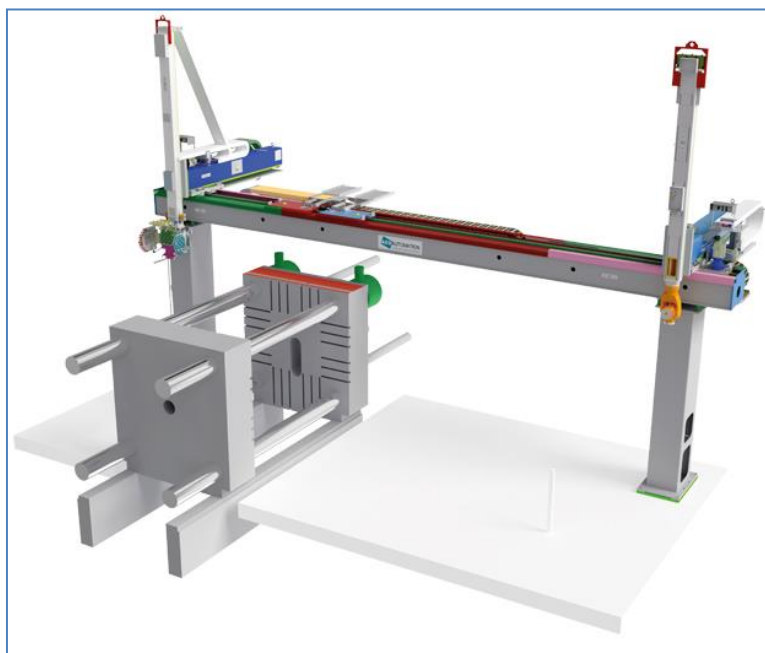
Students Name- ANUSHA A

PAVANKUMAR H N

NAUSHIR MIRAZ

NIKHITHA M H

Guide – Mr. Sandeep Kumar K Assistant Professor-III, ECE Department



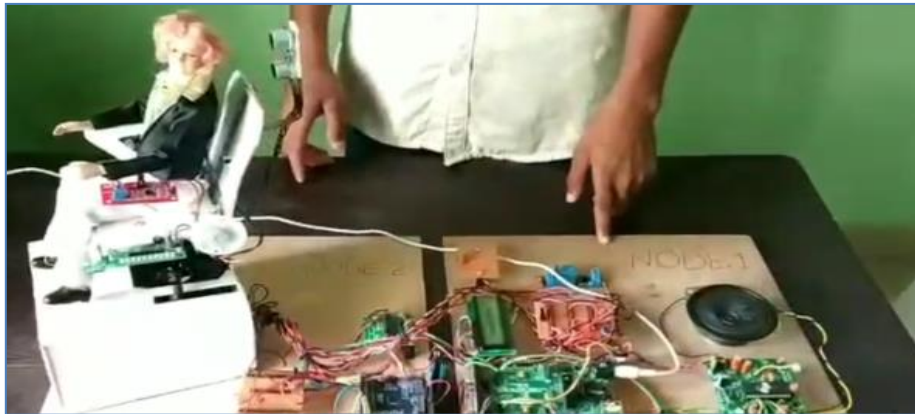
8. Project Title - Smart chair for body posture analysis

Doing computer work with an incorrect posture can lead to musculoskeletal disorders. Training workers with ergonomics advice decreases these risks. In this paper a posture recognition system, CAPRIO, is proposed, using pressure sensors and context information to generate tailored ergonomics advice. Using pressure sensors alone leads to too many false positives in detecting wrong postures. Using computer usage as an additional input improves the accuracy of the posture detection. The system is compared by simulation to other possible methods on accuracy, implementation complexity, usability and privacy sensitivity. CAPRIO scores well on those criteria. It has lower accuracy than some video based methods, but is less privacy infringing.

Students Name- SUSHMITHA C P RAMESH

SIDDALINGAPPA RAMAKANTH

Guide – Mr. Ramzan Basheer Assistant Professor-III, ECE Department



5.7.4. Consultancy (from Industry) (5)

(Provide a list with Project Title, Funding Agency, Amount and Duration)

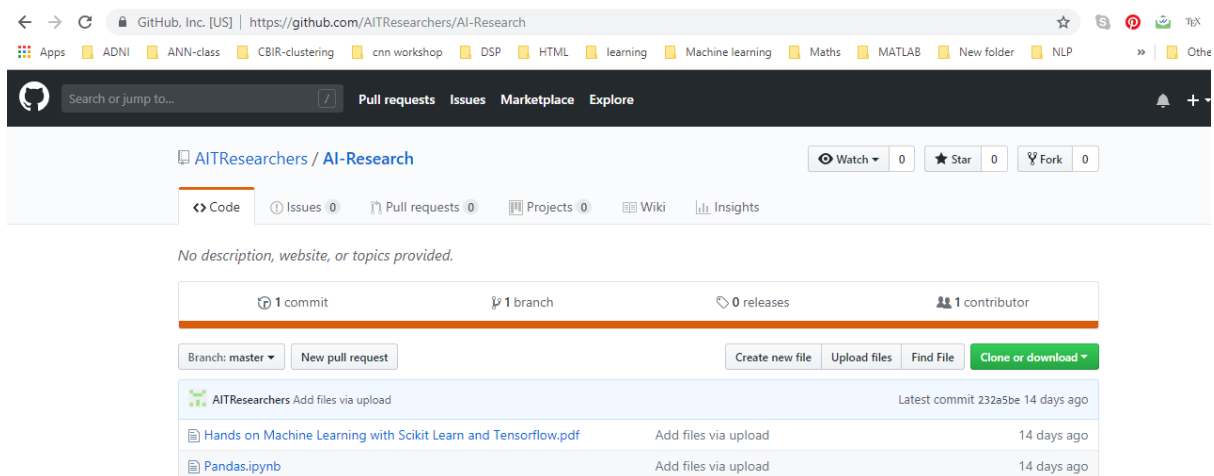
Funding amount (Cumulative during CAY _{m1} ,			CAY _{m2} and CAY _{m3}):
Amount > 10 Lakh		– 5	Marks
Amount >= 8 Lakh and <= 10 Lakh		– 4	Marks
Amount >= 6 Lakh and <	8 Lakh	– 3	Marks
Amount >= 4 Lakh and <	6 Lakh	– 2	Marks

Amount \geq 2 Lakh and $<$ 4 Lakh	4 Lakh	– 1 Mark
Amount $<$ 2 Lakh		– 0 Mark

NIL - No such activities during the assessment years

The Department of ECE has set up Artificial Intelligence and Machine Learning Lab with GPU based servers. The Github page is created and managed by the students to share the python learning material, the details and codes of the project.

The below shows snippet of the page



5.8. Faculty Performance Appraisal and Development System (FPADS) (30)

Faculty members of Higher Educational Institutions today have to perform a variety of tasks pertaining to diverse roles. In addition to instruction, Faculty members need to innovate and conduct research for their self-renewal, keep abreast with changes in technology, and develop expertise for effective implementation of curricula. They are also expected to provide services to the industry and community for understanding and contributing to the solution of real life problems in industry. Another role relates to the shouldering of administrative responsibilities and co-operation with other Faculty, Heads-of-Departments and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance.

The assessment is based on:

- A well-defined system for faculty appraisal for all the assessment years (10)
- Its implementation and effectiveness (20)

Faculty and staff appraisal systems in AIT have been operational in various forms over the past few years. With the introduction of ERP systems and to facilitate on-line entries by students and to inculcate efficacy in appraisals by peers and management levels, the formats are made more user friendly. The written and subjective parts have been modified to facilitate quantifying quality.

The Performance Based Appraisal System is modelled on recommendations made by MHRD, Pay Commission Report and the Guidelines issued by UGC. These have been enunciated clearly with appraisals based on performance.

Annual Staff and faculty performance appraisal systems have been introduced. The system consists of: 1) Self appraisal 2) TLP 3) head of department / Section 4) Appraisal by the principal 5) Appraisal by students. Weight ages given to the faculty appraisals are:

Self-appraisal	:	40%
IQAC assessment of TLP	:	20%
Evaluation by HOD	:	10%
Evaluation by Principal	:	10%
Appraisal by students	:	20%

Source Data for Appraisal

while student's appraisals are on-line, are supervised by a group of mentor to avoid bias or fear, the peer team-HoD, principal-management and even the annual confidential report shall use the data for the year of appraisal available with each Institution or department in the faculty. IQAC documents are submitted by the faculty are 1) Personal Folder, 2) Mentor Folder 3) Performance Folder and 4) Course file. These documents are with the respective heads of departments under quality implementation system

System of Awards and Accountability

The appraisal system is the basis for the increments promotions and appreciation of service. The accountability is appraised yearly based upon participation in academic curricular and extracurricular activities. The performance below the targets is counseled by the head of the department and / or the principal.

The student feedback is communicated to faculty by the head of the department. In the PBAS format, after the self-appraisal, the head of the department, the principal, audit of the IQAC for TLP practices and student feedback are assessed cumulatively on a scale of 100. Provision is also made for any grievance in the PBAS process and ratification is done by an independent committee of senior faculty. This score is communicated to the faculty and filled in the personal files. Any faculty getting less than 65/100 is counseled and advised with hand folding for subsequent improvement.

Welfare schemes for teaching and non-teaching employees

- Provision of canteen in the Campus
- Health center in the campus and periodical medical check-up facilities for staff
- In the event of death of an employee while in service, an ex-gratia amount, is granted to the dependents of the deceased employees, towards Funeral Expenses.
- Educational loan for higher studies for deserving faculty and staff.
- Grant of Rs 5000/- for marriage for the administrative staff, maintenance, housekeeping staff and drivers of Acharya transport vehicle / freight.
- Interest free advances during emergency
- Free admission for first child of employees and 50% concession on fees for the second child
- In the event of death of an employee, while in service his/her dependent will be considered for Employment on compassionate grounds, depending upon the merit of

the case, limited to cadre Junior Assistant, subject to eligibility of the individual concerned and availability of vacant posts.

- All the employees are covered under employees provident fund scheme as per the act. The employees and management contribute 12% of the pay of such employees towards the fund.
 - Group Insurance: with collaboration of AIT and Tata AIG general insurance company Ltd., with coordination from Axis bank,
 - students, first parent of students and staff members come under the purview of group Insurance provided by Tata AIG general insurance company ltd.
 - Employs State Insurance facility is extended to all non-teaching and technical staff.
 - Financial Benefits(Sponsor) up to Rs. 10,000/- is provided for every faculty every year towards the publication of research papers, articles, attending conference, workshops and faculty development program.
- 1) Leave facilities: Leave facilities like vacation leave, special leave, earned leave, maternity leave, and medical leave in addition to casual leave and restricted holidays are availed by the employees.
- a. **Vacation leave** for those faculty who have completed one year of service and are vacation staff can avail 30 days of vacation per year generally split into 15 days each after every semester.
 - b. **Marriage leave** can be available for a duration of 10days..
 - c. **Earned leave** for non vacation staff is permissible for 18days per year.
 - d. **Medical leave** for 10 days can be availed by the staff that has completed their probationary period, which is based on submission of discharge summary, hospital medical certificate presentations.
 - e. **Permission:** Faculty are allowed to avail one hour permission only once in a month

- f. **Maternity leave** for 3 months can be availed by the lady staff with full pay only once during the entire service period and who have completed at least 2 years of service in the institution
- g. **Paternity leave** of 5 days is provided with full pay only once during the entire service period
- h. **Special leave** for pursuing PhD Programmes.
- i. **Special leave** for higher education other than PhD: the faculty/staff who have completed the probationary period and have taken up higher studies, are permitted special leave for appearing for their examination to the extent of dates of examination
- j. **Sabbatical leave** for period up to 15 days in a year is permitted for the sponsored research and projects.

To enhance the professional development of teaching and nonteaching staff, the institution has initiated the following efforts:

- 1) Faculty members are encouraged and allowed to improve their qualifications and knowledge up graduations by permitting them to join for courses, PhDs. Official leave is also granted.
- 2) Encourage the faculty to participate in workshops and present papers in conferences and seminars.
- 3) Faculty development programs and skills enhancement programs are organized regularly on campus. Also faculty is deputed to participate in refresher courses, FDPs summer/winter training programs etc.
- 4) Faculty internships in industries has helped to a great extent to gain practical experience to face the challenges and changing needs of learning and industries.
- 5) The faculty are also encouraged to deliver to various groups and engage themselves in extension programs

- 6) In house skill development programs are organized at regular intervals to upgrade the skills of non-teaching staff.
- 7) For administrative skill development of staff, the Institute organizes corporate training programs
- 8) For personality development, teaching skill development and social and technical up gradation, the Institute organizes training program.
- 9) The institute deputed the faculty for training programmes organized by other organizations.
- 10) The institute invites resource persons such as industrialists, researchers and academicians of reports for interactions with the staff.
- 11) Conducting orientation program about the policies and procedures prevailing in the institution
- 12) The institute encourages the senior faculty to motivate the junior faculty in following ways:
 - a) Giving essential inputs, providing personal training on lecture/ laboratory work delivery/seminar-project guiding, counseling on career advancement.
 - b) Involving them in discussions syllabus.
 - c) Creating an open atmosphere for personal growth and to clarify the doubts, concepts and difficulties.

5.9. Visiting/Adjunct/Emeritus Faculty etc.**(10)**

Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty etc. for all the assessment years: Provision of inviting/having visiting/adjunct/emergitus faculty (1)

Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc.

(Minimum 50 hours interaction in a year will result in 3 marks for that year; 3 marks x 3 years = 9 marks)

Table B.5.9.1 Faculty Details

Sl. No.	Faculty / Industry Expertise	Nature of Work
1.	Mr. Venkatesh Manager Technocarve Solution VLSI Design Training Consultant 3 rd A main 2 nd Cross MEI layout Bengaluru Mob- 9741961600	Training & Project Work

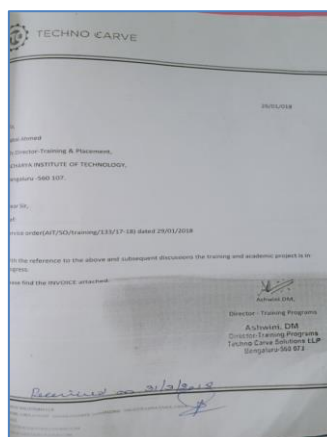
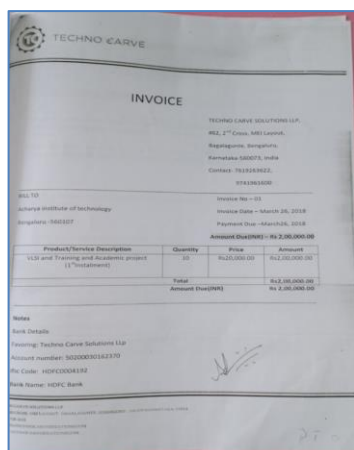
Table B.5.9.2 Schedule of Class

Levels	Contents	Duration
1	Basic Electronics	2 weeks
2	Schematic Entry	4 Weeks
3	Layout Design	4 Weeks
4	Post layout simulation	4 Weeks

Training & Project Work Focus :

- Coordinating between VLSI Design Companies and educational institute.
- Training for technical screening/interview and soft skills.
- Project plan include 30% theory and 70% practical session.
- Lab training provided on the industry standard tools.

Amount Release for the training and project work



CRITERION 6	FACILITIES AND TECHNICAL SUPPORT	80
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6.1. Adequate and well equipped laboratories and technical manpower (30)

In the Department totally 6 well equipped labs are setup in order to facilitate smooth conduction of the lab and to carryout Projects/mini projects and research Activities. These laboratories are effectively used by the Department. Following are the list of laboratories conducted as per the University.

Table B.6.1.a Laboratory Details

SI No.	Semester	Name of the Laboratory
1	III	Analog Electronics Lab
		Digital Electronics Lab
2	IV	Linear Integrated Circuits Lab
		Microprocessor Lab
		Microcontroller Lab
3	V	Hardware Descriptive Language Lab
		Digital Signal Processing Lab
4	VI	Embedded Controller Lab
		Computer Communication Networks Lab
5	VII	VLSI Lab

		Advance Communication Lab
		Power Electronics Lab
6	VIII	Project Work

Table B.6.1.b Details of Laboratory facilities and Technical Manpower

Sl. No.	Name of the Laboratory	No. of students per setup (Batch size)	Name of the Important equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical manpower support		
					Name of the Technical staff	Designation	qualification
1.	Analog Electronics	2 (20-22)	<ul style="list-style-type: none"> •Function Generator •Digital Oscilloscope •DC Regulated Power supply •Linear IC trainer kit •Digital Multi meter. 	16.5 Hrs	Ravi Kumar K H	Instructor	Diploma in TCE
2	Logic Design Lab	2 (20-22)	<ul style="list-style-type: none"> •Digital IC Trainers •Digital IC Tester •Oscilloscope •Computers 	16.5 Hrs	Suresh Kumar T G	Instructor	Diploma in TCE
3	Micro-processor Lab	2 (20-22)	<ul style="list-style-type: none"> •Computers •PCI-07 Interface chords •Stepper Motor module •DAC Module 	16.5 Hrs	Vinod K R	Instructor	Diploma in ECE

4	LIC + Communica- tion Lab	2 (20-22)	<ul style="list-style-type: none"> •30MHz Cathode Ray Oscilloscope, •3Mhz Function Generator, •2Mhz Function Generator, •10MHz Function Generator. •Linear IC Trainer Kits. 	16.5 Hrs	Raju G S	Foremen	Diploma in ECE
5	DSP Lab	2 (20-22)	<ul style="list-style-type: none"> •Computers •MATLAB Software Release 2015b Campus License •DSP Starter kits (TMS320C6713) 	31 Hrs	Vinod K R	Instructor	Diploma in ECE
6	HDL Lab	2 (20-22)	<ul style="list-style-type: none"> •Computers •Xilinx ISE foundation version •12.1 design software (both front and back end) •Universal multivendor development kit common plat form for FPGA & CPLD - mother board with prom •1 Xilinx Spartran-6 FPGA •1 Xilinx CPLD and all interfacing cards, •CM640 chip max pattern generator cum logic analyzer •Xilinx Vertex FPGA development kit with 300k gate density vertex on board. 	16 Hrs	Guru Prasad A G	Instructor	Diploma in ECE., AMIE, (M.Tech)

7	VLSI Lab	2 (20-22)	<ul style="list-style-type: none"> •Sun ray SFV240 server, Dual Processor, 2x1.5 GHz, 2GB RAM, 2x73 GB HDD, DVD Rom, 4GB DDR1 memory •Sun ray Thin clients •Cadence VLSI design software package with Perpetual license of 20 users for 99years 	18 Hrs.	Guru Prasad A G	Instructor	Diploma in ECE., AMIE, (M.Tech)
8	Advanced Communication Lab	2 (20-22)	<ul style="list-style-type: none"> •Digital Storage Oscilloscope 100MHz , •Digital Storage Oscilloscope 200MHz • Fibre Optic trainer •Klystron Source Microwave setup •GUNN Source Microwave Setup •Micro strip setup C Band •Micro strip setup X Band •6.5 Digit Digital Multimeter •Function Generator 	18 Hrs.	Raju G S	Foremen	Diploma in ECE
9	Embedded Controller Lab	2 (20-22)	<ul style="list-style-type: none"> • Arm cortex M3 Development Board. 	16.5 Hrs	Guru Prasad A G	Instructor	Diploma in ECE., AMIE, (M.Tech)
10	Computer Networks Lab	2 (20-22)	<ul style="list-style-type: none"> •Computers 	16.5 Hrs	Vinod K R	Instructor	Diploma in ECE
11	Power Electronics Lab	2 (20-22)	<ul style="list-style-type: none"> •Chopper Module, •Inverter Module, •SCR Converter Module, •IGBT Inverter Module, Power 	17.5 Hrs	Ravi Kumar K H	Instructor	Diploma in TCE

			Supply, •LCR Meter.				
12	Micro-controller Lab	2 (20-22)	•Microcontroller Development Kits, •MFP430F2013 microcontroller starter kits, •Microcontroller development board based on PIC16F877 with In circuit debugger,	9 Hrs	Vinod K R	Instructor	Diploma in ECE

6.2. Additional facilities created for improving the quality of learning experience in laboratories

(25)

Table B.6.2 Additional Facilities

Sl. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	XILINX ZYNQ evaluation Boards	<ul style="list-style-type: none"> • ZYNQ ZC702 Evaluation Board. • ZYNQ ZC706 Evaluation Board. • Vivado Design Suite. • Vivado SDSOC 	To Provide required resources to carryout Research work and Academic Projects	Research scholars, UG and PG students.	Embedded system VLSI Design	PO4,5,12 PSO2
2	AI/Deep Learning server	<ul style="list-style-type: none"> • 2X NVIDIA 16GB GPU. 2X Intel Xeon Processor. 128GB RAM 	Facility for Research work and academic projects.	Research scholars, UG and PG students.	Machine Learning, Neural Networks.	PO4,5,12 PSO2
3	RIGOL Spectrum	<ul style="list-style-type: none"> • DSA 1020 	Facility for Research work	Research scholars,	Communication	PO4,12

	analyzer	Frequency range 9 KHz to 2GHz. DANL (10 MHz and up): -120dBm. Phase Noise : <-80 dBc/Hz @10kHz offset.	in RF applications and Academic Projects	UG and PG students.	systems.	PSO3
4	Modulation Function-Pulse Generator	<ul style="list-style-type: none"> Quantity: 06 10 MHz with Frequency counter, 40 MHz External Frequency Counter, AM Standard, AM Balance, FM, ASK, FSK & PWM modulations. 	Facility for project work in communication systems.	UG and PG students.	Communication systems.	PO2, 12 PSO3
5	Arbitrary waveform generator	<ul style="list-style-type: none"> Rigol DG3101 function / arbitrary waveform generator 100 MHz / 300 MSa/s. 	Facility for Research work in RF applications	Research scholars, UG and PG students.	Communication systems.	PO2 PSO3
6	Development Boards	<ul style="list-style-type: none"> DM 642 high performance video & imaging development platform XDS510 USB JTAG EMULATOR Work station DSP DM 6437 evaluation modules with Workstation 	Facility for Research work in Signal processing	Research scholars, UG and PG students.	Signal Processing	PO4,5,12 PSO2

6.3. Laboratories: Maintenance and overall ambiance (10)

(Self-Explanatory)

Department has 6 well equipped and spacious laboratories. Effective utilization of labs is done by the department. To carryout laboratory classes smoothly the following facilities provided.

Maintenance :

- Servicing of Lab equipment/components/probes are carried out regularly and beginning of the semester.
- Computer / Internet maintenance and software installations are carried out by the centralized system department through ERP facilities.

Ambience:

- Separate work tables are provided in each laboratory.
- Backup UPS Power supply for Computer labs.
- Backup Generator supply for Circuits labs.
- Projector and white board provided in Computer Labs.
- Store facility to keep laboratory equipment.
- Students are assisted for academic projects, mini projects and internships in laboratories

Table B.6.3 Laboratory Facilities

	
Analog Electronics Lab	Digital Electronics Lab
	
DSP Lab	VLSI Lab
	
Communication Lab	Microwave Lab



6.4. Project laboratory**(5)**

(Mention facilities & Utilization)

Table B.6.4.a Facilities & Utilization

Sl No.	Project Lab	Remarks
1	VLSI Lab	Students were provided with industry oriented training with Cadence tools and assisted for their placements
2	R & D Lab	Research Scholars and Students working in the domain of AI, Signal Processing and VLSI, Embedded System.
3	Texas Instruments Innovation Lab	Embedded system designs for IOT applications for faculty members, researchers and PG students dealing with TIVA C series Evaluation Boards.

Table B.6.4.b Laboratory Facilities



	
Research Lab	TI Innovation Lab

6.5. Safety measures in laboratories**(10)**

All the laboratories are Provide with First Aid Kit and Fire Extinguishers. Charts are available in the laboratories.

