

# PES Institute of Technology and Management

Information Science & Engg.

## Part A : Institutional Information

### 1 Name and Address of the Institution

PES Institute of Technology and Management,  
PES Campus, NH-206, Sagar Road, Guddada Arakere, Kotegangoor Post, Shivamogga-577204

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### 2 Name and Address of Affiliating University

Visvesvaraya Technological University

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### 3 Year of establishment of the Institution:

2007

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### 4 Type of the Institution:

<input type="checkbox"/> University	<input type="checkbox"/> Autonomous
<input type="checkbox"/> Deemed University	<input checked="" type="checkbox"/> Affiliated
<input type="checkbox"/> Government Aided	

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## 5 Ownership Status:

<input type="checkbox"/> Central Government	<input checked="" type="checkbox"/> Trust
<input type="checkbox"/> State Government	<input type="checkbox"/> Society
<input type="checkbox"/> Government Aided	<input type="checkbox"/> Section 25 Company
<input type="checkbox"/> Self financing	<input type="checkbox"/> Any Other(Please Specify)

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

Name of Institutions	Year of Establishment	Programs of Study	Location
PES Institute of Advanced Management Studies	2008	Commerce, Computer Application	NH 206, Sagar Road, Shivamogga
PES Pre University College	2009	11th and 12th Standard	NH 206, Sagar Road, Shivamogga
PES Public School	2010	CBSE - 1st Standard to 10th Standard	NH 206, Sagar Road, Shivamogga
PES Polytechnic	2011	Diploma Courses	NH 206, Sagar Road, Shivamogga

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

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Information Science & Engg.	UG	2007	2007	60	No	60	Applying first time	--	--	Yes	4
Computer Science and Engineering	UG	2007	2007	120	No	120	Applying first time	--	--	No	4

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Computer Science and Engineering	PG	2014	2014	24	Yes	0	Not eligible for accreditation	--	--	0	2
<b>Sanctioned Intake for Last Five Years for the Computer Science and Engineering</b>											
<b>Academic Year</b>				<b>Sanctioned Intake</b>							
2019-20				0							
2018-19				0							
2017-18				24							
2016-17				24							
2015-16				24							
2014-15				24							
Electronics and Communication Engineering	UG	2007	2007	120	No	120	Applying first time	--	--	0	4
Digital Electronics	PG	2014	2014	24	Yes	0	Not eligible for accreditation	--	--	0	2

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
<b>Sanctioned Intake for Last Five Years for the Digital Electronics</b>											
<b>Academic Year</b>				<b>Sanctioned Intake</b>							
2019-20				0							
2018-19				0							
2017-18				24							
2016-17				24							
2015-16				24							
2014-15				24							
Civil Engineering	UG	2013	2013	60	No	60	Applying first time	--	--	0	4
Mechanical Engineering	UG	2010	2010	120	No	120	Applying first time	--	--	0	4
Electrical and Electronics Engineering	UG	2007	2007	60	No	60	Not eligible for accreditation	--	--	No	4
Master of Business Administration	PG	2008	2008	120	Yes	60	Eligible but not applied	--	--	No	2



Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
<b>Sanctioned Intake for Last Five Years for the Master of Business Administration</b>											
<b>Academic Year</b>				<b>Sanctioned Intake</b>							
2019-20				60							
2018-19				60							
2017-18				60							
2016-17				60							
2015-16				60							
2014-15				120							

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

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Science & Engg.
3	Under Graduate	Engineering & Technology	Electronics & Communication Engg.
4	Under Graduate	Engineering & Technology	Information Science & Engg.
5	Under Graduate	Engineering & Technology	Mechanical Engg.

**9 Total number of employees in the institution:**

**A. Regular\* Employees (Faculty and Staff):**

Items	2019-20		2018-19		2017-18	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Maths, Science & Humanities (Male)	7	7	6	6	7	7
Faculty in Maths, Science & Humanities (FeMale)	7	7	8	8	8	8
Non-teaching staff (Male)	24	27	22	25	21	22
Non-teaching staff (FeMale)	11	13	7	8	7	8
Faculty in Engineering (Male)	75	77	80	81	77	78
Faculty in Engineering (Female)	18	18	18	20	21	21

**B. Contractual\* Employees (Faculty and Staff):**

Items	2019-20		2018-19		2017-18	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	1	1	0	1	0	0
Faculty in Engineering (Female)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (FeMale)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (FeMale)	0	0	0	0	0	0

**10 Total number of Engineering Students:**

<b>Engineering and Technology- UG</b>	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>Engineering and Technology- PG</b>	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>Engineering and Technology- Polytechnic</b>	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>MBA</b>	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>MCA</b>	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2

### Engineering and Technology- UG Shift-1

Items	2019-20	2018-19	2017-18
Total no. of Boys	1096	1088	1188
Total no. of Girls	930	935	936
<b>Total</b>	<b>2026</b>	<b>2023</b>	<b>2124</b>

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### Engineering and Technology- PG Shift-1

Items	2019-20	2018-19	2017-18
Total no. of Boys	0	0	2
Total no. of Girls	0	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>

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### Engineering and Technology- MBA Shift-1

Items	2019-20	2018-19	2017-18
Total no. of Boys	68	49	48
Total no. of Girls	51	56	64
<b>Total</b>	<b>119</b>	<b>105</b>	<b>112</b>

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### 11 Vision of the Institution:

To be the most preferred institution for engineering & management education, research and entrepreneurship by creating professionally superior and ethically strong global manpower.

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**12 Mission of the Institution:**

To prepare students for professional accomplishments and responsible global citizenship while fostering continuous learning and to provide state-of-the-art education through the committed and highly skilled faculty by partnering and collaborating with industry

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

Head of the Institution	
Name	Dr. Chaitanya Kumar M V
Designation	Principal
Mobile No.	9380741865
Email ID	principal_pestim@pes.edu

 **NBA Coordinator, If Designated**

Name	Dr. Jagadeesha S N
Designation	Professor and HOD, Department of Computer Science & Engineering
Mobile No.	9916104383
Email ID	hodcse@pestrust.edu.in

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## PART B: Criteria Summary

<b>Criteria No.</b>	<b>Criteria</b>	<b>Total Marks</b>	<b>Institute Marks</b>
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	43.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	94.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	94.00
4	STUDENTS' PERFORMANCE	150	99.88
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	122.93
6	FACILITIES AND TECHNICAL SUPPORT	80	62.00
7	CONTINUOUS IMPROVEMENT	50	35.00
8	FIRST YEAR ACADEMICS	50	37.28
9	STUDENT SUPPORT SYSTEMS	50	40.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	110.00
	<b>Total</b>	<b>1000</b>	<b>738</b>

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# Part B

## 1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 43.00

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

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	To be the most preferred institution for engineering & management education, research and entrepreneurship by creating professionally superior and ethically strong global manpower.						
Mission of the institute	To prepare students for professional accomplishments and responsible global citizenship while fostering continuous learning and to provide state-of-the-art education through the committed and highly skilled faculty by partnering and collaborating with industry						
Vision of the Department	To create technically competent, ethically strong and skilled IT Professionals						
Mission of the Department	<table border="1"> <thead> <tr> <th>Mission No.</th> <th>Mission Statements</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>Enhancing the knowledge through ongoing research and professional development programs by incorporating effective teaching and learning methods</td> </tr> <tr> <td>M2</td> <td>To prepare students to be successful in their professional career and continuous learners by offering a strong technical foundation with professional and ethical responsibilities.</td> </tr> </tbody> </table>	Mission No.	Mission Statements	M1	Enhancing the knowledge through ongoing research and professional development programs by incorporating effective teaching and learning methods	M2	To prepare students to be successful in their professional career and continuous learners by offering a strong technical foundation with professional and ethical responsibilities.
Mission No.	Mission Statements						
M1	Enhancing the knowledge through ongoing research and professional development programs by incorporating effective teaching and learning methods						
M2	To prepare students to be successful in their professional career and continuous learners by offering a strong technical foundation with professional and ethical responsibilities.						

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

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Graduates will adapt to the emerging technologies in the field of Information Science to build professionally successful careers
PEO2	Graduates will be able to provide the solution for the problems in the field of Information Technology and fulfill the societal requirements.
PEO3	Graduates will function effectively in IT field by creative thinking, continuous learning and having good ethics.

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

Total Marks 7.00

Institute Marks : 7.00

**The Vision, Mission and PEOs are adequately published as indicated below**

**Dissemination of Vision and Mission:**

- College website (<http://pestrust.edu.in/pesitm/information-science/> (<http://pestrust.edu.in/pesitm/information-science/>))
- Department Newsletter
- Display boards at the entrance, department library, class rooms, HOD's cabin and Laboratories
- Lab Manuals
- Students Progress Report
- Bluebooks
- Students HandBook

**Dissemination of PEOs:**

- College Website
- Department Library
- Department Laboratories
- Department Corridor
- HOD Chamber
- Staff Rooms
- Notice Boards of the department
- Bluebooks
- Students HandBook

**The awareness of Vision, Mission and PEOs are created among the internal and external stakeholders through**

- Faculty Members
- Students Induction program
- Parent teacher meeting
- Alumni meet

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

Total Marks 16.00

Institute Marks : 16.00

The Department framed the **Vision and Mission** inline with institution Vision and Mission through a consultative process involving all the stakeholders. **Vision and Mission** of the Institute has been taken as reference while framing the department **Vision and Mission**. Views from the stake holders, both internal and external are collected through meetings and feedbacks. The collected information and feedback are summarized. **Vision and Mission** of the Department is defined and then approved. Approved vision and Mission of the Department are sent for publication and Dissemination.

**The following steps are used to frame the Department Vision and Mission:**



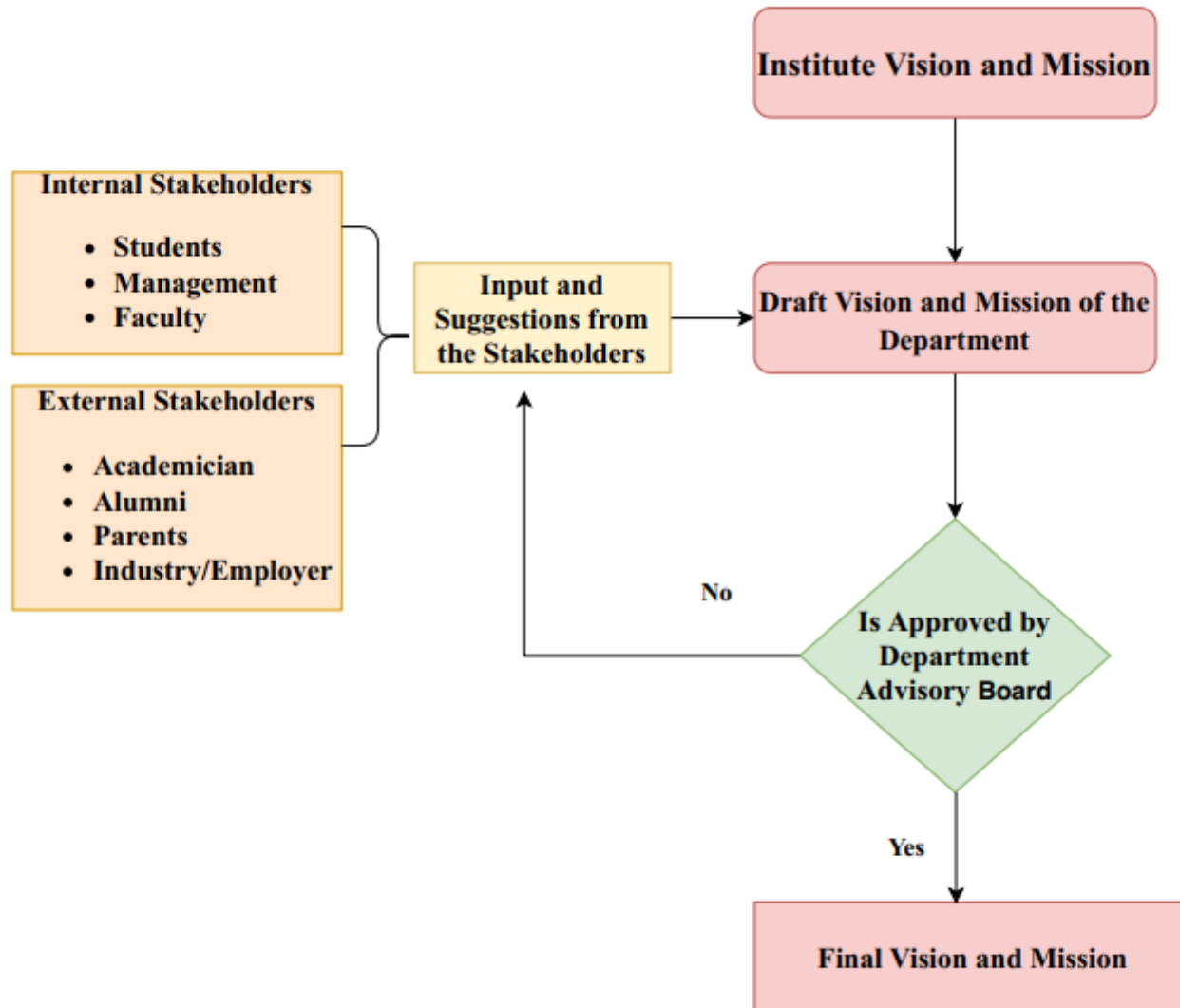
Step 1: **Vision and Mission** of the Institution are taken as a basis.

Step 2: Views are taken from both internal stakeholders (Management, Faculty, students) and external stakeholders (Parents, Employers/ Industries and Alumni)

Step 3: Armed with the information thus collected from the Internal and External Stakeholders to develop a strong and meaningful draft **vision and mission** of the Department.

Step 4: Approved by the Department Advisory board.

Step 5: Approved **Vision and Mission** are disseminated among stakeholders



**Fig 1.1 :Process of Vision and Mission of the department**

**The process for defining PEOs of the department**

The Department framed the **PEOs** inline with institution Vision and Mission through a consultative process involving all the stakeholders..Views from the stake holders, both internal and external are collected through meetings and feedbacks. The collected information and feedback are summarized. **PEOs** of the department is defined and then approved. Approved **PEOs** of the department are sent for publication and Dissemination.

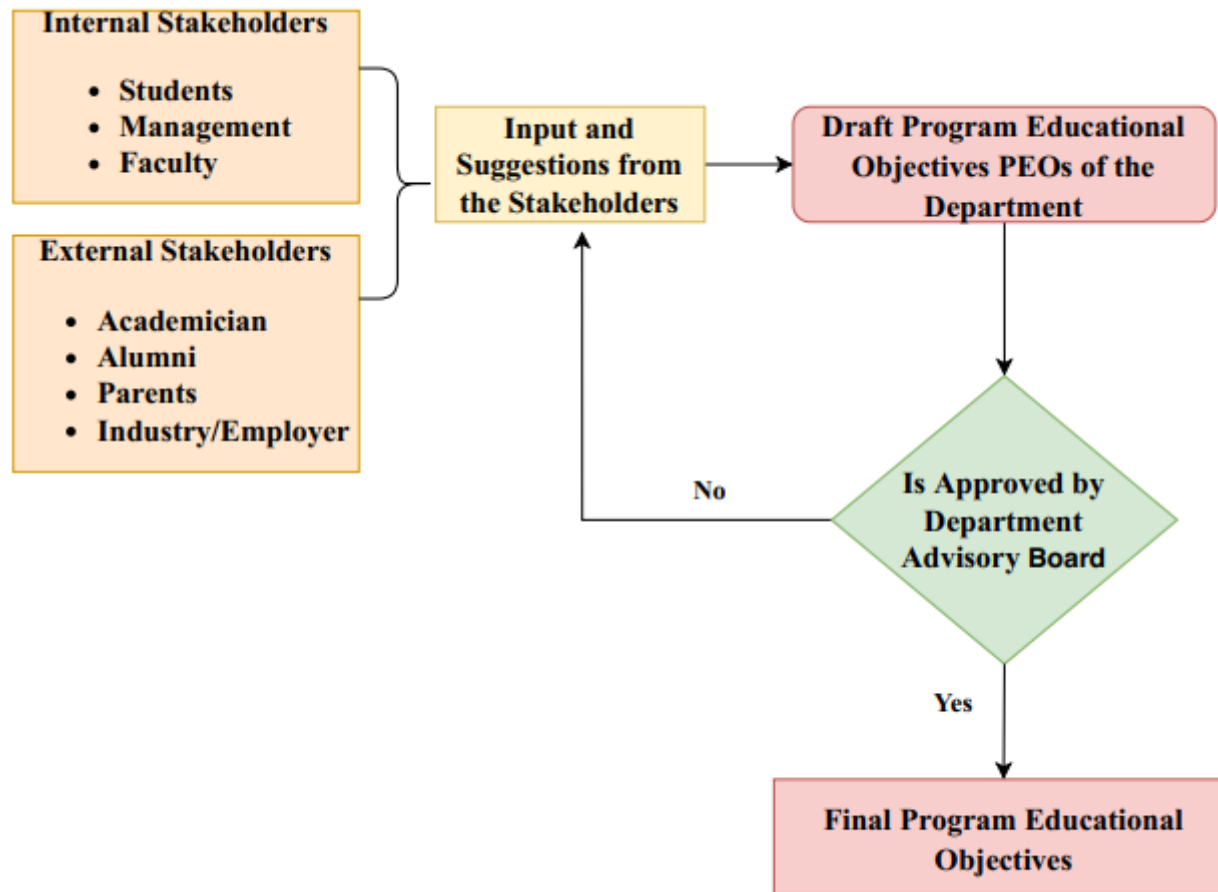
The following steps are used to frame the PEOs:

Step 1: Views are taken from both internal stakeholders (Management, Faculty, students) and external stakeholders (Parents, Employers/ Industries and Alumni)

Step 2: Armed with the information thus collected from the Internal and External Stakeholders to develop a strong and meaningful Draft **PEOs** of the Department.

Step 3: Approved by the Department Advisory board

Step 4: Approved **PEOs** are dessiminated among stakeholders



**Fig 1.2: Process of PEOs of the department**

**1.5 Establish consistency of PEOs with Mission of the Department (15)**

Total Marks 10.00

Institute Marks : 10.00

**Consistency /Justification of co-relation of the below matrix**

**Table 1.1: PEO and Mission mapping**

PROGRAMME EDUCATIONAL OBJECTIVES(PEO's)	MISSION		Justification
	M1	M2	
Graduates will adapt to the emerging technologies in the field of Information Science to build professionally successful careers	2	2	Graduates of the program will achieve excellence and demonstrate the ability to comprehend real life engineering problems and solve them through the knowledge and skills acquired in the areas of Information Science and Technology
Graduates will be able to apply strong knowledge and Technical skills to provide the solution in the field of Information Technology and fulfill the societal requirements	3	3	Based on the knowledge gained through teaching and learning process, the graduates of this program will be able to design and analyze engineering systems, acquire soft skills
Graduates will function effectively in IT field by creative thinking, continuous learning and having good ethics.	2	2	The curriculum imbibes innovative teaching learning process to transfer Technology for industrial and societal needs.

PEO Statements	M1	M2
Graduates will adapt to the emerging technologies in the field of Information Science to build professionally successful careers	2	2
Graduates will be able to provide the solution for the problems in the field of Information Technology and fulfill the societal requirements.	3	3
Graduates will function effectively in IT field by creative thinking, continuous learning and having good ethics.	2	2

## 2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

Total Marks 94.00

### 2.1 Program Curriculum (20)

Total Marks 13.00

#### 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** Institute Marks : 7.00  
(10)

PES Institute of Technology and Management is affiliated to Visvesvaraya Technological University (VTU), Belagavi and hence the syllabus/ curriculum prescribed by the university is followed. VTU curriculum contains core and elective courses. The curriculum is formulated and reviewed by Board of Studies (BOS) of University once in a four years.

Undergraduate program is affiliated to Visvesvaraya Technological University, Belagavi and the curriculum is prescribed by the university. The schemes are:

- 2010 scheme
- Choice Based Credit System (CBCS) scheme for the academic year 2015
- Choice Based Credit System (CBCS) scheme for the academic year 2017
- Choice Based Credit System (CBCS) scheme for the academic year 2018

For each course, outcomes are defined by the course Instructor and these are mapped to program outcomes and program specific outcomes. The program specific outcomes are defined by the department.

#### **PROGRAMME SPECIFIC OUTCOMES (PSOs)**

**PSO1:** Analyze the logics, Algorithms and information systems to enable the students to design and implement the software.

**PSO2:** Evaluate working of Hardware and Software aspects of computer using appropriate tools.

**PSO3:** Apply the standard practices in software development to deliver quality products.

## Scheme of Examination prescribed by the University

Table 2.1: 2014-18 Batch (2010 Scheme)

2010 Scheme	Marks		
	Internal Assessment	Semester End Exam	Total
Examination			

Theory	25	100	125
Laboratory	25	50	75

**Table 2.2: 2015-19 Batch(As per Choice Based Credit System scheme)**

CBCS Scheme	Marks		
	Internal Assessment	Semester End Exam	Total
Theory	20	80	100
Laboratory	20	80	100

**Table 2.3:2017-21 Batch (Choice Based Credit System (CBCS))**

CBCS Scheme	Marks		
	Internal Assessment	Semester End Exam	Total
Theory	40	60	100
Laboratory	40	60	100

## Types of Courses offered by University

**Table 2.4: Course types offered by Unuversity**

S. No	TYPE OF COURSES	COURSES	Percentage
1	Basic Science courses	Engineering Physics, Engineering Chemistry etc.	10%
2	Engineering Science courses	Basic Electronics, Elements of Mechanical Engineering, Basic Electrical Engineering etc.	17%
3	Professional core courses	Data Structures, Computer Organization, Database Management System, Web Programming etc.	50%

4	Professional Electives	Operations Research, Artificial Intelligence, Storage Area Networks, Information and Network Security etc.	8%
5	Open electives	Python Programming,	3%
6	Project work, Seminar and Internship	Project work phase-I, Project work phase-II, Technical Seminar, Internship	6%
7	Mandatory courses	Constitution of India, Professional Ethics and Cyber law, Environmental studies, Kannada kali, Kannada Manasu.	6%

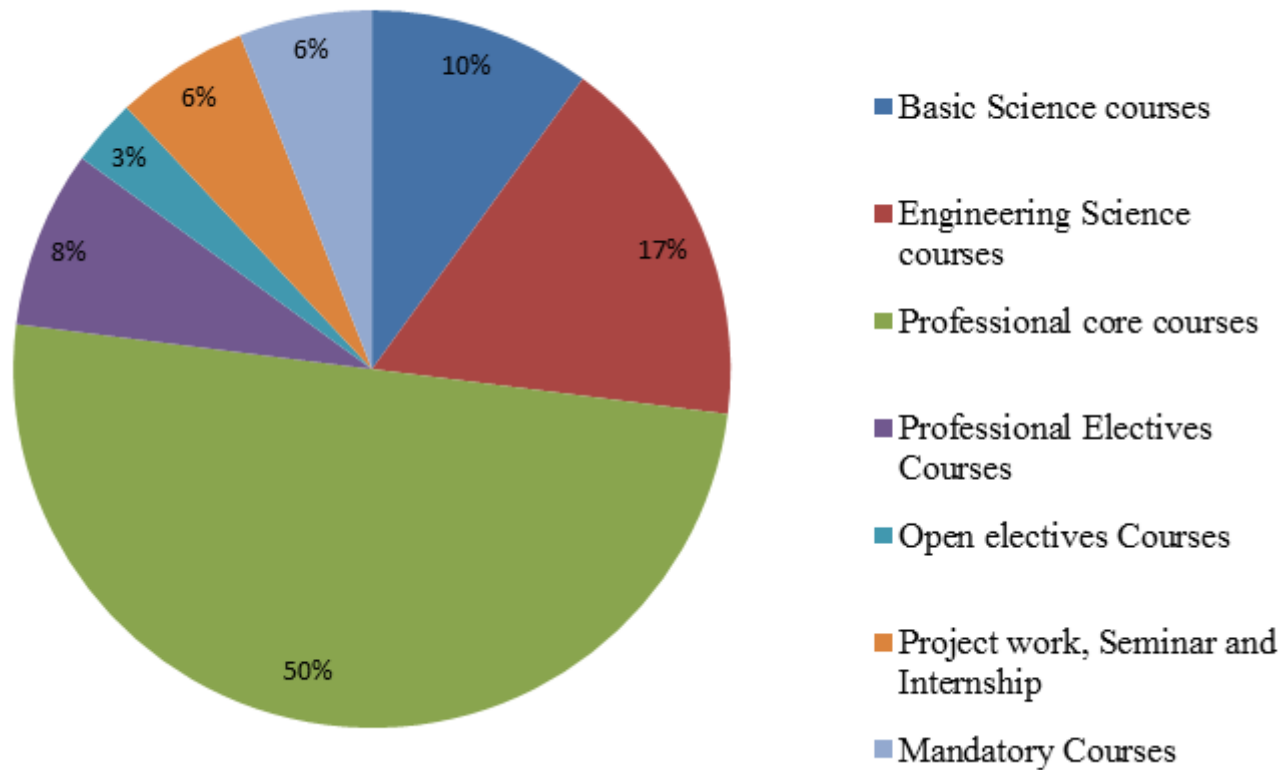


Fig 2.1: Graph showing course contribution in program for the batch 2015-2019

### Process Diagram to identify extent of Compliance of the Curriculum for attaining the PO and PSO's

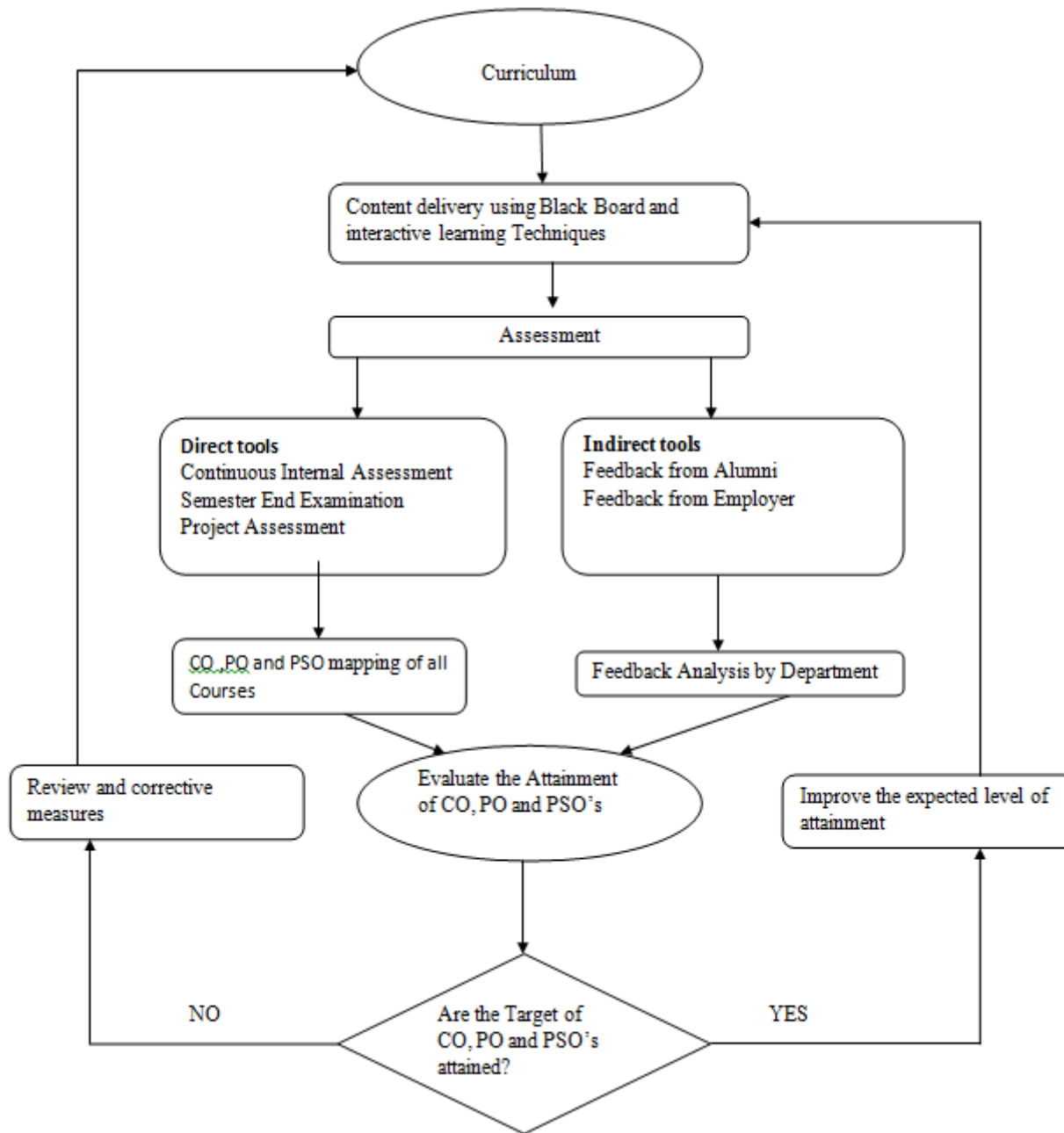


Fig 2.2. Process Diagram to identify extent of Compliance of the Curriculum for attaining the PO and PSO's



# Curriculum Gaps for the Attainment of defined POs & PSOs

To identify the curriculum gaps, feedback from alumni and employers and inputs from the course instructors are taken. The university syllabus and the gap analysis is discussed in the department staff meeting. The same gaps are reviewed and approved by the PAC.

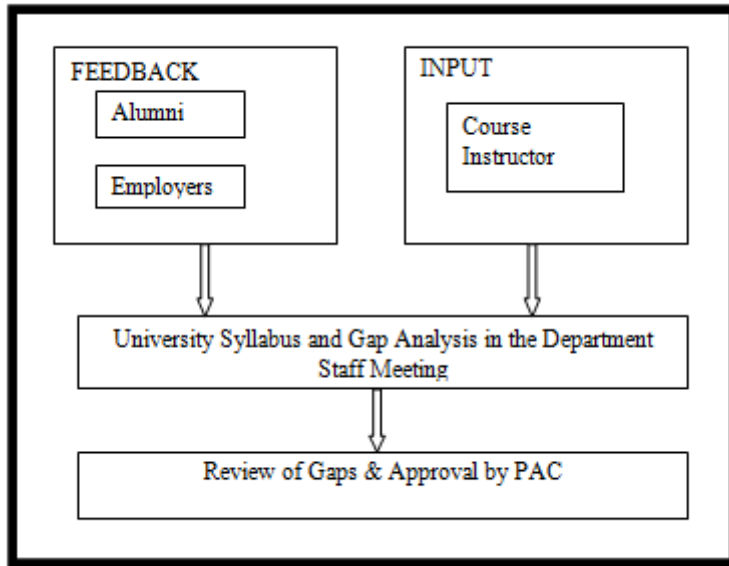


Fig 2.3: Process for Identifying Curriculum Gaps

Table 2.5: Curriculum Gaps identified in the academic year 2018-2019

S No	Subjects	GAP	Relevant to POs, PSOs
1	Database Management System	ODBC Connections using Java	PO1,PO2,PO3,PO12 PSO1 ,PSO3
2	Cloud Computing	DevOps on Cloud	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
3	Web Technologies and Applications	E-commerce Applications	PO1,PO2,PO3,PO12 PO5,PO11, PSO1 ,PSO3
4	Discrete Mathematical Structures	Concepts of Set theory	PO1,PO2,PO3,PO12 PSO1 ,PSO3

5	Python Application Programming	Working with IDE, Pycharm	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
6	Big Data Analytics	Big Data analytics using R	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
7	Cryptography, Network Security and Cyber Laws	Recent trends in Cryptography	PO1,PO2,PO3,PO12 PO6,PO5,PO11, PSO1,PSO2,PSO3

**Table 2.6: Curriculum Gaps identified in the academic year 2017-2018**

S No	Subjects	GAP	Relevant to POs, PSOs
1	Data Structures	Dictionary and its Applications	PO1,PO3,PO12 PSO1 ,PSO3
2	Cryptography, Network Security and Cyber Laws	Current trends in cryptography is required	PO1,PO2,PO3,PO12 PSO1,PSO2,PSO3
3	Finite automat and Finite Language	Parser generator Techniques	PO1,PO3,PO12 PSO1,PSO2,PSO3
4	Object Oriented Analysis and Design	A Practical Session on Modeling and design	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3

**Table 2.7: Curriculum Gaps identified in the academic year 2016-2017**

S No	Subjects	GAP	Relevant to POs, PSOs
1	Database Management System	ODBC connection with Java	PO1,PO2,PO3,PO12 PSO1,PSO2,PSO3
2	Computer Networks	Ethical Hacking	PO1,PO2,PO3,PO12 PSO1,PSO2,PSO3

3	Programming the Web	Framework Application –Bootstrap	PO1,PO3,PO12 PSO1,PSO2,PSO3
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**2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)**

Institute Marks : 6.00

**2018-19**

S.No	Gap	Action Taken	Date- Month- Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	ODBC Connections using Java	Hands on Session on ODBC Connections using Java	06/10/2018	Mr. Arjun U. Assistant Professor, PESITM, Shivamogga	96	PO1,PO2,PO3,PO12 PSO1 ,PSO3
2	DevOps on Cloud	Hands on Session	27/10/2018	Rahula S, Senior Project Engineer, Pune	85	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
3	E-commerce Applications	Seminar	23/10/2018	Mr. Chandrakanth	85	PO8,PO9,PO10 PSO1,PSO3
4	Concepts Set theory	Seminar	23/02/2019	Prof. Prasanna Kumar H R, HOD, Department of ISE, PESITM, Shivamogga	80	PO1,PO2,PO3,PO12 PSO1 ,PSO3
5	Working with IDE, Pycharm	Hands on	16/03/2019	Mr.Arjun U Assistant Professor	90	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
6	Big Data analytics using R	Talk and Hands on	23/03/2019	Mr. Venkatesh P. Assistant Professor	96	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
7	Recent trends in Cryptography	Organized Workshop on Blockchain	3/05/2019	Dr. Kiran, Asst. Professor, Dept of IT, NITK Suratkal	90	PO1,PO2,PO3,PO12 PO6,PO5,PO11, PSO1,PSO2,PSO3

2017-18

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Dictionary and its Applications	Talk	11/09/2017	Prof. Prasanna Kumar H R, HOD, Department of ISE, PESITM, Shivamogga	98	PO1,PO3,PO12 PSO1 ,PSO3
2	B Trees, B+ Trees	NPTEL Videos	08/02/2017	NPTEL video played	80	PO1,PO2,PO3,PO12 PSO1,PSO2,PSO3
3	Current trends in cryptography is required	MOOCs Program	02/02/2018	Prof. D Janaki Ram, Professor, Department of CSE, IITM, Madras	85	PO1,PO2,PO3,PO12 PSO1,PSO2,PSO3
4	Parser generator Techniques	NPTEL Videos	17/08/2017	NPTEL videos	90	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3
5	A Practical Session on Modeling and design	A hands on session was conducted in the department on STAR UML	20/08/2017	Dr. Pramod P, Associate Professor	90	PO1,PO2,PO3,PO12 PO5,PO11, PSO1,PSO2,PSO3

## 2016-17

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	ODBC connection with Java	Talk	06/10/2016	Mr.Praveen Gujjar Assistant Professor, PESITM, Shivamogga	96	PO1,PO2,PO3,PO12 PSO1,PSO2,PSO3
2	Ethical Hacking	Seminar	08/10/2016	Mr. Vinay S K. Asst. Prof., Dept. of ISE, Shivamogga	85	PO8,PO9,PO10 PSO1,PSO3
3	Framework Application – Bootstrap	Hands On	02/10/2016	Mr. Venkatesh P. Assistant Professor	90	PO1,PO3,PO12 PSO1,PSO2,PSO3

## 2.2 Teaching - Learning Processes (100)

Total Marks 81.00

### 2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)

Institute Marks : 20.00

# Adherence to Academic Calendar

Department calendar of events is prepared well in advance before the commencement of the semester based on the college calendar of events in line with VTU calendar of events. It consists of the activities planned for the semester which includes commencement of the classes for all the semesters, soft skill training, internal assessment test dates, dispatch of IA reports, parents' teacher meeting details, government general holidays, conduction of departmental events, sports day, college day, graduation day, last working days details etc.