Table B.6.5 Safety measures in Lab

Sl. No	Name of the Laboratory	Safety Measures
--------	------------------------	-----------------

1	Analog Electronics Lab	All labs are Equipped with 1. Fire extinguisher 2. First aid box 3. Water supply 4. Display boards showing <ul style="list-style-type: none"> • Do's • Don'ts • Safety measures
2	Digital Electronics Lab	
3	VLSI Lab	
4	Communication Lab	
5	DSP Lab	
6	Microwave Lab	
7	Research Lab	
		
First Aid box		Fire Extinguisher

CRITERION 7	Continuous Improvement	50
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7. CONTINUOUS IMPROVEMENT (50)

7.1. Actions taken based on the results of evaluation of each of the POs & PSOs (20)

Table B.7.1.1 POs & PSOs Attainment Levels and Actions for improvement –2014-2018

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
Pos	Target Level	Attainment	Observations
1	80 %	81.56 %	Target Met
Action : NIL			

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
Pos	Target Level	Attainment	Observations
2	80 %	81.43 %	Target Met
Action: NIL			

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
Pos	Target Level	Attainment	Observations
3	80 %	84.11 %	Target Met
Action: NIL			

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Pos	Target Level	Attainment	Observations
4	80 %	83.38%	Target Met
Action: NIL			

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

Pos	Target Level	Attainment	Observations
5	80 %	85.16%	Target Met
Action: NIL			

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Pos	Target Level	Attainment	Observations
6	80 %	79.23%	Target Not Met
Action: <ul style="list-style-type: none"> ➤ Wide range of electives are offered to support engineering practice to society at large ➤ Student projects to address societal issues are encouraged and carried out with funding ➤ Programs on e-waste management, smart cities, Hackathons have equipped students to take up projects, case studies on societal issues. 			

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Pos	Target Level	Attainment	Observations
7	80 %	79 %	Target Not Met

Action:

- Student projects to address societal and environmental issues are encouraged and carried out with funding
- Programme on e-waste management, smart cities, pollution control under dept. forum are conducted.
- Seed bomb-plantation related programme, water treatment programme. green auditing are conducted under NSS activities.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Pos	Target Level	Attainment	Observations
8	80 %	83.43%	Target Met

Action: NIL

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Pos	Target Level	Attainment	Observations
9	80 %	84.63 %	Target Met

Action: NIL

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Pos	Target Level	Attainment	Observations
10	80 %	84.43 %	Target Met

Action: NIL

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Pos	Target Level	Attainment	Observations
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11	80 %	80.43 %	Target Met
Action: NIL			

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Pos	Target Level	Attainment	Observations
12	80 %	81.65 %	Target Met
Action: NIL			

PSO1: Analog / Digital Circuit Design: Apply the conceptual knowledge in the analysis and/or design, evaluate analog/digital circuits and systems

PSOs	Target Level	Attainment	Observations
1	80 %	82.03 %	Target Met
Action: NIL			

PSO2: VLSI , Signal Processing and Embedded Systems : Demonstrate technical competency in the analysis, design , and validation of components in VLSI, Signal Processing, and Embedded Systems

Pos	Target Level	Attainment Level	Observations
2	80 %	80.55 %	Target Met
Action: NIL			

PSO3: Communication and Networking: Apply the domain knowledge in the implementation and performance analysis of Communication Systems and Computer Networks.

Pos	Target Level	Attainment Level	Observations
3	80 %	81.39 %	Target Met
Action: NIL			

Table B.7.1.2 POs & PSOs Attainment Levels and Actions for improvement –2013-2017

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
Pos	Target Level	Attainment	Observations
1	75 %	83.84 %	Target Met
Action : NIL			

PO2:Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
POs	Target Level	Attainment	Observations
2	75 %	81.99 %	Target Met
Action : NIL			

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
POs	Target Level	Attainment	Observations
3	75 %	83.11 %	Target Met
Action : NIL			

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
POs	Target Level	Attainment Level	Observations
4	75 %	79.56%	Target Met
Action : NIL			

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

POs	Target Level	Attainment	Observations
5	75 %	81.29 %	Target Met
Action : NIL			

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

POs	Target Level	Attainment	Observations
6	75 %	77.68%	Target Met
Action : NIL			

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

POs	Target Level	Attainment	Observations
7	75 %	82.06 %	Target Met
Action : NIL			

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

POs	Target Level	Attainment	Observations
8	75 %	78.66%	Target Met
Action : NIL			

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

POs	Target Level	Attainment	Observations
9	75 %	85.31%	Target Met
Action : NIL			

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

POs	Target Level	Attainment	Observations
10	75 %	84.43 %	Target Met
Action : NIL			

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

POs	Target Level	Attainment	Observations
11	75 %	79.2 %	Target Met
Action : NIL			

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

POs	Target Level	Attainment	Observations
12	75 %	84.19%	Target Met
Action : NIL			

PSO1: Analog / Digital Circuit Design: Apply the conceptual knowledge in the analysis and/or design, evaluate analog/digital circuits and systems

PSOs	Target Level	Attainment	Observations
1	75 %	83.55 %	Target Met
Action : NIL			

PSO2: VLSI , Signal Processing and Embedded Systems : Demonstrate technical competency in the analysis, design , and validation of components in VLSI, Signal Processing, and Embedded Systems			
PSOs	Target Level	Attainment	Observations
2	75 %	80.59%	Target Met
Action : NIL			

PSO3: Communication and Networking: Apply the domain knowledge in the implementation and performance analysis of Communication Systems and Computer Networks.			
POs	Target Level	Attainment	Observations
3	75 %	82.45 %	Target Met
Action : NIL			

Table B.7.1.3 POs & PSOs Attainment Levels and Actions for improvement –2012-2016

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
POs	Target Level	Attainment	Observations
1	70 %	84.6 %	Target Met
Action : NIL			

PO2:Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
POs	Target Level	Attainment	Observations
2	70 %	82.4 %	Target Met
Action : NIL			

PO3: Design/development of solutions: Design solutions for complex engineering problems			
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and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

POs	Target Level	Attainment	Observations
3	70 %	81.93 %	Target Met
Action : NIL			

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

POs	Target Level	Attainment	Observations
4	70 %	81.5 %	Target Met
Action : NIL			

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

POs	Target Level	Attainment	Observations
5	70 %	84.53 %	Target Met
Action : NIL			

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

POs	Target Level	Attainment	Observations
6	70 %	78.21 %	Target Met
Action : NIL			

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

POs	Target Level	Attainment	Observations
7	70 %	80.18%	Target Met
Action : NIL			

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

POs	Target Level	Attainment	Observations
8	70 %	83.58 %	Target Met
Action : NIL			

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

POs	Target Level	Attainment	Observations
9	70 %	85.39 %	Target Met
Action : NIL			

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

POs	Target Level	Attainment	Observations
10	70 %	86.57%	Target Met
Action : NIL			

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

POs	Target Level	Attainment	Observations
11	70 %	85.13 %	Target Met
Action : NIL			

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
POs	Target Level	Attainment	Observations
12	70 %	84.8 %	Target Met
Action : NIL			

PSO1: Analog / Digital Circuit Design: Apply the conceptual knowledge in the analysis and/or design, evaluate analog/digital circuits and systems			
PSOs	Target Level	Attainment	Observations
1	70 %	82.54%	Target Met
Action : NIL			

PSO2: VLSI , Signal Processing and Embedded Systems : Demonstrate technical competency in the analysis, design , and validation of components in VLSI, Signal Processing, and Embedded Systems			
PSOs	Target Level	Attainment	Observations
2	70 %	82.26%	Target Met
Action : NIL			

PSO3: Communication and Networking: Apply the domain knowledge in the implementation and performance analysis of Communication Systems and Computer Networks.			
PSOs	Target Level	Attainment	Observations
3	70 %	82.09 %	Target Met
Action : NIL			

7.2. Academic Audit and actions taken thereof during the period of Assessment (10)

The institute established Internal Quality Assurance Cell (IQAC) in the year 2014 -15, whose major responsibility is to conduct periodical audits and take corrective/preventive measures for assuring/ improving the academic performance.

Audit Process and its implementation:

1. One of the senior Professors of the institute is chosen as the director of IQAC. He with the consensus of the Principal constitutes a committee for assessing the academic performance of the different departments. The members in the audit committee are drawn from the IQAC, Heads of the various Departments and senior faculty in the institution.
2. On an average, two academic audits are planned for every semester.
3. Every committee member is assigned with auditing of one or two departments.
4. The auditor will visit the department as per the schedule given by IQAC to inspect the correctness and completeness of academic documents:
 - Planning of course delivery
 - Quality of course outcomes
 - Quality of learning materials
 - Quality of internal assessment and assignment questions
 - Quality of scheme of valuation
 - Adherence to academic calendar
 - Teaching methods incorporated
 - Fairness in evaluation of internal assessment and assignments
 - Support to the students
5. Auditor will then prepare a report of his findings and submits the same to the Director, IQAC and also shares it with Head of the Department.
6. Director, IQAC shall consolidate the reports submitted by all the members and prepares corrective/preventive actions as necessary.

7. The report of the Director, IQAC is submitted to the Principal to deliberate implementation of the suggested actions in the academic council.

The Head of the department discusses audit findings with the faculty and prepares plan of action in the DAC meeting for addressing any concern(s) raised by the auditor.

7.3. Improvement in Placement, Higher Studies and Entrepreneurship (10)

Assessment is based on improvement in: Placement: number, quality placement, core industry, pay packages etc. Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier Institutions Entrepreneurs

Placement Details for Last 3 Years are given below:

Table 7.3.1 Student Placements Details for past 3 years

Years	No. of Companies Visited	No. of Student Placed
2017-2018	20	62
2016-2017	20	78
2015-2016	18	72

Table 7.3.2 Max. Package and Average Package of companies visited for past 3 years

Year	Max. Package	Average Package
2018-2019	7.0 lakhs	5.0 lakhs
2017-2018	6.5 lakhs	4.5 lakhs
2016-2017	5.0 lakhs	3.5 lakhs
2015-2016	4.5 lakhs	2.8 lakhs

Details of Higher Studies are given below:

Table 7.3.3 Higher studies data for past 3 years

Year	Number of students selected for higher studies
2017-2018	10
2016-2017	04
2015-2016	10

Details of students turned Entrepreneurs are given below:

Table 7.3.4 Entrepreneurs data for past 3 years

Year	Number of students turned Entrepreneurs
2017-2018	03
2016-2017	01
2015-2016	04

Internship

Table 7.3.5 Internship data for past 3 years

Year	Total number of students selected for Internship
2018-2019	85
2017-2018	27
2016-2017	21
2015-2016	05

7.4. Improvement in the quality of students admitted to the program (10)

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

Table B.7.4.1: Student admissions for past 3 years

Entrance Examination	Closing Score/ Rank	2018-19	2017-18	2016-17	2015-16
National Level Entrance Examination	No. of students admitted	-	-	-	-
	Opening Score / Rank	-	-	-	-
	Closing Score / Rank	-	-	-	-
State/University/Level Entrance Examination / Others (Name of the Entrance Examination) Common Entrance Test - CET	No. of students admitted	56	58	32	29
	Opening Score / Rank	11836	8027	6626	7795
	Closing Score / Rank	24077	18266	35153	19681
Consortium of Medical Engineering and Dental College of Karnataka- COMEDK	No. of students admitted	40	11	33	33
	Opening Score / Rank	16212	12040	12267	12924
	Closing Score / Rank	56765	46110	54067	28628
Name of the Entrance Examination for Lateral Entry - Karnataka Diploma CET	No. of students admitted	25	26	22	25
	Opening Score / Rank	1080	4340	3187	1229
	Closing Score / Rank	15629	15974	8810	6404
Average CBSE / Any other Board Result of admitted students (Physics, chemistry & Maths)		68	71	70	71

CRITERION 8	First Year Academics	50
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8. FIRST YEAR ACADEMICS (50)

8.1. First Year Student-Faculty Ratio (FYSFR) (5)

Data for first year courses to calculate the FYSFR:

TableB.8.1

Year	Number of students(approved intake strength)	Number of faculty members(Considering fractional workload)	FYSFR	Assessment=(5x20)/FYSFR (Limited to Max.5)
CAY (2018-19)	1020	59	1:17.2	$5 \times 20 / 17.2 = 5.81$
CAYm1 (2017-18)	1170	60	1:19.5	$5 \times 20 / 19.5 = 5.12$
CAYm2 (2016-17)	1170	57	1:20.5	$5 \times 20 / 20.5 = 4.87$
Average	1120	58.6	19.0	5.0

*Note: If FYSFR is greater than 25, then assessment equal to zero.

8.2. Qualification of Teaching First year common Courses (5)

Assessment of qualification = $(5x + 3y)/RF$,

x = Number of Regular Faculty with Ph.D.,

y = Number of Regular Faculty with Post-graduate qualification

RF = Number of faculty members required as per SFR of 20:1,

Table B.8.2 Average Assessment Calculation

Year	X	Y	RF	Assessment of faculty Qualification($5x+3y$)/RF
CAY (2018-19)	10	49	51	$(5 \times 10 + 3 \times 49) / 51 = 3.86$

Year	X	Y	RF	Assessment of faculty Qualification(5x+3y)/RF
CAYm1 (2017-18)	9	51	58.5	$(5 \times 9 + 3 \times 51) / 58.5 = 3.38$
CAYm2 (2016-17)	11	46	58.5	$(5 \times 11 + 3 \times 46) / 58.5 = 3.29$
Average Assessment				3.51

8.3. First Year Academic Performance**(10)**

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the Percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the second year.

Table B.8.3.1 Academic Performance at Department Level

Item	CAY (2017-18)	CAYm1 (2016-17)	CAYm2 (2015-16)
Mean of percentage of marks/Grade point average(X)	7.59	6.8	6.42
Total Number of successful students(Y)	99	103	97
No of students appeared in examination(Z)	105	119	114
$AP = [X * (Y/Z)]$	7.15	5.88	5.46
Average Academic Performance	6.28		

Table B.8.3.2 Academic Performance at College Level

Branch/ Academic year	No. of students appeared in the exam	No. of successful students proceeded to 2nd year	Academic Performance
			AP = Mean of Successful Students X Successful Students/ No. of Students Appeared
CAY(2017-18)			
ECE	105	99	7.15
CSE	125	116	7.40
ME	91	83	6.78
CV	114	88	5.64
MT	68	61	6.95
CAYm1(2016-17)			
ECE	119	103	5.9
CSE	130	115	6.4
ME	119	92	4.5
CV	89	72	4.7
MT	67	54	4.5
CAYm2(2015-16)			
ECE	114	97	5.4
CSE	129	116	6.44
ME	131	110	5.3
CV	114	91	4.8
MT	51	46	5.4

8.4. Attainment of course outcome of first year courses (10)

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

(Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets etc.).

Assessment process for course outcomes (CO's) computation

Direct Assessment	Continuous Internal Assessment(CIE)	60%		
	Semester End Exams(SEE)	40%		
CIE(Theory)	Internal Assessment	30		
	Assignments	10		
	Seminars			
	Quiz			
CIE(Lab)	Divided in to two components			
Marks breakup for Engineering chemistry Lab(17CHEL17)	Continuous Assessment(30marks)		Internal Assessment(10marks)	
	<div>➤ The student will be assessed during the performance of each experiment.</div> <div>➤ Each experiment will be evaluated for 30 marks.</div>		After the completion of all experiments an internal test shall be conducted for 100 marks and scaled to 10 marks.	
	Attributes	Marks	Attributes	Marks
	Procedure write-up	5	Procedure write-up	15
	Conduction of Experiment	16	Conduction of Experiment	52
	Calculations and Record submission	4	Calculations	18
	Viva voce	5	Viva voce	15
	Total	30		100

8.4.2. Record the attainment of course outcomes of all first year courses**(5)**

Program shall have set attainment levels for all first-year courses. (The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student

performance in internal assessments with respect to the COs of a subject plus the performance in the University examination). Refer to 3.2.2 for further details

Table B.8.4.2.1

The Table shows the entries of all first-year courses of 2017-18 CBCS batch with VTU code (second column) and NBA Code (first column).

C. No.*	SUBJECT CODE	NAME
101	17MAT11	Engineering Mathematics I
102	17CHE12	Engineering Chemistry
103	17PCD13	Programming in C & Data structures
104	17CED14	Computer Aided and Engineering Drawing
105	17ELN15	Basic Electronics
106	17CPL16	Computer Engineering Lab
107	17CHEL17	Engineering Chemistry Lab
201	17MAT21	Engineering Mathematics II
202	17PHY22	Engineering Physics
203	17CIV23	Elements of Civil Engineering and Mechanics
204	17EME24	Elements of Mechanical Engineering
205	17ELE25	Basic Electrical Engineering
206	17WSL26	Workshop Practice
207	17PHYL27	Engineering Physics Lab

Course is delivered and attainment of CO's is determined using internal tests 1, 2 and 3 and semester end university examination results.

For CO attainments, level threshold is set by First Year Academic Committee (FYAC) as given in the Table 8.1.

Table B.8.4.2.2

Level threshold set by FYAC	
Level 1	Students scoring <40% marks in internal assessments (IA) and semester end examination (SEE).

Level 2	Students scoring 40 to 59% marks in internal assessments (IA) and semester end examination (SEE)
Level 3	Students scoring 60% marks or above in internal assessments (IA) and semester end examination (SEE)

While analyzing direct assessments for attainment of CO's, 60% weightage is given to internal assessments and 40% weightage is given to semester end examinations as recommended by FYAC.

Attainment of all course outcomes of all first year courses are tabulated below

CAY 2017-18

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17MAT11/21	1	2.64	1.81	2.31	77.00	2.30	76.71
	2	2.69	1.81	2.34	77.99		
	3	2.55	1.81	2.25	75.14		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17PHY12/22	1	2.63	1.55	2.20	73.27	1.96	65.37
	2	1.84	1.55	1.72	57.35		
	3	2.24	1.55	1.96	65.48		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17CIV13/23	1	2.57	1.25	2.04	68.04	2.00	66.73
	2	2.35	1.25	1.91	63.63		
	3	2.60	1.25	2.06	68.52		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17EME14/24	1	2.10	1.40	1.82	60.67	1.61	53.78
	2	2.10	1.40	1.82	60.67		
	3	1.40	0.90	1.20	40.00		
	4	1.40	0.90	1.20	40.00		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17ELE15/25	1	2.47	1.87	2.23	74.37	2.16	71.89
	2	2.47	1.83	2.21	73.73		
	3	2.16	1.84	2.03	67.57		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17WSL16/26	1	2.81	2.61	2.73	90.90	2.73	90.90
	2	2.81	2.61	2.73	90.90		
	3	2.81	2.61	2.73	90.90		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17PHYL17/27	1	2.74	2.16	2.50	83.43	2.50	83.43
	2	2.74	2.16	2.50	83.43		
	3	2.74	2.16	2.50	83.43		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17MAT22	1	2.64	1.71	2.27	75.50	2.28	75.93
	2	2.74	1.71	2.33	77.60		
	3	2.59	1.71	2.24	74.68		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17CHE12/22	1	2.80	1.67	2.35	78.27	2.29	76.27
	2	2.60	1.67	2.23	74.27		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17PCD13/23	1	1.82	1.46	1.68	55.87	1.55	51.60
	2	1.47	1.46	1.47	48.87		
	3	1.53	1.46	1.50	50.07		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17CED14/24	1	2.66	2.52	2.60	86.63	2.46	81.90
	2	2.45	2.29	2.39	79.53		
	3	2.45	2.29	2.39	79.53		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17ELN15/25	1	2.56	0.96	2.46	82.00	2.46	81.93
	2	2.66	0.96	2.45	81.70		
	3	2.70	0.96	2.42	80.50		
	4	2.66	0.96	2.51	83.50		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17CP16/L26	1	2.78	2.40	2.63	87.60	2.63	87.60
	2	2.78	2.40	2.63	87.60		
	3	2.78	2.40	2.63	87.60		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
17CHEL17/27	1	2.84	2.57	2.73	91.07	2.73	91.07
	2	2.84	2.57	2.73	91.07		
	3	2.84	2.57	2.73	91.07		

CAYm1 (2016-17)

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15MAT11	1	2.67	2.46	2.59	86.24	2.62	87.28
	2	2.80	2.46	2.66	88.76		
	3	2.70	2.46	2.61	86.86		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15PHY21/22	1	2.73	1.56	2.26	75.36	2.26	75.20
	2	2.80	1.56	2.30	76.74		
	3	2.63	1.56	2.20	73.49		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CIV13/23	1	2.67	2.14	2.46	81.96	2.46	82.14
	2	2.87	2.14	2.58	85.99		
	3	2.50	2.14	2.35	78.48		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15EME14/24	1	2.70	2.70	2.70	90.00	2.40	80.00
	2	2.70	2.70	2.70	90.00		
	3	1.80	1.80	1.80	60.00		
	4	1.80	1.80	1.80	60.00		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15ELE15/25	1	1.96	2.05	1.99	66.44	2.03	67.54
	2	2.25	2.06	2.17	72.45		
	3	2.07	1.67	1.91	63.74		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15WSL16/26	1	2.44	2.44	2.44	81.33	2.44	81.33
	2	2.44	2.44	2.44	81.33		
	3	2.44	2.44	2.44	81.33		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15PHYL17/2 7	1	2.24	2.24	2.24	74.62	2.24	74.62
	2	2.24	2.24	2.24	74.62		
	3	2.24	2.24	2.24	74.62		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15MAT22	1	2.51	1.85	2.24	74.72	2.28	75.94
	2	2.65	1.85	2.33	77.61		
	3	2.54	1.85	2.27	75.50		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CHE11/22	1	2.61	2.20	2.44	81.43	2.43	81.03
	2	2.78	2.20	2.55	84.83		
	3	2.38	2.20	2.31	76.83		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15PCD13/23	1	2.46	2.00	2.28	75.87	2.15	71.67
	2	2.25	2.00	2.15	71.67		
	3	2.04	2.00	2.02	67.47		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CED14/24	1	2.21	2.21	2.21	73.67	2.21	73.67
	2	2.21	2.21	2.21	73.67		
	3	2.21	2.21	2.21	73.67		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15ELN15/25	1	2.50	2.54	1.50	49.99	2.12	70.60
	2	2.09	2.54	2.52	83.89		
	3	1.95	2.54	2.27	75.62		
	4	2.03	2.54	2.19	72.89		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CPL16/26	1	2.97	2.68	2.85	95.13	2.85	95.13
	2	2.97	2.68	2.85	95.13		
	3	2.97	2.68	2.85	95.13		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CHEL17/27	1	2.90	2.90	2.90	96.67	2.90	96.67
	2	2.90	2.90	2.90	96.67		
	3	2.90	2.90	2.90	96.67		

CAYm2 (2015-16)

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15MAT11	1	1.99	2.31	2.11	70.50	2.22	74.10
	2	2.09	2.31	2.18	72.60		
	3	2.43	2.31	2.38	79.30		
	4	2.22	2.31	2.26	75.23		
	5	1.95	2.31	2.09	69.80		
	6	2.32	2.31	2.32	77.19		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15PHY21/22	1	2.30	1.64	2.03	67.77	2.06	68.54
	2	2.65	1.64	2.24	74.80		
	3	2.06	1.64	1.89	63.07		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CIV13/23	1	2.40	1.66	2.11	70.17	2.18	72.63
	2	2.56	1.66	2.20	73.32		
	3	2.61	1.66	2.23	74.40		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15EME15/25	1	2.47	2.47	2.47	82.29	2.14	71.32
	2	2.47	2.47	2.47	82.29		
	3	1.98	1.98	1.98	65.83		
	4	1.48	1.48	1.48	49.38		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15EME15/25	5	1.48	1.48	1.48	49.38		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15ELE14/24	1	2.17	2.00	2.10	70.00	2.16	72.05
	2	2.08	2.09	2.08	69.40		
	3	2.41	1.99	2.24	74.73		
	4	2.32	2.08	2.22	74.07		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15WSL16/26	1	2.95	2.95	2.95	98.33	2.95	98.33
	2	2.95	2.95	2.95	98.33		
	3	2.95	2.95	2.95	98.33		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15PHYL17/27	1	2.35	2.35	2.35	78.19	2.35	78.19
	2	2.35	2.35	2.35	78.19		
	3	2.35	2.35	2.35	78.19		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15MAT21	1	2.05	2.28	2.14	71.45	1.86	62.14
	2	2.18	2.28	2.22	73.95		
	3	1.99	2.28	2.11	70.20		
	4	1.14	2.28	1.60	53.24		
	5	0.98	2.28	1.50	50.03		
	6	1.18	2.28	1.62	53.95		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CHE11/22	1	2.27	2.39	2.32	77.19	2.02	67.48
	2	2.35	2.39	2.37	78.94		

15CHE11/22	3	2.30	2.39	2.34	77.88		
	4	1.80	2.39	2.03	67.82		
	5	1.03	2.39	1.57	52.42		
	6	0.94	2.39	1.52	50.63		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15PCD13/23	1	2.64	1.64	2.24	74.67	2.17	72.27
	2	2.44	1.64	2.12	70.67		
	3	2.41	1.64	2.10	70.07		
	4	2.82	1.64	2.35	78.27		
	5	2.48	1.64	2.14	71.47		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CED14/24	1	2.70	2.70	2.70	90.00	2.70	90.00
	2	2.70	2.70	2.70	90.00		
	3	2.70	2.70	2.70	90.00		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15ELN15/25	1	2.75	1.81	2.37	79.13	2.28	76.13
	2	2.45	1.81	2.19	73.13		
	3	2.60	1.81	2.28	76.13		
	4	2.60	1.81	2.28	76.13		
	5	2.60	1.81	2.28	76.13		
SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CPL16/26	1	2.76	2.52	2.66	88.80	2.66	88.80
	2	2.76	2.52	2.66	88.80		
	3	2.76	2.52	2.66	88.80		
	4	2.76	2.52	2.66	88.80		
	5	2.76	2.52	2.66	88.80		

SUBJECT	CO	CIE	SEE	Total	Individual CO Attainment %	Final Attainment	% of Attainment
15CHEL17/27	1	2.85	2.85	2.85	95.00	2.85	95.00
	2	2.85	2.85	2.85	95.00		
	3	2.85	2.85	2.85	95.00		

Attainment percentage for all first year courses is tabulated

CAY (2017-18)

Physics Cycle			
Course	Target Attainment(CIE+SEE)	Attainment Level(CIE+SEE)	Remarks
17MAT11	70	82	Target Met
17PHY12/22	70	76	Target Met
17CIV13/23	70	75	Target Met
17EME14/24	70	95	Target Met
17ELE15/25	70	81	Target Met
17WSL16/26	70	90	Target Met
17PHYL17/27	70	83	Target Met
Chemistry Cycle			
17MAT22	70	80	Target Met
17CHE12/22	70	80	Target Met
17PCD13/23	70	74	Target Met
17CED14/24	70	86	Target Met
17ELN15/25	70	82	Target Met
17CPL16/26	70	93	Target Met
17CHEL17/27	70	96	Target Met

CAYm1 (2016-17)

Physics Cycle			
Course	Target Attainment(CIE+SEE)	Attainment Level(CIE+SEE)	Remarks
15MAT11	65	87	Target Met
15PHY12/22	65	75	Target Met
15CIV13/23	65	82	Target Met
15EME14/24	65	80	Target Met
15ELE15/25	65	67	Target Met
15WSL16/26	65	81	Target Met
15PHYL17/27	65	75	Target Met
Chemistry Cycle			
15MAT22	65	76	Target Met
15CHE12/22	65	81	Target Met
15PCD13/23	65	72	Target Met
15CED14/24	65	73	Target Met
15ELN15/25	65	71	Target Met
15CPL16/26	65	95	Target Met
15CHEL17/27	65	97	Target Met

CAYm2 (2015-16)

Physics Cycle			
Course	Target Attainment(CIE+SEE)	Attainment Level(CIE+SEE)	Remarks
15MAT11	60	74	Target Met
15PHY12/22	60	68	Target Met
15CIV13/23	60	73	Target Met
15EME14/24	60	71	Target Met
15ELE15/25	60	72	Target Met
15WSL16/26	60	98	Target Met
15PHYL17/27	60	78	Target Met

Chemistry Cycle			
15MAT22	60	62	Target Met
15CHE12/22	60	67	Target Met
15PCD13/23	60	72	Target Met
15CED14/24	60	90	Target Met
15ELN15/25	60	76	Target Met
15CPL16/26	60	89	Target Met
15CHEL17/27	60	95	Target Met

8.5. Attainment of Program Outcomes from first year courses(20)

8.5.1 Indicate results of evaluation of each relevant PO and/or PSO, if applicable (15)

The relevant program outcomes that are to be addressed at first year need to be identified by the institution. Program Outcome attainment levels shall be set for all relevant POs. The Program Outcomes (POs) as presented in criteria 3 and defined by NBA are reproduced below for referencing in this section.