All the staff will prepare lesson plans/schedules of the allotted subjects and hard/soft copies of the lecture notes supposed to be maintained. Head of the department monitors the execution of lesson plans.

The course file is prepared as per the following checklist:

- Calendar of Event: University
- Calendar of Event: College
- Calendar of Event: Department
- Syllabus Copy
- Class Time Table
- Individual Time Table
- Students List
- CO & PO Mapping
- Lesson Schedule
- IA Question Papers and Scheme
- IA Marks for each test
- Assignment Questions / Quiz /Mini Project/Class Presentation
- Continuous Evaluation Marks
- Final IA Marks
- Previous Year University Question Papers
- Final IA Marks Submitted to University
- CO-PO & CO-PSO Attainment
- Notes/Course Material
- Sample Assignment Copy/ Quiz Answers
- Attendance Register

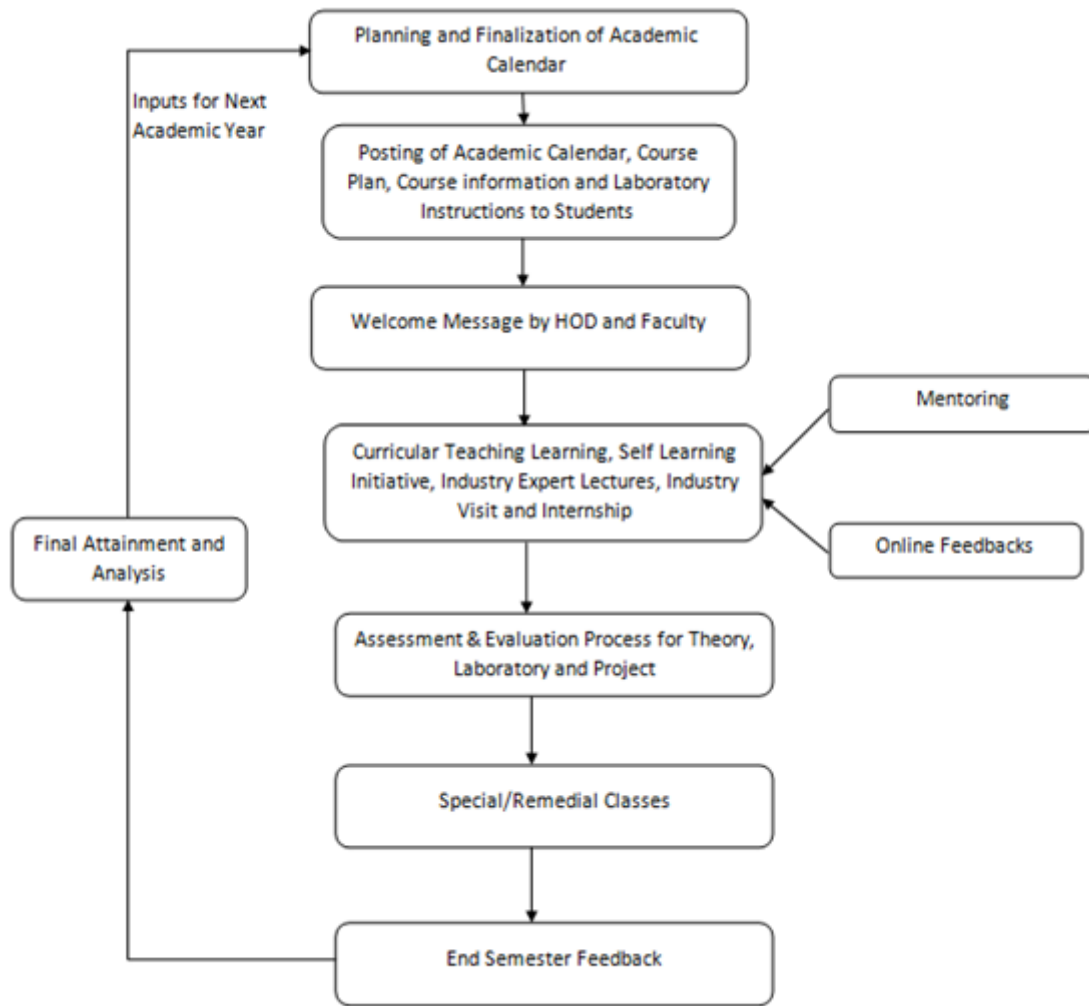


Fig: 2.4 Teaching Learning Process

## VTU University Calendar of Events

## Revised Academic Calendar of VTU, Belagavi for EVEN Semester of 2018-2019 (Feb 2019 – July 2019)

	II Sem B. E. / B. Tech. / B. Arch	IV & VI Sem B. E. /B. Tech. IV, VI, VIII Sem B. Arch.	VIII Sem B.E / B.Tech & X Sem B. Arch	IV Sem MCA	VI Sem MCA	IV Sem MBA	IV Sem M. Tech.	IV Sem M. Arch.	II Sem M. Tech.	II Sem MCA	II Sem MBA	II Sem M. Arch.
<b>Commencement of EVEN Semester</b>	25.02.2019	01.02.2019	01.02.2019	01.02.2019	01.02.2019	18.02.2019	28.12.2018	01.02.2019	01.03.2019	01.03.2019	25.02.2019	25.02.2019
<b>Last Working day of EVEN Semester</b>	17.06.2019	23.05.2019	23.05.2019	18.05.2019	18.05.2019	01.06.2019	13.04.2019	18.05.2019	21.06.2019	21.06.2019	17.06.2019	17.06.2019
<b>Practical Examination</b>	19.06.2019 To 29.06.2019	27.05.2019 To 07.06.2019	-	21.05.2019 To 25.05.2019	-	-	-	-	24.06.2019 To 29.06.2019	24.06.2019 To 29.06.2019	-	-
<b>Theory Examinations</b>	01.07.2019 To 16.07.2019	10.06.2019 To 16.07.2019	27.05.2019 To 07.06.2019	27.05.2019 To 15.06.2019	-	03.06.2019 To 28.06.2019	27.05.2019 To 31.05.2019	-	01.07.2019 To 12.07.2019	01.07.2019 To 12.07.2019	20.06.2019 To 04.07.2019	20.06.2019 To 04.07.2019
<b>Viva Voce</b>		-	11.06.2019 To 17.06.2019	-	-	-	-	-	-	-	-	-
<b>Summer Project / Professional training /</b>	-	-	-	-	20.05.2019 To 29.05.2019 [Submission of report to VTU]	01.04.2019 To 15.04.2019 [Submission of report to VTU]	03.06.2019 To 18.06.2019 [Submission of report to VTU]	-	-	-	-	-
<b>Commencement of ODD Semester</b>	22.07.2019	22.07.2019	-	22.07.2019	-	-	-	-	26.08.2019	22.07.2019	08.08.2019	22.07.2019

**NOTE**

1. College Time Table shall be arranged for five and a half week days and planned to accommodate EDUSAT transmission slots, the schedule of which will be notified separately.
2. The faculty/staff shall be available to undertake any work assigned by the university.
3. If any of the above date is declared to be a holiday then the corresponding event will come into effect on the next working day.
4. Notification regarding Calendar of Events relating to the conduct of University Examination will be issued by the Registrar (Evaluation) from time to time

  
**REGISTRAR**

## Institutional Calendar of Events



**PES INSTITUTE OF TECHNOLOGY AND MANAGEMENT, Shimoga**

**Calender of Events During Even (4th, 6th & 8th) semester-2018-19 (Tentative)**

Month	Dates							General Holidays	Academic Activities
J A N U A R Y	SUN		6	13	20	27			
	MON		7	14	21	28			
	TUE	1	8	15	22	29		28-01-2019, Reopening - IV, VI & VIII Sem	
	WED	2	9	16	23	30		Placement/ Soft-skill Training, 28th Jan to 02nd Feb 6 days for VI Sem & 28th Jan to 31st Jan 4 days for IV Sem.	
	THUR	3	10	17	24	31			
	FRI	4	11	18	25				
	SAT	5	12	19	26				
F E B R U A R Y	SUN		3	10	17	24			
	MON		4	11	18	25			
	TUE		5	12	19	26			
	WED		6	13	20	27			
	THUR		7	14	21	28			
	FRI	1	8	15	22				
	SAT	2	9	16	23				
M A R C H	SUN	31	3	10	17	24			
	MON		4	11	18	25	4th Mahashivarathri	2nd Ethnic Day	
	TUE		5	12	19	26		7, 8, 9 - First - IA for IV, VI & VIII Semester	
	WED		6	13	20	27		First one-third syllabus for First IA	
	THUR		7	14	21	28		13th Dispatch of First IA Report	
	FRI	1	8	15	22	29			
	SAT	2	9	16	23	30			
A P R I L	SUN		7	14	21	28			
	MON	1	8	15	22	29	6th Chandramana Yugadi	11, 12, 13 - Second - IA for IV, VI & VIII Semester	
	TUE	2	9	16	23	30	17th Mahaveer Jayanthi	Second one-third syllabus for Second IA	
	WED	3	10	17	24		19th Good Friday	16th Dispatch of Second IA Report	
	THUR	4	11	18	25		21st Full working day, compensatory for 18th.	26th Sports Day	
	FRI	5	12	19	26		Thursday TT has to followed on 21st.	27th College Day	
	SAT	6	13	20	27		13th Full working day compensatory for 20th.		
M A Y	SUN		5	12	19	26			
	MON		6	13	20	27	1st May Day	11th Project Exhibition	
	TUE		7	14	21	28	7th Basava Jayanthi	15, 16, 17 - Third IA for IV, VI & VIII Semester	
	WED	1	8	15	22	29		Last one-third syllabus for Third IA	
	THUR	2	9	16	23	30		18th Graduation Day	
	FRI	3	10	17	24	31		22nd Dispatch of Third IA report	
	SAT	4	11	18	25				

  
Principal

Dr. Chaitanaya Kumar M V

Principal

PES Institute of Technology & Management  
NH-206, Soor Road, SHIVAMOGGA-577 202.

**Department Calendar of Events**

## PES Institute of Technology & Management

NH 206, Sagar Road, Shivamogga - 577 204  
**COE FOR EVEN SEM BE- Information Science and Engineering**

Month	Dates						General Holidays	Academic Activities BE
J A N U A R Y	SUN		6	13	20	27		
	MON		7	14	21	28		Reopening 28-01-2019-IV, VI and 30-01-2019 VIII Sem BE
	TUE	1	8	15	22	29		Placement/ Soft-skill Training, 28th Jan to 02nd Feb 6 days for VI Sem & 28th Jan to 31st Jan 4 days for IV Sem BE
	WED	2	9	16	23	30		
	THUR	3	10	17	24	31		
	FRI	4	11	18	25			
SAT	5	12	19	26			For VIII Sem Regular Classes shall be held	
F E B R U A R Y	SUN		3	10	17	24		
	MON		4	11	18	25		
	TUE		5	12	19	26		13,14- Internship Seminar
	WED		6	13	20	27		
	THUR		7	14	21	28		
	FRI	1	8	15	22			20- Technical Talk by Faculty
SAT	2	9	16	23			27- Technical Talk by Faculty	
M A R C H	SUN	31	3	10	17	24		
	MON		4	11	18	25	4th Mahashivarathri	2nd Ethnic Day
	TUE		5	12	19	26		7, 8, 9 - First - IA
	WED		6	13	20	27		13th Dispatch of First IA Report
	THUR		7	14	21	28		
	FRI	1	8	15	22	29		13,14,15- Technical Seminar
SAT	2	9	16	23	30		10,24- Technical Talk by Faculty	
A P R I L	SUN		7	14	21	28		
	MON	1	8	15	22	29	6th Chandramana Yugadi	11, 12, 13 - II - IA
	TUE	2	9	16	23	30	17th Mahaveer Jayanthi	16th Dispatch of Second IA Report
	WED	3	10	17	24		19th Good Friday	15,16- Workshop on Selenium Tool
	THUR	4	11	18	25		13th Full working day compensatory for 20th.	26th Sports Day and 27th College Day
	FRI	5	12	19	26			8,9- Project Phase 2
SAT	6	13	20	27		21st Full working day, compensatory for 18th. Thursday TT has to followed on 21st.		
M A Y	SUN		5	12	19	26		
	MON		6	13	20	27	1st May Day	11th Project Exhibition for VIII sem
	TUE		7	14	21	28	7th Basava Jayanthi	15, 16, 17 - III IA
	WED	1	8	15	22	29		9,10- Hackathon
	THUR	2	9	16	23	30		18th Graduation Day
	FRI	3	10	17	24	31		22nd Dispatch of Third IA report to parents
SAT	4	11	18	25			10,11,13- Project Final Phase	
J U N E	SUN	30	2	9	16	23		
	MON		3	10	17	24	5th Ramazan	
	TUE		4	11	18	25		
	WED		5	12	19	26		
	THUR		6	13	20	27		
	FRI		7	14	21	28		
SAT	1	8	15	22	29			

**Note:** Attendance Requirement: According to VTU regulations, candidates have to put in a minimum attendance of 85 % in each course.

**Internal Test Marks:** For IV Sem BE-Final Test Marks shall be the average of three tests to a maximum of 30 marks. The remaining 10 marks shall be awarded based on the evaluation of CCE component(i.e., Assignment, Class presentation, Mini Project, Case Study etc.)

**For VI & VIII Sem BE-Final Test Marks** shall be the average of best of two tests, to a maximum of 15 marks. The remaining 5 marks shall be awarded based on the evaluation of CCE component(i.e., Assignment, Class presentation, Mini Project, Case Study etc.)

## **Use of Various Instructional Methods and Pedagogical Initiatives**

The faculty of department adopts various innovative Teaching & Learning methodologies to create the best learning environment for students. These methodologies include traditional black board teaching, presentations, video lecturing etc. as given below.

- Industry Institutional Interaction
- Industrial Visit
- Internships
- Content Beyond Syllabus
- Seminar by Staff
- Group Tasks

## **Methodologies to support slow learners and encourage bright students**

### **Slow Learners**

- Student who scored less than 50% marks in more than three subjects in IA are considered as slow learners.
- Class teacher and Subject teacher will identify slow learners.
- After identifying, the students performances are informed to their parents and remedial classes are conducted.

### **Bright Students**

- Students with good academic performance in Internal Assessment are considered as bright students.
- Students are encouraged to participate in workshops, seminars, paper presentations.
- Students are appreciated by giving Book Coupons.

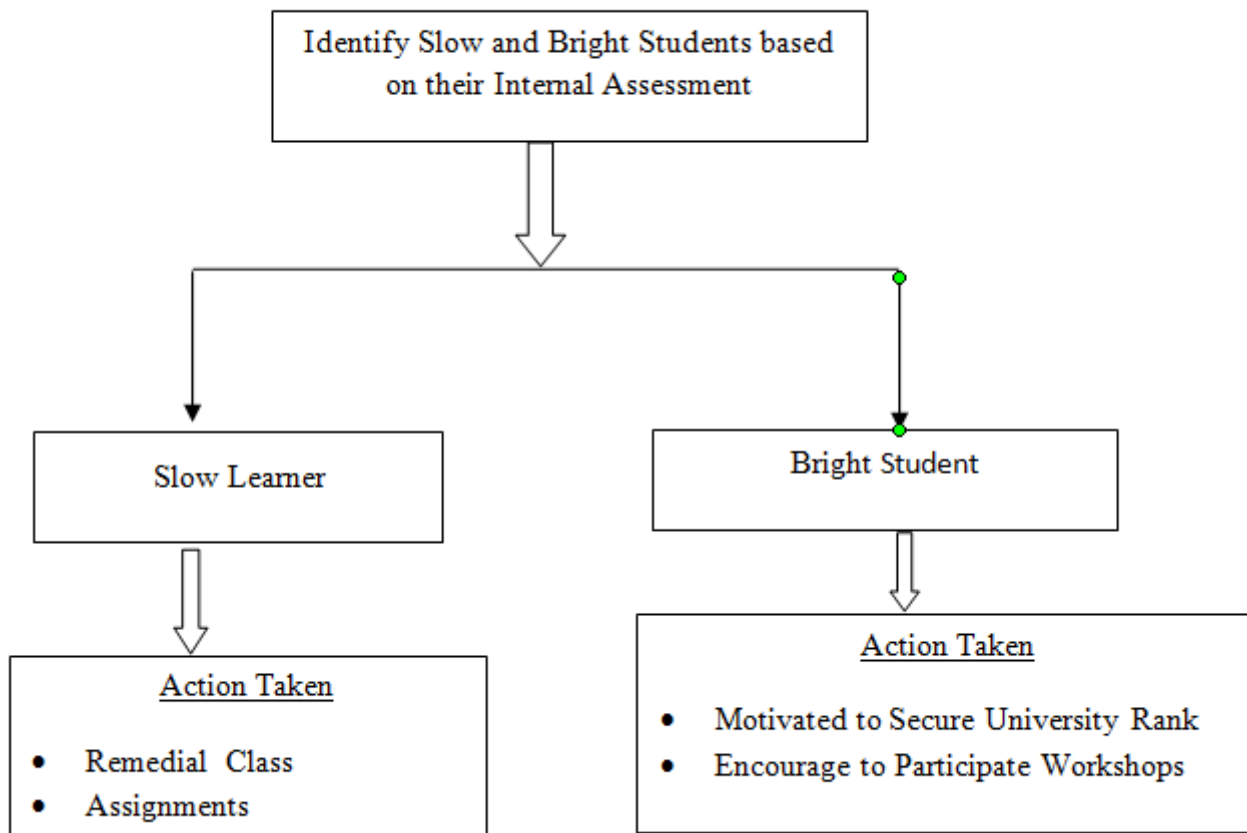


Fig 2.5: Process of identifying weak and Bright Students

## Quality of Classroom Teaching (Observation in a Class)

Well-structured lesson plans are prepared and executed for all theory and practical courses, reviewed by HOD. The course file includes the following documents:

- **Calendar of events:** It includes university, college and department calendar of events.
- **Time table:** Time table includes the clear schedule of the subjects and labs allotted to the faculty.
- **Syllabus copy**
- **Previous Year university question papers:** The faculty members will maintain the photocopy of the previous year question papers in their course file.

- **Lesson Plan:** Lesson plan is prepared for each lecture hour in the teaching plan by the course instructor before the commencement of the semester and it is reviewed and approved by the HOD.
- **Internal question papers with scheme:** Test question papers with scheme prepared by the course instructor, reviewed and approved by the question paper review committee.

**Following Teaching Methodologies are used for effective teaching:**

- Lectures
- Tutorials
- Presentation (Still and Video)
- Experimental Laboratory Work
- Group tasks (Projects)
- Black-board
- Case Studies
- Quiz
- e-Learning

**Conduction of Experiments**

**Procedure :**

- Faculty in-charge of respective labs will prepare the manuals.
- Faculty explains the procedure, logic and applications of the experiment/program
- Students will design the program/experiment ,execute the program /conduct the experiments and record the output.
- The experiments are evaluated by the faculties and marks are recorded.

**Continuous Assessment of Laboratory**

Continuous assessment system is also implemented for assessment of laboratory work. The evaluation is done on the basis of submission of laboratory observations, records, conduction and viva. Internal test is conducted at the end of the semester and evaluated.

**Distribution of the Marks**

**Table 2.8: 2010 SCHEME**

Sl. No.	Description	Marks (25)
1.	Continuous Evaluation: <ul style="list-style-type: none"> <li>• Observation write up</li> <li>• Conduction of experiment and output</li> <li>• Viva voice</li> <li>• Record write up</li> </ul>	<b>15</b>
2.	Internal Test	<b>10</b>

**Table 2.9:2015 CBCS SCHEME**

<b>Sl. No.</b>	<b>Description</b>	<b>Marks</b>
1.	Continuous Evaluation: <ul style="list-style-type: none"> <li>• Observation write up</li> <li>• Conduction of experiment and output</li> <li>• Viva voice</li> <li>• Record write up</li> </ul>	<b>12</b>
2.	Internal Test	<b>8</b>

**Table 2.10: 2017 REVISED CBCS SCHEME**

<b>Sl. No.</b>	<b>Description</b>	<b>Marks</b>
1.	Continuous Evaluation: <ul style="list-style-type: none"> <li>• Observation write up</li> <li>• Conduction of experiment and output</li> <li>• Viva voice</li> <li>• Record write up</li> </ul>	<b>30</b>
2.	Internal Test	<b>10</b>

**Table 2.11: 2018 CBCS SCHEME**

<b>Sl. No.</b>	<b>Description</b>	<b>Marks</b>
1.	Continuous Evaluation: <ul style="list-style-type: none"> <li>• Observation write up</li> <li>• Conduction of experiment and output</li> <li>• Viva voice</li> <li>• Record write up</li> </ul>	<b>30</b>
2.	Internal Test	<b>10</b>

**Table 2.12: Lab Rubrics for CBCS SCHEME**

Parameters	Marks Allocated	Rubrics
Observation/ Procedure Writing	5	Low:(0 marks) Student does not write the procedure/program and the calculations Medium(1-4marks) Student incompletes the observations High: (5 marks) student completes the calculations and the observation books
Execution/Conduction	15	Low:(0 marks)-Student does not execute the program Medium: (1-14 marks) Student incompletes the execution with errors High: (15 marks) -student completes the execution of the program
Viva voice	5	Low:(0 marks)-Student does not explain any concepts of the program Medium: (1-4 marks) Student explain the concepts of the program High: (5 marks) -student explain the logic and concepts of the program
Record Submission	5	Low: (0 marks) -Student does not write the program and outputs in the record book Medium: (1-4 marks) Student incompletes the record book High: (5 marks)-student records the calculations and the executed program in the record books

**Sample Lab Experiment Evaluation copy**





**PES Institute of Technology and Management,  
Shivamogga-577204**

Department of Information Science & Engineering

Name of the Student: AS SINCHANA

Total CIE Marks: 20

Name of the Laboratory and Subject Code: WEB Technology & Application AND

Expt. No	Date	Title of Experiment	Weekly Evaluation-12M (60% of CIE Marks)				Sign of Faculty
			(A) 6M	(B) 4M	(C) 2M	Total 12 M	
1	30/8/19	A Simple calculator	5	3	2	10	<del>AS</del>
2	30/8/19	Finding Square & cube of number from 0 to 100	6	4	1	11	<del>AS</del>
3	30/8/19	Javascript to perform an automatic Text grouping & Text shrinking	6	3	2	11	<del>AS</del>
4	30/8/19	Javascript parameter - A String the position in the string of the left most vowel, A number - the no. with its digits in the Reverse	6	4	1	11	<del>AS</del>
5	30/9/19	XML document to sort information about the student	6	4	1	11	<del>AS</del>
6	18/10/19	Number of visitors visiting the web page	6	3	1	10	<del>AS</del>
7	18/10/19	Display a digital clock	6	4	2	12	<del>AS</del>
8	05/10/19	Simple calculator	2	4	1	7	<del>AS</del>
9	15/11/19	Search the word in states PHP program	2	3	2	7	<del>AS</del>
10	15/11/19	Sort the student Records	2	4	1	7	<del>AS</del>
Average Marks secured from weekly evaluation						10	<del>AS</del>
Marks scored from Internal Assessment out of 8 M (40% of CIE)						08	<del>AS</del>
Total marks scored						18	<del>AS</del>

Note: A- Conduction of Experiment, B- Writing Record, C-Viva vice

Fig 2.6: Sample Lab evaluation form

## Students Feedback on Teaching Learning Process and Action taken

The department takes student feedback on the teaching and learning process once in every semester. Institute has a Grade Evaluation and Management Software(GEMS) through which students give their feedback online. The detail process of taking feedback and corrective actions are shown in Fig:2.7

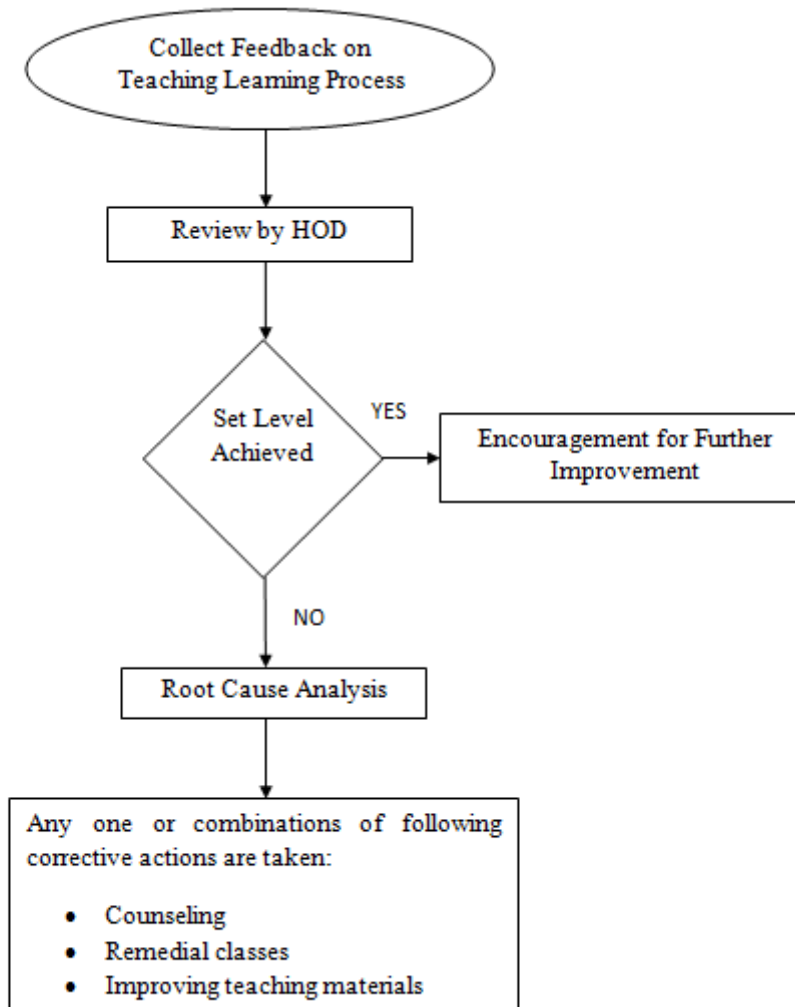


Fig 2.7: Feedback Process

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

Institute Marks : 18.00

## Process for Internal Semester Question Paper setting,evaluation and Effective Process Implementation

The department has question paper review committee responsible for monitoring, Coordinating the Question paper settings for internal examinations and carry out Evaluation process for internal Assessments against the Coverage of Syllabus and Course outcomes. The Fig 2.8 shows the process of reviewing the question paper for Internal assessment.

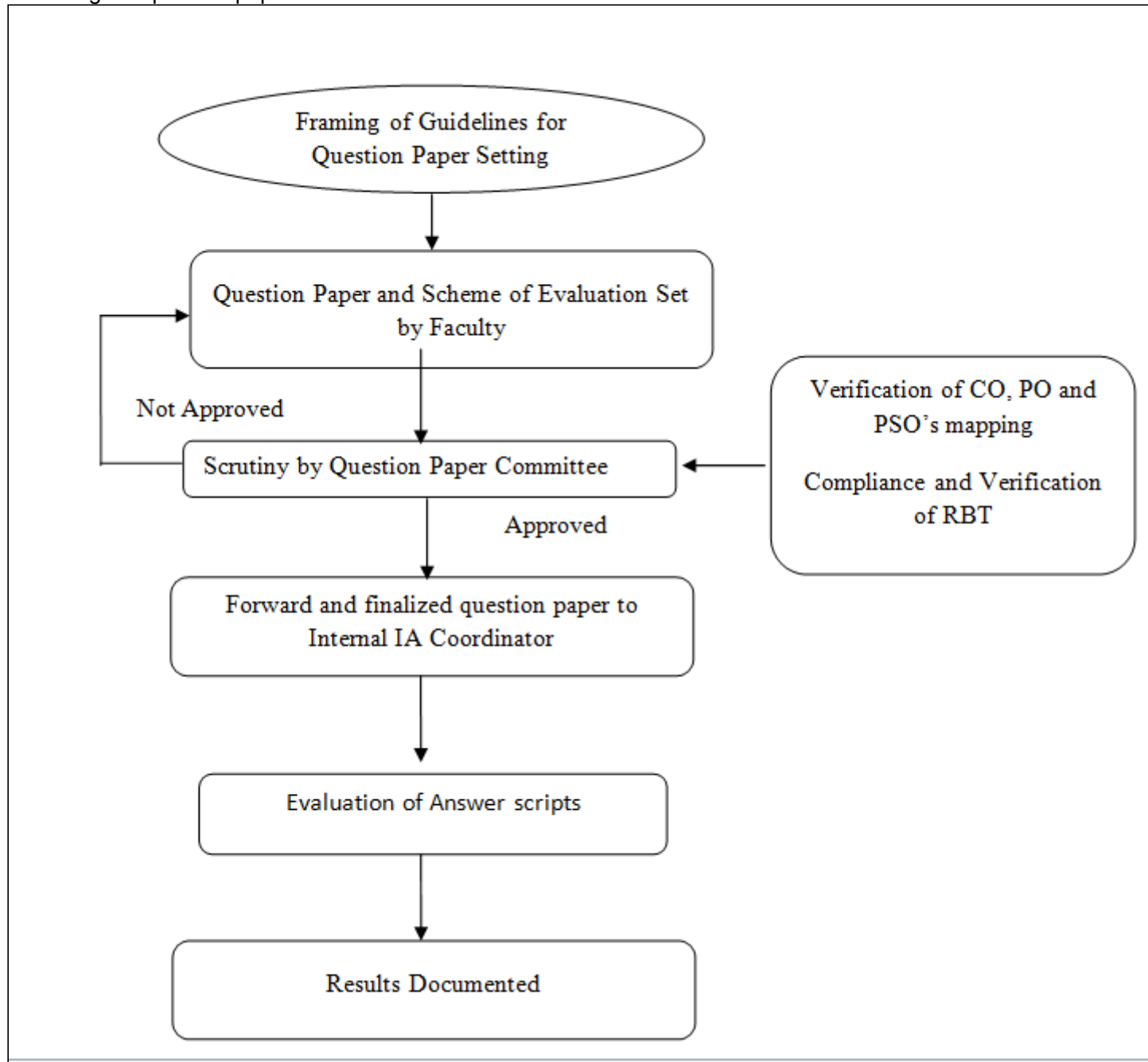


Fig 2.8: Process for Internal Semester Question Paper setting and evaluation

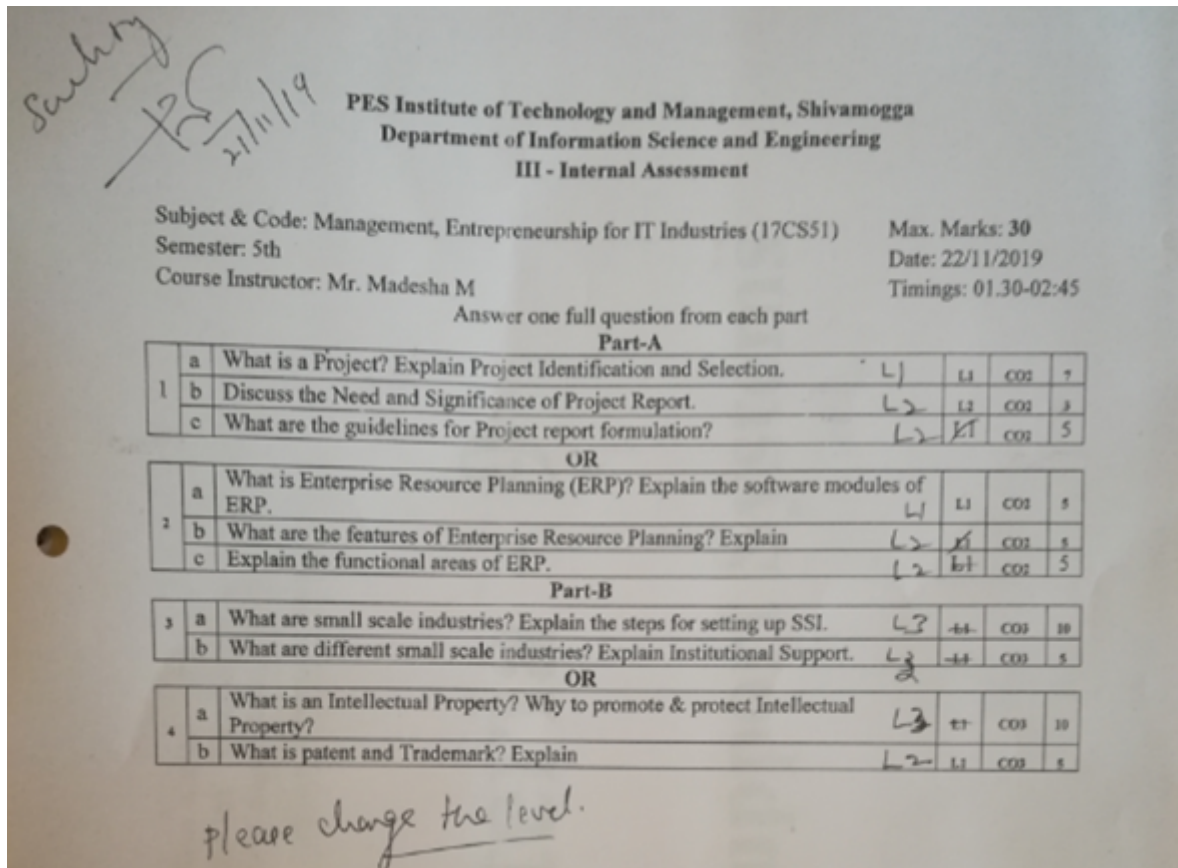


Fig 2.9: Sample Question Paper Scrutinized by the Committee

### Sample Assignment questions



**Assignment Questions**

Subject & code: Data Structures and Applications (18CS32)  
Date: 12.09.2019

Semester: 3  
Course Instructors: Mr Arjun U.

Q No.	Questions	BT
1	What is Data Structure? Explain their Classification and Operations	L1
2	What is an Array? Explain the Representation of the array	L2
3	What is a structure? Give different ways of defining a structure with example for each.	L2
4	Explain Self-referential structure with Example	L2
5	Define Pointer. With examples, explain pointer declaration, pointer initialization and use of pointer in allocating block of memory.	L1
6	What are the various Dynamic memory allocation techniques? Explain how dynamic allocation is done using <code>malloc()</code> along with C program.	L2
7	Write a note on dynamically allocated arrays with example.	L1
8	Explain the following array operations with algorithm and example for each: a. Inserting an element b. deleting an element. C. display	L2
9	What is a String? How string is stored in different ways in the memory?	L1
10	Explain the following String Handling Operations	L2

Fig 2.10: Sample assignment questions

**2.2.3 Quality of student projects (25)**

Institute Marks : 20.00

## Process for Project team creation and guide allotment

The following flow diagram shows the process of creating project batches, allocation of project guides, finalization of project topics and project evaluation.

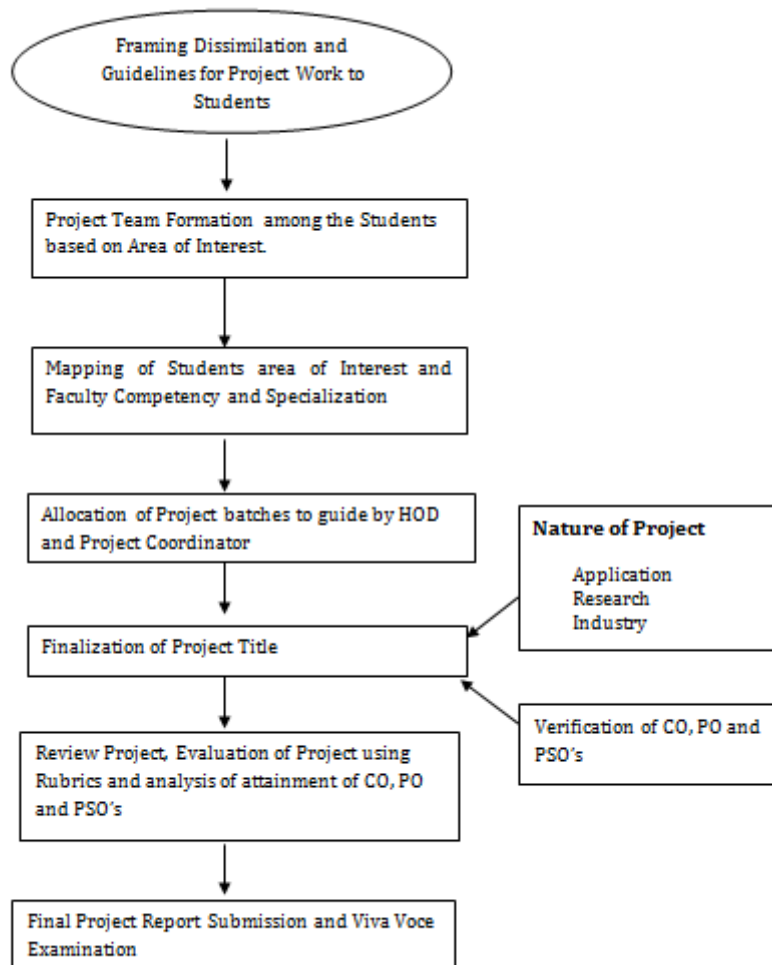



Fig 2.11: Project Identification, Guide Allocation, Monitoring and Evaluation

## Project Evaluation Format

		<b>Prerana Educational and Social Trust®</b> <b>PES Institute of Technology and Management</b> NH-206,Sagar Road,Shivamogga-577204						
		<b>Department of Information Science and Engineering</b> <b>Project Evaluation Form – Review 1</b>						
Project Title					DATE:			
SL NO.	USN	NAME OF THE STUDENT		GUIDED BY				
<b>TEAM MEMBERS CONTRIBUTION AND PERFORMANCE</b> <b>Rubrics for Assessing the Progress of the Work</b>								
1.Not Relevant		2-Marginal		3-Average	4-Good	5-Excellent		
EVALUATION COMPONENTS			MARKS	TEAM MEMBERS				
				1	2	3	4	5
Synopsis (10)	Aim of the Project		5					
	Justification for Carrying out the Project		5					
Literature Survey (15)	Knowledge about Existing Methods		5					
	Selection of Reference Papers		5					
	Review of the literature is presented in a logical manner		5					
Analysis & Design (30)	Problem Identification		10					
	Objectives of the Project		10					
	Selection of appropriate techniques and tools		10					
Slide Preparation & Presentation (20)	Organization of the Presentation		10					
	Communication of Ideas		10					
Documentation(20)	Contents of Report		10					
	Organization of Report		10					
Regularity(5)	Meeting Guide and attending Presentation		5					
<b>Total</b>			<b>100</b>					
Project Assessment Committee		Designation	Comments			Signature		
1		HOD						
2		Project Coordinator						
3		Project Guide						

**Fig 2.12: Project evaluation components**

## Quality of Completed Projects

Fig 2.11 shows some projects which are selected for Karnataka State Council for Science and Technology(KSCST) student project funding and exhibited in the state level student project exhibition



## KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012

Website: <http://www.kscst.iisc.ernet.in/spp.html> || Email: [spp@kscst.iisc.ernet.in](mailto:spp@kscst.iisc.ernet.in) || Phone: 080-23600978

### STUDENT PROJECTS PROGRAMME: 41st SERIES – STATE LEVEL SEMINAR AND EXHIBITION

List of Projects Selected for State Level Seminar and Exhibition (S&E) to be held at Bapuji Institute of Engineering and Technology, Davanagere on 10<sup>th</sup> and 11<sup>th</sup> August 2018

70. P.E.S. INSTITUTE OF TECHNOLOGY AND MANAGEMENT, SHIVAMOGGA

Sl. No.	PROJECT REFERENCE NO.	PROJECT TITLE	BRANCH	NAME OF THE GUIDE	STUDENT1 & TEAM LEADER	STUDENT 2	STUDENT 3	STUDENT 4	PROJECT SELECTED FOR
177.	41S_BE_1461	EXPERIMENTAL PERFORMANCE ANALYSIS OF CONVENTIONAL GASOLINE VEHICLE BLENDED WITH HYDROGEN GAS.	MECHANICAL ENGINEERING	Mr. RAJASHEKHARA M.C	Mr. MOHAMMED SHAHID	Mr. MADHU M.G.	Mr. LOHITHA M.S.	Mr. SYED SALMAN.	EXHIBITION
178.	41S_BE_1466	QUICK RESPONSE (QR)CODE FOR VEHICLE REGISTRATION AND IDENTIFICATION	COMPUTER SCIENCE AND ENGINEERING	Dr. SUNITHA B. S	Ms. SONALI SHETTY	Ms. ANUSHA TENGSE			EXHIBITION
179.	41S_BE_1468	SMART WATERING SYSTEM USING IOT	INFORMATION SCIENCE AND ENGINEERING	Mr. VENKATESH.P	Ms. NIVEDITHA P S	Ms. CHAITHRA B S	Ms. DEEPASHREE S	Mr. KOUISHK G R	SEMINAR
180.	41S_BE_1472	DIGITAL COTTAGE UDYAMA	INFORMATION SCIENCE AND ENGINEERING	Mr. PRAVEEN GUJJAR J	Ms. SUPRIYA S P	Ms. AYESHA RUKHSAR	Ms. DEEPTHI KASHYAP	Ms. RENUKA N	EXHIBITION

**Note:**

- You are requested to send the hard bound copy of the project report along with softcopy of the full report in a CD in PDF format.
- Any corrections with respect to Guide and Students name, kindly send an email regarding the same to [spp@kscst.iisc.ernet.in](mailto:spp@kscst.iisc.ernet.in).

Fig 2.13: KSCST funded projects

## Project Domains

The following graph shows the different domains on which students undertake projects. These domain cover current trends in the field of IT and industrial needs.



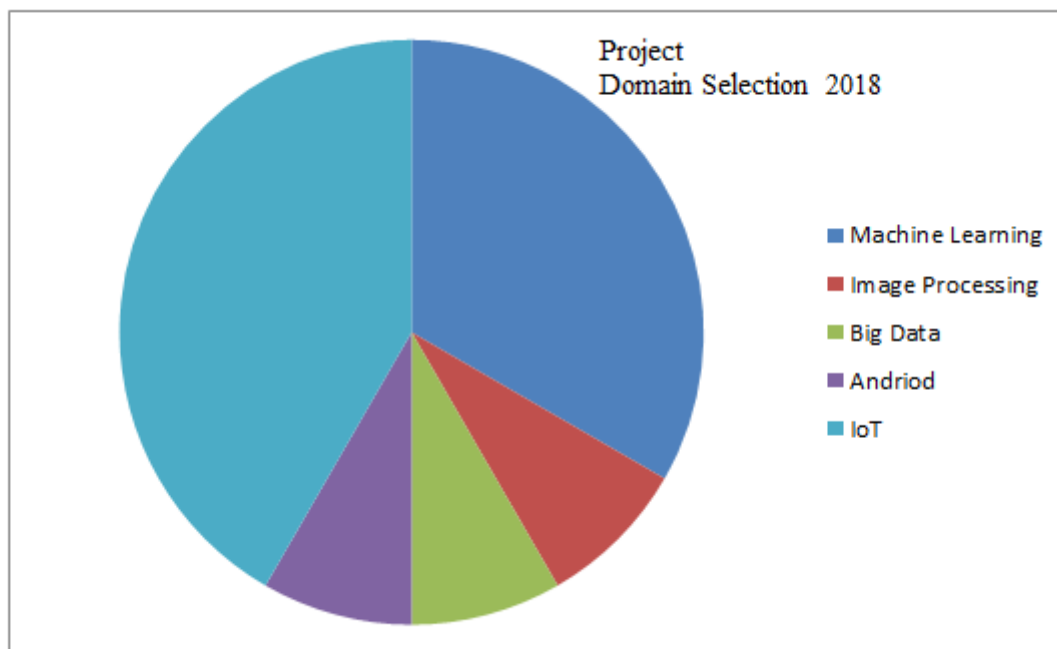


Fig 2.14 : Project Domains

Table 2.13: Details of students who presented Project papers in various Conferences

2016-17 Batch				
Sl. No.	Students Name	USN	Paper Title	Conference Details
1.	Ms. Chaithra K.H Ms. Usha S.	4PM13IS010 4PM13IS040	A Proposed Data mining Methodology and its Application to Predict the Allotment of Colleges”	2 <sup>nd</sup> National Conference on Emerging Trends and Advances in Information Technology held at AIT, Chikmagalore,Karnataka from 7 <sup>th</sup> to 8 <sup>th</sup> of April, 2017.
2.	Ms. Sindhurani, Ms. Praneetha Ms. Supriya C.M	4PM13IS034 4PM13IS023 4PM13IS036	Three Level Security to Transfer Secret Information”.	2 <sup>nd</sup> National Conference on Emerging Trends and Advances in Information Technology held at AIT, Chikmagalore, Karnataka from 7 <sup>th</sup> to 8 <sup>th</sup> of April, 2017.
2017-18 Batch				
1.	Ms. Bhuvana Ms. Kavyashree Ms. Meghana Kori Ms. Sindhu N P	4PM14IS009 4PM14IS021 4PM14IS030 4PM14IS045	Agriculture Yield Prediction Using Data Mining	Fourth National Conference on Multimedia Technology and Communication System” organized at Malnad College of Engineering, Hassan ,Karnataka from 18 <sup>th</sup> to 19 <sup>th</sup> May, 2018

2.	Mr. Alok Kumar Mr. Ramesh Mr. J Sachin Ms. Veena	4PM14IS004 4PM14IS017 4PM14IS016 4PM14IS051	Intelligent Personal Assistant for Smart Home	Fourth National Conference on Multimedia Technology and Communication System” organized at Malnad College of Engineering, Hassan ,Karnataka from 18 <sup>th</sup> to 19 <sup>th</sup> May, 2018
3.	Ms. Pavithra H D Ms. Shubha S.M	4PM14IS036 4PM14IS044	Privacy Preserving Authentication Model for Cloud Storage System”.	National Conference on “Emerging Trends and advances in Information Technology” on 24 <sup>th</sup> April, 2018 held at Adichunchanagiri Institute of Technology, Chikmagalore ,Karnataka
<b>2018-19 Batch</b>				
1.	Ms. Pooja S.G Ms. Manasa Ms. Komala Ms. Varshini K M	4PM15IS027 4PM15IS016 4PM15IS012 4PM15IS053	Leaf Disease Detection Using Image Processing	5 <sup>th</sup> National Conference on “Multimedia Technology and Communication System, held on 10 <sup>th</sup> May, 2019 at MCE, Hassan ,Karnataka

## 2.2.4 Initiative related to industry interaction (15)

Institute Marks : 10.00

### Industrial visits

Industrial visits are arranged in the department for final year students to understand the industry culture, process activities in software development and learn the industry standard tools. Students get the opportunities to interact with the industry experts. The following table shows the details of industrial visit arranged in the department.

Table 2.14: Detail of Industrial visit

Sl. No.	Name of company/ organization	No. of students	Nature of training	Date	No. of days
1	A1 Logic, Mangalore	50	Skill Improvement	14/04/2018	01

### MoU with industry

Department of ISE has an MOU with Srichid Technologies, Bengaluru . Students and faculty members can do research projects in Srichid innovation lab in collaboration with Srichid technology private Ltd and also the company offers internship to the students in recent areas of technology and research.



MoU With Srichid Technologies



Inauguration of Srichid Lab

Fig 2.15: MoU and inauguration of Srichid lab



सत्यमेव जयते

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MEMORANDUM OF UNDERSTANDING (MOU)

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11 Page

Fig 2.16: Copy of MoU

Table 2.15: workshops organized in association with the Industry and academic experts

S. NO.	Date	Workshop On	Resource Person
--------	------	-------------	-----------------

1	07.10.2017 to 08.10.2017	Python Programming	Mr.Venugopala P.S Associate Professor NMAMIT, Nitte , Karnataka Mrs.Ashwini Associate Professor NMAMIT,Nitte , Karnataka
2	23.05.2018	Rapid SQL Writing	Mr. C.V Joshi , CEO, BitRamp Soluttions, Shivamogga , Karnataka
3	05.09.2018	Internet of Things	Mr. C.V Joshi , CEO, BitRamp Soluttions, Shivamogga , Karnataka
4	27.10.2018 to 28.10.2018	DevOps on Cloud	Mr.Rahula Sheleka ,Senior Project Engineer, Wipro, Pune
5	29.03.2019	IoT and Raspberry PI	Mr.Thejesh, CTO, Loginware Softtec ,Bengaluru, Karnataka
6	03.05.2019 to 04.05.2019	Hackathon on Blockchain	Dr.Kiran ,Associate Professor NITK Surathkal, Karnataka

### 2.2.5 Initiative related to industry internship/summer training (15)

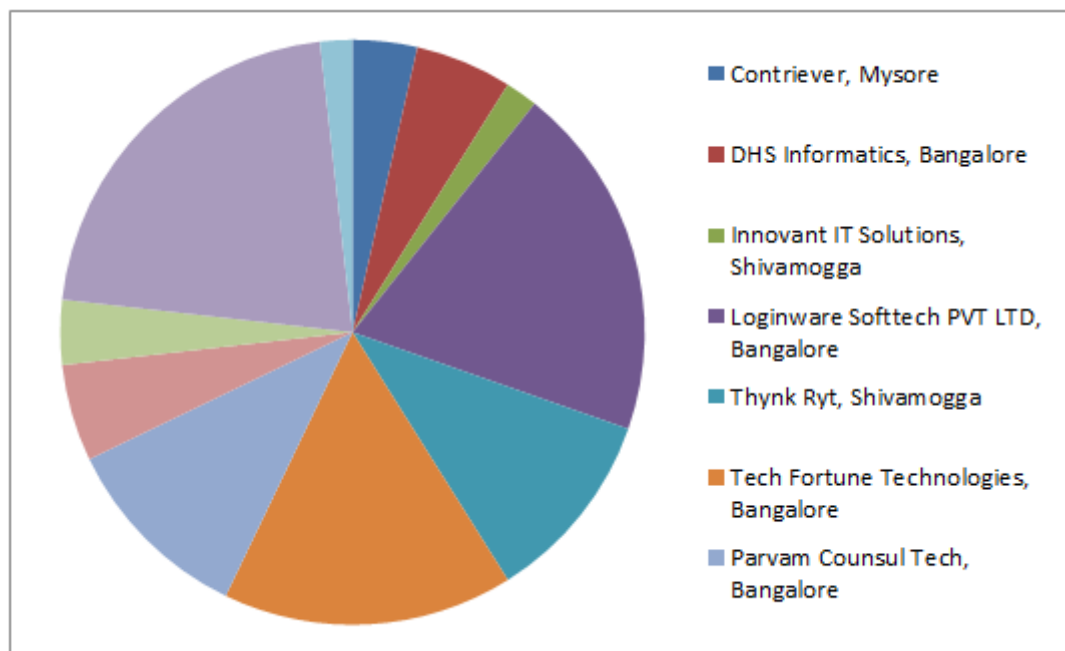
Institute Marks : 13.00

## Initiatives related to Industry Internship

The following table shows the list of companies offered internship for the students and number of students undergone four weeks internship.

Table 2.16: Internship detail for the batch 2016-20

Sl. No.	Internship companies	Number of Interns
1	Contriever, Mysore	02
2	DHS Informatics, Bangalore	03
3	Innovant IT Solutions, Shivamogga	01
4	Loginware Softtech PVT LTD, Bangalore	11
5	Thynk Ryt, Shivamogga	06
6	Tech Fortune Technologies, Bangalore	09
7	Parvam Counsul Tech, Bangalore	06
8	Nexus Edutech, Mysore	03
9	Hewlett Packard Enterprises, Mangalore	02
10	Inventron Technologies, Mysore	12
11	Hexagon Global IT, Bangalore	01



**Fig 2.17:** Internships offered by companies for the batch 2016-20

**Table 2.17:** Four Weeks Internship Program offered by the Various companies for batch 2015-19

Sl. No.	Internship Companies	Number of internships
1	Net Soft Infotech, Bangalore, Mysore	13
2	Bitramp, Shivamogga	15
3	Ignus Educare Solutions, Mysore	01
4	Tech Fortune, Bangalore	02
5	Infoholic Research, Bangalore	01
6	Code Wave Technologies, Bangalore	01
7	Venus Cloud Technologies, Shivamogga	02
8	Apsis Solutions, Bangalore	04
9	Srichid Technologies, Bangalore	03

10	Hewlett Packard Enterprises, Mangalore	01
11	HAL, Bangalore	01
12	Tech Systems, Bangalore	01

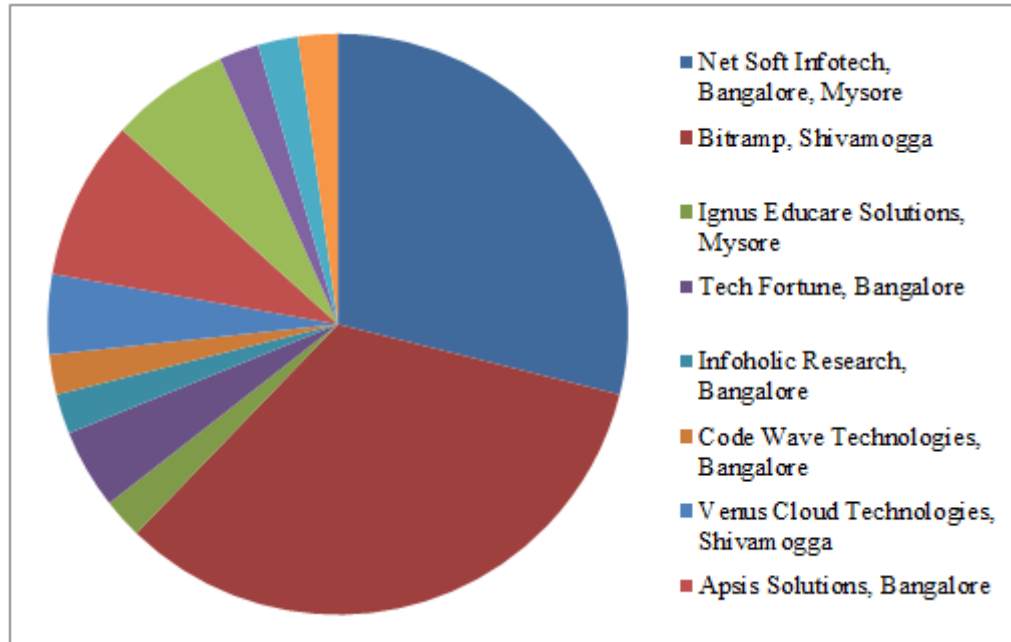


Fig 2.18: Internship offered by companies for batch 2015-19

## Impact Analysis of Industrial Training

- Students gain exposure to spirit of entrepreneurship
- Students will be able to implement their ideas in their final year projects.
- Students will get practical knowledge related to their theory subjects.
- Students will get an idea about the recent developments in the industries.
- Students will improve their communication and additional knowledge about industry requirements and modern tools

## INTERNSHIP SUPERVISOR EVALUATION FORM

The evaluation is designed primarily to provide intern feedback on work nature, efficiency and performance. Please complete the form and submit at the end of the internship.

SUPERVISOR INFORMATION						
NAME:			JOB TITLE:			
ORGANIZATION'S NAME:			PHONE NUMBER:			
EMAIL ADDRESS:						
INTERNSHIP INFORMATION						
STUDENT NAME:						
STARTING DATE (DD/MM/YY):			COMPLETION DATE (DD/MM/YY):			
ABOUT THE INTERN						
Please evaluation this student intern on the following items by checking the appropriate rating.	Excellent	Very Good	Satisfactory	Needs Improvements	Unsatisfactory	Next Applicable
1. Arrived to work on-time						
2. Behaved in a professional manner						
3. Effectively performed assignment						
4. Oral Communication Skills						
5. Written Communication Skills						
6. Ability to work with others						
7. Ability to adapt to a variety of Tasks						
8. Decision making setting priorities						

Fig 2.19: Internship student evaluation form

### Student Feedback on Internship

- Once industrial tour, internship, summer training is over, every student has to submit feedback.
- The Department Industrial coordinator is responsible to collect forms from the students and submit report to the department.
- The student can also suggest other important things which they want to know more on it.



**STUDENT FEEDBACK ON INTERNSHIP**

Company Name: <i>Invention Technologies</i>					
Address: <i>Magadi Main road, Vijaynagar Bangalore - 560083</i>		Date: <i>10/08/2019</i>			
Name of the Student: <i>Mohammed Sital</i>		USN: <i>4PM16IS035</i>			
SL No	Particulars	Excellent	Very Good	Good	Poor
1	Is the internship training well organized?			✓	
2	Whether it is relevant to you and useful to you?			✓	
3	Proficiency of the internship training expert person			✓	
4	Response to queries by internship training expert person		✓		
5	Will you recommend juniors to do internship in this industry?	Recommended: <input checked="" type="checkbox"/> Not recommended: <input type="checkbox"/>			
Any suggestion/improvement:					
<i>Mohammed Sital</i> Student's Signature					

Fig 2.20: Student feedback form on internship

Table 2.18: List of 2015-19 batch students completed Internship

SL. NO	USN	STUDENT NAME	Company Name
1	14PM13IS012	DIVYA Y RAIKAR	Net Soft Tech, Bangalore
2	24PM14IS005	AMAN S V	Bit Ramp, Shivamogga
3	34PM14IS008	BHAGYASHREE A R	Net Soft Tech, Bangalore
4	44PM14IS033	NAVYA R	Srichid, Bangalore
5	54PM14IS038	PRASANNA KUMAR PRABHU	Ignus Learning and Educare Solutions Pvt Ltd, Mysore
6	64PM15IS003	ANAGHA M G JOIS	Apsis Solutions, Bangalore
7	74PM15IS004	ANUSHREE B	Net Soft Tech, Bangalore

84PM15IS005	ARPITA SETHI	Tek Systems Global Services, Bangalore
94PM15IS006	ASFIYA KHANUM	Apsis Solutions, Bangalore
104PM15IS007	ASHWINI M V	Venus Cloud Technology, Shivamogga
114PM15IS008	BHAVYA D	HAL, Bangalore
124PM15IS009	CHAYA A M	Bit Ramp, Shivamogga
134PM15IS010	DEEPIKA B R	Net Soft Tech, Bangalore
144PM15IS012	KOMAL G R	Bit Ramp, Shivamogga
154PM15IS013	HALASWAMY H S	Bit Ramp, Shivamogga
164PM15IS014	KAJOL SHIDRAMSHETTAR	Bit Ramp, Shivamogga
174PM15IS015	M S SIRISAPTHAMI	Tech Fortune, Bangalore
184PM15IS016	MANASA H S	Bit Ramp, Shivamogga
194PM15IS018	MEGHANA B P	Bit Ramp, Shivamogga
204PM15IS019	MEGHANA K HEGDE	Srichid, Bangalore
214PM15IS020	MONIKA K S	Bit Ramp, Shivamogga
224PM15IS021	NANDINI G V	Tech Fortune, Bangalore
234PM15IS023	NAVEEN SATYANARAYANA DHARESHWAR	Bit Ramp, Shivamogga
244PM15IS024	NIKHIL S V	Apsis Solutions, Bangalore
254PM15IS026	POOJA N M	Net Soft Tech, Bangalore
264PM15IS027	POOJA S G	Bit Ramp, Shivamogga
274PM15IS028	POOJA S R	Net Soft Tech, Bangalore
284PM15IS029	PRAJNA H R	Net Soft Tech, Bangalore
294PM15IS030	PRANAMYA G HANDE	Net Soft Tech, Bangalore
304PM15IS032	PRIYANKA S P	Infolic Research, Bangalore
314PM15IS033	PRUTHVI T R	Net Soft Tech, Bangalore
324PM15IS034	RACHANA E	Net Soft Tech, Bangalore
334PM15IS035	RAGHAVA D D	Bit Ramp, Shivamogga
344PM15IS037	RAKESH C M	Bit Ramp, Shivamogga
354PM15IS039	RASHMI B M	Net Soft Tech, Bangalore
364PM15IS040	SANJAY B S	Code Wave Technologies, Bangalore
374PM15IS041	SARIKA K S	Venus Cloud Technology, Shivamogga
384PM15IS043	SHIFA ANJUM A	Apsis Solutions, Bangalore
394PM15IS045	SHWETHA A	Net Soft Tech, Bangalore
404PM15IS046	SOWMYA S	Apsis Solutions, Bangalore
414PM15IS048	SUDEEP SHRIPAD HEGDE	Srichid, Bangalore
424PM15IS049	SUNIL KUMAR SURESH KERUDI	HP Enterprises, Mangalore
434PM15IS050	SUPREETHA S	Net Soft Tech, Bangalore
444PM15IS051	SWATHI S	Net Soft Tech, Bangalore

45	4PM15IS052	VARSHINI K	Bit Ramp, Shivamogga
46	4PM15IS053	VARSHINI K M	Net Soft Tech, Bangalore

Table 2.19: List of 2016-20 batch students completed Internship

SL. NO	USN	STUDENT NAME	Company Name
1	4PM15IS011	DHANYASHREE S H	CONTRIVER
2	4PM15IS017	MEGHA C M	DHS INFORMATICS
3	4PM15IS022	NAVEEN KUMAR M R	INNOVANT IT SOLUTION
4	4PM15IS038	RAMYA N P	LOGINWARE SOFTTECH PVT LTD
5	4PM15IS044	SHOBHA RANI G T	CONTRIVER
6	4PM15IS047	SOWMYASHREE M C	THYNK RYT
7	4PM15IS054	VARUN K	INNOVANT IT SOLUTION
8	4PM16IS001	A S SINCHANA	TECH FORTUNE TECHNOLOGIES
9	4PM16IS002	ABHIGNA K	TECH FORTUNE TECHNOLOGIES
10	4PM16IS004	AKSHATHA S	TECH FORTUNE TECHNOLOGIES
11	4PM16IS005	AMRUTHA YADAV	TECH FORTUNE TECHNOLOGIES
12	4PM16IS006	AMULYA B P	TECH FORTUNE TECHNOLOGIES
13	4PM16IS007	ANITHA K	TECH FORTUNE TECHNOLOGIES
14	4PM16IS008	ANUSHA H K	LOGINWARE SOFTTECH PVT LTD
15	4PM16IS009	ARCHANA M	LOGINWARE SOFTTECH PVT LTD
16	4PM16IS010	ARTHIKA S SHETTY	LOGINWARE SOFTTECH PVT LTD
17	4PM16IS011	ARUNKUMAR G	PARVAM CONSUL TECH PVT LTD
18	4PM16IS013	BHARGAVI	LOGINWARE SOFTTECH PVT LTD
19	4PM16IS014	CHAITRA S	NEXUS EDUTECH
20	4PM16IS015	GAGANA B	THYNK RYT
21	4PM16IS016	GOWDA SAKSHI RAVICHANDRA	HAWLETT PACKARD ENTERPRISES
22	4PM16IS017	KAIVALYA S JAIN	PARVAM CONSUL TECH PVT LTD
23	4PM16IS018	KARTHIK U D	LOGINWARE SOFTTECH PVT LTD
24	4PM16IS019	KAVYA G	HAWLETT PACKARD ENTERPRISES
25	4PM16IS020	LAVANYA N SHASTRY	NEXUS EDUTECH
26	4PM16IS021	LIKHITHA T D	LOGINWARE SOFTTECH PVT LTD
27	4PM16IS022	MADHU TARAPUR	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
28	4PM16IS023	MEGHANA N V	NEXUS EDUTECH
29	4PM16IS024	MEGHASHREE B S	TECH FORTUNE TECHNOLOGIES
30	4PM16IS025	MOHAMMED SUHAIL	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
31	4PM16IS026	MUTTU RAJ S	LOGINWARE SOFTTECH PVT LTD

32	4PM16IS027	NANDHINI H V	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
33	4PM16IS028	NIKHIL R BHOOPALAM	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
34	4PM16IS029	NISCHITHA S	TECH FORTUNE TECHNOLOGIES
35	4PM16IS030	PAVAN KUMAR B C	THYNK RYT
36	4PM16IS031	POOJA H P	TECH FORTUNE TECHNOLOGIES
37	4PM16IS032	PRATHIBHA HEBBAR D S	TECH FORTUNE TECHNOLOGIES
38	4PM16IS033	PRATHIKSHA B P	THYNK RYT
39	4PM16IS034	PRIYA A J	LOGINWARE SOFTTECH PVT LTD
40	4PM16IS035	RAHUL G	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
41	4PM16IS036	RAJATH M S	THYNK RYT
42	4PM16IS037	RAVEENA T G	DHS INFORMATICS
43	4PM16IS038	SACHIN DESAI	PARVAM CONSUL TECH PVT LTD
44	4PM16IS039	SAGAR KUMAR B	HEXAGON GLOBAL IT SERVICE PVT LTD
45	4PM16IS041	SAMMITHA H	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
46	4PM16IS042	SATHWIKA G N	THYNK RYT
47	4PM16IS043	SHREESHESH K S	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
48	4PM16IS044	SHRUTHI D	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
49	4PM16IS045	SHRUTHI K S	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
50	4PM16IS046	SHWETHA S	TECH FORTUNE TECHNOLOGIES
51	4PM16IS049	SUDARSHANA GOPALA SHETTY	LOGINWARE SOFTTECH PVT LTD
52	4PM16IS050	SUPRIYA H L	DHS INFORMATICS
53	4PM16IS051	SWATHI SARANG	PARVAM CONSUL TECH PVT LTD
54	4PM16IS052	VIGNESH S	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
55	4PM16IS053	VINAY S V	LOGINWARE SOFTTECH PVT LTD
56	4PM16IS054	VINUTHA B S	PARVAM CONSUL TECH PVT LTD
57	4PM16IS055	VISHWAPRIYA D	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS
58	4PM16IS056	VRUNDA B	PARVAM CONSUL TECH PVT LTD
59	4PM16IS057	PRAKASH BASAGI	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS

### 3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Total Marks 94.00

#### Define the Program specific outcomes

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

Total Marks 16.00

<b>PSO1</b>	Analyze the logics, Algorithms and information systems to enable the students to design and implement the software
<b>PSO2</b>	Evaluate working of Hardware and Software aspects of computer using appropriate tools.
<b>PSO3</b>	Apply the standard practices in software development to deliver quality products

#### 3.1.1 Course Outcomes(COs)(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) (5)

Institute Marks : 4.00

Note : Number of Outcomes for a Course is expected to be around 6.

<b>Course Name :</b>	<b>C2 02</b>	<b>Course Year :</b>	<b>2016-2017</b>
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<b>Items</b>	<b>2019-20</b>
C2 02.1	Acquire knowledge of JFETS and MOSFETS operational amplifier circuits & their applications
C2 02.2	Understand combinational logic, k-map and QuineMcClusky technique.
C2 02.3	Design decoders, encoders, multiplexers, adders, subtractors and binary comparators
C2 02.4	Understand the working of Latches, Flip-Flops and Designing registers.
C2 02.5	Analyze synchronous & Asynchronous sequential circuits, A/D and D/A converters.