PO	Program Outcomes
PO 1	Engineering knowledge
PO 2	Problem analysis
PO 3	Design/development of solutions
PO 4	Conduct investigations of complex problems
PO 5	Modern tool usage
PO 6	The engineer and society
PO 7	Environment and sustainability
PO 8	Ethics

PO 9	Individual and team work
PO 10	Communication
PO 11	Project management and finance
PO 12	Life-long learning

POs ADDRESSED	TARGET LEVEL		
	2017-18	2016-17	2015-16
1	2.5	2.45	2.4
2	2.5	2.45	2.4
6	2.5	2.45	2.4
7	2.5	2.45	2.4
12	2.4	2.3	2.2

The first-year courses for all the UG engineering branches are handled by various departments, viz., Mathematics, Physics, Chemistry, ECE, EEE, Mechanical, CSE, and Civil. These departments define the CO-PO correlation matrices for the corresponding subjects/ courses handled by them for all the branches of engineering i.e., the definition are at the Institution level. The entries in the CO-PO correlation matrix are the correlation levels as defined in Criteria 3 & reproduced below.

Correlation Level Assignment				
Assignment Level	1	2	3	‘-‘or no entry/blank
Description	Slightly correlated (Low)	Moderately correlate (Medium)	Substantially correlated (High)	Implies no correlation

PO attainment of all first year courses is tabulated below

CAY (2017-18)

Table B.8.5.1.1

***Direct attainment level of PO is determined by taking average across all courses addressing that PO.**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
17MAT11/22	2.47	2.47										
17PHY12/22	2.34	2.18										2.34
17CIV13/23	2.21	2.21				2.37						
17EME14/24	3.60	2.35					3.11					2.73
17ELE15/25	2.44	2.40										2.57
17WSL16/26	2.70	2.70				2.70						2.70
17PHYL17/27	2.50	2.50										
17CHE12/22	2.40	2.34				2.34	2.34					
17PCD13/23	2.23	2.22										2.23
17CED14/24	2.57	2.57										2.57
17ELN15/25	2.47	2.51										
17CPL16/26	2.80	2.80										
17CHEL17/27	2.90	2.90				2.90	2.90					2.90
Direct Attainment*	2.40	2.30				2.58	2.78					2.58

CAYm1 (2016-17)

Table B.8.5.1.2

***Direct attainment level of PO is determined by taking average across all courses addressing that PO.**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
15MAT11/21	2.62	2.62										
15PHY12/22	2.15	2.28										2.15
15CIV13/23	2.35	2.35				2.46						
15EME14/24	2.46	1.80					2.70					2.25
15ELE15/25	2.03	2.02										2.17
15WSL16/26	2.24	2.24										
15PHYL17/27	2.28	2.20										
15CHE12/22	2.49	2.39				2.55	2.55					
15PCD13/23	2.15	2.28										
15CED14/24	2.21	2.21										2.21
15ELN15/25	1.47	2.27										
15CPL16/26	2.85	2.85										
15CHEL17/27	1.63	2.90				2.90	2.90					2.90
Direct Attainment*	2.23	2.34				2.63	2.72					2.34

CAYm2 (2015-16)

Table B.8.5.1.3

*Direct attainment level of PO is determined by taking average across all courses addressing that PO.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
15MAT11/21	2.2	2.2										
15PHY12/22	2.14	1.89					2.21					2.03
15CIV13/23	2.23	2.23				2.11	2.85					
15EME14/24	2.22	1.48										1.98
15ELE15/25	2.15	2.14										2.22

15WSL16/26	2.95	2.95				2.95						2.95
15PHYL17/27	2.35	1.72										2.03
15CHE12/22	1.86	2.32				2.37	2.47					
15PCD13/23	2.19	2.19										2.15
15CED14/24	2.70	2.70										2.70
15ELN15/25	2.28	2.24										
15CPL16/26	2.66	2.66										
15CHEL17/27	2.85	2.85				2.85						2.85
Direct Attainment*	2.37	2.28				2.57	2.51					2.36

8.5.2. Actions taken based on the results of evaluation of relevant POs(5)

(The attainment levels by direct (student performance) are to be presented through program level Course-PO matrix as indicated)

PO Attainment Levels and Actions for improvement - CAY – Mention for relevant POs

CAY (2017-18)

TableB.8.5.2.1

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge			
PO1	2.5	2.4	Target Not Met
<p>Observations:</p> <ol style="list-style-type: none"> 1. Students rarely have set carrier goals, so need orientation towards possible carrier options. 2. Faculty expressed disparity between the course content and the allotted number of lecture hours by university. <p>Actions:</p> <ol style="list-style-type: none"> 1. One extra hour per week than the university prescribed number of hours is allotted to conduct tutorials to motivate students to improve their understanding in basic engineering subjects 2. Seminars and invited talks are arranged on need of basic concepts of first year topics in higher semester courses <p>Branch specific seminars by industry experts to give over view of latest technology.</p>			

PO2:: Problem analysis			
PO2	2.5	2.3	Target Not Met
Observations: <ol style="list-style-type: none"> 1. Students lacking in problem analyzing skills. 2. Faculty expressed students lack in understanding of basic concepts required for first year engineering subjects. 3. Student needed motivation to connect first year subjects to their chosen branch of engineering. Actions: <p>To Improve analytical thinking skills in first year engineering subjects following steps were taken</p> <ol style="list-style-type: none"> 1. Group Activities to be conducted to enhance presentation skills & thinking skill etc. 2. Special classes to be conducted to revise prerequisite required for first year subjects. 3. Additional programs are solved in class hours and hands on to be conducted. 4. Encouraged to solve Additional problems to enhance the performance in solving the complex engineering Problems. 5. Video lectures, Animated PPTs and models were used by faculty for deeper understanding applications of concepts. 			
PO3:Design/development of solutions			
PO3			NO MAPPING
PO4: Conduct investigations of complex problems			
PO4			NO MAPPING
PO 5: Modern tool usage			
PO5			NO MAPPING
PO6 :The engineer and society			
PO6	2.5	2.58	Target Met
PO7:Environment and sustainability			
PO7	2.5	2.78	Target Met
PO8:Ethics			

PO8			NO MAPPING
PO9 : Individual and team work			
PO9			NO MAPPING
PO10 :Communication			
PO10			NO MAPPING
PO11 : Project management and finance			
PO11			NO MAPPING
PO12 :Life-long learning			
PO12	2.4	2.58	Target Met

CAYm2(2016-17)

TableB.8.5.2.2

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge			
PO1	2.45	2.23	Target Not Met
Observations: <ol style="list-style-type: none"> 1. Some students expressed use of audio video clippings in regular classes will give them better understanding of concepts. 2. Reduction in Results of problematic courses of first year engineering. 3. Students requested for industrial/museum visit for practical exposure of theoretical concepts. Actions planned: <ol style="list-style-type: none"> 1. Use of innovative teaching methods (ITC tools) by all faculties in regular classes if needed. 2. Remedial classes shall be conducted to improve results. 3. Practical exposure of theoretical concepts by arranging industrial/museum visits. 4. In house Faculty development Programme on innovative teaching skills shall be organized to make newly added faculty to implement better TLP. 5. Students were motivated for engineering exam structure and study techniques required for semester pattern. 			

PO2:: Problem analysis			
PO2	2.45	2.34	Target Not Met
Observations. <ol style="list-style-type: none"> 1. Faculty expressed that the knowledge of fundamental in Physics Chemistry & Mathematics is insufficient to cope for the first year engineering syllabus. 2. Students requested for type of university exam questions and some set of practice questions for developing confidence for external exams. Actions planned. <ol style="list-style-type: none"> 1. Diagnostic test in Physics, Chemistry and Mathematics to analyze students entry level problem solving capacity 2. One week induction Programme on teaching basic concepts of Engineering Physics, Engineering Chemistry & Engineering Mathematics. 3. Practice problems were given to solve in class under teacher supervision for all subjects. 			
PO3:Design/development of solutions			
PO3			NO MAPPING
PO4: Conduct investigations of complex problems			
PO4			NO MAPPING
PO 5: Modern tool usage			
PO5			NO MAPPING
PO6 :The engineer and society			
PO6	2.45	2.63	Target Met
PO7:Environment and sustainability			
PO7	2.45	2.72	Target Met
PO8:Ethics			
PO8			NO MAPPING
PO9 : Individual and team work			
PO9			NO MAPPING
PO10 :Communication			
PO10			NO MAPPING

PO11 : Project management and finance			
PO11			NO MAPPING
PO12 :Life-long learning			
PO12	2.3	2.35	Target Met

CAYm2 (2015-16)

TableB.8.5.2.3

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge			
PO1	2.4	2.37	Target Not Met
Observations 1.Newly joined faculty expressed need for training in teaching methodology 2.Students finding difficult to adjust for engineering course pattern 3.Faculty couldn't complete syllabus due to heterogeneity of class which includes students from various states and countries Actions planned 1. In house Faculty development Programme on innovative teaching skills to make faculty to Implement better TLP. 2. Students were motivated for engineering exam structure and study techniques required for semester pattern. 3. Extra classes to be conducted if faculty requires to complete syllabus following the TLP			
PO2:: Problem analysis			
PO2	2.4	2.28	Target Not Met
Observations 1.Some students who have not learnt basics of programming up to 12 th standard need extra support in Programming courses. 2. Students had no exposure about applications of basic science in engineering 3. Majority of Students up to 12 th standard are used to teacher supported learning process.			

Actions Planned			
1. Additional programs are solved in class hours and hands on conducted in labs. 2. Handouts covering problems and applications of various concepts were distributed. 3. Question bank including previous University exams and some challenging questions to be given after completion of every module.			
PO3:Design/development of solutions			
PO3			NO MAPPING
PO4: Conduct investigations of complex problems			
PO4			NO MAPPING
PO 5: Modern tool usage			
PO5			NO MAPPING
PO6 :The engineer and society			
PO6	2.4	2.57	Target Met
PO7:Environment and sustainability			
PO7	2.4	2.51	Target Met
PO8:Ethics			
PO8			NO MAPPING
PO9 : Individual and team work			
PO9			NO MAPPING
PO10 :Communication			
PO10			NO MAPPING
PO11 : Project management and finance			
PO11			NO MAPPING
PO12 :Life-long learning			
PO12	2.2	2.36	Target Met

CRITERION 9: STUDENT SUPPORT SYSTEMS**50****9.1 Mentoring system to help at individual level****(5)**

Acharya Institute of Technology has a very strong system of mentoring to provide student's a sense of security, bonhomie, guidance for academic and personal needs. A mentor or proctor, a member of the faculty, so entrusted with the responsibility, pays personal attention to and monitors student's academic progress in institution hours and behavioral process outside the campus. Management motivates and enables a student to look to his mentor as a patriarchal/ matriarchal figure, guide and philosopher by the process which enriches the interaction so essential for the academic ambience embellished with a human touch.

A mentor records personal data of each student including parent contact details, regular attendance, academic and communication details into ERP of the institute. The Chief Proctor, Head of the Department and the Principal can view details of a student through the ERP at any time and offer required support. This helps to closely monitor student's progress in terms of his/her attendance, punctuality, academic performance and learning capabilities. Also, it helps to identify, outside the curricular requirements, the student's habitual deviations and attitudinal aberrations, utilization of facilities and associative growth of personal attributes.

The system provides an early warning through the mentor's feedback on a periodic basis to the parents/guardians, heads of departments, course coordinators, principal and management on classified needs for their intervention and mid-course corrections. The mentors, counselors, conduct psycho-social counseling. Grievances pertaining to gender discrimination and socio-economic problems are addressed by the institution.

Allotment of mentors

- 1) After a student reports in first year he/she will be allotted with a mentor.
- 2) A group of around 20 students will be allotted to one mentor.
- 3) Girl students are preferably allotted to lady faculty only.
- 4) Students from a state/ country will not be with one mentor to maintain diversity in the group.

Regular communication process

- 1) Each mentor meets his wards fortnightly at a prespecified time slot in regular time table.
- 2) Parents are informed about attendance and internal assessment marks by the mentor soon after the completion of the Internal Assessment.
- 3) An SMS/ mail is also sent to the parents/guardians with these details.
- 4) In case of repeated nonperformance, the mentor speaks to the parents discussing the learning disabilities of the student.
- 5) All communications with parents/guardians are recorded in <https://www.acharyainstitutes.in/>

Special Case communications

- 1) If a ward is found to be irregular in attendance, immediate call will be made to parents.
- 2) If a ward is found to be below average in academic performance mentor will counsel him/her for study style, material, subject teacher guidance etc.
- 3) If necessary, parents will be called to meet HOD/Dean student affairs and take corrective measures.

In short, system of mentoring provides the parents/guardian a single window source of information about their ward through mentor and expects parents/guardian to contact mentor for any support regarding academic needs of their ward.

The placement officer of the institution plays an exemplary role for career growth of the students. Besides his regular role as placement liaison officer, he frequently visits each and every class to motivate and counsel students in the career aspect. He/she explains in detail the career prospects, preparation and career development activities. Necessary training programs in soft and other skills developments are arranged under the aegis of placement cell which includes experts from industry as trainers.

9.2. Feedback analysis and reward /corrective measures taken, if any (10)

Feedback collected for all courses: YES/NO;

YES

Student feedback is collected once in a semester for all the courses.

Student feedback is collected, analyzed and communicated to all faculty members once in a semester through automated feedback system (192.168.2.178/feedback/). The faculty members with prescribed norms in TLP feedback are counseled by the HOD, Principal, taking corrective measures if required. The indices used for measuring teaching and learning through Student Feedback are as follows:

1. Adequacy of depth of coverage: Explains course content effectively and makes adequate coverage
2. Audibility of faculty: Lectures/Speech quite audible.
3. Lecturers make you think: Encourages independent thinking.
4. Encouraged to ask Questions: Encourages asking questions and discussions

5. Black board writing clarity and organization: black/chalk/white board writing, PPTs, Visuals, case studies, media use etc.
6. Punctuality of faculty to class: Quite punctual, meet and dismiss class on time.
7. Understanding the subject clearly: Speaks clearly and understandably, has good subject competency.
8. Provides constructive feedback on Assignments:
9. Effective use of class time: uses class time effectively
10. Challenging test questions and assignments.
11. The test and assignments valued in time.
12. Faculty good in communication: Communicates effectively, enthusiastic about subject, content delivery
13. Fairness in Evaluation.
14. Motivation to learn and study.
15. Meeting your expectations by the faculty: Expects a high level of academic performance.
16. Course coverage as per syllabus/lesson plan.
17. Help in solving your academic difficulties: Provides study/course/reading material and references
18. Overall satisfaction about teaching and learning.
19. Class room discipline: maintains atmosphere of mutual respect, courtesy and class room discipline
20. You are provided with new knowledge/ recent developments: Provided new knowledge, recent developments, and thrust and frontier subjects/areas.

The response of the students is categorized into the following options:

A – Mostly (5)

B - Quite Often (4)

C - At Times (3)

D –Hardly (1)

E –Never (0)

With the aid of the response given by the students, average percentage of feedback is calculated and circulated to the faculty. Faculty having feedback less than 70% is counseled by the HOD, Principal

In addition to the Student appraisal, Faculty and Staff Appraisal Systems in AIT have been operational in various forms over the past few years. With the introduction of ERP Systems and to facilitate on-line entries by students and to inculcate efficacy in appraisals by peers and management levels, the formats are made more system friendly. The written and subjective parts have been modified to facilitate quantifying Quality.

The weight age of appraisal currently in force is

- | | |
|------------------------------------|------------------|
| 1. Self-appraisal | : Weightage 40 % |
| 2. Teaching Learning Process (TLP) | : Weightage 20 % |
| 3. Appraisal by Head of Department | : Weightage 10 % |
| 4. Appraisal by the principal | : Weightage 10 % |
| 5. Appraisal by Students | : Weightage 20 % |

9.3. Feedback on facilities

(5)

Assessment is based on student feedback collection, analysis and corrective action taken.

Institution ensures that feedback on facilities are promptly attended to and resolved effectively through following mechanisms for promoting better stakeholder relationship.

- 1) Grievance redressal committee is constituted to address the grievance complaint of any kind submitted by the students and staff of AIT. This committee meets once in the beginning of every semester to take stock of the situation and plan for the future if any unaddressed issues to be addressed based on the previous instances and sets protocol and actions accordingly.
- 2) Constitution of anti-ragging committee to prevent ragging. This is a committee constituted to prevent any kind of ragging activity in and around the campus including the institute hostels. It is functioning well with more than 30 squad members (including faculty and senior students) working 24x7 during the beginning of every academic year to make sure that the incumbent student is safe and promote highly safe learning environment in Acharya institute.
- 3) Constitution of “Women’s Cell” to inculcate a culture of respect for the female gender and the creation of a climate, free of fear of sexual harassment and an urgent need to address the task of the prevention and support to those who need assistance.

Zero Tolerance Policy

Acharya campus is a multi-lingual, multi-religious, multi-national, multi-ethnic institution promising equal opportunities irrespective of caste, creed, religion, language, gender, ethnicity or citizenship. It strongly intends to maintain such ‘equality with equal opportunity’ under its zero-tolerance policy.

Acharya Institute of Technology brings to the notice of all employees direct or indirect, all students past and present and all officials associated with the organization in any way that the following issues are on a Zero Tolerance Level. Acharya Institute of Technology reserves the right to remove from service the employees or rusticate them from rolls of institutions the

students and also may also hand them over to police, if they are found to be flouting any discipline in any form mentioned below:

Gender Issues

- 1) Misbehavior and unsavory remarks against women
- 2) Public display of any passion or otherwise towards women
- 3) Public proximity to either gender – please maintains personal space
- 4) Filming videos on campus without express written permission of a) Proctor (for students) under intimation to head of institution b) Head of institution (for employees)
- 5) Any sharing or forwarding of private videos, pictures, write-up about employees or students or about Acharya Institute's on face book, twitter, YouTube etc. is henceforth prohibited and shall come under the zero-tolerance policy if it goes beyond norms of decency and privacy of individuals
- 6) Any objectionable materials, if so, published as above, shall invite punitive measures.
- 7) Interaction between student and Faculty is encouraged, but only within limits of decency.

Religious-Ethnic Issues

- 1) Display of any bias, favoritism or unusual exemptions based on gender, caste, Creed, religion or language will be viewed seriously as irresponsible behavior and shall attract appropriate actions even to the extent of removal from service or rustication from rolls.
- 2) Participation in institutional activities shall be on an equal opportunity basis and no distinction shall be made other than by competence in required area or merit of performance.

General Issues

- 1) Any anonymous writings about faculty / employees / student (s) shall be taken a note of and enquired for validity.
- 2) Possession or carrying any firearms or other weapons likely to cause serious injuries on use, with or without license in Acharya campus or outside by employees and students shall be taken as a serious offence under the zero-tolerance policy.
- 3) Possession, carrying or use of alcohol, drugs, tobacco is strictly forbidden on campus and shall attract punitive measures
- 4) Violence in any form / abuse in any language shall attract punitive measures.

Detection and Follow-Up

Any such incident (s) or actions as soon as they are detected shall be promptly brought to the notice of the mentor and/or HoD and/or principal and/or head of section who shall report immediately to empowered committee on zero tolerance policy for further action.

Empowered Committee on Zero Tolerance Policy

The Committee is empowered to take immediate action by scrutinizing the case (s) and enforce punitive and/or remedial measures within 48 hours of occurrence of the event, with the concurrence of Chairman. The committee composition is

- | | |
|---|------------------|
| 1) Shalini Reddy (Executive Director, Acharya Institutes) | Chairperson |
| 2) CBM Bhooshan (Executive Secretary to chairman) | Member |
| 3) M R Prakash, Principal | Member |
| 4) Ramakrishna Gowda,
(General administrator and sports in charge) | Member |
| 5) Puneeth, Senior Manager HR – | Member secretary |

The grievances are also considered through the feedback given by the parents during the parents-teachers meeting conducted every semester. These grievances are addressed and actions taken accordingly. All

the grievances related to academics are discussed with the concerned heads of the departments and resolved at the earliest.

9.4 Self Learning

05

Learning at Acharya Institute of Technology is student-centric. Teachers give the students ample and adequate opportunities and scope for interactive self-learning based on the academic background, intellectual level, soft skills and special skills of students. The lesson plans, course material, laboratory manuals and often study materials are made available to the students. Students are also given with assignments and mini projects. Some of the support structures and systems available for teachers to develop and promote self-learning skills among students are as follows:

- 1) Institute promotes self- learning through MOOC online courses and video lectures from NPTEL, UDACITY, MIT-OCW, EDX and KHAN academy which can be accessed on local area network by the students.
- 2) Accesses to on-line journals from the library resources network are available to the students and faculty members on campus LAN and remote access.
- 3) Repository of seminar /project reports in the department library for the reference of students and faculty.
- 4) Internships conducted through In-house software development cell for students.
- 5) The institution is enabled by its academic alliances with many leading organizations as MOUs with Universities.
- 6) All the departments have student's forum which organize various technical events that helps students in molding their personality.