<b>Course Name :</b>	<b>C2 10</b>	<b>Course Year :</b>	<b>2016-2017</b>
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<b>Items</b>	<b>2019-20</b>
C2 10.1	Design a software system, component, or process to meet desired needs within realistic constraints.
C2 10.2	Assess professional and ethical responsibility.
C2 10.3	Function in multi-disciplinary teams involved in software development process
C2 10.4	Use the techniques, skills, and modern engineering tools necessary for engineering practice
C2 10.5	Validate and maintain software systems or parts of software systems

<b>Course Name :</b>	<b>C3 05</b>	<b>Course Year :</b>	<b>2017-2018</b>
----------------------	--------------	----------------------	------------------

<b>Items</b>	<b>2019-20</b>
C3 05.1	Describe the concepts involved in Object-Oriented modeling and their benefits.
C3 05.2	Demonstrate concept of use-case model, sequence model and state chart model for a given problem
C3 05.3	Explain the facets of the unified process approach to design and build a Software system
C3 05.4	Translate the requirements into implementation for Object Oriented design
C3 05.5	Choose an appropriate design pattern to facilitate development procedure

<b>Course Name :</b>	<b>C3 12</b>	<b>Course Year :</b>	<b>2017-2018</b>
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<b>Items</b>	<b>2019-20</b>
C3 12.1	Demonstrate need for OS and different types of OS
C3 12.2	Apply suitable techniques for management of different resources
C3 12.3	Use processor, memory, storage and file system commands
C3 12.4	Realize the different concepts of OS in platform of usage through case studies

<b>Course Name :</b>	<b>C4 01</b>	<b>Course Year :</b>	<b>2018-2019</b>
----------------------	--------------	----------------------	------------------

<b>Items</b>	<b>2019-20</b>
C4 01.1	Adapt HTML and CSS syntax and semantics to build web pages.
C4 01.2	Construct and visually format tables and forms using HTML and CSS
C4 01.3	Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically
C4 01.4	Appraise the principles of object oriented development using PHP
C4 01.5	Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features

<b>Course Name :</b>	<b>C4 08</b>	<b>Course Year :</b>	<b>2018-2019</b>
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<b>Items</b>	<b>2019-20</b>
C4 08.1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
C4 08.2	Compare and contrast the deployment of smart objects and the technologies to connect them to network
C4 08.3	Appraise the role of IoT protocols for efficient network communication
C4 08.4	Elaborate the need for Data Analytics and Security in IoT
C4 08.5	Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry

**3.1.2 CO-PO matrices of courses selected in 3.1.1 (Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5)**

Institute Marks : 4.00

**1 . course name : C202**

<b>Course</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>
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C305.4	-	▼	-	▼	2	▼	2	▼	-	▼	-	▼	-	▼	-	▼	-	▼					
C305.5	-	▼	-	▼	2	▼	-	▼	-	▼	-	▼	-	▼	-	▼	2	▼	-	▼			
<b>Average</b>	<b>2.00</b>		<b>0.00</b>		<b>2.00</b>		<b>2.00</b>		<b>3.00</b>		<b>0.00</b>		<b>0.00</b>		<b>0.00</b>		<b>0.00</b>		<b>0.00</b>		<b>2.00</b>		<b>0.00</b>

4 . course name : C312

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
C312.1	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	
C312.2	2	▼	2	▼	-	▼	2	▼	-	▼	-	▼	-	▼	
C312.3	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	
C312.4	3	▼	3	▼	2	▼	2	▼	-	▼	-	▼	2	▼	
<b>Average</b>	<b>2.00</b>		<b>2.50</b>		<b>2.00</b>		<b>2.00</b>		<b>0.00</b>		<b>0.00</b>		<b>0.00</b>		<b>2.00</b>

5 . course name : C401

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12			
C401.1	-	▼	-	▼	2	▼	-	▼	-	▼	-	▼	2	▼	
C401.2	-	▼	-	▼	3	▼	-	▼	-	▼	-	▼	-	▼	
C401.3	-	▼	-	▼	3	▼	-	▼	3	▼	-	▼	-	▼	
C401.4	-	▼	-	▼	3	▼	-	▼	-	▼	-	▼	-	▼	
C401.5	-	▼	-	▼	-	▼	2	▼	-	▼	-	▼	-	▼	
<b>Average</b>	<b>2.00</b>		<b>0.00</b>		<b>2.75</b>		<b>0.00</b>		<b>2.50</b>		<b>0.00</b>		<b>0.00</b>		<b>2.00</b>

6 . course name : C408

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C408.1	3	3	-	3	-	-	-	-	-	-	-	-
C408.2	-	-	3	2	3	-	-	-	-	-	-	-
C408.3	-	-	-	-	-	-	-	-	-	-	-	-
C408.4	-	-	3	-	-	-	-	-	-	-	-	-
C408.5	2	2	-	2	3	-	-	-	-	-	-	-
<b>Average</b>	<b>2.00</b>	<b>2.50</b>	<b>3.00</b>	<b>2.33</b>	<b>3.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

1 . Course Name : C202

Course	PSO1	PSO2	PSO3
C202.1	1	-	-
C202.2	-	2	-
C202.3	-	-	-
C202.4	-	-	2
C202.5	3	-	-
<b>Average</b>	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>

2 . Course Name : C210

Course	PSO1	PSO2	PSO3
C210.1	2	-	-

C210.2	2	▼	-	▼	-	▼
C210.3	3	▼	-	▼	-	▼
C210.4	-	▼	3	▼	-	▼
C210.5	-	▼	-	▼	3	▼
<b>Average</b>	<b>2.33</b>		<b>3.00</b>		<b>3.00</b>	

### 3 . Course Name : C305

Course	PSO1	PSO2	PSO3			
C305.1	1	▼	-	▼	-	▼
C305.2	-	▼	2	▼	2	▼
C305.3	3	▼	-	▼	-	▼
C305.4	-	▼	2	▼	-	▼
C305.5	-	▼	2	▼	-	▼
<b>Average</b>	<b>2.00</b>		<b>2.00</b>		<b>2.00</b>	

### 4 . Course Name : C312

Course	PSO1	PSO2	PSO3			
C312.1	2	▼	-	▼	-	▼
C312.2	-	▼	3	▼	2	▼
C312.3	-	▼	2	▼	-	▼
C312.4	2	▼	-	▼	-	▼
<b>Average</b>	<b>2.00</b>		<b>2.50</b>		<b>2.00</b>	

**5 . Course Name : C401**

Course	PSO1	PSO2	PSO3
C401.1	2    ▾	-    ▾	-    ▾
C401.2	-    ▾	2    ▾	-    ▾
C401.3	-    ▾	3    ▾	2    ▾
C401.4	2    ▾	-    ▾	-    ▾
C401.5	2    ▾	-    ▾	2    ▾
<b>Average</b>	<b>2.00</b>	<b>2.50</b>	<b>2.00</b>

**6 . Course Name : C408**

Course	PSO1	PSO2	PSO3
C408.1	3    ▾	-    ▾	-    ▾
C408.2	3    ▾	-    ▾	-    ▾
C408.3	3    ▾	-    ▾	-    ▾
C408.4	2    ▾	-    ▾	-    ▾
C408.5	-    ▾	2    ▾	2    ▾
<b>Average</b>	<b>2.75</b>	<b>2.00</b>	<b>2.00</b>

**3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10)**

Institute Marks : 8.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	1.8	1.6	1.4	1.4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1

C102	1.8	1.6	1.4	1.4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1
C103	2.24	2	1	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104	1.6	1.4	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C105	2.5	2.5	1	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	1	1	1	1	1	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C107	3	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C108	1.75	1.75	PO3	PO4	2	PO6	PO7	PO8	PO9	PO10	PO11	3
C109	2	2.4	2.25	2.33	1	PO6	PO7	PO8	PO9	PO10	PO11	1
C110	2.6	2	2.6	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	2	2	PO3	PO4	PO5	PO6	PO7	PO8	2	PO10	PO11	PO12
C112	3	3	3	2	2	PO6	PO7	PO8	PO9	PO10	PO11	3
C113	1.8	2	PO3	PO4	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C114	3	2.5	1.5	PO4	PO5	PO6	3	PO8	PO9	PO10	PO11	PO12
C115	1.5	1	PO3	3	PO5	2	3	PO8	PO9	PO10	PO11	PO12
C116	1	PO2	1.75	1	PO5	2.2	1	1.6	1	1.5	1	1
C201	2.2	2.2	1.8	1.8	1.5	1.67	1	PO8	1.34	PO10	1.25	2.2
C202	2	2.34	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203	2	2	2.34	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C204	2	2	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205	2.34	3	2.67	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C206	2	2	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C207	2	PO2	2	PO4	2	PO6	1	PO8	PO9	PO10	PO11	1.5

C208	PO1	2.67	1.67	2	1	2	PO7	PO8	1	PO10	PO11	1
C209	2.2	2.2	1.8	1.5	1.5	1.67	1	PO8	1.34	PO10	1.25	2
C210	PO1	3	3	1	3	2	PO7	3	3	2	PO11	PO12
C211	2.34	3	2.67	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C212	1.25	1.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C213	2	2	3	1	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C214	1	2	2.5	PO4	PO5	PO6	1	PO8	PO9	PO10	PO11	2
C215	2	2.5	3	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C216	2.5	1	3	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C301	2.5	PO2	PO3	PO4	2	2	PO7	3	PO9	PO10	PO11	2
C302	1.67	2	3	PO4	PO5	PO6	1	PO8	PO9	PO10	PO11	2
C303	2.34	2	3	2	1	PO6	PO7	PO8	PO9	PO10	PO11	2
C304	2	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C305	2	PO2	2	2	3	PO6	PO7	PO8	PO9	PO10	2	PO12
C306	2	2	2.67	3	2	PO6	PO7	PO8	PO9	PO10	2	PO12
C307	2	2.5	2	PO4	PO5	3	PO7	PO8	PO9	PO10	PO11	1
C308	2	2	PO3	2	2	1	PO7	PO8	2	2	2	PO12
C309	3	PO2	2	PO4	2	2	PO7	PO8	PO9	PO10	PO11	PO12
C310	2	2.5	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C311	2.34	2.5	3	2	3	PO6	PO7	PO8	PO9	2	PO11	PO12
C312	2	2.5	2	2	PO5	PO6	PO7	PO8	1	PO10	PO11	2
C313	3	1.5	2	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

C314	1.5	2	2.34	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11	2
C315	2.2	2.5	2.67	2	PO5	PO6	PO7	2	PO9	2	PO11	1
C316	PO1	1.5	2	PO4	PO5	PO6	PO7	1	2	2	1	PO12
C401	2	PO2	2.75	PO4	2.5	PO6	PO7	PO8	PO9	PO10	PO11	2
C402	2.34	2	2.5	1.5	2	PO6	PO7	PO8	PO9	PO10	3	PO12
C403	1.6	2	1.75	2	PO5	1.75	PO7	PO8	PO9	PO10	PO11	PO12
C404	3	PO2	PO3	2	3	PO6	PO7	PO8	PO9	PO10	PO11	2
C405	2	2	1.5	2	1	PO6	PO7	PO8	PO9	PO10	PO11	1
C406	2	2	3	2	1	PO6	PO7	PO8	PO9	PO10	PO11	2
C407	2.34	2.34	2.34	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.34
C408	2	3	3	2.34	3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C409	1	2	PO3	2	3	2	PO7	PO8	PO9	PO10	PO11	2
C410	2	2.5	3	2	2	1	PO7	PO8	1	PO10	PO11	PO12
C411	3	3	PO3	PO4	PO5	2	PO7	PO8	PO9	3	PO11	PO12
C412	3	PO2	3	2	PO5	2	2	PO8	2.67	2	2	PO12
C413	3	3	PO3	PO4	PO5	2.5	PO7	3	3	2	3	3

**3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses**

Course	PSO1	PSO2	PSO3
C101	PSO1	PSO2	PSO3
C102	PSO1	PSO2	PSO3
C103	PSO1	PSO2	PSO3
C104	PSO1	PSO2	PSO3

C105	PSO1	PSO2	PSO3
C106	3	PSO2	3
C107	PSO1	PSO2	PSO3
C108	PSO1	PSO2	PSO3
C109	PSO1	PSO2	PSO3
C110	PSO1	PSO2	PSO3
C111	PSO1	PSO2	PSO3
C112	3	PSO2	3
C113	PSO1	PSO2	PSO3
C114	PSO1	PSO2	PSO3
C115	PSO1	PSO2	PSO3
C116	PSO1	PSO2	PSO3
C201	2	2	2
C202	2	2	2
C203	1.67	2.5	PSO3
C204	2.5	2	PSO3
C205	2.34	2	2
C206	2.2	PSO2	PSO3
C207	3	2.25	PSO3
C208	2.34	3	3
C209	2	3	PSO3
C210	2.33	3	3



C211	2.34	2	2
C212	3	2	3
C213	3	2	PSO3
C214	2	2.5	PSO3
C215	2	3	3
C216	2	2.5	1
C301	3	PSO2	PSO3
C302	2	2	PSO3
C303	2	PSO2	PSO3
C304	2.67	2	PSO3
C305	2	2	2
C306	3	PSO2	3
C307	3	2	2
C308	3	2	2
C309	3	3	PSO3
C310	3	2	PSO3
C311	2	2.5	3
C312	2	2	2.5
C313	2.5	2	PSO3
C314	2.67	3	PSO3
C315	2	2.5	PSO3
C316	2	3	PSO3

C401	2	2.5	2
C402	2	2.5	3
C403	2	3	PSO3
C404	2.34	PSO2	PSO3
C405	2.34	PSO2	PSO3
C406	2.67	PSO2	3
C407	1.5	2.5	PSO3
C408	2.75	2	2
C409	2	2	PSO3
C410	3	2.5	PSO3
C411	3	2	3
C412	2	2	3
C413	2	3	3

### 3.2 Attainment of Course Outcomes (50)

Total Marks 40.00

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

Institute Marks : 8.00

## CO ASSESSMENT PROCESS

### Assessment Process for CO Attainment:

Outcome is evaluated based on the performance of students in internal assessments and in University examination of a course. Internal assessment contributes 40% and University assessment contributes 60% to the total attainment of a CO. Fig 3.1 shows the CO attainment process

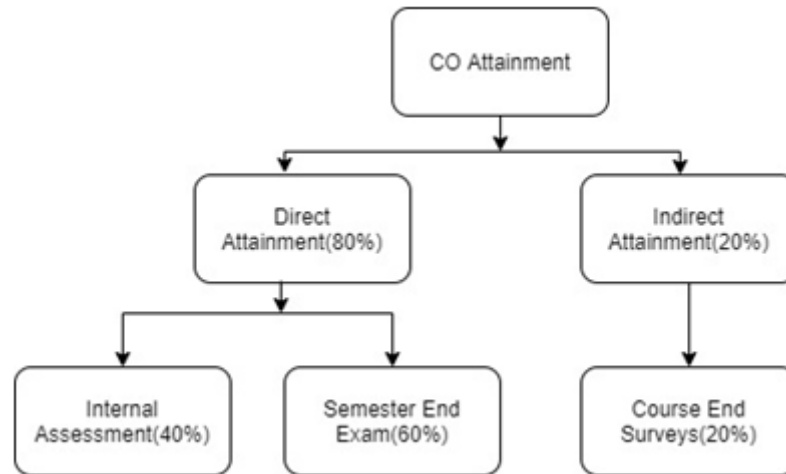


Fig 3.1: CO Attainment Process

**CO Assessment Tools:**

The description of Assessment tools used for the evaluation of Course outcomes is given in following table.. The various assessment tools used to evaluate COs and the frequency with which the assessment processes are carried out are listed in following table.

Table 3.1: Assessment tools

Direct Assessment Methods		
S. No.	Direct Assessment Tool	Method Description
1	Theory/practical Semester End Examination	Marks obtained in external semester examination (theory or practical) are the basis for external assessment to record the attainment of course outcomes. Attainment level is calculated based on the attainment criteria decided at the departmental level. A Semester End Examination is more focused on attainment of course outcomes and uses a descriptive exam.
2	Internal Assessment Test	Marks in a theory paper are based on three tests in each semester. It is a metric to continuously assess the attainment of course outcomes with respect to course objectives. Average of the marks obtained from best of two tests shall contribute to the internal assessment marks along with Continuous Comprehensive Evaluation marks (based on Quiz/ Mini project/seminars/ assignment).
3	Lab Assessment	Lab Assessment is one of the measuring criteria to mainly assess student's practical knowledge. In case of Practical, the internal assessment marks are based on the laboratory records, conduction ,viva and semester end assessment
4	Seminar	Every student gives a seminar on the current trends in IT during their final semester of course. Marks scored by the students helps to assess the program outcomes and Program specific Outcomes.
5	Project	The internal assessment marks in the case of projects in the final year and pre final year are based on the individual and team performance during reviews and the final presentation given to panel and Guide. The complete process of review and evaluation is done according to the guidelines set by the department.

6	Internship	Students undertake internship in any industry/R & D institutes/ Reputed institution for the duration of 6 weeks in their sixth semester vacation. Internship helps to assess most of the Program Outcomes
<b>Indirect Assessment Methods</b>		
1	Course End Survey	At the end of each course, course instructor takes survey on the Course outcomes in the range of 1-3 with respect to the course handled by the instructor. Aggregate of this survey is considered for the indirect attainment of the respective course.

With the help of CO against PO/PSO mapping, the PO/PSO attainment is calculated by the course instructor. In each course, the level of attainment of each CO is compared with the predefined targets, if it is not met, the course coordinator takes necessary steps for the improvement to reach the target for next academic year.

### **Quality/Relevance of Assessment Process:**

#### **Theory:**

**Internal Tests:** Internal tests serve to encourage students to keep up with course content covered in class. Three written examinations are conducted and average of best of two test marks are considered. For theory subjects, during a semester there shall be 3 internal assessments. Each assessment consists of one subjective paper, one quiz. The subjective papers are set for 30 Marks. The Objective paper is set with five of multiple choices, filling the blanks and matching type of questions for a total of 5 marks.

The total marks secured by the student in each IA are evaluated for 30 marks, and the average of the best two Assessments shall be taken as the final marks secured by each candidate. The questions in the internal examinations are mapped against COs of respective course. The questions for three internal examinations and quiz are framed in such a way to cover all Course Outcomes.

The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department.

**University examination:** The semester end examinations are of 3- hour duration and cover the entire syllabus of the course. It would generally satisfy all course outcomes for a particular course. The COs are evaluated based on the set attainment levels.

#### **Practical Subjects:**

**Daily Performance:** Lab courses provide students first-hand experience with course concepts and the opportunity to explore methods used in their discipline. All the students are expected to be regular and learn the practical aspects of the subject and develop the necessary skills to become professionals. In order to facilitate interaction among the students and to develop team spirit, the students are expected to carry out some experiments in groups. Performance assessment is based on the ability of the student to actively participate in the successful conduct of prescribed practical work and draw appropriate conclusions. The student submits a record of practical work performed in each lab session.

For practical subjects there shall be a continuous evaluation during a semester for 60% sessional marks and 40% semester end test marks. Out of 20 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 12 marks and internal practical examination shall be evaluated for 8 marks conducted by the laboratory teacher concerned.

**University examination:** The semester end examination shall be conducted with an external examiner and internal examiner. The external examiner shall be appointed from the clusters of colleges which are decided by the chairman of Board of Examiners (BoE) of the University.

These end-semester examinations are of 3- hour duration and cover the entire syllabus of the course. It would generally satisfy all course outcomes for a particular course. The COs are evaluated based on the set attainment levels.

#### **Seminar**

There shall be a seminar presentation in final year. For the seminar, the student shall collect the information on a specialized topic and prepare a technical report, showing his understanding of the topic, and submit it to the department. It shall be evaluated by the department. The seminar report shall be evaluated for 100 marks and there shall be no external examination for the seminar.

#### **Assessment Tool for Seminar Evaluation**

Table 3.2: Assessment tool for evaluation of seminar

Assessment Tool	
Seminar Internal Assessment	Presentation
	Question and Answer
	Seminar Report

**Presentation:** The content, quality of the presentation and communication skill is assessed by the evaluator.

**Question and Answer:** At the end of the presentation, the evaluators and the student audience ask questions and seek clarifications on specific issues related to the seminar. The effectiveness of the student's response to these queries is assessed.

**Seminar Report:** A report on seminar is submitted at the end of the presentation. This report shall include, in addition to the presentation materials, all relevant supporting information. All references must be given toward the end of the report. A students' ability to comprehend and write effective reports and design documentation is assessed by evaluating the report.

**Project Work:**

Project is intended to be a challenge to the intellectual and innovative abilities of students. It gives students the opportunity to synthesize and apply the knowledge and analytical skills learned in the different disciplines. Students shall start the project work during their 7<sup>th</sup> semester.

Out of a total of 300 marks for the project work, 200 marks shall be allotted for Internal Evaluation and 100 marks for the Semester End Examination (Viva Voce). The Semester End Examination of the project work shall be conducted by the examiners selected by the BOE of the university.

**Set Attainment Levels:**

Course outcomes of all courses are assessed with the help of above mentioned assessment tools and following attainment levels. The following table shows the set attainment levels for 2015-2019 batch.

Table 3.3: CO Set Attainment levels

Internal Assessment And SEE assessment	Level 1	60% of students scoring more than target marks in the examination.
	Level 2	65% of students scoring more than target marks in the examination
	Level 3	70% of students scoring more than target marks in the examination

**Steps for CO Attainment**

Step 1 : Obtain course outcome.

Step 2 : Mapping of Course Outcome with Program Outcome.

Step 3 : Setting Target for CO assessment.

Step 4 : CO measurement through attainment levels

Step 5 : Obtain CO attainment table through direct and indirect assessment methods.

The Fig 3.2 shows the sample attainment sheet considering IA marks and SEE marks for the attainment of the course Outcomes



## CO Attainment

The course outcomes are measured in terms of Internal Assessment (IA) and External Assessment (EA). Target of 50% is set for each course in the department for 2015-19 batch. The target has been set considering average performance levels in the examination for the assessment years. Attainment level(As defined in Table 3.3) is measured in terms of student performance in internal assessments (IA) with respect the COs of a course plus the performance in the EA.

### Internal Assessment

The attainment using Internal Assessment is calculated by considering the CO belonging to particular question with particular marks. The CO attainment for particular question is calculated by considering following formula:

$$\text{CO Attainment}_{(\text{Internal Assessment})} = \frac{\text{No of Students Scoring more than set Targer Marks}}{\text{No of Students attempted the Question}}$$

After calculating CO attainment for each CO belonging to that question, the final attainment of respective CO is considered by summation of all % of attainment / No. of question belonging to that CO.

### External Assessment

For Calculating the attainment using Semester End Examinations (SEE) target of 50% is used and each Course Outcomes are given equal weightage as the Semester End Examination question papers do not shows the COs of the questions.

#### Indirect Assessment

A *course End survey* is taken at the end of every semester for each course. students assess the Course Outcomes with the levels of 1(low),2(Medium) and 3(High) against each COs of the Course. The average of these assessment are taken and used for making the Indirect assessment.

### Final CO Attainment

Final Co attainment is calculated as shown below

Direct Assessment= 40% of Internal Assessment+60% of External Assessment)

**Final CO Attainment= 80% of Direct Attainment + 20 % of Indirect Assessment**

The following table 3.4 shows the attainment of all courses including first year courses for the batch 2015-19 with respect to the attainment levels defined by the department.

Table 3.4: Record of attainment for the batch 2015-2019(LYG)

SI No	Course Code	Subject Code	CO ATTAINMENT					
			CO1	CO2	CO3	CO4	CO5	CO6
1	C101	15MAT11	3	3	3	3	3	-
2	C102	15MAT21	3	3	3	3	3	-
3	C103	15CHE12	3	3	3	3	3	-

4	C104	15PHY12	3	3	3	3	3	-
5	C105	15CIV13	3	3	3	3	-	-
6	C106	15PCD13	3	3	3	3	-	-
7	C107	15EME14	3	0	0	0	0	-
8	C108	15CED14	3	3	3	3	-	-
9	C109	15ELE15	3	3	3	3	3	-
10	C110	15ELN 15	3	3	3	3	3	3
11	C111	15WSL16	3	3	-	-	-	-
12	C112	15CPL16	3	3	3	3	3	-
13	C113	15PHYL17	3	3	3	3	3	-
14	C114	15CHEL17	3	3	-	-	-	-
15	C115	15CIV18	2	2	-	-	-	-
16	C116	15CPH18	2	1	2	1	2	-
17	C201	15MAT31	3	3	3	3	-	-
18	C202	15CS32	0	2	0	0	-	-
19	C203	15CS33	2	2	0	1	-	-
20	C204	15CS34	2	2	2	2		-
21	C205	15CS35	1	1	0	0	-	-
22	C206	15CS36	0	0	0	0	1	-
23	C207	15CSL37	3	3	3	3	3	-
24	C208	15CSL38	3	3	3	3	-	-
25	C209	15MAT41	3	3	3	2	-	-
26	C210	15CS42	0	0	0	2	3	-
27	C211	15CS43	3	2	3	2	-	-
28	C212	15CS44	2	1	0	1	-	-
29	C213	15CS45	3	1	3	3	-	-
30	C214	15CS46	0	1	3	3	0	-
31	C215	15CSL47	3	3	3	3	-	-
32	C216	15CSL48	3	3	3	3	-	-
33	C301	15CS51	3	3	3	-	-	-
34	C302	15CS52	1	1	2	0	0	-
35	C303	15CS53	1	1	1	-	-	-
36	C304	15CS54	1	2	0	2	-	-
37	C305	15CS551	0	0	1	0	2	-
38	C306	15CS564	0	1	1	0	1	-
39	C307	15CSL57	3	3	3	-	-	-



40	C308	15CSL58	3	3	3	-	-	-
41	C309	15CS61	3	2	1	-	-	-
42	C310	15CS62	3	3	2	-	-	-
43	C311	15CS63	3	3	3	3	3	-
44	C312	15CS64	1	1	2	2	-	-
45	C313	15CS651	1	3	2	-	-	-
46	C314	15CS664	0	0	0	2	0	-
47	C315	15ISL67	3	3	3	3	3	-
48	C316	15ISL68	3	3	3	-	-	-
49	C401	15CS71	3	3	3	3	1	-
50	C402	15CS72	3	3	3	3	3	3
51	C403	15CS73	3	3	3	-	-	-
52	C404	15CS742	3	3	2	2	-	-
53	C405	15CS754	3	3	3	3	3	-
54	C406	15CSL76	3	3	3	3	-	-
55	C407	15CSL77	3	3	3	-	-	-
56	C408	15CS81	3	3	3	3	3	-
57	C409	15CS82	3	3	3	3	3	-
58	C410	15IS832	3	2	3	3	-	-
59	C411	15CSS86	3	3	3		-	-
60	C412	15CSP85	3	3	3	3	3	-
61	C413	15CS84	3	3	3	3	3	-

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

Total Marks 38.00

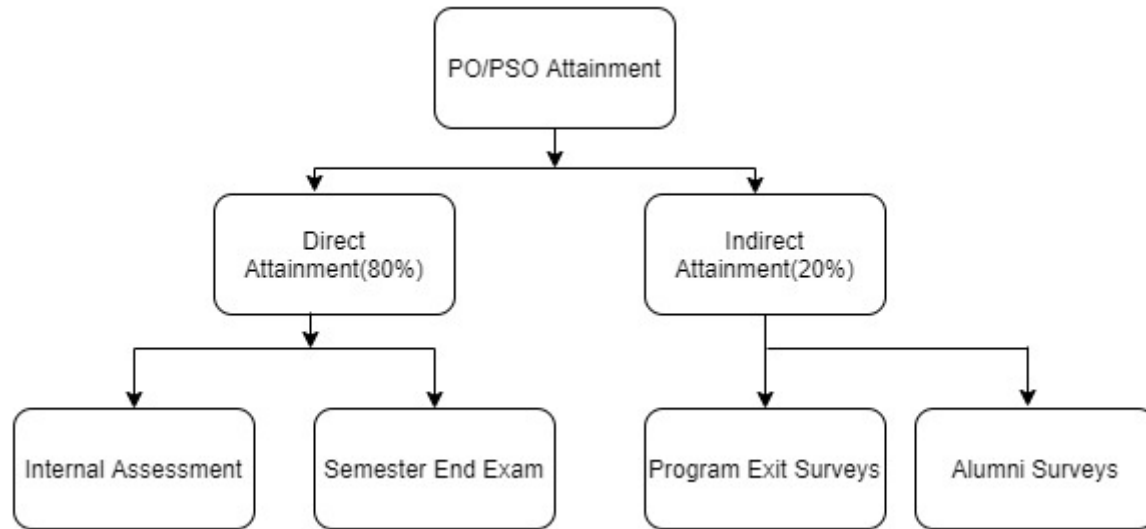
#### 3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

Institute Marks : 8.00

## PO/PSO ASSESSMENT PROCESS

At the end of the each batch, the PO/PSO assessment is done from the CO attainment of all curriculum components. As per NBA guidelines, program can appropriately define the attainment level. The attainment level may be set by the particular program or commonly by the institution. The attainment can be made as best the choice by the institution or the program by analyzing the student's knowledge. This can be achieved by using different

supporting activities. This attainment is mainly for the purpose of making an esteemed engineer with good analytical, practical and theoretical knowledge about the program by attaining the PSO's and PEO's of the program and the institution. Assessment Process for Overall PO and PSO Attainment is given below.



**Fig 3.4: PO and PSO attainment process**

PO/PSO assessment is done by giving 80% weightage to direct assessment and 20% weightage to indirect assessment. Direct assessment is based on CO attainment, where 60% weightage is given to attainment through University exam and 40% weightage is given to attainment through internal assessments. Indirect assessment is done through , program exit survey and alumni survey.

## PO/PSO Assessment Tools

The various direct and indirect assessment tools used to evaluate POs &PSOs and the frequency with which the assessment processes are carried out are listed in following table.

**Table 3.5:PO/PSO Assessment tools**

Assessment Tools		Weightage	Frequency	Responsibility
Direct Assessment	Course Outcomes Attainment	80%	End of the semester	Department level
Indirect Assessment	Exit Survey/Alumni Survey	20%	At the end of the Program / Day of Alumni Meet	Department level

### 1) Direct Assessment

## Program 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 similar calculation is done for PSOs.

$$PO \text{ Attainment} = \frac{\text{Achievable PO}}{3} \times \frac{\sum(\text{CO Mapping} \times \text{CO Attainment})}{\sum \text{CO - PO Mapping}}$$

$$PSO \text{ Attainment} = \frac{\text{Achievable PSO}}{3} \times \frac{\sum(\text{CO Mapping} \times \text{CO Attainment})}{\sum \text{CO - PSO Mapping}}$$

A sample of copy CO attainment calculations is shown in figure 3.5

Course Outcome, Program Outcome and Program specific Outcome attainment calculator

Title of the Program		Information Science & Engineering										
Academic Year		2018-19										
Subject Name		AUTOMATA THEORY AND COMPUTABILITY										
Subject Code		ISCS4										
Semester and Section		5										
No. of Students		47										
Name of the Faculty		GOVTHAMA T										
Head of the Department		Prasanna Kumar HR										

CO's	CO - PO Mapping											CO - PSO Mapping			Course End	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2		PSO3
CO504.1		3	2										3			1.95
CO504.2	2												2	2		1.825
CO504.3				2									2			1.75
CO504.4		3											3			1.7
CO504.5																
CO504.6																
CO504.7																
CO504.8																
<b>Achievable PO</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>2.7</b>	<b>2</b>	<b>NA</b>	

Sl. N	USN	Name	Target in % (Percentage of Marks Set as Target Level)	50	Maximum Marks Allocation			CO's Mapping for Questions				
					Q. No.	IA - 1	IA - 2	IA - 3	Q. No.	IA - 1	IA - 2	IA - 3
1	4PMMS002	DIYA Y RAKAR	Maximum Marks Allocation for SEE	80	1A	4	7	5	1A	CO504.1	CO504.2	CO504.4
2	4PMMS005	AMAN S Y			2B	5	8	10	2B	CO504.1	CO504.2	CO504.4
3	4PMMS008	BHAGYASHREE A R			3C	6			3C	CO504.2		
4	4PMMS033	NAVYA R			4D	6			4D	CO504.2		
5	4PMMS038	RASANNA KUMAR PRABHU			5A	4	7	5	5A	CO504.1	CO504.2	CO504.4
6	4PMMS003	ANAGHA M G JOIS			6B	5	6	7	6B	CO504.1	CO504.4	CO504.4
7	4PMMS004	ANUSHREE B			7C	6			7C	CO504.2		
8	4PMMS005	AJAYITA SETHI			8D	6			8D	CO504.2		
9	4PMMS006	ASFIYA KHANUM			9A	4	9	8	9A	CO504.1	CO504.2	CO504.4
10	4PMMS007	ASHWINI V			10B	5	6	7	10B	CO504.1	CO504.4	CO504.4
11	4PMMS008	BHAVYA D	11C	6			11C	CO504.2				
12	4PMMS009	CHAYYA M	12A	4	9	8	12A	CO504.1	CO504.2	CO504.4		
13	4PMMS018	DEEPIKA B R	13B	5	6	7	13B	CO504.1	CO504.4	CO504.4		
14	4PMMS042	KOMAL G R	14A	4	9	8	14A	CO504.1	CO504.2	CO504.4		
15	4PMMS043	HALASVAMI H S	15B	5	6	7	15B	CO504.1	CO504.4	CO504.4		
16	4PMMS014	KALIX SHORANSHETTA R	16C	6			16C	CO504.2				
17	4PMMS025	M S SRISAPTHAM	17D	6			17D	CO504.2				
18	4PMMS026	MANASA H S	18A	4	9	8	18A	CO504.1	CO504.2	CO504.4		
19	4PMMS049	MREKUNIA D D	19B	5	6	7	19B	CO504.1	CO504.2	CO504.4		


Fig 3.5: Sample copy of attainment calculator

## 2) Indirect Assessment

### Program Exit Survey/Alumni Survey

Department 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 and the alumnus of the department. The questions will be rated 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.

	<p><b>Prerana Educational and Social Trust®</b> <b>PES Institute of Technology and Management</b> NH-206, Sagar Road, Shivamogga-577204</p>
<p><b>Department of Information Science and Engineering</b></p>	

#### GRADUATE EXIT SURVEY

Dear Students,

The Department of Information Science and Engineering requires feedback from you to gauge whether B.E programme offered by our department is sufficient in preparing the students to be a competent engineer for professional life after their graduation.

The objective of the survey is to gauge our graduate's accomplishments after graduation and attributes after completing the programme (PO & PSO).

Name: *Manasa H.S*

Year of graduation:

*2019*

1. As a graduate of PESITM, where do you place yourself in the following Graduate Attribute Grid?

POs/ PSOs	Degree of relevance		
	3	2	1
PO1: Engineering Knowledge	✓		
PO2: Problem Analysis	✓		
PO3: Design/Development of solutions	✓		
PO4: Conduct investigations of complex problems		✓	
PO5: Modern tool usage		✓	
PO6: The engineer and society	✓		
PO7: Environment and sustainability	✓		
PO8: Ethics	✓		
PO9: Individual and team work	✓		

PO10: Communication	✓		
PO11: Project management and finance		✓	
PO12: Life-long learning		✓	
PSO1: Analyze the logics, Algorithms and information systems to enable the students to design and implement the software.	✓		
PSO2: Evaluate working of Hardware and Software aspects of computer using appropriate tools.	✓		
PSO3: Apply the standard practices in software development to deliver quality products.		✓	

The Department of Information Science and Engineering would like to thank you for your willingness in spending your valuable time to complete this questionnaire. Your time and effort is much appreciated.

*S.A.*  
Signature

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Fig 3.6 : Sample Graduate Exit Survey form

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

Institute Marks : 30.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	1.4	1.2	1.1	1.1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.78
C102	1.3	1.2	1	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.74
C103	2	1.7	0.8	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104	1.3	1.1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C105	1.9	1.9	0.8	0.7	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	0.8	1.1	0.8	PO4	0.8	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C107	1.9	1.5	1.4	1.2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.85
C108	1.6	1.6	PO3	PO4	1.9	PO6	PO7	PO8	PO9	PO10	PO11	0.93
C109	1.5	1.8	1.7	1.7	0.7	PO6	PO7	PO8	PO9	PO10	PO11	0.75

C110	2.2	1.7	2.2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	1.9	1.9	PO3	PO4	PO5	PO6	PO7	PO8	1.9	PO10	PO11	PO12
C112	2.8	2.8	2.8	1.9	1.9	PO6	PO7	PO8	PO9	PO10	PO11	2.8
C113	1.7	1.8	PO3	PO4	1.9	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C114	2.9	2.4	1.5	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C115	2.1	1.7	1	0.7	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C116	0.7	PO2	1.1	0.6	PO5	1.4	0.7	1.1	0.7	0.98	0.66	0.66
C201	1.4	1.3	1	1	0.9	0.9	0.6	PO8	0.9	PO10	0.9	1.42
C202	1.1	0.8	1.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203	1.3	1.2	1.5	1.4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.25
C204	1.3	1.3	1.7	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205	1.3	1.6	1.5	1.1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.1
C206	0.7	0.7	0.8	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C207	1.8	PO2	.8	PO4	1.8	PO6	0.9	PO8	PO9	PO10	PO11	1.38
C208	PO1	2.3	1.5	1.7	0.9	1.7	PO7	PO8	0.9	PO10	PO11	0.85
C209	1.9	1.7	1.3	1.3	1.2	1.5	0.7	PO8	1	PO10	0.97	1.73
C210	PO1	1.8	2.1	0.6	2.1	1.2	PO7	1.7	1.8	1.2	PO11	PO12
C211	1.5	2	1.7	1.3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.32
C212	0.7	0.8	1.4	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C213	1.4	1.5	2.2	0.7	1.7	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C214	0.5	1.1	1.3	PO4	PO5	PO6	0.7	PO8	PO9	PO10	PO11	1.38
C215	1.7	2.1	2.5	0.8	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.68
C216	2.2	0.9	2.7	1.7	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.82

C301	1.9	PO2	PO3	PO4	1.6	1.6	PO7	2.2	PO9	PO10	PO11	1.48
C302	1	1.2	2	PO4	PO5	PO6	0.6	PO8	PO9	PO10	PO11	1.07
C303	1.5	1.2	1.9	1.2	0.6	PO6	PO7	PO8	PO9	PO10	PO11	1.24
C304	1.4	1.3	1.3	1.2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C305	1.2	PO2	1.2	1	1.8	PO6	PO7	PO8	PO9	PO10	1.32	PO12
C306	1.2	1.2	1.6	1.7	1.2	PO6	PO7	PO8	PO9	PO10	1.14	PO12
C307	1.8	2.3	1.8	PO4	PO5	2.7	PO7	PO8	PO9	PO10	PO11	0.9
C308	1.9	1.9	PO3	1.9	1.9	1	PO7	PO8	1.9	1.91	1.91	PO12
C309	2.2	PO2	1.3	PO4	1.4	1.5	PO7	PO8	PO9	PO10	PO11	PO12
C310	1.4	1.8	1.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C311	1.8	2	2.1	1.6	2.3	PO6	PO7	PO8	PO9	1.46	PO11	PO12
C312	1.3	1.7	1.4	1.3	PO5	PO6	PO7	PO8	0.7	PO10	PO11	1.36
C313	1.9	1.1	1.4	0.7	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C314	0.8	1.4	1.1	PO4	0.5	PO6	PO7	PO8	PO9	PO10	PO11	1.06
C315	2.1	2.4	2.5	1.9	PO5	PO6	PO7	1.9	PO9	1.89	PO11	0.96
C316	PO1	1.4	1.9	PO4	PO5	PO6	PO7	1	1.9	1.9	0.95	PO12
C401	1.7	PO2	2.2	PO4	2	PO6	PO7	PO8	PO9	PO10	PO11	1.78
C402	2.1	1.6	2.1	1.3	1.9	PO6	PO7	PO8	PO9	PO10	2.77	PO12
C403	1.6	1.6	1.3	1.8	0.9	PO6	PO7	PO8	PO9	PO10	PO11	0.82
C404	2.2	PO2	PO3	1.4	2.1	PO6	PO7	PO8	PO9	PO10	PO11	1.36
C405	1.5	1.9	1.6	1.8	PO5	1.7	PO7	PO8	PO9	PO10	PO11	PO12
C406	1.7	1.7	2.5	1.7	0.8	PO6	PO7	PO8	PO9	PO10	PO11	1.68
C407	2.3	2.3	2.3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.9

C408	1.7	2.5	2.41	1.9	2.3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C409	0.9	1.8	PO3	1.8	2.7	1.6	PO7	PO8	PO9	PO10	PO11	1.61
C410	1.5	1.8	1.9	1.5	1.2	0.7	PO7	PO8	0.7	PO10	PO11	PO12
C411	2.9	2.9	PO3	PO4	PO5	2	PO7	PO8	PO9	2.93	PO11	PO12
C412	2.9	PO2	2.9	2	PO5	2	2	PO8	2.5	1.96	1.96	PO12
C413	2.9	2.9	PO3	PO4	PO5	2.4	PO7	2.8	2.8	1.87	2.81	2.81

### PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	1.83	1.82	1.78	1.58	1.70	1.73	1.19	1.88	1.66	1.84	1.66	1.58
Direct Attainment	1.66	1.67	1.65	1.33	1.52	1.59	0.89	1.78	1.48	1.79	1.54	1.40
InDirect Attainment	2.5	2.4	2.3	2.6	2.4	2.3	2.4	2.3	2.4	2.06	2.13	2.29

### PSO Attainment

Course	PSO1	PSO2	PSO3
C101	PSO1	PSO2	PSO3
C102	PSO1	PSO2	PSO3
C103	PSO1	PSO2	PSO3
C104	PSO1	PSO2	PSO3
C105	PSO1	PSO2	PSO3
C106	2.39	PSO2	2.41
C107	PSO1	PSO2	PSO3
C108	PSO1	PSO2	PSO3
C109	PSO1	PSO2	PSO3



C110	PSO1	PSO2	PSO3
C111	PSO1	PSO2	PSO3
C112	2.81	PSO2	2.87
C113	PSO1	PSO2	PSO3
C114	PSO1	PSO2	PSO3
C115	PSO1	PSO2	PSO3
C116	PSO1	PSO2	PSO3
C201	1.35	1.39	PSO3
C202	0.84	1.34	1.08
C203	1.12	1.46	PSO3
C204	1.67	1.35	PSO3
C205	1.33	1.05	1.05
C206	PSO1	PSO2	PSO3
C207	2.74	2.06	PSO3
C208	2.01	2.61	2.54
C209	1.7	PSO2	PSO3
C210	1.38	2.08	2.12
C211	1.54	1.26	1.31
C212	1.63	1.11	1.71
C213	2.21	1.32	PSO3
C214	1.2	1.55	PSO3
C215	1.68	2.52	2.52
C216	1.68	2.27	0.91

C301	1.54	2.22	PSO3
C302	1.16	1.34	PSO3
C303	1.24	PSO2	PSO3
C304	1.71	1.37	PSO3
C305	1.77	1.16	1.2
C306	1.82	PSO2	1.8
C307	2.71	1.79	1.78
C308	2.87	1.93	1.9
C309	2.05	2.04	PSO3
C310	2.17	1.39	PSO3
C311	1.55	1.88	2.18
C312	1.32	1.97	PSO3
C313	1.65	1.45	PSO3
C314	1.48	1.37	PSO3
C315	1.91	1.9	2.37
C316	1.88	2.86	PSO3
C401	PSO1	1.92	PSO3
C402	1.7	2.2	2.73
C403	1.96	PSO2	PSO3
C404	1.7	PSO2	PSO3
C405	1.89	2.73	PSO3
C406	2.24	PSO2	2.52
C407	1.46	2.44	PSO3

C408	2.25	1.37	PSO3
C409	1.74	1.78	PSO3
C410	2.19	1.71	PSO3
C411	2.93	1.95	2.93
C412	1.95	1.95	2.93
C413	1.95	2.87	2.93

**PSO Attainment Level**

<b>Course</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>
CO Attainment	1.92	1.92	2.10
Direct Attainment	1.82	1.81	2.09
InDirect Attainment	2.34	2.37	2.13

4 STUDENTS' PERFORMANCE (150)

Total Marks 99.88

:

**Table 4.1**

<b>Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)</b>	<b>2019-20 (CAY)</b>	<b>2018-19 (CAYm1)</b>	<b>2017-18(CAYm2)</b>	<b>2016-17(CAYm3)</b>	<b>2015-16(CAYm4)</b>	<b>2014-15 (CAYm5)</b>	<b>2013-14 (CAYm6)</b>
Sanctioned intake of the program(N)	60	60	60	60	60	60	60
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	49	50	47	55	51	49	39
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	1	0	0	0	1	0
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	49	51	47	55	51	50	39

**Table 4.2**

<b>Year of entry</b>	<b>Total No of students admitted in the program (N1 + N2 + N3)</b>	<b>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)</b>			
		<b>I year</b>	<b>II year</b>	<b>III year</b>	<b>IV year</b>
2019-20 (CAY)	49	0	0	0	0
2018-19 (CAYm1)	51	33	0	0	0
2017-18 (CAYm2)	47	34	22	0	0
2016-17 (CAYm3)	55	37	32	31	0
2015-16 (LYG)	51	28	22	22	19
2014-15 (LYGm1)	50	12	10	10	10
2013-14 (LYGm2)	39	12	7	7	7

**Table 4.3**

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2019-20 (CAY)	49	0	0	0	0
2018-19 (CAYm1)	51	50	0	0	0
2017-18 (CAYm2)	47	46	46	0	0
2016-17 (CAYm3)	55	54	52	50	0
2015-16 (LYG)	51	46	42	42	41
2014-15 (LYGm1)	50	39	40	39	39
2013-14 (LYGm2)	39	36	27	26	26

**4.1 Enrolment Ratio (20)**

Total Marks 18.00

Institute Marks : 18.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2019-20 (CAY)	60	49	81.67
2018-19 (CAYm1)	60	50	83.33
2017-18 (CAYm2)	60	47	78.33

Average [ (ER1 + ER2 + ER3) / 3 ] : 81.11

Assessment : 18.00

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

Total Marks 17.50

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

Institute Marks : 6.25

Item	Latest Year of Graduation, LYG (2015-16)	Latest Year of Graduation minus 1, LYGm1 (2014-15)	Latest Year of Graduation minus 2 LYGm2 (2013-14)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	51.00	50.00	39.00
Y Number of students who have graduated without backlogs in the stipulated period	19.00	10.00	7.00
Success Index [ SI = Y / X ]	0.37	0.20	0.18

Average SI [ (SI1 + SI2 + SI3) / 3 ] : 0.25

Assessment [25 \* Average SI] : 6.25

**4.2.2 Success rate in stipulated period (15)**

Institute Marks : 11.25

Item	Latest Year of Graduation, LYG (2015-16)	Latest Year of Graduation minus 1, LYGm1 (2014-15)	Latest Year of Graduation minus 2 LYGm2 (2013-14)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	51.00	50.00	39.00
Y Number of students who have graduated in the stipulated period	41.00	39.00	26.00
Success Index [ SI = Y / X ]	0.80	0.78	0.67

Average SI [ ( SI1 + SI2 + SI3) / 3 ]: 0.75

Assessment [15 \* Average SI] : 11.25

**Note** : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

#### 4.3 Academic Performance in Third Year (15)

Total Marks 9.50

Institute Marks : 9.50

Academic Performance	CAYm3 (2016-17)	LYG (2015-16)	LYGm1 (2014-15)
Mean of CGPA or mean percentage of all successful students(X)	6.45	6.45	6.52
Total number of successful students(Y)	50.00	42.00	39.00
Total number of students appeared in the examination(Z)	52.00	42.00	40.00

Average API [ (AP1 + AP2 + AP3)/3 ] : 6.34

Assessment [1.5 \* AverageAPI] : 9.50

#### 4.4 Academic Performance in Second Year (15)

Total Marks 8.88

Institute Marks : 8.88

Academic Performance	CAYm2 (2017-18)	CAYm3 (2016-17)	LYG (2015-16)
Mean of CGPA or mean percentage of all successful students(X)	6.70	5.80	6.00
Total number of successful students (Y)	46.00	52.00	42.00
Total number of students appeared in the examination (Z)	46.00	54.00	46.00
API [ X * (Y/Z) ]	6.70	5.59	5.48

Average API [ (AP1 + AP2 + AP3)/3 ] : 5.92

Assessment [ 1.5 \* AverageAPI ] : 8.88

#### 4.5 Placement, Higher Studies and Entrepreneurship (40)

Total Marks 32.00

Item	LYG (2015-16)	LYGm1 (2014-15)	LYGm2 (2013-14)
Total No of Final Year Students(N)	42.00	39.00	26.00
No of students placed in the companies or government sector(X)	32.00	30.00	20.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	2.00	1.00	0.00
No of students turned entrepreneur in engineering/technology (Z)	0.00	1.00	0.00
x + y + z =	34.00	32.00	20.00
Placement Index [ (X+Y+Z)/N ] :	0.81	0.82	0.77

Average Placement [ (P1 + P2 + P3)/3 ] : 0.80

Assessment [ 40 \* Average Placement ] : 32.00

**Program Name :**

**Assessment Year Name : CAYm1**

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Arpita Sethi	4PM15IS005	TEK SYSTEMS	BLR/C/2019/OFE-002
2	Meghana K Hegde	4PM15IS019	TATA Consultancy Services Limited	23/06/2019
3	PRAJNA HR	4PM15IS029	Tech Mahindra Ltd	21/06/2019
4	Sanjay BS	4PM15IS040	Code Wave Technologies	02/07/2019
5	Sowmya S	4PM15IS046	SLK Software Services	21/09/2018
6	Swathi S	4PM15IS051	Infosys	HRD/3T/19-20/13080315
7	Pruthvi T R,	4PM15IS033	MindTree Technologies	22/05/2019
8	Deepika B.R.	4PM15IS010	Infosys	HRD/3T/19-20/13080390



9	Naveen S D	4PM15IS023	Infosys	HRD/3T/19-20/13080448
10	Sudeep Shripad Hegde	4PM15IS048	Wipro Technologies	09/05/2019
11	BHAVYA D	4PM15IS008	IQVIA	06/09/2019
12	Sunil Kumar Suresh Kerudi	4PM15IS049	careerPrime's	CP/2018-19/CPPOL/CaRe/0031
13	Prasanna Kumar Prabhu	4PM14IS038	GFI Informatique	09/09/2019
14	Kajol Shidramshettar	4PM15IS014	MindTree Technologies	12/01/2020
15	Manasa H.S	4PM15IS016	MindTree Technologies	19/02/2020
16	Meghana B P	4PM15IS018	Capgemini	2771810 /359121
17	Nandhini G.V	4PM15IS021	Marmeto Technologies	22/10/2018
18	Navya Reddy	4PM14IS033	Ortusolis Technology Services LLP	11/09/2019
19	Pooja S G	4PM15IS027	Accenture Solutions Pvt. Ltd	03/12/2019
20	Pranamy G Hande	4PM15IS030	Call In IT	08/02/2019
21	Rakesh C.M	4PM15IS037	Ahana Technologies	ASO1571
22	Sirisapthami sapthami M S	4PM15IS015	Infosys	HRD/3T/19-20/13080447
23	Raghava D D	4PM15IS035	Tech Mahindra Ltd	12/06/2019
24	Rachana M	4PM15IS034	Sri Chid Technologies	12/03/2019
25	Anagha M jois	4PM15IS003	Infosys	HRD/3T/19-20/13080446
26	Nikhil S.V	4PM15IS024	Call In IT	19/03/2019
27	Sarika K.S	4PM15IS041	Call In IT	19/03/2019
28	Varshini K	4PM15IS052	SR Integrated Circuit India Pvt Ltd	27/01/2020
29	Priyanka S P	4PM15IS032	Sri Chid Technologies	01/02/2020
30	Ashwini M.V.	4PM15IS007	UST GLOBAL	30/10/2019
31	Varshini K M	4PM15IS053	Dunamis Info Technologies	15-Jul-2019

32	Anushree B	4PM15IS004	Concentrix	11/12/2019
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**Assessment Year Name : CAYm2**

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aishwarya V Telka	4PM14IS001	TATA Consultancy Services Limited (TCSL).	TCSL/DT20195839289/Bangalore
2	Bhuvana D.S.	4PM14IS009	Wipro Technologies	8637937
3	Chaithra Bs	4PM14IS010	TATA Consultancy Services Limited (TCSL)	18/10/2019
4	Deepashree B	4PM14IS011	Infosys limited	HRD/3T/18-19/12773610
5	Deepthi Kashyap	4PM14IS012	Allstate Solutions Private Technologies	17/01/2019
6	Kavya H S	4PM14IS020	DXC Technology	08/08/2018
7	Kavyashree Hosahalli Keshava	4PM14IS021	Tech Mahindra Limited	Ref: 712272/1686275/ELTP
8	Manoj V.G	4PM14IS029	Ortusotis Technologies Services	22/10/2019
9	Meghana J Kori	4PM14IS030	TATA Consultancy Services Limited (TCSL)	14/01/2019
10	Nithish H M	4PM14IS034	Happiest Minds Technologies Private Limited	28/08/2019
11	Niveditha P.S	4PM14IS035	Nextgen Healthcare India Private Limited	21/02/2019
12	Supriya S.P	4PM14IS049	TE Consulting (India) Private Limited	Ref No: TE/DEL/2019/11
13	Soumya B	4PM14IS052	Pay front Technologies India Private Limited	17/10/2018
14	Pavithra Hd	4PM14IS036	TATA Consultancy Services Limited (TCSL)	24/11/2018
15	Prakruthi P K	4PM14IS037	AllState Solutions Private Limited	17/01/2019
16	Karchinal Rudrappa Ramesh	4PM14IS017	Infosys	20/08/2018
17	Renuka N.	4PM14IS041	MindTree technologies	23/04/2019
18	Sachin J	4PM14IS016	Mphasis Technologies	29/10/2018
19	Sindhu N.P	4PM14IS045	State Street Global Advisors	11/10/2018
20	Sudharshan C.V	4PM14IS047	Ortusoils Technology Service	30/05/2019
21	Veena A	4PM14IS051	Yethi Consulting Pvt.Ltd	10/09/2018

22	Sindhu U S	4PM14IS046	PayAsia Management Pvt.Ltd	29/08/2019
23	Madhu S.R.	4PM14IS026	Trans Neuron technologies	01/08/2019
24	Alok kumar A N	4PM14IS004	Global edge Software Tech	11/09/2018
25	Kavana D.B	4PM14IS018	Capgemini	12/11/2019
26	Koushik G.R	4PM14IS022	Dunamis Info Technologies	13/02/2019
27	Kousalya H.T	4PM14IS024	Value Point Systems	18/12/2018
28	Mangala Achar	4PM14IS027	ServiceLine Solutions India	26/05/2019
29	Shubha SM	4PM14IS044	Mphasis	08/07/2018
30	Naveen Kumar B	4PM14IS032	G7 CR Technologies	01/02/2019

**Assessment Year Name : CAYm3**

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Anusha M	4PM13IS004	Sunplus Software Technologies Pvt. Ltd., Bangalore	21/06/2018
2	Arpitha M.M	4PM13IS006	Acuvate Technologies	ACUVA758
3	Chaitra K H	4PM13IS008	Hexaware Technologies Limited	11/03/2018
4	Niveditha Vaidya	4PM13IS019	Cognizant Technologies	11786167
5	Dheeraj T.S	4PM11IS009	QualiTest India Private Limited	23/03/2018
6	Karthik S Nadig	4PM13IS015	Madiba Consulting India	22/11/2019
7	Pavan B.S	4PM13IS020	Joulesto Watts Business Solutions pvt.Ltd	31/12/2018
8	Praneetha P	4PM13IS023	TATA Consultancy Services Limited (TCSL)	TCSL/DT20184106075/Bangalore
9	Sajith. S	4PM13IS028	CSC	30/05/2018
10	Pavan	4PM13IS021	Trinion Technologies	01/08/2018
11	Usha S	4PM13IS040	Groupon Shared Services Pvt. Ltd	19/09/2019
12	Prakash D	4PM13IS022	Talend Data Integration Services Private Limited	22/11/2019
13	Sachin S	4PM10IS031	ChipsApp Technologies	11/09/2017
14	Shreeya P Jain	4PM13IS031	ChipsApp Technologies	11/09/2017
15	Shwetha N.H.	4PM13IS032	HDB Financial Services	18/06/2018
16	SriNandan	4PM13IS035	Fluruta Technologies	20/03/2018
17	Swathi Damodar Naik	4PM13IS037	Beaming India	12/01/2018
18	Shravya R.	4PM13IS030	Career Prime	10/04/2018
19	Karthi R	4PM13IS014	Tripoly Studio Technologies	20/08/2018
20	Tejaswini K.P	4PM13IS039	Megron Tech Private Limited	23/11/2019

#### 4.6 Professional Activities (20)

Total Marks 14.00

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

Institute Marks : 3.00

Following are the societal membership /Chapters we have in our Institution

- CSI Institutional Members
- IEEE Student Chapter
- ISTE Chapter
- IFERP Professional Membership

## Teaching Faculty Membership:

**Table 4.1: Membership details in professional societies**

S No.	Name of the Faculty	Membership
1	Dr. Prasanna Kumar H.R	IEEE Member CSI Member Institute of Scholars(InSc) ISTE Member
2	Dr. Pramod	CSI Member IFERP Professional Membership ISTE Member
2	Mr. Arjun U	CSI Member IFERP Professional Membership International Society for research and Development ISTE Member
3	Mr. Venkatesh P.	ISTE Member IFERP Professional Membership International Society for research and Development
4	Mr. Vinay S.K.	ISTE Member IFERP Professional Membership International Society for research and Development
5	Mr. Madesha M	IFERP Professional Membership International Society for research and Development
6	Mrs. Gowthami A.T.	IFERP Professional Membership International Society for research and Development
7	Mrs. Vani G.S	ISTE Member

**Student Branch award for the year 2019-20 from IEEE Student Branch**



Fig 4.1 Student Branch award for the year 2019-20 from IEEE Student Branch  
CSI Educational Institutional Membership Certificate

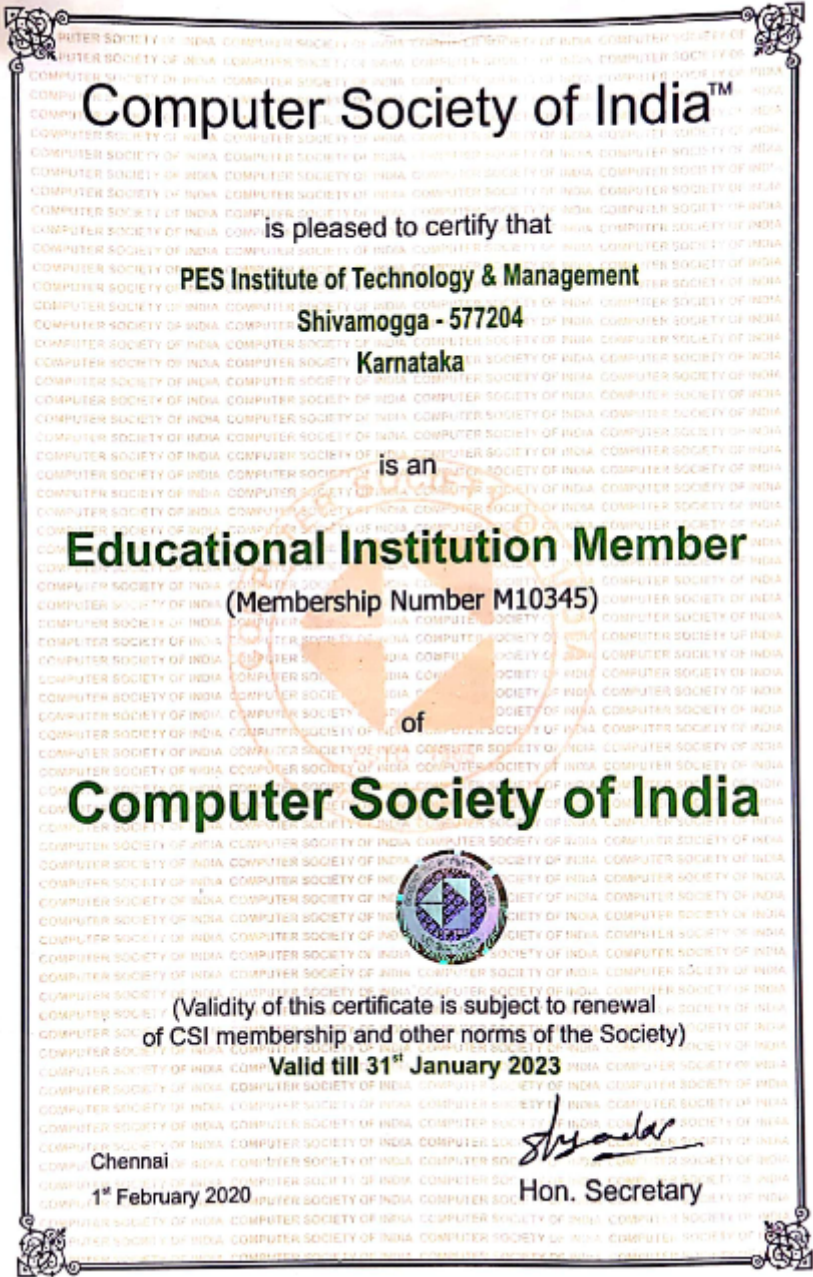


Fig 4.2 :CSI Educational Institutional Membership Certificate  
ISTE Studetns Chapter



Fig 4.3 :ISTE Studetns Chapter





Fig 4.4 : BITES Membership Certificate

**Student Membership:**

IEEE Student members:

- 1.Sandhya S Hegde
- 2.Prakash Bhasagi
- 3.Amulya B P

Table 4.2: Workshops conducted

S. No.	Workshop Name	Date	Student Organizer
1	Workshop on Internet of Things	16 <sup>th</sup> and 17 <sup>th</sup> March,2019	Sagar Kumar B Shwetha S.
2	Machine learning	30 <sup>th</sup> and 31 <sup>st</sup> March,2019	Shwetha S. Sagar Kumar B
3	Image Processing using Python and Matlab	12 <sup>th</sup> and 13 <sup>th</sup> October,2019	Amulya B.P Prakash Bhasagi
4	Internet of Things using Cloud	12 <sup>th</sup> and 13 <sup>th</sup> October,2019	Amulya B.P Prakash Bhasagi

5	Internet of Things	21 <sup>st</sup> and 22 <sup>nd</sup> October,2019	Amulya B.P Prakash Bhasagi
6	Machine learning	22 <sup>nd</sup> and 26 <sup>th</sup> October,2019	Amulya B.P Prakash Bhasagi

**Three Papers presented during I2CONECCT in association with IEEE Mangalore subsection, May 2019**

Table 4.3: Papers presented by students under IEEE student chapter

SI No	Authors Name	Paper Title	Conference Title	National /International
1	Ms. Kajol S, Ms. Meghana B P	Seed Purity Test using Image Processing Technique	I2Conecct - IEEE Student Chapter	National
2	Ms. Swathi S, Ms. Pruthvi T R	Facial Emotion Recognition using CNN	I2Conecct - IEEE Student Chapter	National
3	Mr. Keshava H, Mr. Irshadahmed, Mr. Chandrashekhara M, Mr. Madhukumar S J	Electricity Maintenance for Smart City	I2Conecct - IEEE Student Chapter	National

Inter College paper presentation competition held at NMAM Institute of Technology, Nitte, Karnataka under CSI chapter on 10<sup>th</sup> March, 2018 and One team secured second prize for the paper "Intelligent Personal Assistant for Smart Home"



Fig 4.5: Students receiving Prize

#### 4.6.2 Publication of technical magazines, newsletters, etc. (5)

Institute Marks : 3.00

Newsletter of the Department is published twice a year. This newsletter is conceived of as a meeting place for students, faculty, staff, alums and friends to catch up on what's happening in the Department, learn of upcoming events, and read the news and accomplishments of the many people connected in different ways to our department.

<b>S No.</b>	<b>Newsletter year</b>	<b>Issue and Volume</b>
1	2017-18- Even Semester	Volume 1, Issue1, 2018
2	2018-odd Semester	Volume 1, Issue 2, 2019
3	2018-19- Even Semester	Volume 2, Issue1, 2019

**Newsletter Volume 1, Issue1, 2018**

# "MAHITHI"

## INDUSTRIAL VISIT "Visit to A1 Logic"



Final year students and all faculty members visited to "A1 Logic" Software development Company, Mangalore.

Mr. Praveen Udupa ,CEO and Founder of A1 Logic, gave presentation on "Emerging Technologies in IT" and awareness about work nature of IT Industry.

### Vision

To create technically competent, ethically strong and skilled IT Professionals.

### Mission

- To prepare students to be successful in their professional career and continuous learners by offering a strong technical foundation with professional and Ethical responsibilities
- Enhancing the knowledge through ongoing research and professional development programs by employing highly skilled faculty members

## Best Paper Award



Ms. Voena, Mr. Sachin J and Mr. Alok, presented paper on "Intelligent home automation system" during state level paper presentation competition held at in NMAMIT, Nitte and secured second best paper award.

This paper presents a abridgment to develop a personal assistant that reduces the human effort by applying the concepts of Artificial Intelligence (AI) and Home Automation by performing multiple tasks through voice I/O. This paper also briefly describes the representation model of the system. The additional feature of combining software as well as hardware technologies makes it more usable.

## World Water Day



### Pledge to Save Water Taking oath on World Water Day



Pencil sketches Mr. Vijay Aaradhya  
III semester

"Excellence is never an accident." Aristotle





## “MAHITHI”

The Department of Information Science and Engineering came into existence in the year 2007. It is headed by Dr. Prasanna Kumar H R supported by a highly qualified and dedicated staff. The department aims at cultivating the thirst for knowledge, vigor and the vision to look beyond the evident in students. The students are well versed with the exhaustive and thoroughly chosen curriculum, guided as they are by an experienced faculty. Realizing well in time that the information technology wave has become a phenomenon in itself over the past few years, the institute established a separate department to cater the ever-growing demand for professionals in this challenging field. Hands-on training sessions in various fields of application of IT have imparted to the student's considerable acumen in the vast sector. The students perform project work as part of their curriculum to enhance their specification skills, leading to multifaceted development of their engineering concepts.

### Vision

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### Mission

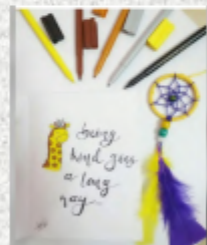
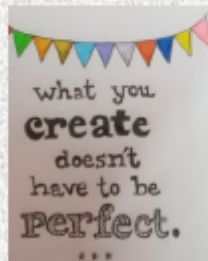
- To prepare students to be successful in their professional career and continuous learners by offering a strong technical foundation with professional and Ethical responsibilities
- Enhancing the knowledge through ongoing research and professional development programs by employing highly skilled faculty

## “IOT WITH RASPBERRY PI”



IoT workshop conducted at the ISE department on 29-03-2019. Participants developed various applications using IoT and used the cloud storage services. More than 45 students participated in the workshop.

Internet of things is about connecting objects to the internet and making it a smart object.



Doodles :Aaliya Waseem, IV Sem

“if u want to shine like a sun first burn like a sun” Dr. APJ Abdul kalam

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### Vision

To create technically competent, ethically strong and skilled IT Professionals.

### Mission

- To prepare students to be successful in their professional career and continuous learners by offering a strong technical foundation with professional and Ethical responsibilities.
- Enhancing the knowledge through ongoing research and professional development programs by employing effective teaching and learning methods.

## “BLOCKATHON-2”



Two days workshop and hackathon was organized in the department on 25th and 26th of October 2019, total of 350 students from various colleges of state participated in the event. PESITM and Srichid technology also signed for an MOU for a major benefit to the student community to enhance their skills and knowledge.

**Resource person:** Dr. Satchidananda S Sogala, CEO and founder Srichid technology, Bangalore.

Mr. Lohith and Mr. Surjith, Full stack developers, Srichid technology, Bangalore

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

Institute Marks : 8.00

Table 4.5: Students participations during academic year 2016-17

Sl. No.	Event date	Name of the event and Place	Students Name	Prize/Participation
1	28-08-2016	Workshop on "Data Analytics" organized by IBM Bluemix at Bangalore, Karnataka	Ms. Pavithra Mr. Suhas	Participated
2	15-11-2016	VTU Intercollegiate Weight Lifting competition held at VDRIT, Haliyala, Karnataka	Mr. Dheeraj	Won the Silver medal
3	01-12-2016	Speak for India Debate competition held at Shimoga, Karnataka	Mr. Dheeraj	Participated
4	11-11-2016	VTU Inter collegiate Inter Zone Weight Lifting Tournament held at GAT, Bangalore, Karnataka	Mr. Dheeraj	Runner-up
5	20-10-2016	VTU Inter collegiate Inter Zone Wrestling competition held at VDRIT, Haliyal, Karnataka	Mr. Dheeraj	Won the Third prize
6	19-01-2017 to 21-01-2017	National Skill Fest held at RiiIT, Mysore, Karnataka	Mr. Dheeraj Mr. Akshay Ms. Arpitha Ms. Chaithra K H Mr. Pavan B S Ms. Niveditha Vaidya	Participated
7	15-02-2017	District level Inter college Dance competition held at Shimoga, Karnataka	Mr. Sudarshan Mr. Manoj V G	Won the first prize
8	13-08-2016	IBM India University Relations Hackcamp held at Bangalore, Karnataka	Mr. Suhas	Participated
9	11th to 12th March, 2017.	3Q-Techathon Challenging competition on IT Infra Networking held at Bangalore, Karnataka	Mr. Sudarshan	Participated
10	15-3-2017 to 19-3-2017	VTU Fest held at MVJ College of Engineering, Bangalore, Karnataka	Ms. Arpitha Mr. Srinandan Udupa Mr. Karthik Mr. Dheeraj Ms. Usha S Ms. Deepthi kashyap Mr. Karthik Nadig	Won the second prize in Group song and third prize in Skit



11	20-3-2017 to 21-3-2017	VTU Central Zone Football Tournament held at SIT, Tumkur, Karnataka	Mr. Sachin J Mr. manoj Gowda Mr. Prasanna Kumar Prabhu	Runner-up
12	8-4-2017	National Conference on Emerging Trends and advances in Information Technology held at AIT, Chikmagalore, Karnataka	Ms. Pavithra H D Mr. Suhas Ms. Shubha S M Ms. Sindhurani G R Ms. Praneetha Ms. Supriya C M	Participated and presented a paper
13	8-4-2017	National Conference on Emerging Trends and advances in Information Technology held at AIT, Chikmagalore, Karnataka	Ms. Chaithra K H Ms. Usha S	Won the best paper award
14	17-4-2017	Hackathon event conducted by Evive Health at JNNCE, Shimoga, Karnataka	Mr. Suhas	Won the third prize with Rs. 50000
15	30-5-2017	KSCST Project Evaluation at BIET, Davangere, Karnataka	Ms. Shwetha N H Mr. Dheeraj T S Ms. Shreeya P Jain Mr. Sandesh Muttu	Participated

Table 4.6: Students participations during academic year 2017-18

Sl. No	Event Date	Name of the event and Place	Students name	Prize/Participation
1	11-8-2017 to 12-8-2017	Karnataka State Council for Science and Technology(KSCST) project exhibition held at NMAM Institute of Technology, Nitte, Karnataka	Mr. Dheeraj, Mr. Sandesh Muttu Ms. Shreeya P Jain Ms. Shwetha N H	Project of the year award
2	17-2-2018 to 18-2-2018	Workshop on Ethical Hacking held at JNNCE, Shimoga, Karnataka	Ms. Arpitha Sethi Mr. Nikhil Ms. Soumya S Ms. Anagha Jois Mr. Sunil Kumar Mr. Prasanna Kumar Prabhu Ms. Shifa Anjum Ms. Asfia	Participated
3	6-3-2018	TCS TechByte Quiz competition held at Srinivasa Institute of Technology, Mangalore, Karnataka	Mr. Suhas Mr. Naveen Kumar Mr. Manoj V G Mr. Nithish	Participated
4	10-3-2018	Intercollegiate Technical paper presentation competition held at NMAM IT, Nitte, Karnataka	Ms. Soumya B Ms. Koushlya Ms. Gowthami	Participated

5	10-3-2018	Intercollegiate Technical paper presentation competition held at NMAM IT, Nitte, Karnataka	Ms. Veena A Mr. Alok Kumar Mr. Sachin Mr. Ramesh	Second prize
6	11-4-2018 to 13-4-2018	VTU Fest held at Angadi College of Engineering, Belagavi, Karnataka	Ms. Deepthi Kashyap Mr. Karthik Nadig Ms. Supriya Ms. Akshatha Ms. Rajeshwari Ms. Sandhya Hegde Ms. Arpitha Sethi	Participated
7	24-4-2018	National Conference on Emerging Trends and Advances in Information Technology held at AIT, Chikmagalore, Karnataka	Ms. Pavithra H D Ms. Shubha S.M	Participated and presented a paper
8	27-4-2018 to 28-4-2018	Smart Malenadu competition held at JNNCE, Shimoga, Karnataka	Mr. Sudarshan Mr. Koushik K N Mr. Madhu Mr. Manoj V G Ms. Deepashree Ms. Niveditha Ms. Chaithra Ms. Deepthi Kashyap Ms. Ayesha Ms. Renuka Ms. Supriya	Participated
9	27-4-2018 to 29-4-2018	National level Technical paper presentation competition held at JNNCE, Shimoga, Karnataka	Ms. Anitha Ms. Tejaswini Ms. Meghana Kori Ms. Bhuvana Ms. Deepashree Ms. Nivedhitha P S	Presented a paper
10	18-5-2018	International Conference on Recent Trends in Technology held at SDMIT, Ujire, Karnataka	Ms. Deepashree Ms. Chaitra Ms. Niveditha P S	Participated and presented a paper
11	18-5-2018 to 19-5-2018	Fourth National Conference on Multimedia Technology and Communication System held at MCE, Hassan, Karnataka	Ms. Bhuvana D S Ms. Kavyashree H K Ms. Meghana Kori Ms. Sindhu U S Mr. Alok Kumar Mr. Ramesh Mr. Sachin J Ms. Veena a	Participated and presented a paper