Department forums

Name of the department	Forum Name
Aeronautical Engineering	Udaan

Automobile Engineering	Cruze
Bio Technology	Bio-Infinity
Civil Engineering	Srujan
Construction Technology and Management	Tecton
Computer Science & Engineering	Lakshya
Electronics and Communication Engineering	Spectra
Electrical and Electronics Engineering	Elexso
Information Science and Engineering	Stigen
Mechanical Engineering and Manufacturing Science & Engineering	Fame
Mechatronics	Renisanse
Mining Engineering	Magnum
Master of Business Administration	Pragma
Master of Computer Applications	e-Disha

- 7) Departments organize alumni expert series, which gives platform for students to interact and learn from their seniors.
- 8) Technical societies like ISTE, ASME, IEEE, IEI, CSI, ASAE and student chapters of National/International associations are active and students are encouraged to present technical papers at National/International conferences.
- 9) Institute supports students to take up projects. A few project teams are sponsored to participate at National/International exhibitions.
- 10) Experts from reputed Industries/R and D organization are invited to the campus to deliver their expertise provide a platform for student interaction.
- 11) Classrooms are furnished with LCD projectors. Wi-Fi is available throughout the campus for promotion of self-learning.
- 12) Institute has English and Kannada language laboratory.
- 13) Library facilities are extended beyond working hours every day throughout the year except the three national holidays.

- 14) Field trips, survey camps and industrial visits are arranged.
- 15) Placement and Training Department has initiated pre-placement training for the students of all semesters to make them industry ready.
- 16) Group seminars, discussions, case studies and student presentations are held on regular basis.
- 17) The departments arrange for student visit to global and national technical exhibitions, trade shows.

(The institution needs to specify the facilities, materials and scope for self-learning/ learning beyond syllabus, Webinars, Podcast, MOOCs etc. and evaluate their effectiveness)

9.5. Career Guidance, Training, Placement

(10)

The institution has a structured and organized training and placement cell. A large number of reputed companies in various domains visit the institution for recruitment. This has been made possible by specific training and skill-based trainings through outsourced agencies and in-house training.

Career guidance

All the students of Acharya Institute of Technology are provided with intense and multidimensional career guidance throughout the course duration. Professional organizations and consultants/experts in higher education conduct seminars and counselling sessions, group wise. Special emphasize is given to induce students to undertake higher education in forms of master degree, doctoral degrees in India and abroad.

Training and placement facility

The placement at Acharya campus is a dynamic, real-time process which is inclusive, proactive, ambitious and wholesome. The placement process is constantly tuned based on industry need and feedback. The placement cell monitors the employment opportunities and

arranges campus recruitment process interviews for the final year students and provides internship opportunities for pre-final year students. A dedicated training and placement cell work round the year to provide efficient, effective training and employment opportunities for all the students. Acharya Institute of Technology has an exclusive training department which takes care of the training needs of all its departments. The training imparted includes aptitude, communication, analytical reasoning, problem solving along with the basic etiquettes along with domain training. Number of domain training programmes and placement training programs conducted for past 4 years are shown in Table

Number of domain training programmes conducted for past 4 years

Year / Branch	AE	AU	BT	CSE	CTM	CV	ECE	EEE	ISE	ME	MI	MT	MBA	MCA	M.Tech
2014-15	2	3	2	5		3	5	3	4	3		4	1	2	3
2015-16	5	5	4	6	3	3	6	6	6	5	2	6	1	2	
2016-17	1	1	1	3	2	2	4	2	2	1		2	2	3	1
2017-18	1	1	1	3	2	2	4	3	2	2		2	2	3	

Number of placement training programmes conducted for past 4 years

Year / Branch	AE	AU	BT	CSE	CTM	CV	ECE	EEE	ISE	ME	MI	MS	MT	MBA	MCA
2014-15	11	11	11	11	11	11	11	11	11	11	11	11	11	1	9
2015-16	10	9	9	10	9	9	10	11	9	10	8	8	9		6
2016-17	8	8	8	8	8	8	8	8	8	8	8	8	8	4	6
2017-18	6	6	6	6	6	6	6	6	6	6	6	6	6	4	4

The number of placements for both under graduate and post graduate students through campus recruitment for last 4 years are shown in Table

Placement record for last 4 years

Courses	Year	No of eligible students	No. of students placed in campus	No. of students placed off campus	% of students placed
UG	2014-15	605	274		45
	2015-16	540	276		51
	2016-17	540	302		48
	2017-18	539	164		27
PG	2014-15	149	85		57
	2015-16	162	49		30
	2016-17	140	41		26
	2017-18	113	34		22

A large number of recruiters visit AIT campus year on. The companies who visited the campus for the on-going recruitment till date for the year 2017-18 and 2018-19 are indicated in the following table

Software and core companies visited during 2017-18 and 2018-19

Software Company	Software Company
99acres.com	KPMG
ABC For Technology Training	LAM Research India
Abyeti Technologies Pvt Ltd	Launch Car Scanner
ACC Ltd(Internship)	Liventus Technology
Accenture	Lowe's Services India Pvt Ltd
Accord Software & Systems Pvt. Ltd	Madhu Infotech India Pvt Ltd
Advantage Club	MAGNA INFOTECH
Aegis	Magnus Prep(Internship)
Albans Projects Pvt. Ltd	Mahindra Aerospace (Internship)

ALKHOLOCKS	MajorBrains Technology Pvt. Ltd
Amada India Pvt Ltd	MAMA Home
Amara Raja	Maventic
Amaris(Internship)	MGTL Score High Pvt Ltd
Amazon	MindaSilca Engineering Private Limited
Amphisoft Technologies	Mindtree - AMCAT
AMS India Pvt Ltd	Mobilean Technologies(Internship)
Analytics	Mphasis
ANGIKA TECHNOLOGIES	MTAP Technologies
Ansaldo STS - A Hitachi company	Murai Technologies
Apna Complex	MUthoot Group - VTU - CPC
ArtechInfosystems Pvt. Ltd	Nandi Toyota
Aspiring Minds	Nash Industries (I) Pvt. Ltd. (R&D Division)
AT&T(Internship)	Nerdy Turtlez
Auto edge(Internship)	Nescode
Autogram	NetzaryInfodynamics
Avalon Technology and Services Pvt Ltd	Next Novity(Internship)
Avankia	Nidec
Aveksha	NIIT
AVTEC Ltd	Nine Leaps Technology
AWIGN(Internship)	Nisargalaya Herbal Company Pvt. Ltd.
AYUH-MEDITECH SOLUTIONS PVT. LTD	Niyo Solutions
Bangalore Education Guideline Pvt Ltd.	NJ INDIA INVEST
BERGER PAINTS INDIA LIMITED	NTT DATA
Bhadra Landmarks	Nuchange Informatics
Bhagin Technologies	Odessa

Bizlog	ODYSSEUS SOLUTIONS
Board Infinity	Om Logistics Ltd
Bosch Ltd(Internship)	OneOrigin / ZeroG Solutions
Bose Corporation India Pvt. Ltd	Open Appliances Pvt. Ltd(Internship)
British Telecom Global Business Services	Optimism IT Solutions
BVBI Infotech	Orient Technologies Pvt Ltd
BYJU's	Quinnox
CADD Centre Training Services Pvt Ltd	OX Softwares Pvt. Ltd
Calotropis Software Solutions	Park Controls & Communications (P) Ltd.
CampK12(Internship)	Paytm
Capgemini	Penny Wise Solutions
CapitalVia	PEOL Technologies Pvt Ltd
Cellworks	Pin Click
Chaitanya India Fin Credit Pvt Ltd	Planet Ganges Consulting Pvt Ltd
Chola Turbo	Planet Ganges Consulting Pvt Ltd(Internship)
ClearTax	Plankton Solutions(Internship)
CMS Computer ltd	Prasanna Cargo
Codehall Technology	Pratian Technologies
CODILAR TECHNOLOGIES	PRDC
Cognizant	Pricewaterhouse Coopers
Collabera	Print Bindaas Pvt. Ltd(Internship)
Concentrix	Profectum Market Solutions Pvt Ltd
Confederation of Indian Industry	Progility Technologies Pvt Ltd
CourseCubePvt Ltd	Prokens
CRMIT Solutions	Prolifer
Crossroad Elf DSS Pvt Ltd	PropertyPistol Realty Pvt. Ltd

C-Square	Proptiger.com/Housing.com/Makaan.com
Cummins India Limited	PS and E Services
Cyber Infrastructure	Purvankara
DeltaX	PVR Cinemas
DHL Supply Chain India Pvt. Ltd	QBRICS INC
Digiby(Internship)	Quinnox
Digital Shark Technology Pvt. Ltd.	Radiant Research Services Pvt. Ltd
Direct Dialogue Initiatives India(Internship)	Rahyals Group
DispatchTrack Software Pvt Ltd	Ramco Cements
DQMS Automotive Design and Development(Internship)	Ranstad
DreamGains Financial (I) Pvt Ltd	Rapyder Cloud Solutions Pvt Ltd
DTDC	RDC Concrete
DXC Technology	Reactore
ECI Telecom	Real Estate Solutions Team
Edelweiss Housing Finance Limited	Reliance General Insurance
e-Emphasys Solutions Pvt Ltd	Reliance JioInfocomm Ltd
eLitmus	Replicon Inc(Internship cum placements)
ELSARA TECHNOLOGIES Pvt. Ltd	ReSource Pro
EmbedUR Systems Pvt Ltd	Robert Bosch
Emertxe Information Technologies	Royal Enfield
Empowersys	Royenicks Pvt.Ltd
EnGrip	S&P Global
EnoahiSolutions India Pvt Ltd	Safari Industries
Epsilon	Saint Gobain India Pvt. Ltd.(Internship)
ERIC BENNY SPORTS MANAGEMENT(Internship)	SAMEER(Internship)

ESI Group	San Engineering & Locomotives Co. Ltd
Eurofins	SANDCUBE ANALYTICS
EVEREST INDUSTRIES	Semi-Conductor Laboratory(Internship)
Executive Scouters	Seventh Sense Talent Solutions(Niyo Solutions Inc)
Exide life Insurance	Shahi Exports Pvt. Ltd
Experis IT Pvt Ltd(Accenture & IBM)	ShipX
Fab Hotels	Shravanhavc
Fabgrad(Internship)	Sigaram Software Technologies Pvt. Ltd
Facade One Systems Private Limited	Signity Corporate Solution Pvt Ltd.(Internship cum placements)
FACE - OYO Rooms	Skill Panther(Internship)
Fanuc India Pvt Ltd	SMS Limited
FEEDERFOX MEDIA	Sobha Developers Ltd
Fidelis	Soft Suave Technologies
Fidelity National financial	Sonata Software
Finoculus	Spinco Biotech Pvt Ltd
Flutura	Stratogent Technology
Flycraft Innovation Pvt. Ltd.(Internship)	Sunrise Biztech Systems Pvt Ltd
Freshersworld.com(Internship)	Syntel Inc
Fujistec India Pvt ltd	Syska LED Lights Pvt. Ltd
Genpact	Systemair India Pvt Ltd
GIC Housing Finance Limited	Tacnik Technology Pvt Ltd
Gingercup (Seventh Sense Talent Solutions)	Tait Communication
Glenmark Pharmaceuticals	Talent Being
Global Shiksha India Pvt. Ltd	Target HR
Go Speedy Go	TATA AIG

Goldman Sachs	Tata Elxsi
Grace	Tavant Technologies
Great Eastern Shipping	Tech Mahindra
Greenomics Mag(Internship)	TECHNOLOGICS GLOBAL PVT
Gridlle Technologies Pvt. Ltd	Teksystems
Grifeo	Telerad Tech
Haappy App(Internship cum Placements)	Terralogic Software Solutions Pvt. Ltd.
Happy Visitor	The Brand Works
Hashedin	Think and Learn Pvt Ltd (Byju's)
HDB Financial Services Ltd	Toppr Technologies Pvt. Ltd.
HDFC Life	TOPPR.COM
Hebron Properties(Internship)	Toshiba
Hexaware Technologies Ltd	Toyota Tsusho Insurance Broking Pvt. Ltd
Hikvision	TRANSVISION SOFTWARE & DATA SOLUTIONS PVT.LTD
HMX	Trigent Software Ltd
Home First Finance Company (HFFC)	TristarInfratech Enterprises
Hummingbird Technologies	TRS Forms & Services Pvt Ltd
Hykon India Limited	TruckEasy
IBM GBS	TTksservices
ICICI Lombard	Ultra Rich Match
IDBI Federal Life Insurance Company Ltd(Internship)	Unikaihatsu Software Pvt. Ltd
Impelsys	Unisys
Indegene	UNIVERSAL HUNT PRIVATE LIMITED
Indegene (Internship)	Urban Ladder
Indian Navy	UttaraInfoSolutionsPvt Ltd

Infosys	Valley Point Technologies
Innovalus Technologies	ValuePoint Systems
InnovasphereInfotech	VayaFinserv Private Limited
Input Zero	Vcreate Information Technology Pvt Ltd
Inszoom	VEDA IIT - (Soctrionics&Invecas)
IntelliFour Software Pvt.Ltd(Internship)	Velozeta Technologies Pvt Ltd
Intern Theory(Internship)	Vembu Technologies
iRely Soft Services India Pvt Ltd	VIVO
Isolve Technologies	Vodafone
ITC InfoTech	VRL AUTOMATION ENGINEERING & PROJECTS PVT LTD
Jain University & Jain College(Corporate Relations)	VTU CPC(Mega Job fair)
James InfinusPvt Ltd	Vyom Labs
Jaro Education	Vyuhgenics India Pvt Ltd
JARO Institute of Technology, Management and Research Pvt. Ltd	Webmobi(Internship cum placements)
Jay Robotix	Weldcraft
JBM Ogihara Automotive India Ltd	Wenger & Watson
JEEVES INFORMATION SYSTEMS	Windowfab
JobRace	Wipro
Juspay	WrigNanosystemsPvt Ltd
K&S Partners	Xampr
Kabloom	Xcelerator Ninja (VTU CPC - Internship)
Kaho Labs	Xelpmoc Design & Tech Pvt Ltd
KANHA PLASTIC PVT LTD	Xoken Labs
Kantar	YethiPvt Ltd
KhimjiRamdas	Yscart(Internship)

KONGSBERG DIGITAL	Zenworx
Kotak Mahindra	ZOOM HKG Infosoft Pvt Ltd
KPIT	Zopper

9.6. Entrepreneurship Cell

(5)

Acharya Institute of Technology has IBM incubation cell to convert innovative ideas into products. To encourage entrepreneurial skills, institute has started Technology Business Incubator (TBI), to nurture and leverage innovative minds in embracing on sustainable business.

Objectives

- 1) To foster innovative ideas and support sustainable growth
- 2) To create a viable entrepreneurial ecosystem
 - i. Acharya Institute of Technology has set up an IBM Incubation cell during October 2010 which was inaugurated by the then IT & BT secretary, government of Karnataka wherein several ideas incubated and graduated out of the same.
 - ii. Several ideation fests have been organized by our institution to foster growth of start-ups and entrepreneurs.
 - iii. Entrepreneurship awareness workshops are organized by all departments as part of their forum activities.
 - iv. Institution has organized several networking events to help the entrepreneurs to connect and collaborate with technology professionals, mentors, investors, etc.
 - v. Entrepreneurship development programs are organized at regular intervals and speakers who are entrepreneurs themselves are invited to deliver talks. Recently programs are organized in the areas of cardiac design labs, Hardware accelerator and other entrepreneur delivered talks.

- vi. Students and alumni of Acharya Institute of Technology are invited either to participate in such entrepreneurship development programs or if they are already entrepreneurs, they are invited to share their experiences.
- vii. Participating in networking events conducted by external agencies.
- viii. Networking with NGOs and SHGs
- ix. Networking with industry associations like Peenya industrial association, ASSOCHAM, FICCI, IESA, etc.
- x. MOU with SASKEN Laboratories.
- xi. MOU with MOOC Technologies.
- xii. Acharya IPR Cell under KSCST has been set up in our campus.
- xiii. Acharya Internal IPR Policy has been formulated.

Impact of the efforts

A good number of student projects have been undertaken under the SASKEN innovation laboratory

Some of the noteworthy ones are mentioned below.

- 1) 4KUHD- Modify the existing H.265 codec to make it efficient in terms of Power and resolution for UHD TV's
- 2) Audio analysis- to extract the information and meaning from audio signals for analysis, classification, storage in the development of new audio-related products and services.
- 3) I See You- a Java based GUI that can be used to locate persons
- 4) RFID-range extender by developing RF repeaters
- 5) Master hub- a low cost universal master hub device that can be used for multiple applications
- 6) Mobile hearing aid-Mobile phone-based body ware digital hearing aid (MBW) device

- 7) ANNOVIL- Vehicle to vehicle communication through light
- 8) Object locator- a low cost object locator device that can be used for multiple applications
- 9) Mobile Glass- android application that can be used as reading glass/ magnifying glass
- 10) Lane departure detecting system in highway

Some of the successful enterprises incubated under the IBM Acharya Incubation Centre are:

- 1) INFOBOUTIQUE - Fully incubated and product launched in the market
- 2) TECHNOCRAT - Incubation done at Acharya incubation centre
- 3) CODE PIP - Incubation done at Acharya incubation centre
- 4) ATOM ROBOTICS - Incubated by Mechatronics Engineering students and robot called Jarvis sent for Patenting
- 5) SKY IMAGINATIONS - one developed by Mechatronics Engineering student and one being used commercially
- 6) MAVITRONICS –Student's from Mechatronics who successfully developed a 3D printer and for which they have won several national prizes

Some of the projects have been taken for commercialisations with various industries are as follows:

- 1) 3D Printer (Machine)
- 2) Automated coir-player
- 3) Multipurpose wheelchair for Neurologically Disabled People
- 4) Development of noise contour for Bangalore city
- 5) *In vitro* Anti diabetic Study by Glucose uptake assay on Skeletal Muscle cell line and Glut4 gene expression studies
- 6) Auto irrigation based on IOT

- 7) Floating solar panel
- 8) Prototype of UAV for agricultural applications
- 9) MUD concrete block using C and D waste

Collaboration with Foreign Universities to Enhance and Encourage Entrepreneurship

Acharya Institutes has MOU's with the following universities in the areas of student and faculty exchange, research collaboration, internships, joint programs etc. to enhance Entrepreneurship among the student as shown in Table 1.1. Under these MOU's our students are engaged in Research Projects under the mentorship of the Foreign University and the same is completed in a period of about 8-10 months and finally the best students are selected to do an internship at the respective University. We have 35MoUs with Universities and 24 MoUs with Industries

Last year we had about 13 students who went to ODU, 14 students who went to Carleton University and about 15 who went to Lubbock, Germany. This year also, 13 students are to do an internship at ODU and about 30 students to do an internship at Northern Illinois University.

Some of the students who have done exceptionally well in their research are being funded by those universities to continue their research, e.g. one developed by our MT student.

BOX-ACHARYA INSTITUTES TECHNOLOGY BUSINESS INCUBATOR

BOX-Acharya Institutes Technology Business Incubator (AITBI) has been established at our campus to nurture and outreach knowledge-based technology in innovative ideas; support sustainable growth to develop socially responsible entrepreneurs. The mission is to provide entrepreneurial ambience, mentorship and outreach, to foster innovative thinkers for entrepreneurial venture and to extend all possible assistance to them

as well as the society in all aspects of wealth generation, employment creation and social impact.

BOX-AITBI would provide an end-to-end cutting-edge ecosystem that supports new and emerging technology ventures and enhance their likelihood of success. The proposed incubator renders necessary Infrastructure, Financial support, Business advisory, Mentoring, Legal assistance, Product development, Networking, Commercialization, Protecting Intellectual Properties, Insurance, and Tax administration resulting in strategic alliances.

Objectives of the practice

AI-TBI aims in contributing to priorities of society at large and build a technology driven entrepreneurial ecosystem that paves overall economic wealth creation.

Goal

The goal is to provide entrepreneurial ambience, membership and outreach to foster innovative thinkers for entrepreneurial venture and to extend all possible hand holding in wealth generation, employment creation and social impact.

The context

The Vision of BOX-AITBI is to nurture and leverage innovative minds in embarking on sustainable business ventures for societal benefit.

The Mission of BOX-AITBI is to provide for, entrepreneurial ambience, mentorship and outreach, to foster innovative thinkers to be successful entrepreneurs in creating opportunities of employment for the welfare of the society.

Objectives of BOX-AITBI is to

1. Foster innovative ideas and support sustainable growth
2. Create a viable entrepreneurial ecosystem.

Infrastructure and human capital

In India, the numbers on startups speak volumes about the emergence of startups and it has been projected that by 2020 that there will be 11, 500 firms. The BOX- AITBI believes that long-term substantial growth can be accomplished by 1) Reducing financial risk by selecting appropriate proposals 2) Maximize the success of the projects by developing appropriate resources

The practice

BOX-AITBI would provide an end-to-end cutting-edge ecosystem that supports new and emerging technology ventures and enhance their likelihood of success. The incubator renders necessary infrastructure, financial support, business advisory, mentoring, legal assistance, and product development, and networking, commercialization, protecting intellectual properties, insurance, and tax administration resulting in strategic alliances. The Parent institute's continuous engagement with various verticals of industries and research institutes in India and abroad, strengthen augments the endeavors of the incubator. By virtue of research inquisitiveness, the involvement of the faculty in the technology driven start-ups will reinforce teaching and research, strengthen linkages between education and industry.

Thrust areas

BOX-AITBI, in alignment with the national initiatives and dynamic changes in technology front, is committed to adapt, demystify and deliver emerging needs. BOX-AITBI mainly focuses on the thrust areas such as Healthcare and Life Sciences, Clean Technology, Internet of Things, Food Processing and Agritech, e-Commerce and Automation and Control.

Apart from the primary functions, it also facilitates entrepreneurship awareness programs, startup boot camps, mentoring workshops, conclaves, panel discussions etc., to smoothen the functions of the startups in the BOX-AITBI. The incubator with its strong network of angel investors and venture capitalists, extend financial support in transforming economically viable ideas to successful commercial ventures.

Institutional support networks with organizations like the IIIMs, EDII, IBM, SASKEN, PIA, IITs and many others are already in place. The management of Acharya has been supportive in providing the initial seed funding for the AITBI activities. Corporate networks that will enable the AITBI to generate revenues through consultancy and training are in place.

Peenya Industrial Estate, one of the largest in Asia, is in the immediate vicinity of Acharya Institutes. BIEC, which hosts many trade fairs and exhibitions, is another neighbor. The Acharya campus with conducive environment that boasts of a good amount of entrepreneurial activity, micro finance facilities, self-help groups, etc. Acharya Institutes has already made substantial impact to its neighborhood, socially and economically.

Existing networks

Alumni network

Acharya Institute of Technology has a well-established alumni network comprising of about more than 20000 students who have graduated from our institution of which about 1000+ students have become entrepreneurs.

Network with various industries and industrial associations

Acharya Institute of Technology has understandings with various industries and industrial associations. Some of these are as mentioned below: -

Network Within industries and associations

National Aeronautics Ltd, Sasken Communication Technologies Limited, Moog India Tech. Centre, IBM India Pvt. Ltd., UTL Tech. Pvt. Ltd., SAP India Pvt. Ltd., Dynamatic Technologies Ltd, Prasiddi Engineers, Trinity Institute of NDT Technology, Mahindra and Mahindra Ltd., Infosys Campus Connect Program, Edall Systems, TIME, Rooman Technologies

Network with foreign institutions

Acharya Institute of Technology has a very good network with several foreign institutions. Some of these are 1) Illinois Institute of Technology, Chicago, USA 2) Florida International University, Florida, USA 3) Northern Illinois University, Dekalb, Illinois, USA, 4) Harrisburg University, PA, USA, 5) Carleton University, Ottawa, Canada, 6) Trinity Western University, Canada, 7) Old Dominion University, Norfolk, USA, 8) University of Illinois, Rockford, USA, 9) The University Institute of the Coast, Cameron, 10) Waljat Institution of Applied Sciences, Muscat, Sultanate of Oman, 11) University of Applied Sciences, Lubeck, Germany

Evidence of success

Details on entrepreneurship orientation for faculty/and proposed AITBI team.

Acharya Institutes TBI has entered into a MoU with Entrepreneurship Development Institute of India (EDII), Ahmedabad, and a pioneer institution in the field of entrepreneurship education. To ensure that all the AI-TBI members have a common understanding of entrepreneurship and management of an Incubation Centre, EDII designed a bespoke training program.

A 20-member team underwent the training workshop that was spread over four days residential program at EDII, Ahmadabad. The program was delivered by resource persons from various segments of the startup ecosystem and included Incubation.