12	28-6-2018	State level Project exhibition held at VTU, Belagavi, Karnataka	Mr. Alok Kumar Mr. Ramesh Mr. Sachin Ms. Veena	Participated
13	29-5-2018	KSCST Project Evaluation held at BIET, Davangere, Karnataka	Ms. Ayesha Ms. Renuka Ms. Deepthi Kashyap Ms. Supriya	Participated
14	17-7-2018 to 18-7-2018	Workshop on "GO Programming" held at CIT, Gubbi, Karnataka	Ms. Sarika Ms. Bhavya	Participated

Table 4.7: Students participations during academic year 2018-19

Sl. No	Event Date	Name of the event and Place	Students Name	Prize/Participation
1	10-8-2018	KSCST final project exhibition and seminar held at BIET, Davangere, Karnataka	Ms. Nivedhitha P S Ms. Deepashree Ms. Supriya Ms. Ayesha	Participated
2	7-10-2018	Quiz completion in view of World Wild Life Week held at Adichunchanagiri PU College, Shimoga, Karnataka	Ms. Meghana N V Ms. Gagana B Mr. Varun D Anand K C	Participated
3	19-1-2019	Smart India Hackathon Competition (Online)	Mr. Naveen Dhareshwar Mr. Sudeep Sripad Hegde Mr. Nikhil S V Ms. Priyanka S P Ms. Meghana Hegde Ms. Soumya Rao Ms. Sanjay B S Ms. Ashwini M V Ms. Deepika B R Ms. Nandini G V Ms. Bhavya D Ms. Sarika K S	Participated
4	16-2-2019 to 17-2-2019	Workshop on Android Application Development held at NITK, Surathkal, Karnataka	Ms. Sudarshana Ms. Priya A J Ms. Arthika Shetty	Participated
5	16-2-2019 to 17-2-2019	Workshop on Internet of Things held at NITK, Surathkal, Karnataka	Ms. Bhargavi Ms. Prathibha Hebbar	Participated

6	23-2-2019 to 24-2-2019	Workshop on Android Application Development held at NITK, Surathkal, Karnataka	Ms. Kavyashree R Ms. Kavyashree Ms. Bindu Ms. Aishwarya	Participated
7	26-4-2019 to 27-4-2019	Techzone event held at JNNCE, Shimoga, Karnataka	Mr. Sagar Kumar Mr. Mohammed Suhail	Participated
8	10-5-2019	National Conference on Multimedia Technology and Communication System held at MCE, Hassan, Karnataka	Ms. Pooja S.G Ms. Manasa Ms. Komala Ms. Varshini	Participated

## 5 FACULTY INFORMATION AND CONTRIBUTIONS (200)

Total Marks 122.93

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining
Dr.Prasanna Kumar H R	AHUPR0198K	ME/M. Tech and PhD	27/10/2018	Computer and Information Science	3	0	0	Professor	01/01/2019	20/03/20
Dr.Pramod	AQFPP1808G	ME/M. Tech and PhD	09/01/2018	Computer and Information Science	3	0	0	Associate Professor	31/07/2017	31/07/20
Mr. Venkatesh P	AJBPV9967B	M.E/M.Tech	09/05/2015	Computer science and engineering	0	0	0	Assistant Professor		24/01/20
Mr. Arjun U	ALDPA9907E	M.E/M.Tech	03/05/2014	Computer science and engineering	2	0	0	Assistant Professor		16/02/20

Mr. Vinay S K	AGOPV9257C	M.E/M.Tech	03/05/2014	Computer Network Engineering	0	0	0	Assistant Professor		26/09/20
Mrs. Vani G S	ASPPV9040G	M.E/M.Tech	05/05/2016	Computer science and engineering	0	0	0	Assistant Professor		16/07/20
Mrs. Gowthami A T	BFYPG1979Q	M.E/M.Tech	05/05/2016	Software Engineering	0	0	0	Assistant Professor		31/07/20
Mr. Madesha M	BSSPM6063L	M.E/M.Tech	03/05/2014	Computer science and engineering	1	0	0	Assistant Professor		29/07/20
Mr. Praveen Gujjar	AOIPJ3271J	M.E/M.Tech	09/05/2015	Computer science and engineering	2	0	0	Assistant Professor		26/07/20
Mrs. Divya K	DRNPK1092R	M.E/M.Tech	21/01/2017	Computer science and engineering	0	0	0	Assistant Professor		19/08/20

### 5.1 Student-Faculty Ratio (20)

Total Marks 10.00

Institute Marks : 10.00

## UG

No. of UG Programs in the Department

**Information Science & Engg.**

Year of Study	CAY		CAYm1		CAYm2	
	(2019-20)		(2018-19)		(2017-18)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students

2nd Year	60	1	60	0	60	0
3rd Year	60	0	60	0	60	0
4th Year	60	0	60	0	60	1
<b>Sub-Total</b>	<b>180</b>	<b>1</b>	<b>180</b>	<b>0</b>	<b>180</b>	<b>1</b>
<b>Total</b>	<b>181</b>		<b>180</b>		<b>181</b>	
Grand Total	181		180		181	

**PG**

No. of PG Programs in the Department

<b>Computer Science and Engineering</b>			
<b>Year of Study</b>	<b>CAY(2019-20)</b>	<b>CAYm1(2018-19)</b>	<b>CAYm2 (2017-18)</b>
	<b>Sanction Intake</b>	<b>Sanction Intake</b>	<b>Sanction Intake</b>
1st Year	0	0	24
2nd Year	0	24	24
<b>Total</b>	<b>0</b>	<b>24</b>	<b>48</b>
<b>Digital Electronics</b>			
<b>Year of Study</b>	<b>CAY(2019-20)</b>	<b>CAYm1(2018-19)</b>	<b>CAYm2 (2017-18)</b>
	<b>Sanction Intake</b>	<b>Sanction Intake</b>	<b>Sanction Intake</b>
1st Year	0	0	24
2nd Year	0	24	24
<b>Total</b>	<b>0</b>	<b>24</b>	<b>48</b>
<b>Master of Business Administration</b>			
<b>Year of Study</b>	<b>CAY(2019-20)</b>	<b>CAYm1(2018-19)</b>	<b>CAYm2 (2017-18)</b>
	<b>Sanction Intake</b>	<b>Sanction Intake</b>	<b>Sanction Intake</b>
1st Year	60	60	60
2nd Year	60	60	60
<b>Total</b>	<b>120</b>	<b>120</b>	<b>120</b>
<b>Grand Total</b>	120	168	216

SFR

No. of UG Programs in the Department

No. of PG Programs in the Department

Description	CAY(2019-20)	CAYm1 (2018-19)	CAYm2 (2017-18)
Total No. of Students in the Department(S)	<input type="text" value="181"/> <b>Sum total of all (UG+PG) students</b>	<input type="text" value="180"/> <b>Sum total of all (UG+PG) students</b>	<input type="text" value="181"/> <b>Sum total of all (UG+PG) students</b>
No. of Faculty in the Department(F)	<input type="text" value="8"/> <b>F1</b>	<input type="text" value="8"/> <b>F2</b>	<input type="text" value="9"/> <b>F3</b>
Student Faculty Ratio(SFR)	<input type="text" value="22.63"/> <b>SFR1=S1/F1</b>	<input type="text" value="22.50"/> <b>SFR2=S2/F2</b>	<input type="text" value="20.11"/> <b>SFR3=S3/F3</b>
Average SFR	<input type="text" value="21.75"/> <b>SFR=(SFR1+SFR2+SFR3)/3</b>		
<b>F=Total Number of Faculty Members in the Department (excluding first year faculty)</b>			

**Note:** 75% should be Regular/full time faculty and the remaining shall be Contractual Faculty/Adjust Faculty/Resource persons from industry as per AICTE norms and standards. The contractual faculty will be considered for assessment only if a faculty is drawing a salary as prescribed by the concerned State Government for the contractual faculty in the respective cadre.

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

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2019-20)	8	0
CAYm1(2018-19)	8	0
CAYm2(2017-18)	9	0

Average SFR for three assessment years : 21.75

Assessment SFR : 10



**5.2 Faculty Cadre Proportion (25)**

Total Marks 14.00

Institute Marks : 14.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2019-20)	1.00	1.00	2.00	1.00	6.00	6.00
CAYm1(2018-19)	1.00	0.00	2.00	1.00	6.00	7.00
CAYm2(2017-18)	1.00	0.00	2.00	0.00	6.00	9.00
Average Numbers	1.00	0.33	2.00	0.67	6.00	7.33

Cadre Ratio Marks [ (AF1 / RF1) + [(AF2 / RF2) \* 0.6] + [ (AF3 / RF3) \* 0.4] ] \* 12.5 : 14.00

**5.3 Faculty Qualification (25)**

Total Marks 10.93

Institute Marks : 10.93

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F ]
2019-20(CAY)	2	6	9.00	12.22
2018-19(CAYm1)	1	7	9.00	10.56
2017-18(CAYm2)	0	9	9.00	10.00

Average Assessment : 10.93

**5.4 Faculty Retention (25)**

Total Marks 20.00

Institute Marks : 20.00

<b>Description</b>	<b>2018-19</b>	<b>2019-20</b>
No of Faculty Retained	8	7
Total No of Faculty	9	9
% of Faculty Retained	89	78

Average : 83.00

Assessment Marks : 20.00

### **5.5 Innovations by the Faculty in Teaching and Learning (20)**

Total Marks 15.00

Institute Marks : 15.00

- Demonstrated the usage of Weka tool for the subject Data Warehousing and Data Mining for analysis and interpretation of Data Sets.
- Hands on Session is carried out for the subject Python Application Programming and students are made to write the programs which is not prescribed in VTU syllabus
- Hands on Session is carried out for C++ to bridge the gap between C programming and Java and students were trained to write the programs which is not prescribed in VTU syllabus
- Creating a Mind Map to browse through all the topics in each module for the subject Object oriented concepts.

Has Four Essential Elements

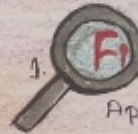
- 1. Pattern name
- 2. Problem
- 3. Solution
- 4. Consequences



→ study and  
→ examine the  
Design Patterns

What is Design patterns?

How Design Patterns solve Design Problems



**Finding**

1. Appropriate objects

2. Specifying Object Implementation.

3. Determining Object Granularity

4. Specifying Object Interface



Scan Intent Section

How to Select Design Patterns



- 1
- 2
- 3
- 4



- 1 Read the Pattern
- 2 Look at the sample code section
- 3 Go back and study the structures
- 4 Define Classes.

•Case studies in the subject Management and Entrepreneurship

PES Institute of Technology & Management



Department of Information Science &  
Engineering

Management Entrepreneurship for IT Industry

“ PURCHASE MANAGEMENT ”

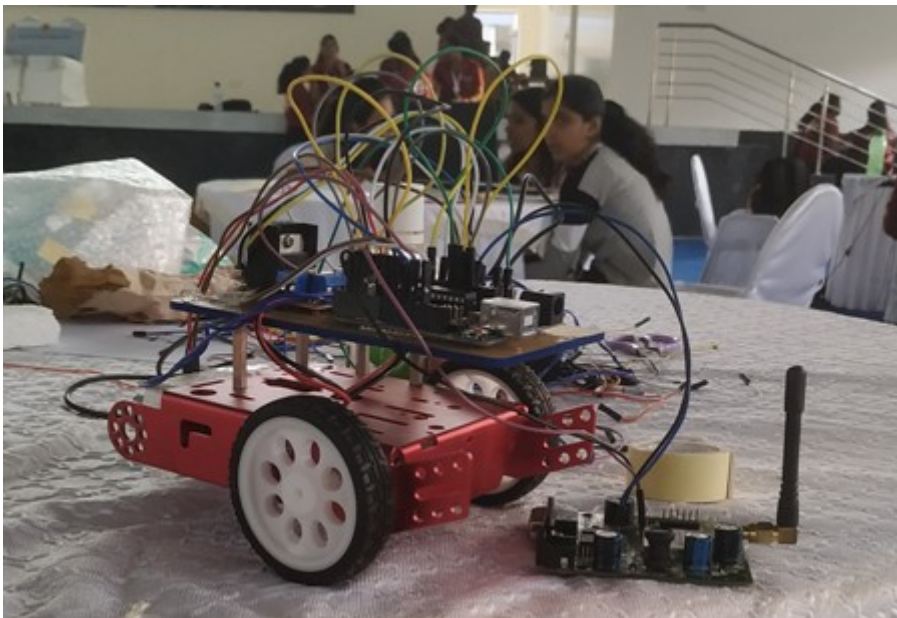
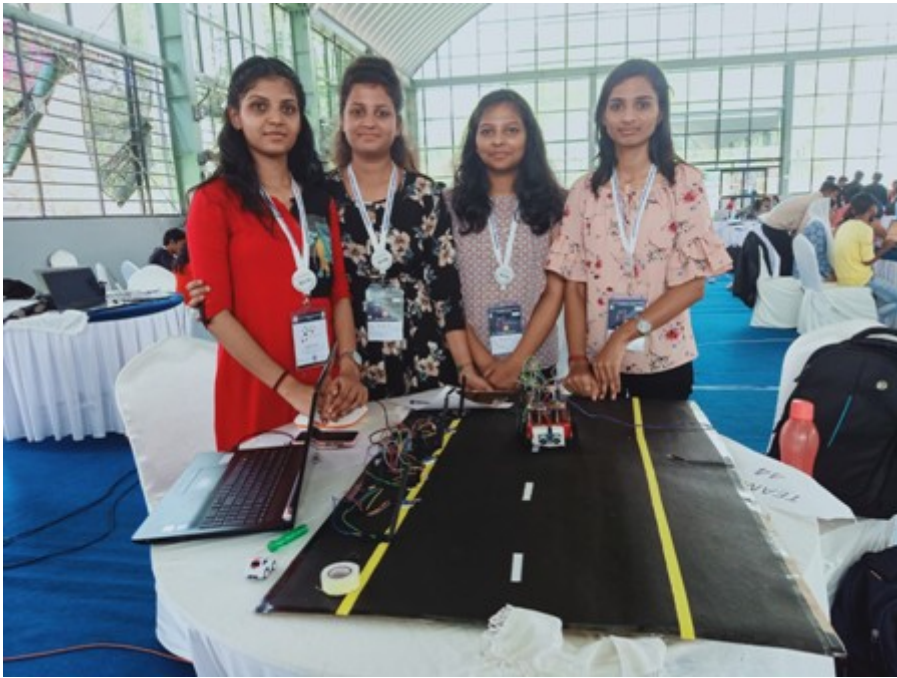
Submitted By,

AKANKSHA J 4PM17IS005  
LAVANYA H P 4PM17IS023  
MEGHANA K M 4PM17IS029  
RAJESHWARI M H 4PM17IS034

Submitted To,

**Mr. MADESH M**  
Asst. Prof, Dept. of IS & E.

- Mini Projects related to IoT for 2nd year students



•Motivated the students to take 8 hours of easy to advanced Data Structures online course for the students of 3rd semester and all the students completed the course. This initiation is related to the subject Data Structures (18CS32) of III Semester for the academic year 2019-20.



- Introduced NetBeans IDE tool for III Semester students to implement Data Structure using C and for V Semester students for Java swing programs.

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

Total Marks 15.00

Institute Marks : 15.00



Name of the faculty	Max 5 Per Faculty		
	2018-19 (CAYm1)	2017-18 (CAYm2)	2016-17 (CAYm3)
Dr. Prasanna Kumar H R	0.00	5.00	3.00
Dr. Pramod	3.00	5.00	3.00
Mr. Venkatesh P	0.00	5.00	5.00
Mr. Arjun U	0.00	5.00	3.00
Dr. Praveen Gujjar J	5.00	5.00	5.00
Mr. Vinay S K	0.00	5.00	5.00
Mrs. Vani G S	0.00	5.00	3.00
Mrs. Gowthami A T	0.00	3.00	0.00
Mr. Madesha M	0.00	3.00	3.00
Sum	8.00	41.00	30.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratios per 5.1	9.05	9.00	9.05
Assessment [ $3 \times (\text{Sum} / 0.5\text{RF})$ ]	5.30	27.33	19.89

Average assessment over 3 years: 17.51

**5.7 Research and Development (30)**

Total Marks 13.00

## PUBLICATIONS

**Table 5.1: Publication Details**

Sl. No	Name of the Faculty	2018-2019	2017-2018	2017-2016
1	Dr. Prasanna Kumar H R	1	1	1
2	Dr. Pramod	1	1	
3	Mr. Arjun U		2	
4	Dr. Praveen Gujjar J	5	1	

### 2018-2019

Sl. No.	Name of the Faculty	Title of the paper	Name of the Journal
1	Dr. Prasanna Kumar H R	Visual Cryptographic Mechanism for Secret Information Sharing	International Journal of Engineering & Technology No. 3.34, Vol. 7, Special Issue 34, September 2018
2.	Dr. Pramod	Securing SaaS Cloud Infrastructure Using Portable TPM	International Journal of Computational Engineering Research (IJCER) Volume 08, Issue 8. August – 2018
3	Mr. Praveen Gujjar J	Profitability Analysis of Indian Information Technology Companies using DuPont Model	Asian Journal of Management Volume 3, Issue 3, pp. 1105 – 1108, 2018
4	Mr. Praveen Gujjar J	Parameter Evaluation of Indian Information Technology Companies using DuPont Model	International Journal of Management and Social Sciences(IJMSS), Volume 08, No. 2.5 , 2019
5	Mr. Praveen Gujjar J	A Study of Indian Software and Networking Companies using Extended DuPont Model	JNNCE Journal of Engineering and Management (JJEM), Volume 02, No. 01, pp. 53 – 58, 2018
6	Mr. Praveen Gujjar J	Extended DuPont Ratio Analysis of Indian Information Technology Companies	Pacific Business Review International Volume 11 Issue 5, November 2018, PP 05 - 14

### 2017-2018

Sl. No.	Name of the Faculty	Title of the paper	Name of the Journal
1	Dr. Prasanna Kumar H R	Strengthen the Security of Confidential Information Using Cryptographic Techniques	International Journal of Applied Engineering Research Vol. 12, Number 16, pp. 5631-5636, 2017



2.	Dr.Pramod	A Novel Approach to Enhance Security in Cloud based SERBAC	International Journal of Computational Engineering Research (IJCER) Volume, 07 Issue 09 September – 2017
3	Mr. Arjun U	A Review on Remote Data Auditing in Cloud Computing”	IJERCSE, Vol 5, Issue 4, April- 2018.
4	Mr. Arjun U	An Efficient public auditing method with periodic verification for data integrity in cloud	ICERECT-2018 ,PES Mandya on April 2018
5	Mr. Praveen Gujjar J	Technology Challenges in Social Networking and Cyber Security	Seventeen AIMS International Conference on Management, ISBN: 978-1-943295-14-2. pp 822 - 825

2016-2017

Sl. No.	Name of the Faculty	Title of the paper	Name of the Journal
1	Dr. Prasanna Kumar H R	Providing High Security and Recovering Good Quality Image using Visual Cryptographic Technique	IOSR Journal of Computer Engineering (IOSR-JCE) Volume 18, Issue 5, Ver VI, pp. 19-23, 2016.

## PhD Awarded

Table 5.2: Details of PhD Awarded

Sl. No	Name of the Faculty	Year of Award	University
1	Dr. Prasanna Kumar H R	2018	VTU
2	Dr. Pramod	2018	VTU

- Dr. Prasanna Kumar H R is an External Doctral Committee Member for 5 Reseach Scholars Pursuing Phd under VTU

### 5.7.2 Sponsored Research (5)

Institute Marks : 0.00

**2018-19 (CAYm1)**

<b>Project Title</b>	<b>Duration</b>	<b>Funding Agency</b>	<b>Amount</b>
Digital Cottage Udyama	6months	KSCST	3000.00
			Total Amount(X): 3000.00

**2017-18 (CAYm2)**

<b>Project Title</b>	<b>Duration</b>	<b>Funding Agency</b>	<b>Amount</b>

**2016-17 (CAYm3)**

<b>Project Title</b>	<b>Duration</b>	<b>Funding Agency</b>	<b>Amount</b>

Cumulative Amount(X + Y + Z) =

**5.7.3 Development Activities (10)**

Institute Marks : 7.00

- Product Development
  - PES Trust website is designed and being maintained by Mr.Arjun U, Asst Professor of the department.
  - GEMS software is being maintained by Mr.Vinay S K and Mr.Arjun U, Asst Professors of the department
  - Prerana app is developed in the department by the student Prakash S Bhasagi under the guidance of Mr. Venkatesh P, Asst Professor of the department for registration and information about the College Fest Prerana
- Instructional materials
  - Lab Manuals for all the Laboratories
  - Mind Maps for subjects
- Working models/charts/monograms etc.
  - List of Programs in the Lab
  - Dos and Dents in the Lab
  - IoT based mini Projects

#### 5.7.4 Consultancy(from Industry) (5)

Institute Marks : 0.00

#### 2018-19 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Website Design and maintainance	1year	Mythri Motors	11800.00
Royal Orchid-IT infrasstructure Audit	1 year	Akarsha Properties	29500.00
Website design and Maintenance	1 year	Bhagath Motors	11800.00
			Total Amount(X): 53100.00

**2017-18 (CAYm2)**

Project Title	Duration	Funding Agency	Amount
Website Design and maintainance	1year	Mythri Motors	11800.00
Royal Orchid-IT infrasstructure Audit	1 year	Akarsha Properties	29500.00
Website design and Maintenance	1 year	Bhagath Motors	11800.00
			Total Amount(Y): 53100.00

**2016-17 (CAYm3)**

Project Title	Duration	Funding Agency	Amount
Website Design and maintainance	1year	Mythri Motors	11800.00
Royal Orchid-IT infrasstructure Audit	1 year	Akarsha Properties	29500.00
Website design and Maintenance	1 year	Bhagath Motors	11800.00
			Total Amount(Z): 53100.00

Cumulative Amount(X + Y + Z) = 159300.00

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

A well-defined Faculty appraisal system is being followed at the Institution. The appraisal is to be submitted every academic year. The appraisal submitted and the Management. As soon academic year starts the faculty appraisal format is shared by the HOD to all the teaching and non teaching staff of the department on the appraisal measurement criteria. Faculty is asked to indicate the predicted percentage of pass results in their handling subjects before they proceed in the month of September actual process begins where faculty members are asked to submit their self appraisal report to the HOD. At department level HOD and one to one discussion will happen to maintain transparency. The same report is submitted to the principal for further processing for needful recommendations.

Faculty Performance Assessment is with respect to the following :

1. Faculty Self-Appraisal
2. Student feedback

3. Appraisal by Head of the Department

1. Faculty Self-Appraisal

Self-Appraisal is adopted once in a year for an academic year. Self appraisal includes various parameters of assessment and the Self-Appraisal I  
**Performance Appraisal Form 2019-2020 (01-09-2019 to 31-08-2020)**

<b>Department:</b>	<b>EMP Code:</b>	
<b>Designation:</b>	<b>Date of Birth:</b>	<b>Date of Joining:</b>
<b>Mobile No:</b>	<b>PAN No:</b>	<b>Aadhar No:</b>

1. Qualification (Starting from the latest to the earliest)

Degree	Specialisation	University	Year	Class obtained	Remarks

2. Experience (Starting from the latest to the earliest)

Designation	From DD/MM/YY	To DD/MM/YY	Total Years	Institution	Experience Certificate Y/N	Remarks

**Summary:-**

- a. **Total Teaching experience at Degree level** ..... (PESITM ..... + other institute .....)
- b. **Industrial Experience** .....
- c. **Research experience** .....

(Excluding period spent for acquiring a degree)

**Additional qualification/training/expertise obtained during Current academic year** .....

**3. Number of Research papers published (Excluding those which has been communicated) for the current year only**

- a. Journals – International/National Journals .....
- b. Conferences – International/National Conferences .....
- c. Number of Patents obtained/filed: International/National.....

(Attach a list of publication including the title of the paper, Journal in which it is published, year and month of publication, volume number, pages)

4. **A. Number of B.Tech projects/Number of ME/ Ph.D dissertations Guided in the present academic year** .....

**5. Details of Research projects applied/undertaken during the year.**

Title of the project	Name of the Agency	Date of starting & duration of the project	Amount

**6. Faculty Development programs conducted during the year. (pl indicate in what capacity, source of funds, Venue, No.of participants)**

Name of the FDP	Date of starting/ duration	Number of participants

**7. Faculty Development programs attended during the year.**

Name of the FDP	Institution	Department	Date of starting/ duration

**8. Details of the International/ National Conferences/ Seminars/ Attended during the year**

**International Conference/ Seminars/ Workshops Attended (Indicate whether the participation is as a Delegate/ Chairing a Session/ Keynote Speaker etc.)**

**International Conference/ Seminars Conducted (pl indicate in what capacity, source of funds, Venue)**

**9. Pedagogy Details (use separate sheet if required)**

**Teaching Methodology used :**

**Teaching Aids used :**

**Books referred and read in the subject taught :**

**Use of Course plan (Give details) :**

**Was Course material prepared? If Prepared was it used by the students? If yes give details/specifics**

**Was any outbound teaching used, If yes give details**

**Use of ICT in teaching , If yes give details:**

**Do you disseminate practical & expertise knowledge If yes give details**

**10. 10a. Administrative responsibility (Tick wherever appropriate)**

Role	Aug to Dec	Feb to July	<b>Comments, if any</b>
Faculty Adviser/Mentor			
Head of the Department			
Chief Warden			
Warden			
Resident Warden			
Faculty Co-coordinator of Student Activity (Mention the name of the activity)			
Member/Chair/ Co-Chair of Professional bodies like IEEE/IETE/CSI/ISTE etc.			
NBA Coordinator			
Other Activities* (Mention the type of activity)			

\*(Lab in charge, counseling students, NBA assistance, calling parents with record, VTU marks entry, class teacher, mentor, lab preparation and monitoring, course coordinator, students club, self-initiation in organizing seminars, organizing industrial visits, preparing handouts, banners, ...): record to enclose

**10b. Contributions to institute development in other areas / Any other information you would prefer to file (be brief and indicate each activity involved with a bullet head) Attach in a separate sheet/s if required**



**11.Present Academic (Theory & Practical's) work Load details (Use Separate sheet if necessary)**

Semester	Odd / Even					
	Sub-1 odd/even	Sub-2 odd/even	Sub-3 odd/even	Sub-4 odd/even	Sub-5 odd/even	Sub-6 odd/even
Subject name with code						
Course plan						
Course file						
Subject notes						
Scheme and evaluation of all tests						
No. of hours handled						
No. of units/modules completed						
Reasons for not completing all units/modules , if any						
Projected % results at the university*						
VTU results percentage						
Subject: theory/analytical						
Avg IA & max IA marks scored by students						
Avg & max marks scored by students in university exam						
Justification for variations in projected & obtained results for the subject (Use Separate sheet if necessary)						
<ul style="list-style-type: none"> <li>As projected in the course plan</li> </ul>						

**Assessment of the Faculty on the following Indicators :**
**A. Academic (Weight 50%)**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

[If the % results obtained in the university exam is - 96 - 100%; 91-95%; 86-90%; 81-85; 76-80%; 71-75%; 66-70%; 61-65%; 56-60%; 51-55%; & <50% then points score are, A=10; 9; 8; 7; 6; 5, 4, 3, 2, 1 & 0 respectively]

Add 15% weightage to the %results for analytical subjects

Add 10% weightage to the %results if % Avg-IA & % avg-university marks scored in the subject is within 10% of each other

Add 10% to the %results if any outbound/reinforcement teaching has been done in the subject to maximum of 100% for each subject And, further if handling two different subjects; then allot score for each - obtain Score on A and average to obtain final score under this criterion

**B. Research and Consultancy (Weight 15%)**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

**Patents Obtained** : 10 points & **submission for patents** : 4 points

**Journals: National**: 2 points for one paper, 4 points for two papers, 5points for 3 papers and above for the current year only.

**Journals : International** : 5 points for one paper, 10 points for two papers in reputed journals for the current year only

**Conferences** : 2 points for one paper, 4 points for two papers, 5points for 3 papers and above for the current year only

**Consultancy**: 10 points if revenue generated beyond Rs.50000, 5 points if revenue generated below Rs.50000. for the current year only

**Funds generated**: 10 points if revenue generated beyond Rs.100000, 5 points if revenue generated below Rs.100000. for the current year only

**Project proposal submitted**: 2 points for each project submitted - subject to a maximum four points for the current year only

**Total points scored on B limited to a maximum of 10**

**C. Faculty Development Programmers Conducted/ Attended (Weight 10%)**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

**FDP conducted** : 5 points

**FDP attended** : 3 points for one FDP and 5 points for two or more FDPs

**D. Seminars/ Conferences/Attended (Weight 5%)**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

**Seminars/workshops/ symposiums conducted**: 5 points

**Seminars/workshops/ symposiums attended**: 2 points for one event, 4 points for two events and 5 points for three or more events

**E. SDP - Seminars/ Conferences/ Workshops Conducted (Weight 5%) in & outside campus**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

**Seminars/workshops/ symposiums conducted**: 5 points

: 2 points for one event, 4 points for two events and 5 points for three or more events;

add two points if the event is held outside of our institute

**F. Student Co-curricular/ activity (Weight 10%)**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

Final year BE/MBA-project Guided at college level 2 points per project subject to a max of 4 points for projects guided;

Ph.D dissertation 4points/award of Ph.D to RS

Students club activity – 2; Students technical paper guidance/mini projects – 1/paper/mini project, subject to a max of 3 points

**Total points scored on F limited to a maximum of 10**

**G. Student Extra-curricular activity (Weight 5%)**

10	9	8	7	6	5	4	3	2	1
----	---	---	---	---	---	---	---	---	---

To allocate points as per contribution by the staff member for the current year only

**Total self-assessment obtained by the staff member=**

**[A x 0.05 + score of Bx0.015 + score of (C+F) x0.01 + score of (D+E+G) 0.005] X 100%**

Note: 1. Total calculated score should be  $\leq 100\%$ . ; 2. Submission of wrong information is liable to be rejection of the self-appraisal report. ; 3. Staff / faculty can use additional page if necessary for specific Remarks or comments.

I ..... **declare that, the information enclosed/ provided is correct. For any wrong information, I will be held responsible. The above information is for the period 1<sup>ST</sup> Sept 2019 to 31<sup>st</sup> Aug 2020.**

**Dated :** \_\_\_\_\_ **Signature of the faculty with date**

**Remarks by the HOD (use separate sheet if required) :**

1. Self Assessment : (50% weight age)
2. Student Feed Back (20% weight age)
3. Contributions to institute development in other areas (10% weight age)
4. HOD's academic assessment (10% weight age)
5. HOD's administrator assessment (10% weight age)

**Principal**

**Management**

Evaluation of each and every staff members appraisal report is based the following criteria.

1. Qualifications
2. Experience
3. Students feedback
4. VTU exam results
5. Number of research papers published(National/International/Journals)
6. Number of patents filed/obtained
7. Number of projects work/dissertation and Ph.D. guided
8. Number of BE projects guided
9. Number of research projects applied/funded
10. FDPs conducted/attended
11. Details of the International/ National Conferences/ Seminars/ Workshops Conducted/ Attended
12. Pedagogy methods adopted/followed Details
13. Administrative responsibilities
14. Responsibilities on students co-curricular/extra co curricular activities
15. University duties/responsibilities

## Sample Faculty Appraisal Form

**PES Institute of Technology and Management**

Issue/ Rev. No: 3.0/HO      Date: 15/12/2016      Page: 1 of 6      Form No: E/PP-12/HO-C

**Performance Appraisal Form 2018-2019 (01-09-2018 to 31-08-2019)**

Name of the Faculty : Prasanna Kumar H R      Department: ISE      EMP Code:664  
 Designation: Professor and HOD      Date of Birth:06/07/1974      Date of Joining: 20/3/2014  
 Mobile No: 8884093472      PAN No: AHUPR0198K      Aadhar No: 595584169893

1. Qualification (Starting from the latest to the earliest)

Degree	Specialization	University	Year	Class obtained	Remarks
Ph.D	Cryptography and Network Security	VTU	2018	---	
M.Tech	Systems Analysis and Computer Applications	NITK, Surathkal Deemed University	2004	First class with Distinction	
BE	Computer Science and Engineering	Kuvempu	1997	First Class	

2. Experience (Starting from the latest to the earliest)

Designation	From DD/MM/YY	To DD/MM/YY	Till date	Total Years	Institution	Experience Certificate Y/N	Remarks
Professor and HOD	1/1/2019	31/12/2018	31/12/2018	8 months	PESITM, Shimoga	Yes	
Associate Professor and HOD	20/3/2014	4/2/2013	18/3/2014	4 years 9 months 1 year 1 month	PESITM, Shimoga	Yes	
Assistant Professor and HOD	14/12/2006	1/9/2005	3/2/2013	5 years 3 months 1 year 3 months	NMAMIT, Nitte	Yes	
Assistant professor	1/9/2005	9/12/2006	9/12/2006	1 year 3 months	NMAMIT, Nitte	Yes	
					AIT, Chikmagalur	Yes	

Fig 5.1: Sample Appraisal Form

## 2. Student Feedback

Student feedback is collected and assessed once in a semester. Student feedback is collected after the 1<sup>st</sup> CIE every semester. Student feedback format and Feedback of three academic years has been mentioned below.

**SEMESTER and SECTION**

Sl. No.	FACULTY NAME	SUBJECT NAME	Has the teacher covered entire syllabus as prescribed by the university/college/board?	Has the teacher covered relevant topics beyond syllabus?	Effectiveness of teaching in terms of technical content/ Course content?	Effectiveness of teaching in terms of Communication Skills?	Effectiveness of teaching in terms of use of technical aids?	Pace on which contents were covered?	Motivation and inspiration for students to learn?	Support for the development of student skills Practical demonstration/ Hands on Training?	(E) s
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
<b>Overall Performance</b>											

**3. Appraisal by Head of the Department**

Self-appraisal format consists of remarks by HOD for self appraisal of the faculty. The evaluation of HOD will be forwarded to the management through Princ

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

Institute Marks :

**6 FACILITIES AND TECHNICAL SUPPORT (80)**

Total Marks 62.00

**6.1 Adequate and well equipped laboratories, and technical manpower (30)**

Total Marks 22.00

Institute Marks : 22.00

Sr. No	Name of the Laboratory	Number of students per set up(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	Lab1: Computer Network /Machine Learning/Project Lab	27	Total: 29 1: 320 GB HDD, 2GB RAM, Pentium4 Processor. 5: 160 GB HDD, 2GB RAM, Dual Core Processor. 4: 500GB, 320GB, 250GB, 160GB HDD, 2GB RAM, Core i3 Processor. 19: 1TB HDD,4GB RAM, Core i5 Processor. Network Switch	Odd Semester Computer Networks lab: 3hrs x 2 batches=6hrs Machine Learning lab: 3hrs x 2 batches=6hrs Odd semester weekly utilization : 12hrs Even Semester Project Laboratory Even semester weekly utilization : 3hrs x 4 batches=12hrs			
					Mr. .Sharanaiah Hiremath	Lab Instructor	Diploma
2	Lab2: DBMS/File Structure/Algorithms/Web Lab	27	Total 29: 160 GB,320 GB HDD, 1GB, 2GB RAM, Dual core Processor. Network Switch	Odd Semester Data Base Management System: 3hrs x 2 batches=6hrs Web Programming: 3hrs x 2 batches=6hrs Odd semester weekly utilization : 12hrs Even Semester Design and Analysis of Algorithms: 3hrs x 2 batches=6hrs File Structures: 3hrs x 2 batches=6hrs Even semester weekly utilization : 12hrs			
					Mr. .Sharanaiah Hiremath	Lab Instructor	Diploma
3	Lab3: Analog And Digital Electronics Laboratory	27	Digital IC Trainer kit, DC multi output power supply, Function Generator, CRO	Odd Semester Analog and digital Electronics: 3hrs x 2 batches=6hrs Odd semester weekly utilization : 6hrs			
					Mrs. Manjula H	Lab Instructor	B.Tech

4	Lab4: Data Structures/Microprocessor And Microcontroller/Software Testing Lab	27	Total: 27 26 : 160GB, 320 GB HDD,1GB, 2GB RAM, Dual Core Processor. 1 : 80GB HDD, 1GB RAM, Pentium4 Processor. Network Switch	Odd Semester Data structures Laboratory: 3hrs x 2 batches=6hrs Odd semester weekly utilization : 6hrs Even Semester Microprocessors and Microcontrollers: 3hrs x 2 batches=6hrs Software Testing: 3hrs x 2 batches=6hrs Even semester weekly utilization : 12hrs	Mrs. Manjula H	Lab Instructor	B.Tech

### 6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Total Marks 20.00

Institute Marks : 20.00

Sr. 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	SRICHID Innovation Laboratory	MOU between the Dept of ISE, PESITM and Srichid technologies. Equipped with desktop systems, internet connection, chairs, desks, board.	Students and faculty members can do research projects in lab in collaboration with Srichid technology private Ltd and also the company offers internship to the students in recent areas of technology and research.	Throughout the semester	To expose students to industry standard, Creating room for innovative ideas.	PO1, PO4, PO5, PO6, PO8,PO9, PO10, PO11, PSO1, PSO2, PSO3
2	Embedded Systems Programming	Equipped with systems, Arduino Uno board with software.	Students are encouraged to do the Embedded system projects using Arduino Uno board.	Throughout the semester	Get expertise in Arduino IDE Programming, Embedded C Programming, Circuit building	PO1, PO3 PO6, PO7, PO11 PSO2, PSO3



3	Assembly Language and ARM Programming	Equipped with systems, TASM, Keil-C and Flash Magic software	Students are encouraged to do the microprocessor and ARM based projects.	Throughout the semester	Get expertise in Assembly and C languages.	PO1, PO3 PO6, PO7, PO11 PSO2, PSO3
4	Spoken Tutorial Tool	Equipped with systems and Head phones	To learn FOSS (Free and Open Source Software) using excellent audio-video methodology.	Throughout the semester	Programming/IT skills which is hard to learn via reading /listening can easily be mastered through spoken tutorial tool.	PO1,PO2, PO3, PO10 PO11 PSO1 PSO2, PSO3
5	Virtual Lab	Remote-access to labs in various disciplines of science and engineering.	To enthuse students to conduct experiments by arousing their curiosity.	Throughout the semester	To provide a complete learning management and can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstration and self evaluation.	PO1, PO2, PO3, PO4, PO5, PO8,PO9, PO10, PO11, PSO1, PSO2, PSO3

### 6.3 Laboratories: Maintenance and overall ambiance (10)

Total Marks 8.00

Institute Marks : 8.00

ISE Department has an adequate number of laboratories, used throughout the year on time table basis to meet the curriculum requirements. The academic courses which have practical work are scheduled in these laboratories every week. Lab is also utilized to facilitate students to carry out their project work. All the laboratories are equipped with sufficient hardware and software to run program specific curriculum.

## Maintenance of Laboratories

- Doors, window panes and floor of laboratories are regularly cleaned to provide dust free environment.
- Fans are provided for keeping the environment in the labs cool.
- Do's and Don'ts, time-table of the lab, and Safety measures rules are displayed in each laboratory.
- Well Technical Staff are available for maintenance of Electronic equipment and software.
- Department having 60 KVA UPS.
- As per requirement minor repairs are carried out by the lab instructor.

- One Teaching faculty and a Lab instructor are in-charge of the overall functioning/maintenance of each lab.

## Ambiance

- Department has Full furnished laboratories with well-equipped components.
- Conditions of chairs/benches are good. Chair with desk are provided for individual students in Labs.
- Lighting system is very effective, along with the natural light in every corner of the rooms.
- Cup-boards/Pigeon-hole racks are available in lab for students to place their belongings.
- Lab is equipped with separate instruction room with white/black board.
- Curtains are fitted for all the windows for better ambiance.



Data structures Laboratory



Analog and Digital Electronics Laboratory



Instruction room



Pigeon-hole racks

**Fig 6.1: Photos of Laboratories**

## 6.4 Project laboratories (5)

Total Marks 4.00

Institute Marks : 4.00

- In the department, Lab 1 is utilized for Mini/Major project works to be carried out by the pre-final year and final year students.
- The various project domains are
  - Internet of Things (IOT)
  - Image processing
  - Machine Learning
  - Social Media
  - Web Technology
  - Data mining and Big data
  - Network security
  - Cloud Infrastructure
  - Embedded Systems
- Lab will be available for usage from 9am to 5pm.
- Project laboratory is facilitated with operating systems and few open source software which is helpful for undergraduate students.

**Table 6.1:Softwares provided in Project lab**

Software	Type
Operating Systems	Ubuntu 16.04 LTS 64bit
Development Tools	Open source Software(Anaconda 3-5.1.0, Netbeans-8.2, JDK1.8.0_181, ns-allinone-2.35, Vim version 7.4, gedit - Version 3.18.3, Libre Office 5.1.6.2 ,gcc 5.4.0 20160609, Apache-tomcat-8.0.27, Oracle-xe-11.2.0, Python 3.8)

- **Karnataka State Council for Science and Technology** (KSCST) is an autonomous S&T organization under Department of Science & Technology, Government of Karnataka. KSCST has been pro-actively engaging itself to identify, propose and implement S&T based solutions to locale specific needs / problems in the broad areas of Water, Education, Energy, Ecology and Environment, Waste management and Infrastructure. Project innovation and ideas are evaluated and the “Best Projects” are identified and awarded. Students of ISE have won Prizes in the KSCST student Project Programme(SPP) .
- Students of ISE are encouraged to publish their project work in National/International conferences.
- Project titled “**Agribook**” carried out by Ms.Shwetha N H, Ms. Shreeya P Jain, Mr.Sandesh Muttu B P, Mr.Dhreeraj T S received Project of the Year award by KSCST 2016-17, under the guidance of Mr. Arjun U.



Fig 6.2: Best Project awarded in KSCST project exhibition

- **Funded project details**

Table 6.2: Funded student projects

Sl. No	Title of the Project	Year	Funded Agency	Funded Amount
1	Agri book	2016-17	KSCST	3000
2	Digital Cottage Udyama	2017-18	KSCST	3000
3	Smart Watering System Using IoT	2017-18	KSCST	3000

- Project titled "Intelligent Personal Assistant for Smart Home" carried out by Alok Kumar A N, Sachin J, K R Ramesh are Participated and Exhibited the Project During "State Level Project Exhibition Cum Competition " held at VTU, Belgaum on 28/06/2018.



**Fig 6.3: Participation certificate in project exhibition**

- Project titled "IOT Based Smart Toilets " carried out by Sanjay B S , Halaswamy H S , Pranamy P Hande , Aman S V are Participated and exhibited the Project during "Project Exhibition Cum Competition 2018-2019" held at PESITM and awarded as a best project.

**Figure 6.4: News Paper coverage about student project**



# Shivamogga



**INVENTION:** Students of Mechanical Engineering Department of PES Institute of Technology & Management (PESITM) with their vehicle monitor system model during the State-level exhibition of models organised by PESITM in Shivamogga on Saturday (Right) Students of Information Science & Engineering Department with their model smart washroom. Guide Dr Pramod is also seen. **DH News Service**

## Car won't start if you are drunk

### Solar energy-operated vehicle model also brought out

**Nrupathunga S K**

**SHIVAMOGGA:** The involvement of drunken drivers in road accidents is increasing day-by-day in the country. Many innocent people are losing their lives.

In order to put an end to this, the students of Mechanical Engineering Department of PES Institute of Technology & Management (PESITM) have designed a model wherein the engine of the vehicle won't start if one holds the steering wheel in an inebriated state.

An alcoholic sensor has been installed on the steering wheel which checks whether you have consumed alcohol or not.

Students are of the view that such a system must be introduced in the country to reduce drunk and drive cases. They have named the model 'vehicle monitoring system'.

They also pointed out that

the use of accelerometer sensor helps to share the location of the vehicle when it meets with an accident, with the mobile number which is inserted in it.

Besides, it also shares information on leakage of gas from the vehicle which may cause accidents. In this way, the family members can know the place, and the condition of the vehicle if the vehicle meets with an accident.

The presence of IR (infrared) sensor detects obstacles on the road and ring an alarm alerting the driver about it. All these sensors would help to reduce accidents.

Students Naveen Kumar S, Nikhil M Shivamurthy BS, and Siddanth P Jain prepared the model under the guidance of Assistant Professor Koushik P K.

**Solar energy-operated vehicle**

On one hand, people's voice to

minimise utilisation of non-renewable sources is getting louder as they diminish with their constant use, and on the other hand prices of fuel are increasing day-by-day.

Thereby, the common people are at the receiving end. In order to find a solution to this, students of Mechanical Engineering Department of PESITM have designed a model of a vehicle which runs on electricity generated through a solar panel.

Explaining their model, Nitish S H told *DH* that the vehicle runs on the principle of conversion of solar energy into electricity which transforms electrical energy into mechanical energy.

When solar radiation falls on the solar panel, it generates electricity which is stored in the battery.

The stored energy is utilised to run the vehicle. The quantum of power generation depends on the intensity of Sun

rays that strike the solar panels. He said, each wheel has a separate motor drive which is connected to the battery, which in turn is charged by the solar panel.

Robotics technology has been adopted here to prepare the model. The movement can be controlled by an app installed on a smartphone.

Abhishek A, B Akhilesh, and Doddana Gowda have prepared the model under the guidance of Dr Tarasath.

**IOT-based smart washrooms**

Though clean India scheme has been implemented in the country, there is no system that monitors whether public toilets, washrooms in public places in general, and in trains, in particular, are cleaned or not.

The students of Information Science & Engineering Department have designed a model that examines whether toilets are cleaned or not

through image processing concepts using different sensors like smell sensor, IR sensor, sonic sensor, and Radio Frequency Identification radar.

Under the proposed system, it can dodge many syndromes. It checks whether the sweeper has cleaned the toilets or no. It could create awareness among people about toilet management.

Students Sanjay B S, Aman S V, Halaswamy H S, and Pranamya G Hande designed the prototype of the model under the guidance of Dr Pramod.

Models such as animal health monitoring system, and smart shopping system prepared by students were also on display in the State-level exhibition of models organised by PESITM, in association with IEEE Mangalore Chapter. More than 50 teams from various engineering colleges participated in the event.

**DH News Service**

## 6.5 Safety measures in laboratories (10)

Total Marks 8.00

Institute Marks : 8.00

Sr. No	Laboratory Name	Safety Measures
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1	Lab-1	<ul style="list-style-type: none"> <li>● Specific Safety Rules like Do's and Don'ts are displayed and instructed for all the students.</li> <li>● Fire extinguishers are kept in the laboratory.</li> <li>● Labs are provided with First-aid kits.</li> <li>● All the labs are provided with CCTV cameras for the easy surveillance.</li> <li>● Well trained technical supporting staff monitor the labs at all times.</li> <li>● Damaged equipment's are identified and serviced at the earliest.</li> <li>● A clean and organized laboratory is maintained.</li> <li>● The use of cell phones is prohibited.</li> <li>● Wearing of footwear is not allowed for preventing dust inside the labs. This is for computer safety.</li> </ul>
2	Lab-2	<ul style="list-style-type: none"> <li>● Specific Safety Rules like Do's and Don'ts are displayed and instructed for all the students.</li> <li>● Fire extinguishers are kept in the laboratory.</li> <li>● Labs are provided with First-aid kits.</li> <li>● All the labs are provided with CCTV cameras for the easy surveillance.</li> <li>● Well trained technical supporting staff monitor the labs at all times.</li> <li>● Damaged equipment's are identified and serviced at the earliest.</li> <li>● A clean and organized laboratory is maintained.</li> <li>● The use of cell phones is prohibited.</li> <li>● Wearing of footwear is not allowed for preventing dust inside the labs. This is for computer safety.</li> </ul>
3	Lab-3	<ul style="list-style-type: none"> <li>● Specific Safety Rules like Do's and Don'ts are displayed and instructed for all the students.</li> <li>● Fire extinguishers are kept in the laboratory.</li> <li>● Labs are provided with First-aid kits.</li> <li>● All the labs are provided with CCTV cameras for the easy surveillance.</li> <li>● Well trained technical supporting staff monitor the labs at all times.</li> <li>● Damaged equipment's are identified and serviced at the earliest.</li> <li>● A clean and organized laboratory is maintained.</li> <li>● The use of cell phones is prohibited.</li> <li>● Wearing of footwear is not allowed for preventing dust inside the labs. This is for computer safety.</li> </ul>

4	Lab-4	<ul style="list-style-type: none"> <li>• Specific Safety Rules like Do's and Don'ts are displayed and instructed for all the students.</li> <li>• Fire extinguishers are kept in the laboratory.</li> <li>• Labs are provided with First-aid kits.</li> <li>• All the labs are provided with CCTV cameras for the easy surveillance.</li> <li>• Well trained technical supporting staff monitor the labs at all times.</li> <li>• Damaged equipment's are identified and serviced at the earliest.</li> <li>• A clean and organized laboratory is maintained.</li> <li>• The use of cell phones is prohibited.</li> <li>• Wearing of footwear is not allowed for preventing dust inside the labs. This is for computer safety.</li> </ul>
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## 7 CONTINUOUS IMPROVEMENT (50)

Total Marks 35.00

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

Total Marks 14.00

Institute Marks : 14.00

### POs Attainment Levels and Actions for Improvement- (2018-19)

POs	Target Level	Attainment Level	Observations
<b>PO 1 : Engineering Knowledge</b>			
PO 1	2.11	1.83	Target is 80% Target achieved It is observed that students have lack of engineering knowledge by not concentrating on fundamentals
Action 1: teaching fundamental concepts for each course in classroom is planned by course instructor			
<b>PO 2 : Problem Analysis</b>			
PO 2	2.14	1.82	Target is 80% Target achieved It is observed that some theory subjects like Management and entrepreneurship do not have analysis type of problems
Action 1: Students are given real world case studies to analyze the problems.			



**PO 3 : Design/development of Solutions**

PO 3	2.27	1.78	Target is 80% Target not achieved Design and implementation level should be improved in students.
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Action 1: Conduct undergraduate project contest and technical fest, wherein students design the project development cycle. Action 2: Students are given some algorithms to implement by using programming languages.

**PO 4 : Conduct Investigations of Complex Problems**

PO 4	1.82	1.58	Target is 80% Target achieved Students should solve exercise problems from the text books.
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Action 1: Encouraged students to take up complex problems and solve.

**PO 5 : Modern Tool Usage**

PO 5	1.98	1.70	Target is 80% Target achieved Students won't get exposure on modern tools in their curriculum.
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Action 1: Student Development Program/Workshop on modern engineering tools is to be organized.

**PO 6 : The Engineer and Society**

PO 6	1.85	1.73	Target is 80% Target achieved It is observed that, students should become the member of various professional societies to contribute their knowledge and work to the society
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Action 1: Students are encouraged to become member of the professional societies. Action 2: Students are encouraged to take the projects for solving societal requirements.

**PO 7 : Environment and Sustainability**

PO 7	1.56	1.19	Target is 80% Target not achieved Students as an engineer, should be aware of their contribution to the environment and its sustainability
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Action 1: Industrial visit are planned to create awareness among the students about E-waste management in industries

**PO 8 : Ethics**

PO 8	2.27	1.88	Target is 80% Target achieved It is observed that students should have Enhanced knowledge on their ethical responsibilities
Action 1: Talk on ethical hacking is planned to create awareness among the students to make them realize what is ethical and unethical in the field of IT.			
<b>PO 9 : Individual and Team Work</b>			
PO 9	1.78	1.66	Target is 80% Target achieved Students are capable of working in a team as well as excel as an individual.
Action 1: Students are motivated to take up mini projects. Action 2: Students are encouraged to be a part of teams in extra co-curricular activities			
<b>PO 10 : Communication</b>			
PO 10	2.06	1.84	Target is 80% Target achieved Students should be able to enhance their communicating and report writing skills in order to reach the external world effectively
Action 1: Students are encouraged to write and present their technical papers in conferences. Action 2: Students are encourage to participate in the project exhibitions			
<b>PO 11 : Project Management and Finance</b>			
PO 11	1.85	1.66	Target is 80% Target achieved It is observed that students study project management only in Software Engineering subject which do not give exposure to the practical aspects of financing and management.
Action 1: Students are encouraged to write project proposals to different student project funding agencies.			
<b>PO 12 : Life-long Learning</b>			
PO 12	1.81	1.58	Target is 80% Target achieved Students should be able to update on the changing technologies in the field of IT.
Action 1: Workshops and talks on current trends in IT are planned.			

## PSOs Attainment Levels and Actions for Improvement- (2018-19)

PSOs	Target Level	Attainment Level	Observations
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### PSO 1 : Analyze the logics, Algorithms and information systems to enable the students to design and implement the software

PSO 1	2.42	1.92	Target is 80% Target not achieved It is observed that students lack in application of design and development tools to implement the software
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Action 1: Learning Material Provided and talk on Applications of various design tools Action 2: Design tool STARUML is used by students and demonstrated various case studies

### PSO 2 : Evaluate working of Hardware and Software aspects of computer using appropriate tools.

PSO 2	2.38	1.92	Target is 80% Target achieved Students are required to have more exposure about working of hardware devices
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Action 1: Students are motivated to develop some mini projects related to IoT and electronic devices. Action 2: Students are exposed to the usage of Open source tool SELENIUM in software testing laboratory.

### PSO 3 : Apply the standard practices in software development to deliver quality products

PSO 3	2.58	2.10	Target is 80% Target achieved Students should concentrate on developing a complete product as a part of their academic projects or hobby projects
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Action 1: Students will be given awareness of modern tools, standard industry practices through industrial visits Action 2: In the department students are given some practical problems for design of a product.

## 7.2 Academic Audit and actions taken thereof during the period of Assessment (10)

Total Marks 7.00

Institute Marks : 7.00


Academic audits are conducted to monitor and evaluate the teaching learning process. It consists of internal audit for every six month and external audits for every year. Audits are conducted for teaching and learning process.

## Academic Audit

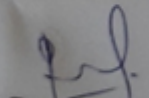
Course files are prepared by faculty members in the semester beginning. The academic committee consisting of HOD, course coordinator and few of departmental senior faculty members performs audit of course files i.e. verify the contents of the course file, lesson plan, assignments, extra material lecture notes, etc. The comments of the committee are given as feedback to the faculty member to include the recommended material. This audit ensures the quality deliverables to the students.

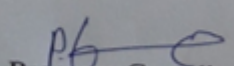
The following documents of the faculty members are verified during the internal academic audits.

- Calendar of events
- Time table and Individual time table
- Syllabus
- Class student list
- Lab batch list, lab records
- Lesson plan
- Attendance register
- Remedial class records
- Model question papers / previous university question papers
- Assignment questions
- IA question papers and Scheme
- Result analysis
- Additional resources to students (notes, PPT, etc.)
- CO-PO, CO-PSO mapping
- Co-curricular Activities: Seminar/Conference/workshop/Guest Lecture conducted and attended.

		<b>Prerana Educational and Social Trust®</b> <b>PES Institute of Technology and Management</b> NH-206, Sagar Road, Shivamogga-577204
<b>Department of Information Science and Engineering</b>		
<b><u>Course File Check List</u></b>		
1)	Calendar of Event: University	<input checked="" type="checkbox"/>
2)	Calendar of Event: College	<input checked="" type="checkbox"/>
3)	Calendar of Event: Department	<input checked="" type="checkbox"/>
4)	Syllabus Copy	<input checked="" type="checkbox"/>
5)	Class Time Table	<input checked="" type="checkbox"/>
6)	Individual Time Table	<input checked="" type="checkbox"/>
7)	Students List	<input checked="" type="checkbox"/>
8)	CO & PO Mapping	<input checked="" type="checkbox"/>
9)	Lesson Schedule	<input checked="" type="checkbox"/>

10)	IA Question Papers and Scheme	<input checked="" type="checkbox"/>
11)	IA Marks for each test	<input checked="" type="checkbox"/>
12)	Assignment Questions / Quiz /Mini Project/Class Presentation	<input checked="" type="checkbox"/>
13)	Continuous Evaluation Marks	<input checked="" type="checkbox"/>
14)	Final IA Marks	<input checked="" type="checkbox"/>
15)	Previous Year University Question Papers	<input checked="" type="checkbox"/>
16)	Final IA Marks Submitted to University	<input checked="" type="checkbox"/>
17)	CO-PO & CO-PSO Attainment	<input checked="" type="checkbox"/>
18)	Notes/Course Material	<input checked="" type="checkbox"/>
19)	Sample Assignment Copy/ Quiz Answers	<input checked="" type="checkbox"/>
20)	Attendance Register	<input checked="" type="checkbox"/>

  
 Course Instructor

  
 Program Coordinator

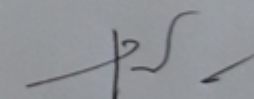
  
 Signature of the HOD

Figure 7.1: Course File Checklist

## Academic Audit Details

Internal Audit: Auditors for the academic year 2019-20, 2018-19 & 2017-18

Table 7.1: Internal Auditors

YEAR	AUDITORS
2019-20	Dr. A. Guruva Reddy, Professor, Dept. of ECE, PESITM
	Dr. Manu A P, Professor, Dept. of CSE, PESITM
2018-19	Mrs. Yajnodbhavi H. M, Assistant Professor, Department of CV, PESITM
	Dr. Sudarshan G M, Professor and Head, MBA, PESITM
2017-18	Mr. Gowtham J K, Associate Professor and Head, Department of ME, PESITM

External Audit: Auditors for the academic year 2019-20

Table 7.2: External Audit

YEAR	AUDITORS
2019-20	Dr. G T Raju, Vice Principal, Professor and Head of CSE, RNSIT, Bengaluru
	Dr. Joseph Gonsalvis, Professor, Department of ME, RNSIT, Bengaluru

Prerana Educational and Social Trust®  
**PES Institute of Technology and Management**  
 NH-206, Sagar Road, Shivamogga-577204  
**Department of Information Science and Engineering**  
 Date: 03.02.2020

**External Audit Presentation Attendance sheet**

External Auditor:

Sl No.	Name	Signature
1	Dr. G.T. Raju	[Signature]
2	Dr. Joseph Gonsalvis	[Signature]

Department Faculties:

Teaching:

Sl No.	Name	Signature
1	Dr. Prasanna Kumar H.R.	[Signature]
2	Dr. Pramod	[Signature]
3	Mr. Venkatesh P	[Signature]
4	Mr. Arjun U	[Signature]
5	Mr. Amith Kumar K.	[Signature]
6	Mr. Vinay S.K.	[Signature]
7	Mr. Madhusa M.	[Signature]
8	Mrs. Gowthami A.T.	[Signature]

Non-Teaching:

Sl No.	Name	Signature
1	Mr. Sharanasiah Hiremath	[Signature]
2	Mrs. Manjula	[Signature]
3	Mrs. Vinutha C	[Signature]

Figure 7.2: External Audit

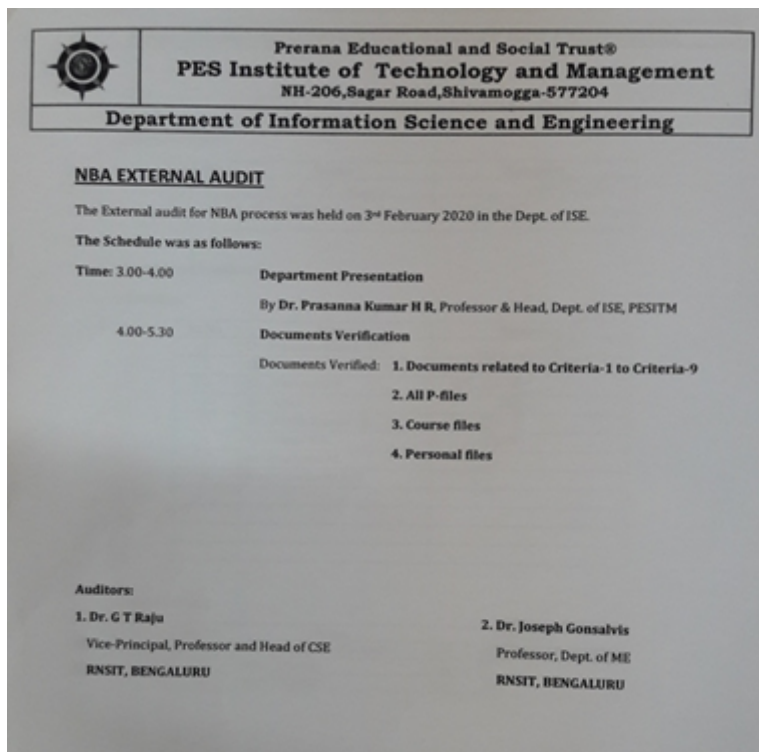


Figure 7.3: External Audit

## Action taken by the faculty members:

- Faculty members incorporate changes suggested by the academic committee, if any gaps are found, to ensure quality deliverables.
- Faculty members have to match the pace of their deliverables as per the students' requirements as well as they have to schedule the lecture plans in such a way that the syllabus is completed on time. To achieve this they can arrange extra lectures and cope-up the syllabus.
- Regular analysis of the results of internal assessment examination of all subjects is done and concerned faculties are guided to take necessary actions. Remedial classes are scheduled in reference to academic progress of the student.
- Faculty members attend FDP as required for the overall development of teaching skills in terms of communication, methods and technical.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

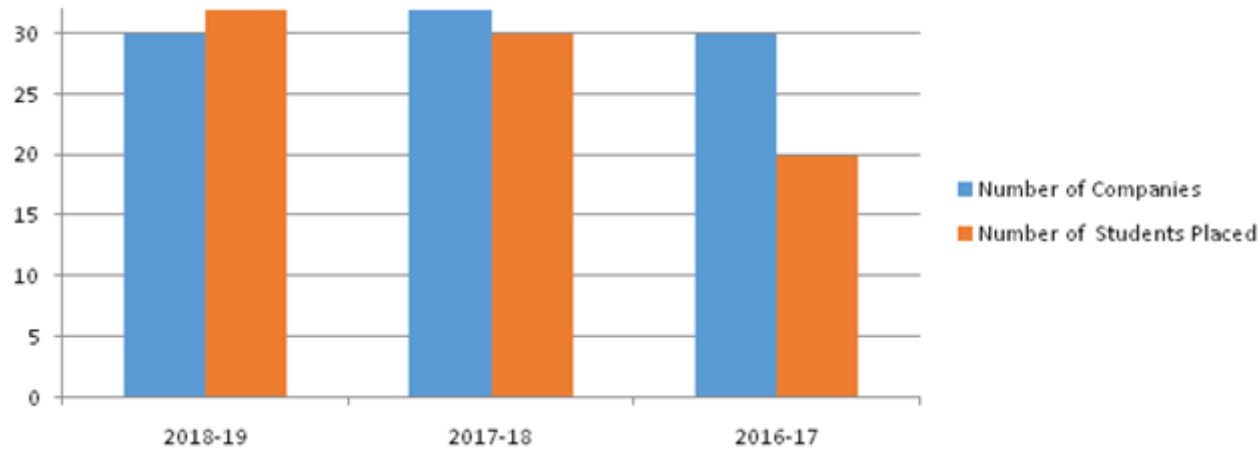
Total Marks 6.00

Institute Marks : 6.00

**Placement Details for Last 3 Years are given below:**

**Table 7.3:** Student Placements Details for past 3 years

Academic year (Passed out batch)	Number of Companies	Number of Students Placed
2018-19	30	32
2017-18	32	30
2016-17	30	20



**Figure 7.4:** Student Placements Details for past 3 years

**Table 7.4:** Max. Package and Average Package of companies visited for past 3 years

Year	Maximum Package(LPA)	Average Package(LPA)
2018-19	5	3
2017-18	5	3
2016-17	4	3

## Details of Higher Studies are given below:

**Table 7.5 :** Higher studies data for past 3 years

Year	Number of Students Opted for Higher studies
2018-19	2
2017-18	1
2016-17	0

## Details of students turned Entrepreneurs are given below:



**Table 7.6:** Entrepreneurs data for past 3 years

Year	Number of Students turned Entrepreneurs
2018-19	0
2017-18	1
2016-17	0

**7.4 Improvement in the quality of students admitted to the program (10)**

Total Marks 8.00

Institute Marks : 8.00

Item		2019-20	2018-19	2017-18
National Level Entrance Examination  COMED-K	No of students admitted	0	0	0
	Opening Score/Rank	0	0	00
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others  CET	No of students admitted	23	29	31
	Opening Score/Rank	19003	30537	32876
	Closing Score/Rank	202104	200987	118713
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	0	1	0
	Opening Score/Rank	0	14492	0
	Closing Score/Rank	0	14492	0
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		72	72	74

**8 FIRST YEAR ACADEMICS (50)**

Total Marks 37.28

**8.1 First Year Student-Faculty Ratio (FYSFR) (5)**

Please provide First year faculty information considering load for the particular program

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nat Ass (Re Cor
							CAY	CAYm1	CAYm2		
Dr. Aveesh S.	ALUPT7731J	M.Sc. and PhD	14/03/2010	Differential Geometry	Associate Professor	18/07/2016	12	12	12	Yes	Req
Dr. Chandru K	AZGPC8846B	M.Sc. and PhD	15/02/2019	Differential Geometry	Assistant Professor	29/01/2018	12	12	12	Yes	Req
Mr. Umeshaiyah	ABLPU8326K	M.Sc	23/02/2008	Mathematics	Assistant Professor	04/09/2008	12	12	12	Yes	Req
Mrs. Veda L K	AIQPV0071N	M.Sc	17/03/2004	Mathematics	Assistant Professor	16/02/2009	12	12	12	Yes	Req
Mrs. Swathi V	FZEPS8237P	M.Sc	24/03/2016	Mathematics	Assistant Professor	16/07/2015	12	12	12	Yes	Req
Mr. Shreyas M.	FPPPS6592G	M.Sc	07/08/2019	Mathematics	Assistant Professor	29/07/2019	12	0	0	Yes	Req
Dr. Shivakumar	AECPK7375N	M.Sc. and PhD	02/05/2000	Chemistry	Professor	01/08/2007	12	12	12	Yes	Req
Dr. Praveen ku	BHQPP3039N	M.Sc. and PhD	13/08/2013	Chemistry	Assistant Professor	27/01/2014	12	12	12	Yes	Req
Ms. Roopa C. I	DDRPR9742F	M.Sc	02/12/2017	Industrial chemistry	Assistant Professor	07/08/2017	12	12	12	Yes	Req
Dr. Pramod G	AXZPP7633A	M.Sc. and PhD	09/01/2017	Aerosol Physics	Associate Professor	01/02/2010	12	12	12	Yes	Req
Ms. Ramya K	DVRPK0646F	M.Sc	19/03/2014	Solid State Physics	Assistant Professor	19/08/2013	12	12	12	Yes	Req

Mrs. Rashmi H	CFFPR5329D	M.Sc	19/03/2011	Solid state physics	Assistant Professor	31/07/2017	12	12	12	Yes	Req
Mrs. Deeksha I	BILPK2238J	MA	12/03/2013	English Literature	Assistant Professor	16/07/2018	12	0	0	Yes	Req
Dr. Archana M	BDMPA5992B	M.Sc. and PhD	15/02/2019	Fluid Mechanics	Assistant Professor	25/07/2018	0	12	0	No	Req
Mrs. Vasavi G.	AZCPV9665P	M.Sc	24/03/2016	Mathematics	Assistant Professor	16/07/2015	0	0	12	No	Req
Abhipsa A Y	AKHPY7506L	M.Sc	24/03/2016	Chemistry	Assistant Professor	29/01/2018	0	0	12	No	Req
Shruthi G S	GXGPS1448D	M.Sc	18/06/2015	Chemistry	Assistant Professor	18/07/2016	0	0	12	No	Req
Narendra Babu	AWCPN1195P	M.Sc	12/03/2018	Solid state physics	Assistant Professor	22/08/2017	0	0	12	No	Req
Mr. Chethan B	AOTPC5115P	M.E/M.Tech	03/05/2014	VLSI Embedded System	Assistant Professor	21/07/2014	12	12	12	Yes	Req
Mrs. Shymala S	AMJPC3468P	M.E/M.Tech	04/05/2014	VLSI Embedded System	Assistant Professor	08/08/2013	12	12	12	Yes	Req
Mrs. Yajnodhara	ALQPY8597B	M.E/M.Tech	19/10/2013	Transportation Engineering	Assistant Professor	06/09/2010	12	12	12	Yes	Req
Mrs. Pooja Y. E	CPGPP0160K	M.E/M.Tech	23/07/2015	Earthquake Engineering	Assistant Professor	06/02/2017	12	12	0	Yes	Req
Mrs Neetha H I	ASBPN6858L	M.E/M.Tech	05/04/2013	Energy System	Assistant Professor	25/07/2012	12	12	12	Yes	Req
Mr. Shanthveer	GAYPS9826J	M.E/M.Tech	08/09/2018	Electrical and Electronics Engineering	Assistant Professor	23/07/2018	12	12	12	Yes	Req

Ms. Nayana K	AMXPN1818Q	M.E/M.Tech	08/04/2012	Information Communication Technology	Assistant Professor	24/01/2011	12	12	12	Yes	Req
Ms. Ashwini S	AVRPA8448E	M.E/M.Tech	03/05/2014	Computer Science Engineering	Assistant Professor	21/07/2016	12	12	12	Yes	Req
Mr. Kailash Ru	BOLPK0162B	M.E/M.Tech	23/07/2015	Computer Science Engineering	Assistant Professor	21/07/2014	12	12	12	No	Req
Mr. Malteshkur	BSXPD3158G	M.E/M.Tech	21/01/2017	Mechanical Engineering	Assistant Professor	18/07/2016	12	12	12	Yes	Req
Mr. Koushik P.	CXMPP8138D	M.E/M.Tech	03/12/2015	Mechanical Engineering	Assistant Professor	16/07/2015	12	12	12	Yes	Req
Mr. Mahanthes	BTGPM0265H	M.E/M.Tech	05/05/2016	Mechanical Engineering	Assistant Professor	18/07/2016	12	12	12	Yes	Req
Mr. Amruth P.	BBOPA3504R	M.E/M.Tech	05/05/2016	Mechanical Engineering	Assistant Professor	16/07/2015	12	12	12	Yes	Req
Mr. Nandan N.	AGBPN8960H	M.E/M.Tech	06/06/2009	Environmental Engineering	Assistant Professor	17/09/2007	0	0	12	Yes	Req
Mr Vishwas S	AKHPV5924B	M.E/M.Tech	05/04/2013	Electrical and Electronics Engineering	Assistant Professor	27/07/2012	0	12	12	No	Req
Dr. Sendhil G	BSMPS7164N	M.A and Ph.D	15/02/2012	VOLLEYBALL	Assistant Professor	04/09/2008	16	16	16	Yes	Req
Chandrashekh	AIOPC5400E	M.Phil	01/02/2008	electronic resources	Assistant Professor	01/08/2007	16	16	16	Yes	Req

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment= (5*20)/FYSFR(Limited to Max.5)
2017-18(CAYm2)	60	4	15	5
2018-19(CAYm1)	60	3	20	5
2019-20(CAY)	60	3	20	5
<b>Average</b>	60	3	18	5

### 8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Total Marks 5.00

Institute Marks : 5.00

Year	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)	Assessment Of Faculty Qualification [ (5x + 3y) / RF ]
2017-18	5	23	3	31.00
2018-19	5	23	3	31.00
2019-20	6	22	3	32.00

Average Assessment: 31.33

### 8.3 First Year Academic Performance (10)

Total Marks 6.28

Institute Marks : 6.28

Academic Performance	2019-20	2018-19	2017-18
Mean of CGPA or mean percentage of all successful students(X)	6.49	6.34	6.24
Total Number of successful students(Y)	50.00	46.00	54.00
Total Number of students appeared in the examination(Z)	50.00	47.00	55.00
API [ $X*(Y/Z)$ ]	6.49	6.21	6.13

Average API[ (AP1+AP2+AP3)/3 ] : 6.28

Assessment [ 1.5 \* Average API] : 6.28

8.4 Attainment of Course Outcomes of first year courses (10)

Total Marks 8.00

8.4.2 Record the attainment of Course Outcomes of all first year courses (5)

Institute Marks : 3.00

## Course Outcomes of First Year Subjects

Course Name and Code: Calculus & Linear Algebra [18MAT11]	
Semester : 1	Academic Year
:2018-19	
<b>After studying this course, a student will be able to</b>	
CO101.1	<b>Apply</b> the Knowledge of calculus to <b>solve</b> the problems related to curvature and <b>evaluate</b> partial derivatives to <b>estimate</b> maxima and minima of multivariable functions.
CO101.2	<b>Define</b> the concept of multiple Integrals to <b>Evaluate</b> area, volume and to <b>solve</b> problems on improper integrals.
CO101.3	<b>Solve</b> first order ordinary linear/Non linear differential equation and able to <b>apply</b> in different engineering applications.
CO101.4	<b>Use</b> matrices techniques for <b>solving</b> system of simultaneous linear equations, Eigen values and Eigen vectors of the matrix.