The program also involved interaction with the CIIE, IIM-Ahmadabad. The core team is also interacting with NSRCEL, the Incubator at IIM, Bangalore. AI-TBI members are already exposed to entrepreneurship.

Problems encountered and resources required

Since BOX-AITBI is at its inception and yet to convert an idea in to incubation. Till now it is more of discussions and sharing of ideas and handholding. No specific difficulties have been noticed. Table shows a few startups by AIT alumni

Startups by AIT alumni

Name of the Alumni	Organization/Company	Website
Hirpararavi	Nixapp technologies	http://www.nixapp.com
Sauravchoudhary	Shree Balajee industries	http://www.shreebalajiindustries.org
Parsanavipul	Swat Info system	http://www.swatinfosystem.com
Manoranjanjena	Jena informaticspvt. Ltd.	http://www.jenainformatics.com
Revathy K	Finsol	http://finsolconsultancy.com
Nisha G and Mahanthasha H	Keenkite It Solutions Pvt. Ltd.	http://www.keenkite.com/
Ashwin B N	THT Technologies	http://www.thttechnologies.com
Lakshmikanth	Quals Technologies Pvt Ltd.	http://www.qualstech.com

Bhojrajsahu	Jena informaticspvt. Ltd.	http://www.jenainformatics.com
<u>Luitjyoti</u> and <u>kanhaiyalal</u>	Signoryle solutions	http://www.signoryle.com
<u>Balajij</u> , website:	Shoot bob	http://www.shootbob.com/
<u>Jasmeetsingh</u>	Softlogique it solutions (p) ltd	http://www.softlogique.com
<u>Ketanjaiswal</u>	Director, hsrk foods and beverages pvt. Ltd	http://www.aurnate.com
Aravind G.	DOGMA GLOBAL	http://dogmaglobal.com/
Naveen P	Npn-12 Service Network, Bangalore	http://npn12.com/
Parthsharma	Knight srobocorp, Bangalore	http://knightsrobocorp.com
PrakashRanjan	Asperify Technologies	http://aspirify.in

9.7. Co-curricular and Extra-curricular Activities

(10)

The institution has the policy to identify and nurture the talents among the students. At the beginning of every academic year during induction program students are apprised about facilities and opportunities to exhibit their talent by participating in extracurricular and co-curricular activities.

Also scheduling the events are sent through circulars and campus network e-news. Strategies for scouting and nurturing the talents in sports, cultural activities and debates/discussions and quiz/competition are by holding institutional level competitions and

also by participating in other institution program Following are some of the strategies adopted to promote student's participation in extracurricular and co-curricular activities.

- 1) Students are allowed to participate in various intra and inter institution competitions like, Technical quiz/symposiums to develop their competition skills.
- 2) Various sports activities are well published on the notice board and campus News e-network. The interested students are subjected to selection process, talented and eligible students are encouraged to improve the skills and participate in different events. Students after getting medals are honored/acknowledged through institution website and news Acharya
- 3) Every department on campus has a forum and here technical skills, technical competitions like Robo soccer, technical seminar, debits, paper presentation, guest lecture etc. are organized.
- 4) Cultural events are regularly planned within the university level and inter institution. After proper rehearsal different groups are identified to participate and represent at the inter institution and university level youth festivals.
- 5) The Department of Physical Education and Sports has six dedicated sports teachers for different kinds of games and organize many sports events.
- 6) Tennis court, Basketball court, cricket stadium, Volley Ball, Badminton, Table Tennis, Kabaddi, Kho-Kho, Shuttle Badminton, Weight Lifting and Power Lifting, Softball, Archery and indoor games facilities are available on campus. Horse riding training is given for the interested students. College has multipurpose stadium with a capacity of 20,000, which caters to events like Cricket, Foot Ball, Hockey, Softball, Handball and Athletics.

- 7) The Department faculty and student representatives from Cultural committees. This committee will identify students having interest in cultural activities and encourage/support them to participate in the institution day function/other institution.
- 8) Seminar halls & auditorium are available for performing events.

Additional academic support

- 1) Students represented state/nation at junior level is given scholarships during admissions.
- 2) Attendance benefit is given to students as and when they represent the Institution, University or National level sports as well as Cultural events.
- 3) Special classes and Makeup Internal assessment tests are conducted for those students who tend to miss their regular academic classes on account of extracurricular and co-curricular activities.

Special dietary requirements, sports uniform and materials

Special dietary requirements, sports uniform and materials are provided, during practice and match sessions.

- 1) Uniforms and ID cards are provided to all sports teams representing the institution.
- 2) Sports materials and kits are provided whenever necessary.
- 3) During matches, TA and DA are given as per the norms fixed by Sports Committee of the Institution.

Any other

- 1) Every year, for first year student's science department conducts activities under "Science Forum" in which students are allowed to participate in events like Quiz, Poster presentation, Fun with Maths, Mathematical modeling.

- 2) Each Department has a association namely Forum, Lakshya, Spectra etc which conduct various programs like Technical quiz, collage etc. This helps students to gain confidence in communication, organizing capability, budgeting, leadership, fund management, and team building.
- 3) Every year Kreedha habba is celebrated as a part of Acharya Habba, where maximum students participate in Athletics and in games like volleyball, basketball, chess etc.
- 4) To encourage Cricket interest among the students, Acharya Premier League (APL) is conducted by the institution with cash prize of Rs.1Lakh for winning team.
- 5) Every year Acharya Habba is celebrated in the month of March.

NSS Unit of the college

National Service Scheme is a student centered programme and it is complementary to education. It is a noble experiment in academic extension. It inculcates the spirit of voluntary work among students and teachers through sustained community interaction. It brings our academic institutions closer to the society. It is a link between the campus and community, the college and village, knowledge and action.

The overall aim of NSS is the Personality Development of students through community service. It gives an extension dimension to Higher Education system and orients the student youth to community service.

NSS Badge

The NSS symbol is embossed on the NSS badge. The NSS volunteers wear it while undertaking any programme of community service. The Konark wheel in the symbol has eight bars which represent the 24 hours of the day. The Red color in the badge indicates that the NSS volunteers are full of blood. i.e. lively, active energetic and full of high spirit. The

Navy Blue colour indicates the cosmos of which the NSS is a tiny part, ready to contribute its share for the welfare of mankind.

NSS LOGO

The symbol of the NSS is based on the '**Rath**' wheel of the Konark Sun Temple situated in Orissa. These giant wheels of the Sun Temple portray the cycle of creation, preservation and release, and signify the movement in life across time and space. It stands for community as well as change and implies the continuous striving of National Service Scheme for social transformation & upliftment. development!

Aim

- Personality Development of students through community service.

Objectives

- The broad objectives of NSS are to: -
- Understand the community in which they work;
- Understand themselves in relation to their community;
- Identify the needs and problems of the community and involve them in problem solving process;
- Develop among themselves a sense of social and civic responsibility;
- Utilize their knowledge in finding practical solution to individual and community problems;
- Develop competence required for group-living and sharing of responsibilities;
- Gain skills in mobilizing community participation;
- Acquire leadership qualities and democratic attitude;
- Develop capacity to meet emergencies and natural disaster and Practice national integration and social harmony.

Members:

Sl. No.	Name	Designation	Role
1.	Dr. Prakash M R	Principal	Chairperson
2.	Dr. S M Gopinath	Prof and HOD, BT	Chief Program Officer
3.	Dr. Aruna M	Asst. Prof., EEE	Coordinator
4.	Mr. Praveen B B	Asst. Prof., ME	Coordinator
5.	Mr. Narasimhamurthy	Asst. Prof., MI	Coordinator
6.	Ms. Thriveni	Asst. Prof., BT	Member
7.	Mr. Mahanthayya	Asst. Prof., AE	Member
8.	Mr. Mallikarjun	Asst. Prof., Phy	Member
9.	Mr. Satish K B	Asst. Prof., Chem	Member
10.	Ms. Bhagirathi	Asst. Prof., MT	Member
11.	Mr. Chetan	Asst. Prof., Maths	Member
12.	Mr. Dhananjaya	Asst. Prof., CV	Member
13.	Mr. Swamy M R	Asst. Prof., MCA	Member
14.	Mr. Avinash	Asst. Prof., CSE	Member
15.	Mr. ArunKenchapur	Asst. Prof., ISE	Member
16.	Ms. Nagapushpa	Asst. Prof., ECE	Member
17.	Mr. Prajwal	Asst. Prof., AU	Member
18.	Mr. Lohit	Asst. Prof., MS	Member
19.	Mr.SuhasPatil	Asst. Prof., MBA	Member

A NCC COY (9 KAR BATTALION) is also available in the campus where students of AIT are a part of it.

10. Governance, Institutional Support & Financial Resources (120)**10.1 Organization, Governance and Transparency (40)****State the Vision and Mission of the Institute (5)****10.1.1 Vision**

“Acharya Institute of Technology, committed to the cause of sustainable value-based education in all disciplines, envisions itself as a global fountainhead of innovative human enterprise, with inspirational initiatives for Academic Excellence.”

10.1.2.Mission

“Acharya Institute of Technology strives to provide excellent academic ambience to the students for achieving global standards of technical education, foster intellectual and personal development, meaningful research, ethical, and sustainable service to societal needs.”

The vision and mission statements are communicated to all the staff, students and parents and stake holders through the institute website, prospectus, and induction programme, back cover page of blue books, departmental newsletter, and institute magazine. These statements are also displayed at prominent places of the institute.

Values: Pursuit of Excellence
Integrity and Transparency
Leadership

Motto “Nurturing Aspiration and supporting Growth”

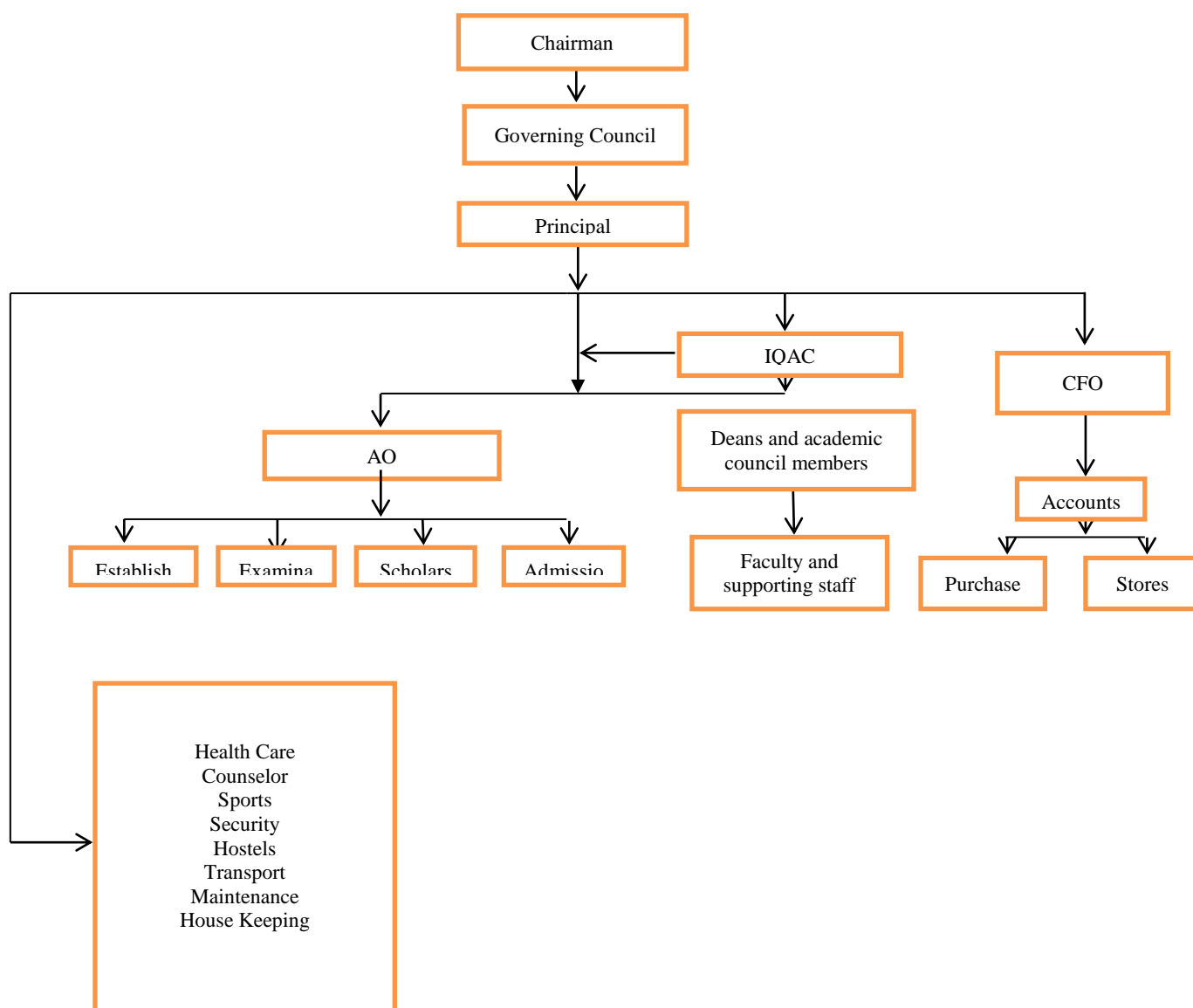
Governing Body, Administrative setup, functions of various bodies, service rules, procedures, recruitment and promotional policies **10**

List the governing, senate and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance there in, in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed. The published rules including service rules, policies and procedures; year of publication shall be listed. Also state the extent of awareness among the employees /students.

Governing council Members

Sl no	Name	Designation
1	Mr. B. PREMNATH REDDY, founder chairman, Acharya Institute of Technology	Chairman
2	Dr. K. RAMACHANDRA, Former Director, GTRE, Bangalore	Member
3	Mr. GEORGE PUNNOOSE, coo, kalkitech	Member
4	Dr. H. N. SHIVA SHANKAR, Director RNSIT, Bangalore	Member
5	Dr. D.K. SUBRAMANYAM, RETD. Prof. IISc, Govt. Nominee	Member
6	Dr. R. NATARAJAN, Former AICTE Chairman	Member
7	Director of Technical Education, Govt. of Karnataka, Bangalore.	Member
8	MR Venkat Sathish,	VTU Nominee
9	REGIONAL OFFICER, AICTE, SWRO, BANGALORE.	Member
10	Dr. RAJESWARI, Prof. &HOD-E&CE, Representative of faculty	Member
11	Dr. Y. VENKATARAMI REDDY, Former, Vice-Chancellor, JNTU	Member
12	Dr. Prakash M R, Principal, Acharya Institute of Technology	Member secretary

Organization chart:



College Academic Council:

The academic activity of the institute is supervised by the Academic Council for which, Principal is the Chairman and all heads of the departments are members. The Committee meets once in a month to discuss the academic performance and to take decisions on critical academic matters, The Minutes of this meeting is forwarded to all the faculty members and management. The salient points of the Academic council meeting are made as agenda for Governing Body.

Academic Council

Sr No	Name	Position	Designation
1	Dr M R Prakash	Principal	Chairman
2	Dr. SK Maharana	HOD AE	Member
4	Dr. Chandrappa	HOD AU	Member
5	Dr. Gopinath SM	HOD BT	Member
7	Dr. Gunashekhar	HOD, Civil	Member
8	Dr. Prashant C M	HOD CSE	Member
9	Dr. Rajeshwari	HOD ECE	Member
10	Dr. Prakash R	HOD EEE	Member
11	Dr. Surekha K B	HOD ISE	Member
12	Dr. Prakash Dabeer	HOD ME	Member
13	Dr. Ramesh Hegde	HOD MCA	Member
14	Dr. M M Bagali	HOD MBA	Member
15	Dr. Devarajaiah R M	HOD MT	Member
16	Dr. Rajanna K R	HOD Maths	Member
17	Dr. Mahesh SS	HOD PHY	Member
18	Prof Sathish	HOD Chem	Member

The college has several committees instituted by the Director Admissions who also nominates the Coordinators of the various committees with their duties and responsibilities. The committees are Internal Quality Assessment Cell (IQAC), Anti Ragging, Grievance Cell, Disciplinary, Library, Sports & Cultural, Training & Placement, College Newsletter, Women Welfare Committee, Hostel Committee, and Examination Cell,

Internal Quality Assurance Cell (IQAC)

Strategies

IQAC shall evolve mechanisms and procedures for:

1. Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks
2. The relevance and quality of academic and research programmes

3. Equitable access to and affordability of academic programmes for various sections of society
4. Optimization and integration of modern methods of teaching and learning
5. The credibility of evaluation procedures
6. Ensuring the adequacy, maintenance and functioning of the support structure and services
7. Research sharing and networking with other institutions in India and abroad

FUNCTIONS

Some of the functions expected of the IQAC are:

1. Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution
2. Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process
3. Arrangement for feedback response from students, parents and other stakeholders on quality-related institutional processes
4. Dissemination of information on various quality parameters of higher education
5. Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles
6. Documentation of the various programmes/activities leading to quality improvement
7. Acting as a nodal agency of the Institution for coordinating quality-related activities, including adoption and dissemination of best practices
8. Development and maintenance of institutional database through MIS for the purpose of maintaining/enhancing the institutional quality
9. Development of Quality Culture in the institution

10. Preparation of the Annual Quality Assurance Report (AQAR) as per guidelines and parameters of NAAC, to be submitted to NAAC

BENEFITS

IQAC will facilitate/contribute:

1. Ensure heightened level of clarity and focus in institutional functioning towards quality enhancement
2. Ensure internalization of the quality culture
3. Ensure enhancement and coordination among various activities of the institution and institutionalize all good practices
4. Provide a sound basis for decision-making to improve institutional functioning
5. Act as a dynamic system for quality changes in HEIs
6. Build an organized methodology of documentation and internal communication

COMPOSITION

IQAC is constituted under the Chairmanship of the Head of the institution with heads of important academic and administrative units and a few teachers and a few distinguished educationists and representatives of local management and stakeholders

The composition of the IQAC may be as follows:

1. Chairperson: Head of the Institution
2. A few senior administrative officers
3. Three to eight teachers
4. One member from the Management
5. One/two nominees from local society, Students and Alumni
6. One/two nominees from Employers /Industrialists/stakeholders
7. One of the senior teachers as the coordinator/Director of the IQAC

Anti-Ragging Committee

The rules and regulations to be followed against ragging is as prescribed by the UGC and the complete information is available on: <http://www.antiragging.in/Site/Infopack.aspx>

In brief:

What Constitutes Ragging?

1. Teasing, Treating or handling a fresher or any other student with rudeness.
2. Indulging in Rowdy or Undisciplined Activity causing harm to other individuals.
3. Adversely affecting the physique or psyche of fresher or any other student.
4. Disrupting regular academic activity.
5. Exploiting the services of fresher or any other student for completion of academic tasks.
6. Financial extraction or forceful expenditure burden put on any fresher or any other student.
7. Acts of abuse by words, emails, posts, public insults.
8. Any act affecting the mental health and self-confidence of a fresher or any other student.

Monitoring Mechanism:

1. Constitution of Anti ragging committee headed by Head of Institution and consisting of representatives of civil and public administrations, NGOs, local media, faculty, parents, students and non-teaching staff.
2. Anti-ragging squads to maintain vigil, oversight and patrolling functions. The Squads have to make surprise visits on hostels, and other places vulnerable for ragging activities. Reports on the visits have to be made by the members of the squad.
3. Constitution of mentoring cell to promote the objectives of anti-ragging and should comprise of student volunteers.

Action against Principal/Head of Institution/Faculty Members/Non-teaching staff:

1. The head of institution/principal shall be liable for criminal action for negligence of duty in lapse in taking adequate measures against ragging. The appointment letter of all employee should incorporate the clause that they shall be liable of action in case of non-compliance for prevention of ragging.
2. Receive affidavit from ALL employees that he/she would report promptly any case of ragging which comes to his/her notice.
3. Departmental enquiries shall be initiated, in addition to penal consequences against employee (head of institution, faculty-teaching and non-teaching) who display insensitive attitude towards complaints of ragging.
4. If Head of Institution/faculty members is found negligent in preventing ragging, he/she shall be declared unfit for holding any post in technical institution.

Action to be taken against student indulging in Ragging:

1. FIR must be files without exception by the institutional authorities with the local police authorities.
2. The Anti-ragging committee shall take appropriate decision, with regard to punishment.
3. Depending upon the nature and gravity of offence, the possible punishments for those found guilty of ragging shall be any one or combination of the following:
Cancellation of admission, suspension from attending classes, withholding/withdrawing of scholarships, debarring from appearing in any examination, withholding results, debarring from representing in any tournament/youth festival, suspension/expulsion from hostel, rustication from the institution for a period ranging from 1 to 4 semesters, expulsion from institution and debarring from admission to any other institution.

Women's Cell

Introduction

Acharya Institute of Technology recognizes the need to inculcate a culture of respect for the female gender and the creation of a climate which is free of sexual harassment fear and an urgent need to address the task of the prevention and support to those who need assistance.

Acharya Institute of Technology aims to provide safe working and learning campus life for faculty and students free from gender discrimination and sexual harassment. It aims to cultivate an atmosphere where men and women work together towards the growth and prosperity of the institution in a safe and healthy academic environment. Women Cell is initiated in this institution to serve the purpose of Female Fraternity.

Objectives of Women Cell

- Committed to fulfil the Institution Vision.
- To sensitize about women safety and gender equality.
- To provide a platform for women to express their grievance/seek redressal in the work life

The committee will aim to redress cases brought forward by any one enrolled in AIT in any capacity by empathizing with them and bringing in professional guidance and support to overcome the situation. The committee would meet based on issues and would record reports every three months.

Operations and Actions

1. Information to all students/ members of staff, teaching and non- teaching about the formation, objectives and existence of women's cell will be passed on by an e-mail. This is to bring about awareness about existence of a cell. Any member in the committee can be contacted for help.
2. When an issue is reported, the members of the committee will understand the matter

and take a written complaint. Formal enquiry will be set up by the committee with the person who complained and the one on whom the complaint is launched.

3. A fair enquiry will be conducted and chairman will decide on the plan of action.
4. If there is prima facie case lawyers/ counselor's advice will be taken.
5. Empathy and secrecy will be maintained to get the victim into mainstream activities and life.

Anti-Sexual Harassment Cell

The members of the Women's cell only constitute the Anti-Sexual Harassment Cell. The committee aims to address

- Gender discrimination,
- Sexual harassment, and
- Promote gender amity, gender justice and full-fledged support to person in trouble.

Gender discrimination is a situation in which a person is treated less because of their biological difference or sex difference. This is usually referred to a woman being treated less compared to their men counterpart.

Sexual harassment includes unwelcome sexually determined behavior such as

- Physical contact and advances
- Demand or request for sexual favors
- Showing pornography
- Any other unwelcome physical, verbal, non-verbal conduct of sexual nature.

According to code of conduct at work place prepared by the National Commission for Women in 1998, sexual harassment includes such behavior as

- Eve teasing
- Unsavory Remarks
 - Jokes causing awkwardness
 - Gender based insults

- Sexual overtones in talking
 - Touching and brushing while talking
 - Display of pornography

Gender Justice is ensuring sexual equity and equality, non-hierarchy and non-discrimination and protective safeguards.

Hostel Committee

Roles and Responsibilities of Halls of Residence Council

1. The Halls of Residence Council shall peruse and approve all Halls of Residence Policies and shall meet at least once in two months in the evening
2. After the Meeting the Council shall have an interactive session with residents of Halls of Residence and also shall have dinner in the Mess
3. Halls of Residence Council shall approve Halls of Residence Rules, ensure implementation, and review recommendations for punishment and all awards.
4. Recommendations approved by the Council shall be binding on all colleges and shall be placed on the Agenda in the next Meeting of Council of Principals for information
5. The punishments for offences committed in Halls of Residences may extend from Suspension from Classes, Expulsion from Halls of Residences, Non-Eligibility for Placement, Academic Rustication from Colleges etc., as decided case-by-case by the Council.
6. The Council shall review and approve budgets for Halls of Residences, lease, rent and other contracts, approve all contracts for running the Mess
7. The Council shall recommend to Chairman of Acharya Institutes, persons found fit for appointments as Chief Manager, Managers, Asst. Managers and Supervisors from time to time to work in coordination with the Faculty Wardens

8. Council shall directly impose punishments for all Staff of Halls of Residence who figure in drug abuse, child, gender issues, smoking and drinking, financial irregularities and any other un-lawful activities unfit for Acharya campus
9. In case of Faculty Wardens indulging in any activities as above, the Halls of Residence Council shall recommend and take summary action with the approval of the Council of Principals even to the extent of termination of Services
10. In case of contract appointments their services shall be terminated by the council after review.
11. The decision of the Hostel Council in all such aspects shall be final
12. All Funds that accrue to and spent by Halls of Residences and Students shall be audited by the Trust Auditor and presented for approval of Chairman of the Hall of Residence Council
13. The Halls of Residence Mess – running and finances would be administered under his guidance through a Halls of Residence Management Committee consisting of the Warden, Supervisors and nominated student representatives as detailed later
14. The Halls of Residence Council will appoint Wardens in various Hostels as per strength of resident students from each of Acharya Institutions
15. Such of the Faculty Wardens shall hold office for a period of two years and not exceeding four years at a stretch
16. The Halls of Residence Council once constituted shall have powers to review and include or delete any of the above roles and responsibilities from Terms of Reference.

Role of Chief Warden

1. The Chairman of Acharya Institutes shall appoint, after recommendations by Council of Principals, a Chief Warden.

2. The Chief Warden shall be an Academic person not below the rank of a Professor of one of the Colleges.
3. The Chief Warden shall report to the ES2C who is the overall Oversight Officer entrusted with operations of all Halls of Residence and seek approvals, wherever necessary.
4. The Chief Warden shall network and provide through the Proctorial system a sound and balanced where in the Proctors shall operate as single-window information source on all aspects of a students' life, particularly in the Halls of Residences working closely with the Wardens and Supervisors / Managers of respective Halls of Residence.
5. The Chief Warden shall through the Proctors keep the student's deficiencies informed for the parents to be alert and also if necessary, communicate to them such deficiencies.
6. The Chief Warden shall ensure formation of a cohesive Team comprising of Supervisors, Proctors and Wardens to provide a healthy academic environment for all students staying in various Halls of Residences.
7. The Chief Warden shall see that there is no duplication of work assigned nor is there a conflict or subordination in the Team that functions in the Halls of Residence.
8. The Chief Warden shall operate in close coordination with the Managers and other Supervisors who shall be reporting to him.
9. The Chief Warden shall be responsible for the Halls of Residence Discipline, Implementation of all policies like the Anti-Ragging Policy, Zero-Tolerance Policy and so on.

10. He shall also recommend and implement punishments and awards as approved by the Halls of Residence Council.
11. Maintenance of Study Hours, Academic Discipline, restricted and approved absenteeism from Halls of Residences only on valid grounds, shall be the responsibility of Wardens together with the Supervisors
12. He shall also ensure balanced Diet for Halls of Residence mates, Dietary values of food supplied in Halls of Residence Mess, Meetings with parents and Guardians regularly.
13. He shall provide in coordination with the Manager and supervisors of each of the Halls of Residences, Student amenities like Phone booths, Internet facility and Computer center, Stationery stores and bookshops, Fitness Centre, Indoor games facilities etc.
14. All Halls of Residence staff like shall report to the Chief Warden.
15. Independently in each of the Halls of Residence the Wardens shall have overall responsibility for all such activities as are entrusted for the Chief Warden shall work in close coordination with the Supervisors in such Halls.
16. The Chief Warden shall act cohesively with the Campus Medical Officer and approved Hospitals to ensure prompt and timely medical attention. For all peruses the Chief Warden and Member-Secretary to Council together with the Oversight Officer shall be the only spokespersons for any situation in Halls of Residence

Role of Hostel Manager

1. Management of Halls of Residences is independent of the Academic Management of Colleges and Chairman shall appoint a Manager for the Halls of Residences.
2. His overall responsibility includes closely coordinated work with the Chief Warden

3. Controlling all revenues and expenditures, and all documentation thereof as assigned by the Oversight Officer of Hostels for all the Halls of Residences including Lease, Room rents, Maintenance Costs etc shall be Chief Manager's responsibility.
4. He also would separately maintain the revenue and expenditures of the Halls of Residence
5. All Funds that accrue to and spent by Halls of Residences and Students shall be audited by the Trust Auditor and presented to and approved by the Chairman of the Hall of Residence Council.
6. The Halls of Residence Mess – running and finances would be administered under the overall guidance of Chief Warden and Manager through a Halls of Residence Management Committee consisting of the Wardens, Supervisors and five student representatives
7. Award of Mess Contracts should be approved by the Chairman for each Halls of Residence
8. The Manager is also responsible for the cleanliness and hygiene, health care and security in the Halls of Residence
9. He will monitor completely and take such assistance as necessary from all Supervisors - one of whom shall be available 24/7 for students and Faculty Wardens in each Hall of Residence.

ROLE OF WARDENS

1. The Warden's Visits to Halls of Residence shall be on a roster as decided by the Management Committee and approved by Oversight Officer, to which they are

attached from 8 AM to 8 PM on all working days, one or two Wardens every day as decided by Chief Warden and so mentioned in the monthly Rosters

2. Such of these visits in the mornings are to ensure that students are out of the Hostel to attend classes and are not lazing in and also to see if anyone reports sick.
3. A Wardens Visit register shall be maintained in each Hall of Residence to record the Warden's specific observations and comments on individual students.
4. The Wardens must also check Resident's Movement Register and take measures for corrective actions for Residents coming in late or after permitted hours.
5. During the Roster-schedule for that day each Warden shall be present in the dining Hall during the entire period of Lunch-time and maintain discipline in the place.
6. The Warden shall have his Breakfast and Lunch, and also write his comment in Mess Menu Register about the food.
7. The Wardens shall enter in detail action taken by him / Proctor and their interaction with parents whenever that takes place and measures taken to solve the issues in Warden's Log Register clearly and with brevity (Kept with Supervisors)
8. The Wardens shall carry out any other responsibility assigned by the management from time to time.
9. Chief Warden shall decide and may maintain the list / duty rosters on a monthly basis for Faculty Wardens / Proctors visiting Hall of Residences
10. The list of Faculty wardens / Proctors must be approved by appropriate authority and shall be duly forwarded to Hall of Residencies.
11. Faculty wardens / Proctors visiting Hall of Residences must report to one authority only (Chief Warden or the Oversight authority).
12. Parents must be called by one authority only, to avoid contradictory and at time conflicting reports.

13. The authority shall be either Warden or Proctor only and unless it is an emergency the Supervisors may inform the Warden(s) on that day roster duty to contact the parents.
14. Manager Hostels shall report to the Oversight Authority and the Chief Warden
15. In case of Emergencies the Wardens shall make it a point to attend to the Halls of Residence Emergency 24/7. For female Wardens in such emergencies transport shall be provided.
16. An honorarium of Rs 1000 shall be provided to wardens to cover transport and telephone charges and towards gratification for services rendered

ROLES AND RESPONSIBILITIES OF SUPERVISORS

DO'S FOR SUPERVISORS:

The Supervisor:

1. Must maintain discipline in the Halls of Residence premises as per the policies laid down from time to time``
2. Must take attendance at specified time and keep a record of student's attendance.
3. Must also observe and report if any student is in drunken or abbreviated state
4. Must interact with students on daily basis and ensure to act upon any feedback or complaints received.
5. Must contact with Maintenance staff viz., Electrician, Plumber to attend / repair the complaints lodged by Residents in complaint register.
6. Must ensure safety, security and prevent un-authorized entry into the Hall of Residence
7. Must ensure that, no ragging takes place in the Hall of Residence premises.
8. Must carry out any other responsibility as assigned from time to time by the management.

9. Must not handle cash in any form of Fine or Hostel Fee
10. Must constantly interact with the Faculty Wardens and help supervision of Resident discipline.
11. Must accompany the Faculty Warden in making rounds of Halls of Residence in the morning to prevent residents staying back from attending classes
12. Must help remove residents to sick rooms if so, recommended by the Campus Medical Officer
13. Must maintain a log of all actions taken by him throughout the day / night mentioning the name of Resident / Room No. where such action was initiated.
14. Must keep all details of all residents as in Resident Cards updated and on-line for easy access when needed
15. Must be present on his duty at all times, unless permitted in writing by the Manager and Chief Warden to go on leave or any other absence
16. Must check the movement registers for proper entries.

DONT'S FOR SUPERVISORS:

The Supervisor must not

1. Smoke, drink or gamble and must also prevent such acts in the Halls of Residence, as there is a Zero-Tolerance for such acts of indiscipline.
2. Collect any money for any purpose and shall not permit any such donations to be collected for any purpose (Religious / otherwise) and must report if any resident or staff does so immediately for necessary enquiry and punishment.
3. Allow any inventory item either from Rooms or from Mess to be taken out of the Rooms or Dining Hall / Kitchen without a Gate-Pass and he must instruct the Security personnel accordingly.

4. Allow Cigarettes, Drinks or any Food parcels from outside or caterers to be brought into Halls of Residences and must instruct the Security personnel to seize such items at the gate.
5. Allow rough handling of property of Hall of Residence or fittings and shall immediately report such acts for enquiry and punishment.
6. Under any circumstances the Supervisors cannot manhandle students and are subject them to physical punishment

The Chief Warden may take appropriate measures for Supervisors to be trained in administering First Aid, Fire-fighting, Emergency Operation of Stand-by Generator and shall also be trained in basic English Language Communication skills.

Student Oversight Committee for Halls of Reference

1. For each Hall of Residence, a team of 10-20 Student Volunteers / nominees shall form two committees one for the Mess and for Oversight of Facilities and Amenities together with Self-Discipline, as the major motto. These committees shall be guided by the Chief Warden and Manager, but only in an advisory capacity.
2. Half of the members of the committee shall be replaced every semester by new volunteers / nominees so that the Committees shall become truly representative bodies for each Hall of Residence.
3. The students in the committee shall play the ideal resident's role in each of the Hall of Residence and also shall have the responsibility to identify themselves as vigilantes of the Hall of Residence.
4. Since most of the student residents are in the process of becoming professional graduates in due course they shall also take on and team up for such attitude in the areas of their concern.

5. The Oversight Committee may form two teams of five members each as below, with corresponding responsibilities:

Team Overseeing the Mess [5-10 Members]:

Day to day running of the Mess and Menu Design shall be decided by the Students' Team within resources and budgets, also keeping in mind the dietary needs for wellness of residents.

Team Overseeing Hostel Facilities [5-10 Members]

Ensuring Cleanliness, Hygiene, Decorum of Washing and drying of clothes and maintaining a healthy environment, coordinating with visiting Wardens for maintaining Discipline and Anti-Ragging processes in place, providing early warning networks to avoid destruction of property and keeping tight Security 24/7.

Disciplinary Committee

Introduction:

Disciplinary committee in an educational institution focuses on personality development and good behavior among growing students. The main motto of Disciplinary committee is to ensure that all the students adhere to their roles and responsibilities.

Mission:

To create congenial study atmosphere by implementing zero tolerance policy towards disciplinary actions and behavior of students.

To help students to impart disciplinary and moral values throughout their tenure.

Objectives:

1. To receive or hear issues relating to indiscipline.
2. To take right decision and action according to the procedure framed by the committee.
3. To implement zero tolerance policy towards indiscipline in the Institute.
4. To redress the victims of indiscipline if any.

5. To bring awareness and inculcate disciplinary values among the student fraternity.

Functions of the Committee:

1. To create awareness about rules and regulations of the college.
2. To maintain and enforce strict discipline in the campus and fair trial for the defaulters.
3. Need based meeting and action taken report and documentation.

Procedure for Committee hearing

To register the complaint or activity of indiscipline on report through oral or written by the victim or faculty or any individual student or by a stake holder of the institute or on notice by any member of the disciplinary committee, the following procedure is carried out:

1. Preliminary meet on the issue and take immediate action if necessary.
2. Notice to the person/s involved in violation of the discipline to attend the disciplinary committee meet on the scheduled date.
3. Conduct necessary investigations if any clarifications are required.
4. Hearing and written statement of the accused to be taken on the scheduled date of meeting.
5. Final decision and action based on the facts and within the purview of the institution rules and regulations and related law enforced should be carried out.
6. Notice of the final decision on the accused decided by the disciplinary committee with adequate proof to be given to the accused and documented.

STUDENT AFFAIRS AND WELFARE**Roles and responsibilities of Dean Students Affairs (DSA) / Welfare**

Excepting academic matters which are dealt by Dean Academics, all student issues are the responsibility of DSA, including all co-curricular activities of students. DSA looks into disciplinary action rules and regulations applicable for students.

Nature of Functions

1. Organizing and managing all matters related to students' welfare, conduct and discipline.
2. To act as Chief Proctor of the Institute.
3. To ensure Discipline among students in and outside Campus.
4. Supporting Department student forum coordinators regarding the co-curricular activities of the students.
5. Coordinating with anti-ragging squad, anti-ragging monitoring cell and ragging prevention cell to ensure ragging free campus.
6. Organizing Student Counseling and information to parents about any issues.
7. Liaison with parents/guardians of students with respect to their performance and conduct on a regular basis.
8. To coordinate to resolve Hostel issues of students, if any, with Chief Warden and Hostel Manager.
9. Approve for issuing Bonafide / Study/ Conduct certificate to students.
10. Support in organizing programs to motivate students for better academic performance, personality development, Campus Placements, Social Connect etc.

Each department has 6 student forum coordinators – 2 from 2nd year and 4 from 3rd year

All coordinators together plan year wise activities for forum which include Technical events,

Budget for which will be approved and monitored by DSA.

Examination Committee**Roles and Responsibilities****Examination Committee**

- Preparing the guidelines for smooth conduction of internal and external examination.

- Monitoring question paper indent, stationery indents for Labs & Theory examinations, arrangement for collection of Exam (Theory/Labs) stationery from VTU.
- Monitoring the uploading exam application to the VTU web portal.
- Resolving any discrepancies found in admission ticket (Subject, subject codes) with concerned VTU authorities.
- Obtaining approval for permitting scribe for physically challenged students with proper documents from VTU.
- Monitoring room allotment day wise and appointment of DCS, Room superintendent for conduct of Theory Examination (Invigilators duties list well in advance).
- Maintaining confidentiality of VTU exam online question paper printing (QPDS) for both theory and lab.
- Monitoring the shortage of question papers and charts, tables and issuing duplicate admission tickets to the students during examination during examination.
- Verification of A forms and B- forms for uploading absentee's statement to the VTU portal.
- Verifying the received answer booklets with respect to A-forms & B-forms from room invigilators, DCS (internal) and RRS.
- Arrangements for bundling/ stitching of the answer scripts bundles and handover to Regional office, Nagarbhavi, Bangalore every day after completion of exams.
- Analyze promoted and detained student numbers and give the information to departments for further needful during that academic years.
- Planning for IA marks updating to VTU web portal, getting approval of batch list for practical exam UG/PG from VTU/BOE and conduction of practical examinations.
- Planning for VTU digital valuation work at our center and monitoring the valuation process till the completion.

- Resolving the any issues found during valuation with concerned VTU coordinators.
- Approval of disbursement of examination and valuation remuneration semester wise.
- Maintenance of records related to VTU examinations.
- To attend the student grievance related to examinations.
- Orientation program for newly recruited staff members to bring awareness and consequences about the conduction of examination process.
- To present the statistical data of numbers taken exams, valuation details, MPC cases etc.

Heads of the Department:

- Online applications for VTU exams to be announced in departmental notice boards and convey the message to the students through concerned proctors.
- Depute one faculty member along with office assistance to upload exam application form.
- Attestation of exam application form to be done by proctors and HOD of the respective department.
- Verification of subject codes both regular and arrears subjects to be done by the department level and issue the admission tickets to the students well in advance.
- Admission tickets of other two sets to be handover to the exam section before the commencement of exams.
- Uploaded exam application form to be printed and signature of the students is compulsory.
- Any discrepancies observed with respect to subject, subject codes in application form to be brought to the notice of exam section well in advance.
- Orientation to be done to the students about rules and regulations about VTU examination process well in advance.

- Instructions to the proctors to monitor the students involved in MPC cases of previous years.
- Instruction for the faculty members to take up examination work positively and attend the same without fail.
- Alternating the exam duties to be monitored by HOD (mutual and not repetitive) and forward only genuine cases to the exam section.
- HOD/deputed faculty members have to monitor regularly the respective students of their department during VTU examinations.
- Strict instructions to be given to the faculty members not carry mobile phone to the examination hall even in switch off mode.
- HoD's to give information to the exam section if any physically challenged students present in the department well in advance.
- Deputation of lab instructors for clerical work during examination.

Deputy Chief Superintendent:

- The DCS shall report to the Chief Superintendent at the exam **section 60 minutes before the commencement of exam** and record his reporting to duties by affixing his signature in the attendance register placed for the said purpose.
- The DCS shall assist the Chief Superintendent in arranging the question papers block wise (branch wise / course wise) as per the seating allotment.
- The DCS shall oversee the distribution of blank answer books; additional books such as data handbooks, tables, charts, graph sheets, drawing sheets etc.,
- The DCS shall deliver the packets of question papers to the rooms concerned within the stipulated time.
- The DCS shall ensure that the Room Superintendents are supplied with all necessary requirements for the smooth and fair conduct of examination.

- The DCS shall remain at the block allotted to him during the entire period of examination and shall not leave the block allotted to him without prior permission of the Chief Superintendent.
- The DCS shall sign on all the B -Forms at the end of 30 minutes of start of the examination and see that two sets of B-Forms are received at the exam section for preparation of A-Forms.
- The DCS shall ascertain that the room superintendents have made the mandatory announcements in the respective examination halls such as “All the students shall check their pockets, in and around their seats and see that no sheets/chits of paper are found and in case if they find such material they shall remove the same and throw out in the dustbin by bringing it to the notice of the room superintendent. The students shall note that they are not permitted to use the **programmable calculators** and other **electronic gadgets including mobile phones, memory chips** etc., in the examination hall and any violation of the same will be considered as case of malpractice and will report for necessary disciplinary action”.
- The DCS shall see that the candidates with valid admission ticket and college identity card only are allowed to take the examination. If any candidate has lost admission ticket the same shall be reported to the Chief Superintendent.
- The DCS shall be responsible for reporting the cases of malpractices in the VTU format and handing over the case to the Chief Superintendent.
- The DCS shall cooperate with the appointed squad for overseeing the conduct of the examinations in a fair manner.
- It is the sole responsibility of the DCS that the Room Superintendents strictly comply with the duties & responsibilities assigned to them and the examination is held in a fair manner in the rooms / blocks allocated to him/her.

- At the end of the examination, the DCS shall receive the answer booklets from the respective Room Superintendents and pack them as per the A-Form and instructions from the Chief Superintendent with the assistance of the relieving superintendents.
- The DCS shall see that each of the packets is super scribed with the following information: Semester, Course Code, Course Title, Date & Time, and Total Number of Scripts.
- In the event of any discrepancy, like misplacement of the booklet, absence of the candidate's signature, USN, invigilator's signature, errors in B-Form, A-Form etc., and the DCS shall be held responsible and shall be available for a recall for clarifications.
- Any dereliction to duties by any of the staff deputed to work at the examination halls / blocks allocated to DCS, shall be reported in writing to the Chief Superintendent.

Relieving Room Superintendent (RRS):

- There shall be one Relieving Room Superintendent for every 150 candidates. If the number of students is less than 75, the Deputy Chief Superintendent shall take the responsibilities of the Relieving Room Superintendent.
- The Relieving Room Superintendent (RRS) shall report to the Chief Coordinator of SEE, **60 minutes** prior to the start of the examination and affix signature in the attendance register placed at the exam section.
- The RRS shall receive the list of examination rooms / blocks allotted to him/her to discharge the duties as RRS and report to the CS. The RRS shall assist the CS in general for smooth conduct of examination and perform the duties assigned by the CS. In the event **exigency**, the Chief Superintendent may opt to utilize the services of the RRS as RS and the RRS shall accept the duties assigned and discharge the same.

- The Relieving Room Superintendent shall give relief to the Room Superintendent for a maximum of 15 minutes after one hour from the commencement of examination & be in charge of the duties of Room Superintendent during that period and discharge all the duties & responsibilities of the “Room Superintendent”.
- The RRS shall return the Relieving Superintendent’s diary duly filled to the Chief Superintendent at the exam section, after the end of that particular session of examination.
- The Relieving Superintendent shall not permit Room Superintendent to leave the examination hall during the first and last half an hour of the examination. During the intervening period, he/she shall relieve the Room Superintendent to attend nature calls. The RRS shall be moving from block to block to provide relief to the RS during the examination.
- The Relieving Superintendent shall assist the DCS in receiving the answer booklets from the RS and in the process of bundling.
- The Relieving Superintendent shall in addition to the above duties attend to any other work entrusted to him / her by CS/DCS.

Room Superintendent:

- The Room Superintendent [RS] shall report to the Chief superintendent at the exam section at least 50 minutes (MS: 8:40 am, AS: 1:10 pm) before the commencement of the examination and record his/her reporting to duties by affixing his/her signature in the attendance register placed for the said purpose
- The Room Superintendent shall ascertain the examination room/block assigned to him / her and the number of candidates in the block

- The RS shall collect the answer booklets/drawing sheets, seating allotment or B - Forms corresponding to the allotted room/block from the coordinators under acknowledgement and verify the stationary received for distribution to the students. etc.,
- The RS shall reach the allotted examination room/block, **30 minutes before** the commencement of the examination and permit the entry of students to the examination hall twenty minutes before the commencement of the examination. The RS shall see that the students occupy only the seats allotted for them.
- The RS shall receive the question papers from the respective DCS
- The answer papers shall be distributed to those candidates only, who are seated in the examination hall and are not to be placed on the vacant seat.
- Prior to issuing the question papers to the students, the RS shall mandatorily announce to the students to leave the books, papers and other reference materials etc., outside the examination hall and instruct the candidates to search desks, tables, their pockets, wallets, instrument box and hand over to the Room Superintendent if any papers / notes/ manuscripts / books or any material.
- The RS shall inform the students that they shall not be in possession of any written material on hand/s, palm, writing pads, inner and outer covers of calculator/geometry box, hand kerchief, etc., also they shall not possess mobile phone or any other electronic gadget such as memory chip etc., in the examination hall.
- The Room Superintendent shall distribute the question papers to the candidates seated in the examination hall, only when the commencement bell of the examination is given.
- Candidates shall be allowed to leave the examination hall only after 45 minutes have elapsed after the commencement of the examination.

- The Room Superintendent shall affix signature on the answer booklets of the students, at the place marked as Room Superintendent signature, only after verifying the identity of the candidate with photo on admission ticket and College ID Card, entered the correct seat number and other particulars required on the facing sheet of the answer paper and obtain signature of the candidates on attendance report (FORM -B)
- The Room Superintendent shall remain alert in the examination hall and shall attend to the requests of the candidates for supply of any other permissible stationary materials attested by the chief superintendent.
- If any student has not brought his / her admission card, the matter shall be brought to the notice of the Chief Superintendent through the DCS.
- If any Candidate is absent the word ABSENT shall be written in capital letters in the appropriate column of the attendance sheet (FORM B), preferably in red ink, after expiry of 30 minutes from the time of commencement of the examination. A consolidated statement showing course wise, candidates present and absent be submitted in form A.
- After half an hour of the commencement of the examination, the spare answer books, question papers shall be returned to the staff when he/she visits examination hall.
- The Room Superintendent shall not accept the answer paper of any candidate without ensuring that it bears his/her correct university seat number (USN) and other information asked on the page of the answer paper.
- The RS shall not allow the candidate to use unfair means in the examination hall.
- No candidate shall be allowed to attend nature calls.
- The Room Superintendents are expected to take rounds in the hall and shall not engage themselves in conversation with other Room Superintendent while the

examination is going on and also shall not read magazine or newspaper by sitting at a place

- The violations of instructions by any candidate shall be brought to the notice of the DCS/CS immediately.
- While taking rounds of the examination hall, if the Room Superintendent notices any candidate indulging in copying or possessing a manuscript or answer papers other than that of the candidate, any written material on calculator/geometry box / scale / parts of the body, he /she shall immediately take in his / her possession the candidate's answer book, question paper, and the materials which he/she has used for copying and immediately report to the DCS/CS.
- The Room Superintendent should not allow the candidate to leave the examination hall till the DCS comes to the examination hall and takes over the charge.
- Taking Tea/Coffee or any other refreshment in the hall where the examination is in progress is strictly prohibited.
- After the expiry of the time of the examination, when the final bell is given, the Room Superintendent shall collect the answer papers and shall arrange seat number wise and hand them over to the DCS personally along with other reports in the exam section.
- The Room Superintendent shall not leave the College premises until he/she personally hands over the answer books to the Deputy Chief Superintendent at the exam section.
- The Room Superintendent shall be personally held responsible for loss, misplacement of any answer book.
- Any dereliction to duties on the part of the Room Superintendent as observed by the DCS will be recorded by the DCS and reported to the CS based on which the CS initiates the necessary disciplinary action.

- Whenever the members of designated flying squad make a surprise visit, the Room Superintendent shall ensure their identity and allow entering the examination hall for surprise check.

Note:

- Deputy Chief superintends (Internal & External), Room superintend to be present if any malpractice case is booked and submit the required reports.
- Deputy Chief superintends (Internal & External) & Relieving superintend to be present till the completion of bundling answer scripts.
- One-hour extra time to be given for Physically challenged students
- Drawing examinations will be for four hours.

Housekeeping Department:

- Hospitality arrangements to be done for examiners (external and internal), VTU squad members and examination section members during examinations.
- List of attenders required for examination work to be submitted to the exam section well in advance.

Transport Department:

- Arrange mini bus to handover the answer scripts bundle to VTU regional office, Nagarbhavi, Bangalore during examinations.

Maintenance Department:

- Depute one technician to monitor power back up to the exam section.

System Department:

Depute one technician to monitor internet, camera recording and printers in QPDS section till the completion of examination process.

Sports & Cultural Committee

Vision

The Acharya Department of Sports and Physical Education Department along with cultural team is dedicated to develop discipline, leadership qualities and teamwork with physical and intellectual resilience in view of sprouting the desires of society.

Mission

Provides platform to pioneer the knowledge, skills and attitudes to pursue and enjoy a physically active and healthy lifestyle creating overall balance and developing character in the pursuit of excellence.

Objectives:

- To enhance and feed additive talents hidden in students in developing their overall personality.
- To encourage students in development of their physical and mental health through active participation in extracurricular activities.
- To enhance their skills and to accentuate their understanding and learning graph.
- To reach out to the other institutes of the university through various activities and widen their spectrum.

Outcomes:

1. Will be enhancing soft skills such as communication skills and confidence levels along with breaking their stage fear.
2. Would be able to time management, emotion management success (& failure) management crisis management and more importantly people management.
3. Will be equipping their whole lives with knowledge and passion for sport and art.
4. Inculcating values such as empathy, broad mindedness, team-spirit, self-control, ethics, acceptance of pluralities in society, corporate social responsibility, and so on.

5. Reservations and placements in sports and cultural quota would be add-on benefits for the students who represent state and nationals.

Functional overview:

- **Selection / Audition Trails:**

Identification of new talents is being done by selection trails that will be conducted at the start of academic year for almost all sports. Selection processes will be done by professional experts from respective sports.

Audition to be carried at the start of academic year for cultural events that will comprise of teams of theatre, music and dance. Field experts along with faculty and alumni will form the audition panel. This will help to maintain good repo with alumni.

- **Teams:**

Teams are finalized based on the student's performance in selections. The respective teams are headed by the captains who are selected based their performance and ability to lead. The coaches are appointed to train the students. (Both permanent as well as contracted coaches are appointed. It depends on student's continuous interest on the games.)

Cultural teams are finalized based on the auditions held. All teams are headed by the student coordinators. The respective workshops are to be conducted by field experts. The finalizing cultural team will help them practice on a regular basis.

- **Practice Sessions:**

Both sports and cultural teams are to practice regularly place for their regular practice are being fixed by the coordinators. The coaches and coordinators are to train the teams in their respective areas regularly.

- **Uniforms /Equipment's:**

College will be providing the required uniforms and equipment's that are required to participate in the events.

- **Participation:**

The teams are to be trained and made ready regularly as this would help them participate in the events. The main overview of this is self-development of students as well as college development. Students are to participate in the **university fest (VTU Youth Festival)** with both sports and cultural full-fledged teams. They are kept ready to participate in other private college fest as well. This will help students as well as college growth. These teams can actively participate in “**Acharya Habba**” as well.

- **Interdepartmental activities:**

Interdepartmental activities would help the active participation of students in it. When the number spectrum is reduced to departmental level the student's interest might be boosted while representing the department.

- **Development activities:**

This will help students actively utilize their leisure time in their personality development activities. This will teach them time management skills, Personality development, Physical and mental growth etc.... With some social theme cultural activities will help the students think actively about society and create awareness through art forms.

- **Scholarships:**

Students with Sports background who have played at District level, State level and National levels are given scholarships from the institution. These students' further growth would be nurtured by Institution.

- **Benefits:**

Students:

1. Personality Development.
2. Leadership Qualities
3. Social Awareness
4. Language knowledge Development
5. Physical and mental fitness
6. Creative compassion and tolerance
7. Time management
8. Emotion management
9. Self-management

College:

1. Advertising fame for the college
2. Active participation in VTU fest
3. Alumni links. (The senior passed out students can do the regular audition and get involved in it.)
4. Add on credentials for the college with prizes.
5. Entry to competition flawless.
6. Sponsorship

- **Allowances:**

The action plan for the academic year is required to be collected in the start by the coordinators. Later their accountability is responsibility of the coordinator and physical education director.

The events participation is being addressed through general academic budgets and action plans. This would include the TA/DA (Re 100 each as DA) for participants in the competitions.

Transportation: College would be coordinating with transportation by providing college bus in and around Bangalore or by financing external transportation cause either by Bus or Train

(Non-Ac), and equipping their participation with all requirements.

Roles and Responsibilities of Committee Members:

1. To prepare the Annual Budget for sports and cultural events separately.
2. To plan and schedule both sports and cultural events for the academic year.
3. To obtain formal permission from the College authorities to arrange programs.
4. To decide the date, time and agenda of the programs.
5. To inform members of staff and students about the events.
6. To arrange the venue and logistics.
7. To arrange memento for guests and gifts/certificates for the participants.
8. The committee shall display on the Notice Board/Website information about festivals to be celebrated.
9. The committee shall also be responsible for organizing cultural and sports events in the college.

10.1.3 Decentralization in working & grievance redressal mechanism 10

The management has delegated its authority to the Principal to administer the institute on sound principles. The principal in-turn has delegated the powers to HODs of all departments under Acharya Institute of Technology. Principal looks after the overall performance and development of Acharya Institute of Technology. He looks after academic activities of the Institute as per the university and AICTE requirements. Dean

Student affairs looks after the co-curricular and extracurricular activities of the student community and ensures their participation in maximum number of events to enhance their overall personality. Dean R& D concentrates upon research & development activities and initiatives and looks after the developments taking place in various departments. Chief Superintendent and Deputy Chief Superintendents ensure that the examination systems are foolproof and exams are conducted with full integrity. The principal is assisted by Academic Council and IQAC in all the matters of interest and holds review meetings on monthly basis and decisions are collectively taken on the issues pertaining to improvement and functioning of the Institute. In-turn the Heads of the Departments conduct monthly faculty meetings within respective departments and obtain the details pertaining to academic and non-academic and any student related problems. Also, all the faculty members are student counselors and they are in constant touch with the students through weekly meetings. The information collected by them is passed on to HODs who in turn appraise the HODs and the principal. Thus, the administration is transparent and trust-worthy and facilitates smooth conduct and function of the Institute. All purchases are handled by a Purchase committee who receive requisitions from various departments and the committee evaluates the need, timeframe of supply, budgetary provisions and accordingly processes the purchases requirements. The Committee is headed by Director and has senior faculties and administrators as members. The principal in turn briefs the management about the purchases to be made and all such proposals are finally put up in Governing Council meetings for approval.

Grievance Redressal Committee

The grievance redressal committee is formed and functions as per the regulations given by the UGC (https://www.ugc.ac.in/pdfnews/1406982_Public-Notice-on-Grievance-redressal.pdf).

The grievance redressal committee in Acharya Institute of Technology is as follows:

SI NO.	Name	Designation	Role
1	Dr Prakash M R	Principal, AIT	Chairman
2	Dr. R. Prakash	Prof & Head, EEE	Member
3	Dr. Devarajaiah	Prof & Head, MT, Dean- Academic	Member
4	Dr. Rajeswari	Prof & Head, ECE,	Member
5	Dr. Indrani Pramod Khelkar	Prof & Dean Student Affairs	Member
6	Prof R. Shadakshari	Asst Prof. Mech& Chief Warden, AIT	Member
7	Dr. Ramesh Hegde	HOD of MCA, AIT	Convener
8	Sri Ramakrishne Gowda	General Administrations, Acharya institutes	Member
9	Dr ARK Swamy	Prof, Dept of ME & Hostel Warden	Member
10	Mr. Vijay Hasya	Hostel Manager, Acharya Institutes	Member

10.1.4 Delegation of financial Powers

(10)

(Institution should explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of financial powers for each year of the assessment years.)

Financial powers are delegated to the Principal and the Head of the department. Annual budget is prepared by the Head of the department in consultation with departmental faculty members. This is further scrutinized by principal and recommends the budget for approval to the Management. The financial account is periodically reviewed by the Principal and Accounts Department. The Principal of the Institution has been granted the power to utilize an impressed amount of Rs Fifteen Thousand only (Rs 15,000) on suitable institutional expenses, at any given point of time. The HoD of the Department has been granted the power to utilize an impressed amount of Rs Five Thousand only (Rs 5,000) on suitable departmental expenses, at any given point of time.

At any point, Rupees Fifteen Thousand and Rupees Five Thousand (provided to Principal and HoD) will be maintained and is reimbursed as a top-up based on usage. Subsequently Principal is at Liberty to procure the required equipment during the Financial Year as against the proposed budget, by presenting the same in the Purchase Committee. Further, Special powers have been delegated to the Principal, if the amount exceeds the proposed budget to the extent of 10 to 20% as against the proposed budget.

10.1.5 Transparency and availability of correct/unambiguous information in public domain

(5)

The college website and the Enterprise Resource Planning (ERP) software ensures that all information's pertaining to students, staff in the ERP to ensure that all stake holders are adequately informed about the policies and procedures along with the developments taking place that could affect them.

All the information pertaining to the admissions, faculty and supporting staff details, student attendance, internal marks, infrastructural facilities, details of programs, information related to ongoing student training programs, faculty development programs, symposiums etc., are made available in the college internet-based ERP.

All Minutes of Meetings like Academic Council, Department Review Meetings (DRM) and other information are mailed to all HODs for further information to all the faculty members. The relevant details are available in the departmental files which are readily accessible to all faculties in the departmental file racks.

10.2.1 Adequacy of budget allocation

10

The yearly budget is prepared according to the needs & requirements of the departments taking into consideration of annual intake of students, laboratory & infrastructure developments. Students, faculty & staff requirements and promotions and latest technologies

etc.

Various departments submit the annual budget to principal. On receipt of such proposals, principal, in consultation with departmental HODs, prepares a consolidated proposal. After deliberations formal budget made altered in departments and forwarded to Principal for preparing final budget at college level and submits it to the Governing Body for approval and sanction.

The Management is approving almost 100% which was proposed by the institute. The budget allocation and utilization for the last three years is adequate. All the expenditure needs prior approval from the competent authority. Funds would be spent only from the approved budget. If funds are required for expenses not mentioned in the proposal, management's approval is a must. Management ensures the adequacy of the funds from various sources like, fee accrual, donation and bank loans.

Budget Expenditure per student - Recurring

Acharya Institute of Technology									
Financial Year	Total Income in lakhs				Total Income (Fees +Interest)	Actual expenditure in lakhs			
	Fee	Govt.	Grants	Other Sources (Interest on Fixed Deposits & Others)		Recurring including Salaries	Total Expenses	Student Strength	Expenditure per students -Recurring
2018-19 - 01/04/18 to 04/02/2019	6054.91		2.86	7.49	6065.27	4514.44	5241.41	4658	0.96918
2017-18	6985.08	--	0.20	18.95	7004.04	5112.92	9796.82	4528	1.12918
2016-17	6506.93	--	9.31	2.78	6509.71	4205.40	6341.45	5033	0.83557
2015-16	5909.44	--	0.35		5909.44	4524.89	6286.07	5036	0.89851
2014-15	6025.66	--	38.33	5.07	6030.74	4305.23	7021.44	5231	0.82302
2013-14	5524.97	--	24.66	26.98	5551.96	3709.80	4118.76	4481	0.82790

Budget Expenditure per student -Non-Recurring

Expenditure and cost per student in lakhs

	Income from Fee	Govt.	Grants	Other Sources (Interest on Fixed Deposits & Others)	Total Income (Fees +Interest)	Non-recurring	Student Strength	Expenditure per students - Non-Recurring
2018-19 - 01/04/18 to 04/02/2019	6054.91		2.867	7.490	6065.27	726.97	4658	0.15607
2017-18	6985.08	0	0.020	18.95	7004.03	4683.89	4528	0.10300
2016-17	6506.93	0	9.311	2.786	6509.71	2136.05	5033	0.4244
2015-16	5909.44	0	0.354	0	5909.44	1761.17	5036	0.3497
2014-15	6025.66	0	38.333	5.074	6030.74	2716.20	5231	0.5192
2013-14	5524.97	0	24.659	26.989	5551.96	408.95	4481	0.0912

Allocation of budget for different categories

Allocation of budget in lakhs								
Items	Budgeted in CFY	Actual expenses in 01/04/18 to 04/02/19 *	Budgeted in 2017-18	Actual expenses in 2017-18	Budgeted in 2016-17	Actual expenses in 2016-17	Budgeted in 2015-16	Actual expenses in 2015-16
CAPEX								
Infrastructure Built-Up	150	418.27	3800	3763.35	900	856.54	170	1619.86
Library	3.5	1.32	3.5	3.55	1.5	1.37	28	28.63
Laboratory equipment	25	11.39	65	67.68	90	88.36	1.45	1.44
Others:								
Electrical Fitting & Equipments	350	184.18	300	298.05	465	464.42	55	54.34
Furniture & Fixtures	55	50.8	50	49.60	16	15.89	3.5	3.48
Computer & Software	70	58.85	470	469.69	480	481.21	45	43.20
Vehicles				18.50	220	220.65	10	9.62
Office Equipment	5	2.136	50	50.49	7.5	7.62	0.6	0.60
Total CAPEX	658.5	726.97	4738.5	4683.90	2180	2136.05	313.55	1761.17
OPEX								
Laboratory Consumables	5	1.32	4	3.76	30	30.24	25	23.14
Teaching and non-teaching staff salary	2800	2064.87	2520	2519.24	2350	2351.18	2480	2460.97
Maintenance and spares	350	285.72	335	334.47	280	278.42	505	507.40
R&D	5	2.867	0.2	0.20	10	9.31	0.4	0.35
Training and Travel	70	48.95	65	65.03	48	47.19	62	61.29
Miscellaneous expenses*								
Advertisement	120	85.11	150	153.63	70	71.09	64	63.26
Bank Charges	1	0.3038	6	5.86	0.9	0.87	1	0.97
Books & Periodicals	0.3	0.25	0.18	0.18	0.2	0.19	0.2	0.25
Cleaning & Maintenance	30	14.59	36	36.01	20	19.04	17	17.26
Donation	0.5	0	0.2	0.20	0.15	0.11	1.75	1.75

Electricity & Water	100	49.74	120	119.92	110	110.62	90	90.74
Membership & Subscription	12	12.25	10	10.81	5	5.19	9	8.71
Miscellaneous Expenses	5	3.236	5	4.38	5	5.30	5	4.98
Loss on Sale of Car				5.19				
Postage & Telephone	60	48.25	58	58.21	32	32.71	28	28.90
Printing & Stationery	60	42.61	90	90.09	100	98.28	86	87.12
Professional Charges	115	84.74	100	102.97	125	125.16	100	98.61
Rate & Taxes	30	28.13	28	28.23	34	34.00	28	28.13
Registration & Renewals	220	177.93	210	208.45	120	117.56	105	104.52
Sponsorship & Seminar Expenses	20	11.51	20	21.63	8	7.90	12	12.53
Staff Welfare	55	23.03	52	51.61	55	53.68	65	66.31
Student Development Expenses	450	261.87	430	428.28	540	535.73	570	572.44
Interest on Term Loan	1200	1087.89	900	864.56	280	271.66	290	285.28
TOTAL OPEX	5708.8	4335.23	5139.58	5112.93	4223.25	4205.40	4544.35	4524.90
TOTAL EXP -CAPEX+OPEX	6367.3	5062.2	9878.08	9796.83	6403.25	6341.45	4857.9	6286.07

Adequacy of budge allocation**10**

(The institution needs to justify that the budget allocated during assessment years was adequate)

Since the department is in growing phase, college management has made it a point that funds should not be a hindrance factor for the healthy rate of growth. Adequate budget is allocated and expenditure is monitored. In no circumstances, teaching learning process is made to suffer because of fund shortage.

Sl.No.	Assessment Year	Budget Allocated in Lakhs	Actual Expenditure in Lakhs	Adequate / Non-Adequate
1	2018-2019	6367.3	5062.2	Adequate
2	2017-2018	9878.08	9796.83	Adequate
3	2016-2017	6403.25	6341.45	Adequate
4	2015-2016	4857.9	6286.07	Adequate

Utilization of allocated funds**15**

(The institution needs to state how the budget was utilized during assessment years)

During last three years budget allocation and utilization is in order and no deficiency was observed

Sl.No.	Assessment Year	Budget Allocated in Lakhs (Rs.)	Actual Expenditure in Lakhs (Rs.)	Percentage of Utilization
1	2018-2019	6367.3	5062.2	79.50
2	2017-2018	9878.08	9796.83	99.18
3	2016-2017	6403.25	6341.45	99.03
4	2015-2016	4857.9	6286.07	129.40

10.3 Availability of the audited statements on the institute's website (5)

(The institution needs to make audited statements available on its website)

Institutional audit statements are available on the institute's website

10.3 Program Specific Budget Allocation, Utilization 30

Total Budget at program level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year, CFYm1

Department of Computer Science and Engineering								
Items	Budget ed in 2018-2019	Actual Expenses in 2018-2019 till date	Budgeted in 2017-2018	Actual Expenses	Budget ed in 2016-2017	Actual Expenses	Budget ed in 2015-2016	Actual Expenses
Laborator y equipment	500000	489735	65000	60685	190000	189900		
Consumab les			40000	37998				
Salaries	160500	1,19,22,346	1,60,65,600	15515769.1	17190540	1,60,67,901	20280481	1,96,89,348
Library	150000	25300	2344370	53464	200000	19148	265000	260102
Maintenan ce	450000	110000	50000	100000	120000	120000	125000	120000
R & D	30000	6265	30000	28421	40000	37713	25000	20769
Training and Travel	250000	182469	160000	152510	700000	694141	425000	402936
Project Expo	10000	10000	10000	10000	10000	10000	10000	10000
General Expenses	55000	14106	50000	33330	50000	33200	50000	31330
Total	1749500	12760221.14	1,87,09,970	15893494.14	18310540	16982102.71	21180481	2,05,34,485

Department of Civil Engineering								
Items	Budgete d in 2018-2019	Actual Expenses in 2018-2019 till date	Budgeted in 2017-2018	Actual Expenses	Budgete d in 2016-2017	Actual Expenses	Budgete d in 2015-2016	Actual Expenses
Laboratory			50000	45961				

equipment								
Salaries	1020800 0	7,03,008	1,04,05,000	10241478. 6	1050000 0	1,03,54,09 5	1080000 0	1,07,86,671
Library	150000		15000	14111			140000	136714
Transport/ survey camp	230000	230000	220000	219000	215000	215000	175000	160000
R & D	28000	4100	24000	800	24000	4000	50000	48000
Training and Travel	175000	174969	110000	104324	275000	265086	281000	280616
Project Expo	12000	10000	10000	10000	10000	10000	12000	10000
lab consumable s		450	550000	51116			60000	52580
Total	1080300 0	8122527. 1	1,13,34,000	10640829. 6	1102400 0	10848181	1151800 0	1,14,74,581

Department of Electronics and Communication Engineering								
Items	Budgete d in 2018- 2019	Actual Expenses in 2018- 2019 till date	Budgeted in 2017- 2018	Actual Expenses	Budgete d in 2016- 2017	Actual Expenses	Budgete d in 2015- 2016	Actual Expenses
Laboratory equipment	9500000	9466169	170000	169000			85000	82523
Consumable s			1120000	1115829	13000	12500		
Salaries	1760000 0	1,65,34,412	1,95,00,000	19124825. 4	1800000 0	1,78,81,804	1850000 0	1,83,49,050
Library	150000		60000	52991	25000	24875	90000	86820
Transport								
R & D	80000	4500	870000	869115	80000	32500	80000	166100
Training and Travel	210000	196469	750000	723978	350000	349064	980000	971476
Project Expo	12000	10000	12000	10000	12000	10000	12000	10000
General Expenses								
Total	2755200 0	26211550	21192000	20780909	1846700 0	18298243	1966200 0	19583446

Department of Mechatronics Engineering								
Items	Budgeted in 2018- 2019	Actual Expenses in 2018- 2019 till date	Budgeted in 2017- 2018	Actual Expenses	Budgeted in 2016- 2017	Actual Expenses	Budgeted in 2015- 2016	Actual Expenses
Laboratory equipment	201000	200600			145000	141264		
Salaries	6000000	4268597	5500000	5157453	5200000	5018089	6200000	6077483
Library	150000	0	10000	2274	10000	10000	100000	97563
Transport	20000	20000	20000	20000	20000	20000	20000	20000
R & D	30000	5000	30000	3000	5000	3000	30000	10900

Training and Travel	200000	195938	47000	45925	1840000	183521	185000	184199
Project Expo	10000	10000	10000	10000	10000	10000	10000	10000
General Expenses					1000	1000		
Total	6611000	4700135	5617000	5238652	7086000	5245610	6545000	6400145

Department of Mechanical Engineering								
Items	Budgeted in 2018-2019	Actual Expenses in 2018-2019 till date	Budgeted in 2017-2018	Actual Expenses	Budgeted in 2016-2017	Actual Expenses	Budgeted in 2015-2016	Actual Expenses
Laboratory equipment	50000	0	3500000	3417858	112000	111095	85000	81037
Lab Consumables	90000	86928	70000	68938	80000	79750	75000	73395
Salaries	21600000	2,13,15,097	2,65,00,000	26084050	25000000	2,40,24,102	26000000	2,57,15,159
Library	150000		15000	14783	25000	22496	300000	291853
Software			410000	400000				
Transport	22000	21000	25000	22000	22000	21000	25000	22500
Maintenance					1500	1208	20000	19360
R & D	25000	20850	10000	6250	40000	32400	115000	113728
Training and Travel	175000	156469	80000	77760	355000	353808	395000	392863
Project Expo	12000	10000	12000	10000	12000	10000	12000	10000
Total	22124000	21610344.29	3,06,22,000	30101639	25647500	24655859.29	27027000	2,67,19,895

10.3.2 Utilization of allocated funds

(20)

(Program needs to state how the budget was utilized during the last three assessment years)

During last three years budget allocation and utilization is in order and no deficiency was observe

Computer Science and Engineering				
Sl.No.	Assessment Year	Budget Allocated in Lakhs	Actual Expenditure in Lakhs	Adequate / Non-Adequate
1	2018-2019	174.95	127.60	Adequate
2	2017-2018	187.09	158.93	Adequate
3	2016-2017	183.10	169.82	Adequate
4	2015-2016	211.80	205.34	Adequate
CIVIL Engineering				
Sl.No.	Assessment Year	Budget Allocated in Lakhs	Actual Expenditure in Lakhs	Adequate / Non-Adequate

1	2018-2019	108.03	81.23	Adequate
2	2017-2018	113.34	106.41	Adequate
3	2016-2017	110.24	108.48	Adequate
4	2015-2016	115.18	114.75	Adequate
Electronics and Communication Engineering				
Sl.No.	Assessment Year	Budget Allocated in Lakhs	Actual Expenditure in Lakhs	Adequate / Non-Adequate
1	2018-2019	275.52	262.12	Adequate
2	2017-2018	211.92	207.81	Adequate
3	2016-2017	184.67	182.98	Adequate
4	2015-2016	196.62	195.83	Adequate

Mechatronics Engineering				
Sl.No.	Assessment Year	Budget Allocated in Lakhs	Actual Expenditure in Lakhs	Adequate / Non-Adequate
1	2018-2019	66.11	47.00	Adequate
2	2017-2018	56.17	52.39	Adequate
3	2016-2017	53.50	52.46	Adequate
4	2015-2016	65.45	64.00	Adequate

Mechanical Engineering Department				
Sl.No.	Assessment Year	Budget Allocated in Lakhs	Actual Expenditure in Lakhs	Adequate / Non-Adequate
1	2018-2019	221.24	216.10	Adequate
2	2017-2018	306.22	301.02	Adequate
3	2016-2017	256.47	246.56	Adequate
4	2015-2016	270.27	267.20	Adequate

10.4 Library & Internet

20

(Indicate whether zero deficiency report was received by the Institution for all the assessment years. Effective availability/purchase records and utilization of facilities/equipment etc. to be documented and demonstrated)

The Learning Resource Center, the Central Library of Acharya Institute of Technology with its state-of-the-art facilities and excellent resources plays a more proactive role in providing excellent user services, optimal use of resources and support quality and enhancement in teaching, learning, research and extension. The Library at the heart of the Campus is an intellectual laboratory that provides a leap into the information age and continues to keep pace with the developments in the ICTs and adopt new modes information delivery. The Learning Resource Center, a fully digitized Knowledge Center for accessibility with print and e-resources provides an ideal environment for intellectual inquiry and provides user focused services to obtain and evaluate scholarly information and knowledge available in main formats and strives to create new knowledge to increase understanding and develop wisdom.

The Library has significant collection of books, journals, e-books, e-journals, secondary sources, databases, digital data archival and manuscript collections, digital primary sources to support the curricular and research needs of all the Departments and also to support the teaching and research mission of the Institute. KOHA – the Library Management software on Cloud computing is used for automation and in-house information management.

Qualified and experienced staff provides easily accessible and cost-effective information services and access to a broad, varied and deep range of information resources and services within all subject areas and at all levels. Access to high quality print and digital books and Journals, e-resources, case studies, Connect2 learning resources, range of study spaces, specialists' advice and assistance in teaching, learning and research with inspirational environments for study and research are provided. Aim of the Library has been to a proactive role in meeting information needs of the users.

Access to information resources under VTU, INDEST, INFLIBNET, DELNET, HELINET consortia are provided in addition to many subscribed national and international databases. Also international network linkages have been established to access learning resources of MIT, Stanford University, University of Illinois, Cambridge University, Oxford University, Tufts University, OCLC, Ohio, USA, National Medical Library, USA, National Agriculture Library, ODI, USA, IDS and other universities and organizations. E-resources of the Library are accessible 24x7 anywhere on campus network (Wi-Fi) and also off campus (remote access through EzProxy).

Extensive user instruction programs and sensitization/awareness programs on information literacy, information management skills are organized regularly. Assistance to access variety of resources directly and through the learning management system are extended. The staff works with students to answer their questions and also to improve their information search skills. Individualized research assistance is provided through a variety of formats including one-on-one consultation, Research librarians, Research Hub drop-in help, email, chat, and text messaging.

The Library extends support to the research and publications process of Faculty and Researchers. Library offers smart, professional and sustainable solutions to the Institute's existing and future research environments, to position itself at cutting edge of technological development and contribute to the increased visibility, dissemination, conservation and evaluation of scholarly production.

The Library offers the users a route for self-directed learning and discovery through digital and technological means. The Maker spaces/Fab Labs encourage the users to regain control of technology and design to create new ideas. Digital lending; renting and reference; Bibliotherapy; the Reading Cure; resource sharing, MOOCs, Academic Commons/Learning Commons, Fed Gate and other Resource Discovery Tools provide

new services to enhance student learning and facilitates better collaboration among students, faculty and Professional staff. Question point service “Ask a Librarian” is a unique online service where queries and reference questions are responded within 24 hours to support excellence in Teaching and Learning.

Important Facilities and Services

- Ask-A-Librarian - Question Point Online Reference Service.
- Videoconferencing.
- Wi-Fi accessible across the Library.
- Library e-resources Remote Access (off-campus access) through EzProxy.
- Research Skills and support in Research assignments/projects, consultations, online course guidance, digital class projects etc.,
- User Training, Sensitization and Information Literacy programs.
- Info skills – Identifying, finding, evaluating, referencing and metadata applications.
- Research Data Management, Publishing support, Style Manuals.
- Workshops/Programs on Citations, Citation Management Tools.
- Plagiarism Check tools (Turn-it-In) and services.
- Institutional Repository (Repository of research output, publications, thesis and dissertations and other useful academic archival material).
- SCOPUS - Abstract and Citation database subscribed.
- Research Data Repository (Preserving data generated by the Faculty Members, Research Scholars for in-house use).
- Scientific Productivity and research impact.
- Print, Copy, Scan Services.

10.4.1 Library space, ambience, timings and usage, availability of a qualified Librarian and other staff, Library automation, Online access, networking.

Carpet area of Library (in m2)	5574 Sqm
Reading Space (in sqm)	1800 Sqm
Number of Seats in reading space (in sqm)	600 Sqm
Number of Users (Issue book) per day	400 per day
Number of Users (reading space) per day	650 per day
Timings: <ul style="list-style-type: none"> During working day Weekend/Public Holiday Vacation 	8.00 am - 10.00 pm 9.00 am - 5.00 pm 8.00 am – 10.00 pm
Number of Library Staff	27
No. of Library Staff with Degree in Library Science	16
Computerization for search, indexing and issue/return records	KOHA Integrated Library Management Software
Bar-coding used	Bar-coding and RFID
Library services on internet / intranet	Both
INDEST or other similar membership specify	VTU Consortium, DELNET, HELINET, N-LIST
Archives	Institutional Repositories (IRs) and Hall of Fame to Preserve History, Honor Excellence and Connect Generation

10.4 .2 Titles and Volumes per title

Number of Titles: **17265**

Number of Volumes: **77487**

Year	No. of New Titles added	No. of New Editions added	No. of New Volumes added
2018-19	648	626	1093
2017-18	169	93	563
2016-17	80	49	237
2015-16	924	484	6782

10. 4.3 Scholarly Journals Subscription

Year	No. of Technical Magazines/Periodicals	No. of Total Technical Journals Subscribed		Scholarly Journal Titles (in original reprints)
		In Hard	In Soft Copy	

		Copy		
2018-19	20	210	8366	4975
2017-18	18	184	8611	5050
2016-17	Nil	Nil	8611	5050
2015-16	18	Nil	540	350

10.4.4 Digital Library

Availability of Digital Library Contents:	
• Number of Courses	13
• Number of E-Books	12895
• Number of E-Journals	8366
• Number of Project Reports	1099
Availability of an exclusive Server:	Amazon Cloud Server
Availability over Intranet/Internet:	Both
Availability of Exclusive Space/Room:	Virtual Learning Resource Lab with 72 Apple Computers
Number of Users per day:	200

Internet

(10)

Name of the Internet provider	BSNL, Regitel online
Available band width	1Gbps
Wi-Fi availability	150Mbps
Internet access in labs, classrooms, library and offices of all Departments	Yes
Security arrangements	Yes




ACHARYA INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi, Approved by AICTE, New Delhi and Accredited by NBA and NAAC)

DECLARATION

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concern for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.

It is submitted that information provided in this Self-Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the institute will be initiated by the NBA, in case any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

 11/03/2019
Signature of Principal

Dr. Prakash MR

PRINCIPAL

ACHARYA INSTITUTE OF TECHNOLOGY
SOLADEVANAHALLI, BENGALURU - 560107

Date: 11/03/2019

Place: Bengaluru



ANNEXURE I:**PROGRAM OUTCOMES (POs)****Engineering Graduates will be able to:**

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSOs	Statement
PSO-1	Analog / Digital Circuit Design: Apply the conceptual knowledge in the analysis and/or design, evaluate analog/digital circuits and systems.
PSO-2	VLSI , Signal Processing and Embedded Systems : Demonstrate technical competency in the analysis, design , and validation of components in VLSI, Signal Processing, and Embedded Systems
PSO-3	Communication and Networking: Apply the domain knowledge in the implementation and performance analysis of Communication Systems and Computer Networks.

ANNEXURE II:

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2017-18			
JANUARY - 2018			01
Day	Date	Department Activity	College Activity
MON	1		
TUE	2		
WED	3		
THU	4		
FRI	5		
SAT	6		
SUN	7	Holiday	
MON	8	Commencement of IV Sem M. Tech classes	
TUE	9		
WED	10		
THU	11		
FRI	12	National Youth Day	
SAT	13		
SUN	14	Holiday	
MON	15	Uttarayana Punya Kala Sankranti Festival*	
TUE	16		
WED	17		
THU	18		
FRI	19		
SAT	20		
SUN	21	Holiday	
MON	22	IV MTech Project Presentation Phase - 1	
TUE	23		
WED	24	InHouse Internship on VLSI Design	Sports committee meeting
THU	25		
FRI	26	Republic Day*	
SAT	27		Academic council meeting
SUN	28	Holiday	

MON	29	InHouse Internship on Raspberry Pi and Arduino	
TUE	30	Martyrs' Day; World Leprosy Eradication Day	
WED	31		

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2017-18				
FEBRUARY- 2018				02
Day	Date	Department Activity		College Activity
THU	1	Commencement of Even Semester BE II,IV VI & VIII sem, MCA IV & VI sem classes		
		Three Days FDP on ARM Cortex M3 1 st - 3 rd March 2018		
FRI	2	8 th Sem Project Synopsis Presentation		Grievance cell Meeting
SAT	3	Uploading details of FDP/Workshops /Conferences attended and conducted by faculties		
		BE Final Year Aptitude Training and Test		
SUN	4	Holiday		
MON	5			
TUE	6			
WED	7			
THU	8			
FRI	9			
SAT	10	Commencement of II sem MBA classes		
		Awareness of Computers for school students under NSS		
		IV M.Tech Project Review		
SUN	11	Holiday		
MON	12			
TUE	13	Mahashivaratri*		
WED	14			
THU	15	Final date to submit technical seminar topic by the Final year UG students		
FRI	16	Approval of final synopsis of 8 th sem BE /6 th sem MCA projects.	First Proctor Coordinators Meeting	Library Committee meeting
SAT	17	Commencement of II sem MTech /II sem MCA classes		

		Final Year ECE Seminar topic approval		
		Technical talk for 6th sem students	Advisory Board Meeting	
SUN	18	Holiday		
MON	19			
TUE	20			
WED	21			
THU	22			
FRI	23	BE Final Year Pre Placement Test		
SAT	24	Alumni Knowledge Sharing Series	IV M.Tech Project Review	Academic council meeting
SUN	25	Holiday, National Voters day		
MON	26	Newsletter issue for Odd sem 2017-2018		
TUE	27	Technical talk for 8th sem students		
WED	28	National Science Day		

Acharya Institute of Technology				
Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107				
Academic Calendar for Even Semester 2017-18				
MARCH -2018				03
Day	Date	Department Activity		College Activity
THU	1			
FRI	2			
SAT	3	BE Final Year Placment seminar I	IA test for IV sem M Tech	
SUN	4	Holiday		
MON	5			
TUE	6			
WED	7			
THU	8			International Women’s Day
FRI	9	Final Year ECE – Intrin Presentation		
SAT	10	8 th Sem BE Project Presentation	IV Sem M. Tech Project Review	Library Committee meeting
		IISC Openday Visit		
SUN	11	Holiday		
MON	12	Ist IA test for the courses BE/BTech II,IV VI & VIII / MCA II, IV & VI / MBA II / M.Tech II Sem.		
TUE	13			
WED	14			
THU	15			
FRI	16			Library Committee meeting
SAT	17	Industrial Visit		Academic Council Meeting

SUN	18	Holiday, Chandramana Ugadi	
MON	19	1st IA Marks entry in Google sheets for CARE and AIPS	
TUE	20		Academic Council Meeting
WED	21		
THU	22	Workshop on Design Thinking 22 – 24 th March 2018	
FRI	23	Acharya Habba,	Parents teachers meeting
SAT	24	Acharya Habba, Alumni Meet	
SUN	25	Holiday	
MON	26	Commencement of IV sem MBA classes	
TUE	27		
WED	28		
THU	29		
FRI	30	IV M.Tech Project Review	
SAT	31	One day workshop Simulink	
		II Sem M.Tech Seminar Presentation	

<p style="text-align: center;">Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2017-18</p>			
APRIL- 2018			
04			
Day	Date	Department Activity	College Activity
SUN	1	Holiday	
MON	2		
TUE	3		
WED	4		
THU	5		
FRI	6		
SAT	7	Final Year BE - Online test	II IA test for IV sem M Tech
SUN	8	Holiday	
MON	9		
TUE	10		
WED	11	2nd IA test for the courses BE/BTech II,IV VI & VIII / MCA II, IV / MBA II / M.Tech II Sem IV M.Tech Project Phase –II (Final Submission)	
THU	12		
FRI	13		
SAT	14	Dr. B R Ambedkars Jayanthi*	

SUN	15	Holiday	
MON	16		
TUE	17		
WED	18		
THU	19	2 nd IA Marks entry in Google sheets for CARE and AIPS	
FRI	20	Technocracy 2018	Library Committee meeting
SAT	21		
SUN	22	Holiday, Earth Day	
MON	23		
TUE	24		
WED	25		
THU	26	IEEE workshop on Nano Science and Technology	
FRI	27	BE Final Year Project Presentation	
SAT	28	Last working day for IV sem M.Tech	Academic council meeting
SUN	29	Holiday	
MON	30		

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2017-18			
MAY-2018			
05			
Day	Date	Department Activity	College Activity
TUE	1	MAY Day* International Labour Day	
WED	2	Commencement of Report submission for IV Sem M.Tech.	
THU	3		
FRI	4		
SAT	5	III IA test for IV sem M Tech	
SUN	6	Holiday	
MON	7		
TUE	8		
WED	9	8 th semester BE final project review and Exit Interview	Briefing of elective subjects to students
THU	10	8 th semester BE final project review and Exit Interview	

FRI	11	8 th semester BE final project review and Exit Interview	National Technology Day
SAT	12	Final Year BE - Placement Test	
SUN	13	Holiday	
MON	14	IIIrd IA test BE/BTech II,IV VI & VIII / MCA IV & VI / MBA II / M.Tech II Sem.	
TUE	15	IIIrd IA test BE/BTech II,IV VI & VIII / MCA IV & VI / MBA II / M.Tech II Sem.	Commencement of summer project Report submission for IV Sem MBA
WED	16	IIIrd IA test BE/BTech II,IV VI & VIII / MCA IV & VI / MBA II / M.Tech II Sem.	
THU	17	Final Year BE Project Exhibition	
FRI	18	Photo session for Final year students *	
SAT	19	Last day to submit project report for IV Sem M.Tech to vtu Graduation Day	
SUN	20	Holiday	
MON	21	3 rd & Final IA Marks entry in Google sheets for CARE and AIPS	
		Final Year BE – Online Test 2	
TUE	22		
WED	23	Last working day of even semester II, IV, VI, VIII sem BE, IV & VI Sem MCA	
THU	24		
FRI	25		Library Committee meeting
SAT	26		Academic council meeting
SUN	27	Holiday	
MON	28	Practical exam begins for II, IV, VI sem BE, IV Sem MCA, commencement of Summer project Report submission to VTU -MCA VI Commencement of VTU Theory exams for BE VIII Sem and IV sem M Tech	
TUE	29		
WED	30	Last day of Summer project report submission to VTU-IV sem MBA	
THU	31	Last day to submit the VIII sem BE project report to the department Last working day for II sem MBA	

Acharya Institute of Technology Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107 Academic Calendar for Even Semester 2017-18			
JUNE-2018			06
Day	Date	Department Activity	College Activity
FRI	1		
SAT	2	Practical exam ends for IV Sem MCA Last day of theory exams for IV sem M. Tech	
SUN	3	Holiday	

MON	4	VTU theory exam starts for IV sem MCA	
TUE	5	World Enironmental Day	
WED	6	Practical exam ends for II, IV, VI sem BE, Last day for Project report submission of M.Tech IV semester	
THU	7		
FRI	8	Last working day for II sem MCA/II sem MTech Last day of Summer project report submission to VTU -MCA VI Last VTU Theory exams for BE VIII Sem	
SAT	9		
SUN	10	Holiday	
MON	11	Practical exam starts for II Sem MCA, II sem MTech, Viva Voce exam for VIII sem BE starts Commencement of Even Semester VTU Theory exams for II,IV &VI sem BE	
TUE	12		
WED	13		
THU	14		
FRI	15		Library Committee meeting
SAT	16	Practical exam ends for II Sem MCA & II sem MTech, Viva Voce exam for VIII sem BE ends	
SUN	17	Holiday	
MON	18	Commencement of theory exams for II sem MCA, II sem M.Tech Last day of VTU theorsy exam for II sem MBA	
TUE	19		
WED	20	Last day of VTU theory exam for IV sem MCA	
THU	21		
FRI	22		
SAT	23		Academic council meeting
SUN	24	Holiday	
MON	25		
TUE	26		
WED	27		
THU	28		
FRI	29		
SAT	30	Last Theory exams for II Sem M.Tech & II sem MCA Last working day of Even Semester MBA IV Sem.	

Acharya Institute of Technology

Soldevanahalli, Bangalore -560107

Minutes of the Grievance Redressal Committee held on 08/09/2018

Agenda

Sl.No	Agenda
	Review of the earlier Meeting Minutes
2018/09/1	Any issues /grievence with respect to staff and students to be discusssed

Members Present:

Sl NO.	Name	Address	Designation	Contact number & email address
1	Dr Prakash M R	Principal, AIT	Chairman	9448864740 principalait@acharya.ac.in
2	Dr Prakash R	Prof & Head, EEE	Member	9448694645 Hod-eee@acharya.ac.in
3	Dr Devarajaiah	Prof & Head, MT Dean- Academic	Member	9449680516 @acharya.ac.in
4	Dr. Rajeshwari	Prof & Head, ECE	Member	9449827287 Hod-ece@acharya.ac.in
5	Dr Indrani Pramod Khelkar	Prof Maths Dean Students affair	Member	9164685067 indranipramodk@acharya.ac.in
6	Dr. A R K Swamy	Prof , ME, Warden	Member	9035997163 Hod-mt@acharya.ac.in
7	Prof R. Shadakshari	Asst Prof. & Chief Warden, AIT	Member	9481242128 shadaksharir@acharya.ac.in
8	Dr. Ramesh Hegde	HOD of MCA & Chief Proctor, AIT	Convener	9900545520 rameshhegde@acharya.ac.in
9	Sri Ramakrishne Gowda	General Administrations, Acharya institutes	Member	9900197317 ramakrishnagowda@acharya.ac.in
10	Mr. Balagi	Hostel Manager, Acharya Institutes	Member	7618775959 hostelmanager@acharya.ac.in

Members Absent: Nill

Minutes of the meeting:

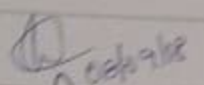
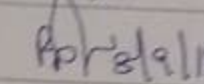
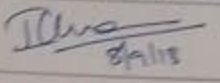
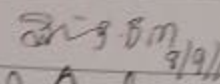
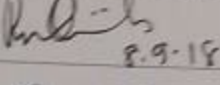
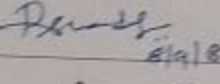
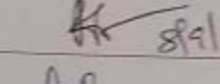
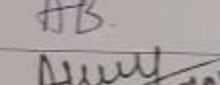
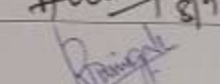
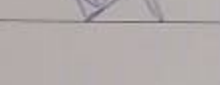
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Chairman welcomed all the members for the meeting



ACHARYA ACHARYA INSTITUTE OF TECHNOLOGY, SRIKESAVANAHALLI,
BANGALORE-560107

Grievance Redressal Committee Meeting held on 08/09/2018 in the Principal's Chamber
at 11.30AM

Sl NO.	Name	Address	Designation	Signature
1	Dr M R Prakash	Principal, AIT	Chairman	
2	Dr Prakash R	Prof & Head, EEE Dean- Student affairs	Member	
3	Dr. Indrani Khelkar	Prof in Maths Dean- Student Affairs	Member	
4	Dr. Rajeshwari	Prof & Head, ECE	Member	
5	Dr. Devarajaiah Dean Academics	Prof & Head, MT	Member	
6	Prof R. Shadakshari	Asst Prof. Mech & Chief Warden, AIT	Member	
7	Dr. Ramesh Hegde	HOD of MCA	Convener	
8	Sri Ramakrishne Gowda	General Administrations, Acharya institutes	Member	
9	Dr ARK Swamy	Prof Mechanical Engg, Warden	Member	
10	Mr. Balagi 7618775959	Hostel Manager, Acharya Institutes	Member	

2019-3-11 17:54



nagapushpa K.P. <nagapushpa@acharya.ac.in>

Regarding Women Cell meeting

1 message

nagapushpa K.P. <nagapushpa@acharya.ac.in>

Sat, Mar 26, 2016 at 10:22 AM

To: uma warrier <warrier.uma@gmail.com>, hanumanthegowda@acharya.ac.in, varalakshmi@acharya.ac.in, gopinath@acharya.ac.in, renuka devi <renukadevi@acharya.ac.in>, darshini.becs.12@acharya.ac.in, pushpalatha amca.14@acharya.ac.in

Cc: principalait acharya <principalait@acharya.ac.in>

Dear Members,

Warm Wishes to all .

Executive members are informed to attend the executive committee meeting scheduled at 2pm on Monday, 28th March 2016 at the principal Office

List of revised executive members is attached for your reference.

Agenda:

- 1 Review of previous meeting
- 2 Any Complaints received and action Taken
- 3 To plan the events for this academic semester

All are requested to the meeting .

Best Wishes and Regards,

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Assistant Professor

Dept of ECE

Acharya Institute of Technology, Bangalore

Mobile Number:9880850112

Hard work has no substitute, Work hard and achieve success"

Anti-Sexual Harrasment committee.xlsx
61K



ACHARYA INSTITUTE OF TECHNOLOGY

Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107

Women Cell

MINUTES OF MEETING

Date: 28- 03-2016

Time: 2 pm

Agenda of the meeting:

- 1 Review of previous meeting
- 2 Any Complaints received and action Taken
- 3 To plan the events for this academic semester

Members Present:

1. Dr H D Maheshappa, Principal AIT- CHAIRMAN
2. Dr Uma Warrier, NGO Consultant - Counselor
3. Prof Nagapushpa K.P, Department of ECE, AIT- Member Secretary
4. Prof Hanumanth Gowda, Legal Adviser
5. Prof Varalakshmi, Department of CSE, AIT, Presiding officer
- 6 Ms Darshini, Student Representative

Members Absent:

- 1 Dr. S. M. Gopinath, HOD, Department of Biotechnology, Member
2. Renuka Devi, Administration Officer, AIT- Member
3. Ms Pushpalatha, Student Representative.

Proceedings of the meeting:

The Chairman welcomed all the Executive members for the Women Cell meeting and reviewed on previous discussions. Chairman briefed about the resolutions of women cell held on 27/2/15 to all the Executive members which includes the following:

It was decided to conduct three activities per semester covering scope and objectives of the women cell and only poster presentation activity was conducted. The Poster Competition was held on 14-3-15 and the theme was EMPOWERED WOMEN FROM INDIA from the field of Politics, Government or Private Corporations, Sports, Arts, Media, Medicine, Science, Literature, Ordinary Women Doing Extraordinary things to make small positive differences, Social Workers and any other field. There was a good response from the students as well as faculty members. He also brought to the notice of the members that some of the works are pending and expected to be conducted as per the schedule. Following are the points discussed/ brought out in this meeting

Dr Uma Warriar, Chief counselor gave the following suggestions:

- Strengthen the work force of women cell
- To conduct documentary shows on issues concerning women
- To Tie up with NGOs, and carry out activities for women strengthening.
- To tie up with the nearby hospitals and to organize workshops that are concerned with the women related issues.
- Identify the women cell by having separate logo ,name and e- brochure for better visibility and publicity
- To Constitute two wings of women cell each of them having separate committee members
 - Regulatory and statutory body – To Look after Grievances
 - Women Association- To Conducts activities
- To conduct Guest lectures for students
- A Template for reporting the complaints to be made available for the members
- To organize a walkathon for the social cause of the women

Nagaprasanna

Signature of Member Secretary

[Signature]


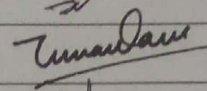

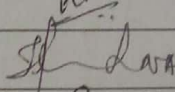
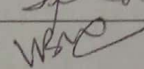
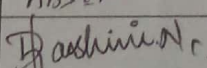
Signature of Chairman

ACHARYA INSTITUTE OF TECHNOLOGY


Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560107

Date: 28/3/2016

Attendance of AIT Women cell meeting held on 28-3-16 in the principal office

Sl No	Name	Designation	Signature
1	Dr .H.D.MAHESHAPPA	Chairman	
2	Dr.UMA WARRIER	NGO Consultant <i>Chief Counsellor Jain University</i>	
3	Ms.NAGAPUSHPA.K.P	Member Secretary	
4	Mr.HANUMANTHEGOWDA.N.A	Legal Advisor	
5	Mrs.VARALAKSHMI.B.D	Presiding officer	
6	Dr. S.M.GOPINATH	Member	ABSENT
7	Mrs RENUKADEVI	Member	ABSENT
8	Ms.DARSHINI.N	Member	
9	Ms.PUSHPALATHA.M	Member	ABSENT

Nagapushpa


Signature of chairman