Course Name and Code: ENGINEERING PHYSICS [18PHY12/22]	
Semester : 1/2	Academic Year
:2018-19	
<b>After studying this course, a student will be able to</b>	
CO102.1	Understand various types of oscillations and their implications, the role of Shock waves in various fields

CO102.2	Study and recognize the elastic properties of materials for engineering applications
CO102.3	Realize the interrelation between time varying electric field and magnetic field, the transverse nature of the EM waves and their role in optical fiber communication.
CO102.4	Learn the basics of quantum physics. Apprehend theoretical background of laser, construction and working of different types of laser and its applications in different fields
CO102.5	Understand various electrical and thermal properties of materials like conductors, semiconductors and dielectrics using different theoretical models.

<b>Course Name and Code: Basic Electrical Engineering [18ELE13]</b>	
<b>Semester : 1</b>	<b>Academic</b>
<b>Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO103.1	Understand the significance of Ohms law and their different applications
CO103.2	Understand the concepts of generation of single and three phase voltages
CO103.3	Analyze the importance of transformers and electrical wiring in engineering field
CO103.4	Understand the concepts of Direct current and different types of generator, motors and their industrial applications
CO103.5	Analyze the working of AC Generator with their working principal and its importance in power plant

<b>Course Name and Code: Elements of Civil Engineering &amp; Mechanics [18CIV14/24]</b>	
<b>Semester : 1/2</b>	<b>Academic</b>
<b>Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO104.1	Mention the applications of various fields of Civil Engineering and compute the resultant of given force system subjected to various load.
CO104.2	Comprehend the action of forces, moments and other loads on systems of rigid bodies and Compute the reactive forces and effects that develop as a result of the external loads.
CO104.3	Locate the centroid and compute the moment of inertia of regular and built-up sections.
CO104.4	Express the relationship between the motion of bodies and analyze the bodies in motion.

<b>Course Name and Code: Engineering Graphics [18EGDL15/25]</b>	
<b>Semester : 1/2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO105.1	Identify the importance of computer aided sketching and orthographic projection of Points and lines.
CO105.2	Produce the sketch for projection of plane surfaces.
CO105.3	Use the knowledge of sketching to represent projection of solid surfaces.
CO105.4	Understand the importance of Lateral surfaces and able to sketch Development of given isometric drawings of simple objects.

<b>Course Name and Code: ENGINEERING PHYSICS LABORATORY [18PHYL16/26]</b>	
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<b>Semester : 1/2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO106.1	Apprehend the concepts of interference of light, diffraction of light using laser light
CO106.2	Apprehend the concepts of radiation, resistance, Fermi energy and understand the principles of operation of dielectric material, optical fibres, Photodiode and Transistor using simple circuits
CO106.3	Determine elastic moduli and moment of inertia of given materials with the help of suggested procedures
CO106.4	Recognize the resonance concept and its practical applications
CO106.5	Understand the importance of measurement procedures, honest recording and representing the data and reproduction of final results

<b>Course Name and Code: Basic Electrical Engineering Laboratory [18ELEL17/27]</b>	
<b>Semester :1</b>	
<b>Academic Year :2018-</b>	
<b>19</b>	
<b>After studying this course, a student will be able to</b>	
CO107.1	Select a suitable measuring instrument for measuring electrical quantities for a given application
CO107.2	Design the circuit and analyze different types of connections in single and three phase electrical system.

<b>Course Name and Code: Technical English-I [18EGH18]</b>	
<b>Semester : 1</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO108.1	Use grammatical English and essentials of language skills and identify the nuances of phonetics, intonations and flaw less pronunciation.
CO108.2	Implement English vocabulary at command and language proficiency.
CO108.3	Identify common errors in spoken and written communication.
CO108.4	Understand and improve the non verbal communication and kinesics.
CO108.5	Perform well in campus recruitment, engineering and all other general competitive examination.

<b>Course Name and Code: Advanced Calculus &amp; Numerical Methods[18MAT21]</b>	
<b>Semester : 2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	



CO109.1	<b>Develop</b> the applications of multivariate calculus to understand the solenoidal and irrotational vectors and also exhibit the interdependence of line, surface and volume integrals.
CO109.2	<b>Demonstrate</b> various physical models through higher order differential equations and <b>solve</b> such linear ordinary differential equations.
CO109.3	<b>Construct</b> a variety of partial differential equations and solution by exact methods/method of separation of variables.
CO109.4	<b>Explain</b> the applications of infinite series and obtain series solutions of ordinary differential equations. <b>Apply</b> numerical methods in the modeling of engineering problems.

**Course Name and Code: ENGINEERING CHEMISTRY [18CHE12/22]**

**Semester : 1/2**

**Academic Year :2018-19**

**After studying this course, a student will be able to**

CO110.1	To Understand free energy in equilibria and electrochemical energy systems
CO110.2	Comprehend the causes and effects of corrosion of metals and control of corrosion.
CO110.3	Explain production and consumption of energy for industrialization and consumption of solar energy for different useful forms of energy
CO110.4	Analyze the environmental pollution, waste management and water chemistry
CO110.5	Identify the different techniques of instrumental methods of analysis of given solution, Fundamental principles of nano materials.

**Course Name and Code: C Programming for Problem solving [18CPS13]**

**Semester : 1/2**

**Academic Year :2018-19**

**After studying this course, a student will be able to**

CO111.1	Comprehend basics of computer hardware, software and overview of C.
CO111.2	Apply conditional and looping constructs to write C program.
CO111.3	Illustrate Arrays, data types, expressions, control statements, functions, file and I/O operations
CO111.4	Design iterative and recursive functions for computational problems. Illustrate usage of C library.
CO111.5	Use Structures, Pointers and Preprocessor directives in problem solving.

**Course Name and Code: Basic Electronics [18ELN14]**

**Semester : 1/2**

**Academic Year :2018-19**

**After studying this course, a student will be able to**

CO112.1	Describe the operation of diodes, BJT, FET and operational amplifiers
CO112.2	Design and explain constructions of rectifiers, regulators, amplifiers and oscillators
CO112.3	Describe the general operating principles of scr and its application
CO112.4	Explain the working and design of fixed IC voltage regulator using 7805 and a stable oscillator using timer IC555.

CO112.5	Different number conversions and construct simple combinational and sequential logic circuits using Flip Flops.
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<b>Course Name and Code: Elements of Mechanical Engineering &amp; Mechanics [18ME15/25]</b>	
<b>Semester : 1/2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO113.1	Identify different sources of energy and their conversion process.
CO113.2	Explain the working principle of hydraulic turbines, pumps,
CO113.3	Describe the working of I C engines and refrigeration systems.
CO113.4	Understand the properties of common engineering materials and their applications in engineering industry. Recognize various metal joining processes and power transmission elements.
CO113.5	Discuss the working of conventional machine tools, machining processes, tools and accessories. Describe the advanced manufacturing systems.

<b>Course Name and Code: ENGINEERING CHEMISTRY LABORATORY [18CHEL16/26]</b>	
<b>Semester : 1/2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO114.1	Handling different types of instruments for analysis of materials using small quantities of materials involved for quick and accurate results.
CO114.2	Carrying out different types of titrations for estimation of concerned in materials using comparatively more quantities of materials involved for good results.

<b>Course Name and Code: C Programming Laboratory [18CPL17]</b>	
<b>Semester : 1/2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO115.1	Explain the various commands used during the execution of the program.
CO115.2	Utilize the process of debugging and execution.
CO115.3	Develop and illustrate simple C programs.
CO115.4	Construct flowchart and algorithm for the given problems.

<b>Course Name and Code: Technical English-II [18EGH28]</b>	
<b>Semester : 2</b>	
<b>Academic Year :2018-19</b>	
<b>After studying this course, a student will be able to</b>	
CO116.1	Identify common errors in spoken and written communication.
CO116.2	Get familiarized with English vocabulary and language proficiency.

CO116.3	Improve nature and style of sensible writing and acquire employment and workplace communication skills.
CO116.4	Improve their Technical Communication Skills through Technical Reading and Writing practices.
CO116.5	Perform well in campus recruitment, engineering and all other general competitive examination.

## Attainment of Course Outcomes of all first year courses CAYm1 (2018-19)

Sl. No.	Subject	Subject Code	NBA Code	CO Code	Target (%)	Achieved For set target	Attainment
1	Calculus & Linear Algebra	18MAT11	C101	CO101.1	50	68.33	3
				CO101.2		71.28	3
				CO101.3		71.94	3
				CO101.4		67.02	3
2	Engineering Physics	18PHY12/22	C102	CO102.1	45	53.00	0
				CO102.2		55.75	1
				CO102.3		57.70	1
				CO102.4		54.60	0
				CO102.5		53.58	0
3	Basic Electrical Engineering	18ELE13/23	C103	CO103.1	50	68.47	3
				CO103.2		63.67	2
				CO103.3		76.83	3
				CO103.4		74.57	3
				CO103.5		69.27	3
4	Elements of Civil Engineering & Mechanics	18CIV14/24	C104	CO104.1	55	51.82	0
				CO104.2		52.52	0
				CO104.3		55.21	1
				CO104.4		54.51	0
5	Engineering Graphics	18EGDL15/25	C105	CO105.1	50	73.45	3
				CO105.2		73.45	3
				CO105.3		73.45	3
				CO105.4		73.45	3
6	Engineering Physics Lab	18PHYL16/26	C106	CO106.1	55	61.75	2
				CO106.2		61.75	2

				CO106.3		61.75	2
				CO106.4		61.75	2
				CO106.5		61.75	2
7	Basic Electrical Engineering Lab	18ELEL17/27	C107	CO107.1	55	73.49	3
				CO107.2		73.49	3
8	Technical English 1	18EGH18	C108	CO108.1	50	88.96	3
				CO108.2		88.96	3
				CO108.3		88.96	3
				CO108.4		88.96	3
				CO108.5		88.96	3
9	Advanced Calculus & Numerical Methods	18MAT21	C109	CO109.1	50	69.02	3
				CO109.2		69.55	3
				CO109.3		66.51	3
				CO109.4		69.77	3
10	Engineering Chemistry	18CHE12/22	C110	CO110.1	55	67.81	3
				CO110.2		58.78	1
				CO110.3		70.14	3
				CO110.4		69.75	3
				CO110.5		70.43	3
11	C Programming for problem solving	18CPS13/23	C111	CO111.1	50	49.32	0
				CO111.2		46.78	0
				CO111.3		49.55	0
				CO111.4		49.81	0
				CO111.5		52.92	0
12	Basic Electronics	18ELN14/24	C112	CO112.1	50	49.10	0
				CO112.2		51.50	0
				CO112.3		45.05	0
				CO112.4		45.90	0
				CO112.5		49.00	0
13	Elements of Mechanical Engineering	18EME15/25	C113	CO113.1	55	63.22	2
				CO113.2		63.04	2
				CO113.3		67.95	3
				CO113.4		62.17	2
				CO113.5		65.56	3
14	Engineering Chemistry Lab	18CHEL16/26	C114	CO114.1	55	74.22	3
				CO114.2		74.22	3
15	C Programming Lab	18CPL17/27	C115	CO115.1	50	91.42	3
				CO115.2		91.42	3
				CO115.3		91.42	3
				CO115.4		91.42	3
16	Technical English 2	18EGH28	C116	CO116.1	50	72.31	3
				CO116.2		72.31	3
				CO116.3		72.31	3

				CO116.4	72.31	3
				CO116.5	72.31	3

**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)**

Institute Marks : 5.00

**CAY (2019-20) & CAYm1 (2018-19)**

- Three Internal tests for maximum marks of 30 are conducted and average of three internals is considered.
- 10 marks shall be awarded based on the evaluation of CCE component (i.e., Assignment, Class presentation, Mini Project, Case Study etc.)
- Maximum total internal marks for each course are 40. The student has to get a minimum of 16 marks to appear for the exam in the corresponding course.
- Semester end examination maximum marks is 60 is considered for external exam performance.
- The marks scored by the students in internal assessment are categorized based on CO's.
- 60% of university exam marks is considered as [N1] and 40% of internal assessment marks is considered as [N2] for every CO. The direct attainment of the course is given by [N1+N2] for every CO.
- For the laboratory, Continuous Internal Assessment is performed based on conduction of experiment, observations, viva and practical record for 24 marks. One semester end practical test is conducted for maximum of 16 marks. The total CIE marks for the laboratory course is 40. The student has to score a minimum of 20 marks to appear for the exam.
- Semester end examination maximum marks are 60 for the laboratory.
- The direct attainment is calculated by considering 50% weightage of SEE & 50% weightage of CIE.

**CAYm2 (2017-18)**

- Three Internal tests for maximum marks of 30 are conducted and average of best two internals is considered.
- 10 marks shall be awarded based on the evaluation of CCE component (i.e., Assignment, Class presentation, Mini Project, Case Study etc.)
- Semester end examination maximum marks is 60 is considered for external exam performance.
- The marks scored by the students in internal assessment are categorized based on CO's.
- 60% of university exam marks is considered as [N1] and 40% of internal assessment marks is considered as [N2] for every CO. The direct attainment of the course is given by [N1+N2] for every CO.
- For the laboratory, Continuous Internal Assessment is performed based on conduction of experiment, observations, viva and practical record for 24 marks. One semester end practical test is conducted for maximum of 16 marks. The total CIE marks for the laboratory course is 40. The student has to score a minimum of 20 marks to appear for the exam.
- Semester end examination maximum marks are 60 for the laboratory.
- The direct attainment can be calculated by considering 60% weightage of SEE & 40% weightage of CIE.

## **Procedure to measure the attainment level for the courses**

The attainment of a particular CO in a course is calculated using the equation

$$\% \text{ Course attainment} = \frac{x}{y} \times 100$$

Where,

x = total marks scored by students in the particular CO scoring more than the set target

Y = number of participants (who attempted that CO)

### **8.5 Attainment of Program Outcomes from first year courses (20)**

Total Marks 13.00

#### **8.5.1 Indicate results of evaluation of each relevant PO and/ or PSO, if applicable (15)**

Institute Marks : 10.00

**POs Attainment:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	1.4	1.22	1.04	1.04	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.7
C102	1	1.11	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C103	1.4	1.69	1.6	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104	1.34	1.15	0.54	0.53	PO5	PO6	PO7	0.32	PO9	PO10	PO11	PO12
C105	0.75	0.75	PO3	PO4	0.98	PO6	PO7	PO8	PO9	PO10	PO11	0.25
C106	0.67	0.83	PO3	PO4	0.83	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C107	0.98	0.98	0.25	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.25
C108	PO1	PO2	PO3	PO4	PO5	1.19	PO7	PO8	0.3	2.01	0.8	1.44
C109	1.38	1.38	1.04	1.04	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.69
C110	0.9	1.85	0.93	0.53	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	1.30	0.80	0.90	0.99	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.81
C112	1.04	1.09	1.11	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C113	1.93	1.86	1.88	1.79	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.91
C114	2.23	1.55	0.56	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C115	1.83	1.37	2.29	PO4	1.83	PO6	PO7	PO8	0.91	0.91	PO11	0.91
C116	PO1	PO2	PO3	PO4	PO5	0.42	PO7	0.97	0.55	1.89	0.65	0.97

### PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	1.30	1.26	1.10	0.99	1.21	0.80	0	0.64	0.59	1.60	0.72	0.88
CO Attainment	1.30	1.26	1.10	0.99	1.21	0.80	0	0.64	0.59	1.60	0.72	0.88

**PSOs Attainment:**

Course	PSO1	PSO2	PSO3
C106	1.45	1.45	1.55
C112	1.58	1.81	1.12

**PSO Attainment Level**

Course	PSO1	PSO2	PSO3
Direct Attainment	1.52	1.63	1.34
CO Attainment	1.52	1.63	1.34

**8.5.2 Actions taken based on the results of evaluation of relevant POs (5)**

Institute Marks : 3.00

**POs Attainment Levels and Actions for Improvement- (2018-19)**

POs	Target Level	Attainment Level	Observations
-----	--------------	------------------	--------------

**PO 1 : Engineering Knowledge**

PO 1	2.27	1.30	Set Target 55% Target Attained (57.11%)
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NA

**PO 2 : Problem Analysis**

PO 2	1.98	1.26	Set Target 55% Target Attained (63.64%)
------	------	------	---

NA



**PO 3 : Design/development of Solutions**

PO 3	1.75	1.10	Set Target 55% Target Attained (63.06%)
NA			

**PO 4 : Conduct Investigations of Complex Problems**

PO 4	1.71	0.99	Set Target 55% Target Attained (57.70%)
NA			

**PO 5 : Modern Tool Usage**

PO 5	2.00	1.21	Set Target 55% Target Attained (60.67%)
NA			

**PO 6 : The Engineer and Society**

PO 6	1.6	0.80	Set Target 55% Not Attained (50%)
Action 1: NSS Activities for social responsibility			

**PO 7 : Environment and Sustainability**

PO 7	NA	NA	First year courses do not contribute towards PO7
NA			

**PO 8 : Ethics**

PO 8	1.5	0.64	Set Target 55% Not Attained (42.67%)
Action1: Interactions with working professionals with students to increase awareness of responsibility of engineers			

**PO 9 : Individual and Team Work**

PO 9	1.14	0.59	Set Target 55% Not Attained (51.46%)
Action1: Career Development program by Genesis, Carrier prime with special attention to group discussion, leadership skills and team work			

**PO 10 : Communication**

PO 10	2.21	1.60	Set Target 55% Target Attained (72.55%)
NA			

**PO 11 : Project Management and Finance**

PO 11	1.67	0.72	Set Target 55% Not Attained (43.11%)
Action 1: Skill development with respect to real world problems and logical reasoning through training			

**PO 12 : Life-long Learning**

PO 12	1.69	0.88	Set Target 55% Target Not Attained (52.14%)
Action 1: It is planned to have additional classes for these courses for practicing problems, to improve attainments.			

**PSOs Attainment Levels and Actions for Improvement- (2018-19)**

PSOs	Target Level	Attainment Level	Observations
<b>PSO 1 : Analyze the logics, Algorithms and information systems to enable the students to design and implement the software</b>			
PSO 1	2.42	1.92	Target is 80% Target not achieved It is observed that students lack in application of design and development tools to implement the software
Action 1: Learning Material Provided and talk on Applications of various design tools Action 2: Design tool STARUML is used by students and demonstrated various case studies			
<b>PSO 2 : Evaluate working of Hardware and Software aspects of computer using appropriate tools.</b>			
PSO 2	2.38	1.92	Target is 80% Target achieved Students are required to have more exposure about working of hardware devices
Action 1: Students are motivated to develop some mini projects related to IoT and electronic devices. Action 2: Students are exposed to the usage of Open source tool SELENIUM in software testing laboratory.			
<b>PSO 3 : Apply the standard practices in software development to deliver quality products</b>			
PSO 3	2.58	2.10	Target is 80% Target achieved Students should concentrate on developing a complete product as a part of their academic projects or hobby projects
Action 1: Students will be given awareness of modern tools, standard industry practices through industrial visits Action 2: In the department students are given some practical problems for design of a product.			

## 9 STUDENT SUPPORT SYSTEMS (50)

Total Marks 40.00

### 9.1 Mentoring system to help at individual level (5)

Total Marks 4.00

Institute Marks : 4.00

#### **Details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system.**

Mentoring is a systematic student-centered process based on a close student advisor relationship intended to aid students in achieving educational, career, and personal goals. The nature of face-to-face mentoring might be to inform, suggest, counsel and progress report dispatch.

- Advising is concerned not only with a specific issue but also with facilitating the students rational processes, environmental and interpersonal skills, behavior awareness, problem-solving, decision-making, and evaluation skills hence to empower them in their learning and personal development.

- The purpose of mentoring is that the student can freely and confidentially express their academic, emotional and personal pressures and concerns to a professional who can help them effectively.
- Mentoring support has two dimensions - counseling on academic related issues, personal issues and career related issues.
- Academic counseling is done for providing educational guidance and assistance for students by determining appropriate education solutions.
- Personal counseling by the mentor help students to familiarize them with social etiquette, peer group interaction, attitudinal changes which can help them to overcome emotional problems besides reducing dropout rates.
- Student History record consisting of all personal details along with the semester results has to be periodically updated and the consolidated report of counseling at the department level has to be submitted.

### **Functions of Mentoring System**

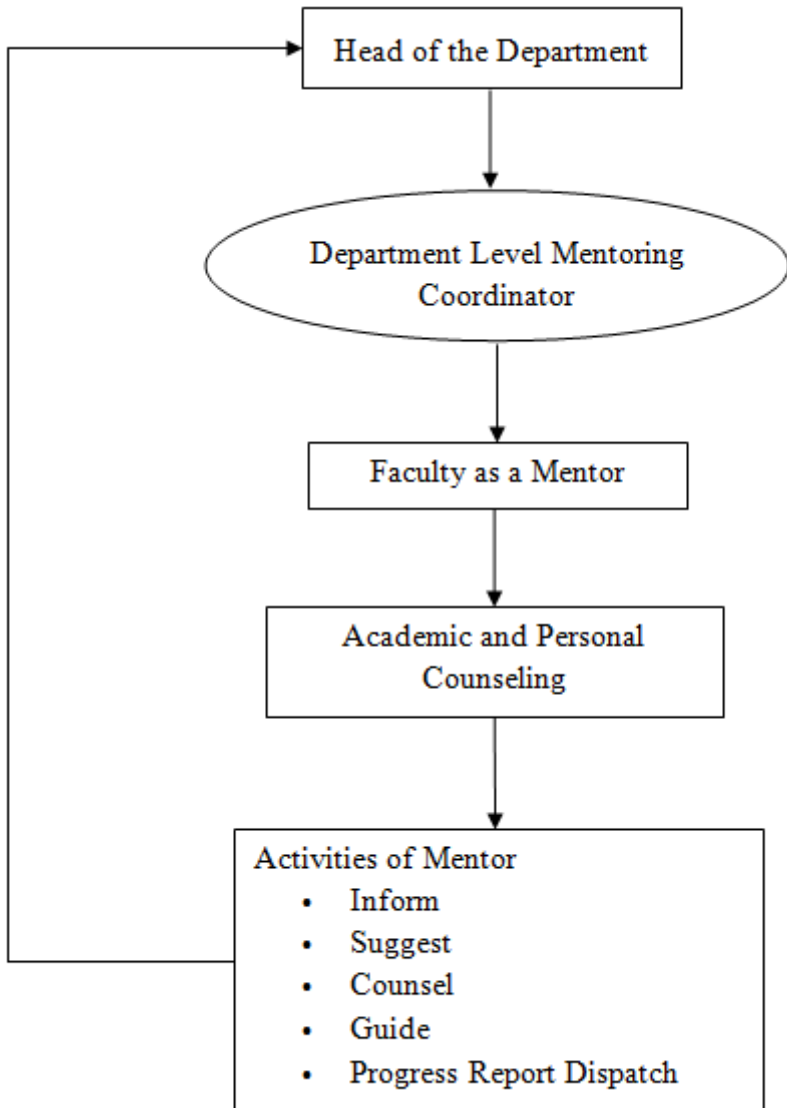


Fig 9.1: Student Mentoring Process

**9.2 Feedback analysis and reward /corrective measures taken, if any (10)**

Total Marks 8.00

Institute Marks : 8.00

**Methodology being followed for analysis of Feedback and Effectiveness**

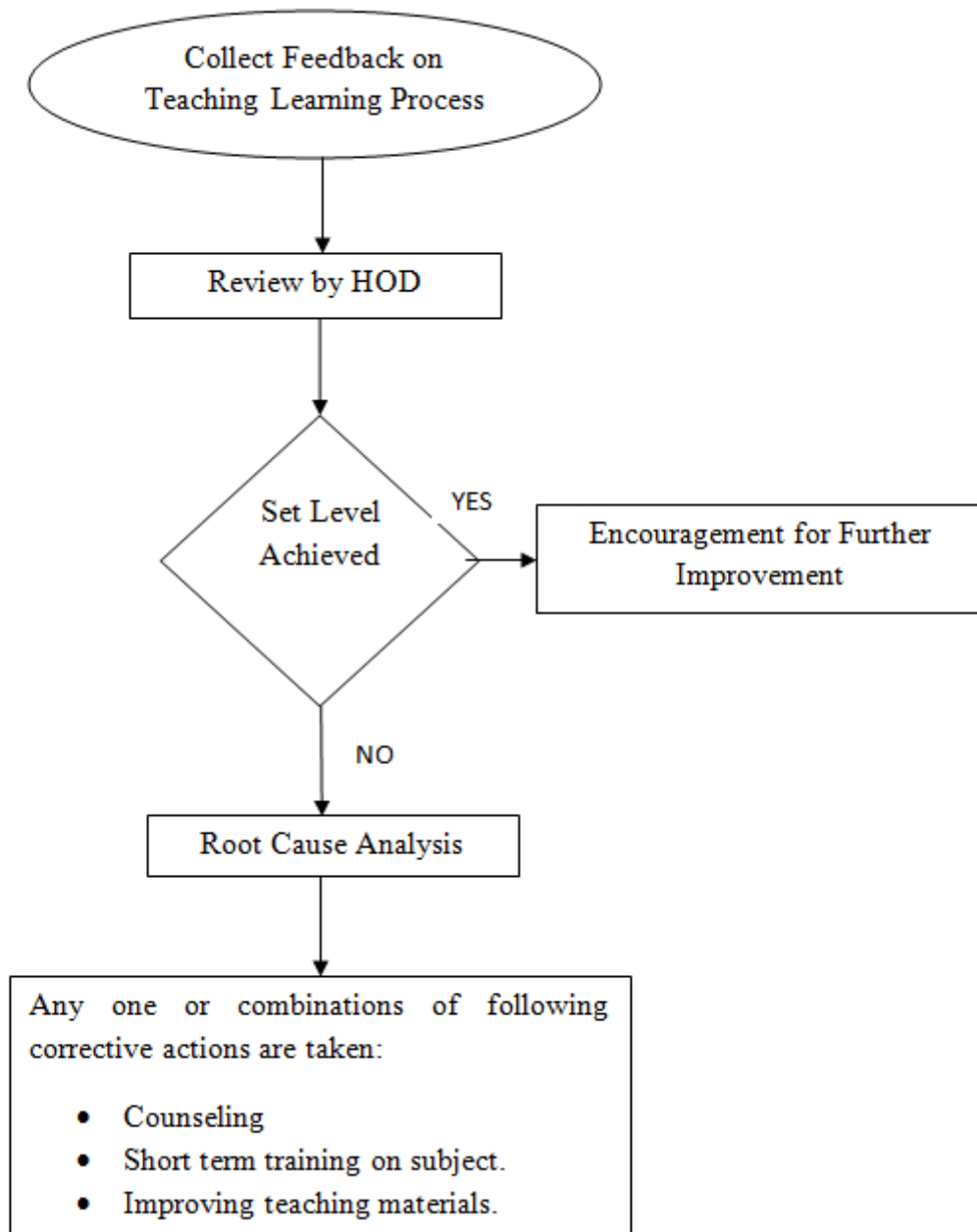


Fig 9.2: Feedback Process

### Procedure for Corrective Actions

<b>Step-1</b>	Collection of feedback forms for all the subjects from the students based on Parameters specified in questionnaire.
<b>Step-2</b>	Estimation of average for all the parameters and calculation of cumulative
<b>Step-3</b>	Threshold value is finalized and the normal value setup at present is above 70%
<b>Step-4</b>	If the threshold exceeds 70%, it is considered as good to excellent and if lesser than 70%; the faculty performance is considered as average or below average.
<b>Step-5</b>	If a faculty receives average or below average performance, allows them to get correct their performances in the next semester.

#### Record of Corrective Actions Taken

**Department of Information Science and Engineering**

Name of the Faculty : Veda L.K  
 Subject Title : Engineering mathematics - IV  
 Semester : IV  
 Feedback Details :

Subject Knowledge	Communication	Presentation	Responsiveness to the Student Queries	Average Score
70.58%	57.64%	59.41%	60%	61.49%

Reason for Feedback Score less than 75%

In the IV sem Mathematics Probability topic is little difficult for students. Also some students are irregular to the classes. Generally most students feel mathematics is hard to get pass. Students need concentration in the class.

Corrective Action to be taken

Given assignments, unit tests, special classes conducted. Made students to attend classes regular.

HOD Remarks

Need to improve Communication skill and presentation skills.

*Veda L.K*  
 Signature of Faculty

*P.R. Sathya*  
 Signature of HOD

**9.3 Feedback on facilities (5)**

Total Marks 4.00

Institute Marks : 4.00

**Feedback on Facilities**

- Feedback is collected from the students on the facilities available in the college such as class room infrastructure, library, labs, canteen, playground, internet facility, exam section and admission section.
- The feedback is analyzed and the necessary corrective measures are implemented after discussions with the higher authority



A well-established feedback mechanism is in place and is operating very effectively. The students will give feedback on the Institute infrastructure and facilities for the academic year 2018-19.

Sl. No	Particulars	AVG	Number of students given feedback: 40																																Total (200)											
1	Help from Office (Admission, Accounts Section etc.)	2.55	4	3	4	4	4	4	3	4	2	2	3	3	3	4	2	2	3	4	2	1	2	1	4	3	2	4	2	2	4	2	2	1	1	2	2	2	1	2	1	1	102			
2	Assistant from Exam Section	3.225	4	3	4	4	4	4	3	4	3	3	4	3	3	4	2	2	2	4	2	2	3	3	4	4	3	2	4	3	4	4	3	3	3	4	4	4	3	4	1	2	129			
3	Activities of Dept. Technical forums (Association)	3.35	4	4	4	3	4	4	4	4	3	3	4	4	4	3	2	3	4	3	3	2	4	4	4	3	4	4	3	4	4	2	3	2	2	3	2	4	4	1	134					
4	Classrooms and lab facilities	3.875	4	4	4	5	5	5	4	5	3	4	4	4	4	5	4	3	4	5	4	4	3	2	4	3	4	4	4	4	4	4	3	3	3	4	4	5	3	3	4	3	155			
5	Placement	3.6	4	2	4	4	5	5	4	5	2	2	2	4	3	4	3	3	3	5	5	2	3	5	2	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	2	144			
6	Library	3.175	4	1	3	5	4	3	2	5	3	1	1	3	3	4	3	3	3	3	4	2	4	1	1	2	2	4	4	3	4	5	4	4	4	3	5	5	4	4	3	1	127			
7	Internet and WIFI	1.75	2	3	3	1	1	1	1	4	1	3	2	1	2	2	1	1	1	2	3	1	4	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	3	3	1	70		
8	Canteen- Quality, Hygiene and Service	1.975	2	2	3	3	3	4	2	4	1	2	1	2	2	4	1	1	1	1	2	2	2	3	2		3	3	2	1	1	4	1	1	1	2	1	2	1	2	3	1	79			
9	Hostel (if applicable)	0.75	2			2						1			3	3	3	2			3	1	1			2															2			1	4	30
10	Sports and Physical Education	2.75	2	1	3	3	4	4	1	4	1	3	2	1	2	3	4	4	4	3	3	2	1	4	4	2	3	2	3	3	4	4	2	2	2	4	4	3	2	3	3	1	110			
11	Cultural Forums	2.525	2	3	3	4	4	4	2	4	3	2	2	2	2	3	2	1	1	2	3	2	2	3	4	3	2	2	3	3	4	3	2	1	2	3	2	2	1	3	4	1	101			
12	Drinking water availability	3.175	3	3	5	4	3	5	4	5	2	3	4	4	2	4	2	2	2	4	4	1	3	4	4	3	4	2	4	3	3	4	2	2	3	4	3	3	2	4	3	1	127			
13	Toilets and cleanliness	2.575	3	4	4	4	2	3	2	2	3	3	3	1	2	4	1	1	1	4	2	1	2	1	2	3	3	3	4	4	3	5	2	1	2	4	4	4	3	1	1	1	103			
14	Classrooms Teaching	3.725	3	4	4	4	5	5	3	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	4	3	4	4	4	149	
15	Training in Labs/Workshops/CAD etc	3.725	4	1	4	5	5	5	3	4	3	1	4	3	3	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	4	4	3	4	4	4	149		
16	Tutorial classes	3.35	4	3	3	3	5	4	3	4	1	2	2	2	3	4	4	4	4	3	4	3	3	4	4	4	3	4	4	4	3	4	2	2	4	3	4	2	4	3	4	4	134			
17	Mentoring Assistance	3.55	3	1	3	4	5	4	4	5	3	1	4	2	4	4	4	4	4	4	4	3	3	3	4	3	3	4	4	4	4	3	4	2	4	3	4	4	3	5	4	4	142			
18	Additional coaching for repeaters (in difficult subjects)	3.175	4	2	4	3	4	4	3	4	2	3	3	2	3	4	3	3	3	4	3	4	3	3	3	4	3	3	4	4	4	3	2	1	2	3	4	4	1	4	3	4	127			
19	Placement training (soft skill etc)	3.425	4	1	4	3	4	3	3	4	2	3	3	3	3	4	3	3	4	4	4	4	2	5	2	3	3	3	4	4	4	4	3	4	3	2	4	4	4	4	5	4	137			
20	Other services if any (Transportation, etc)	0.95		2									2		3		3		2		3	2	2	2	2	3		1		2		1	1		1	1				3	1	38				

(5-Strongly Agree, 4-Agree, 3-Neutral, 2-Disagree, 1-Strongly Disagree)

Fig 9.3a: Feedback on the Institute infrastructure and facilities for the academic year 2018-19

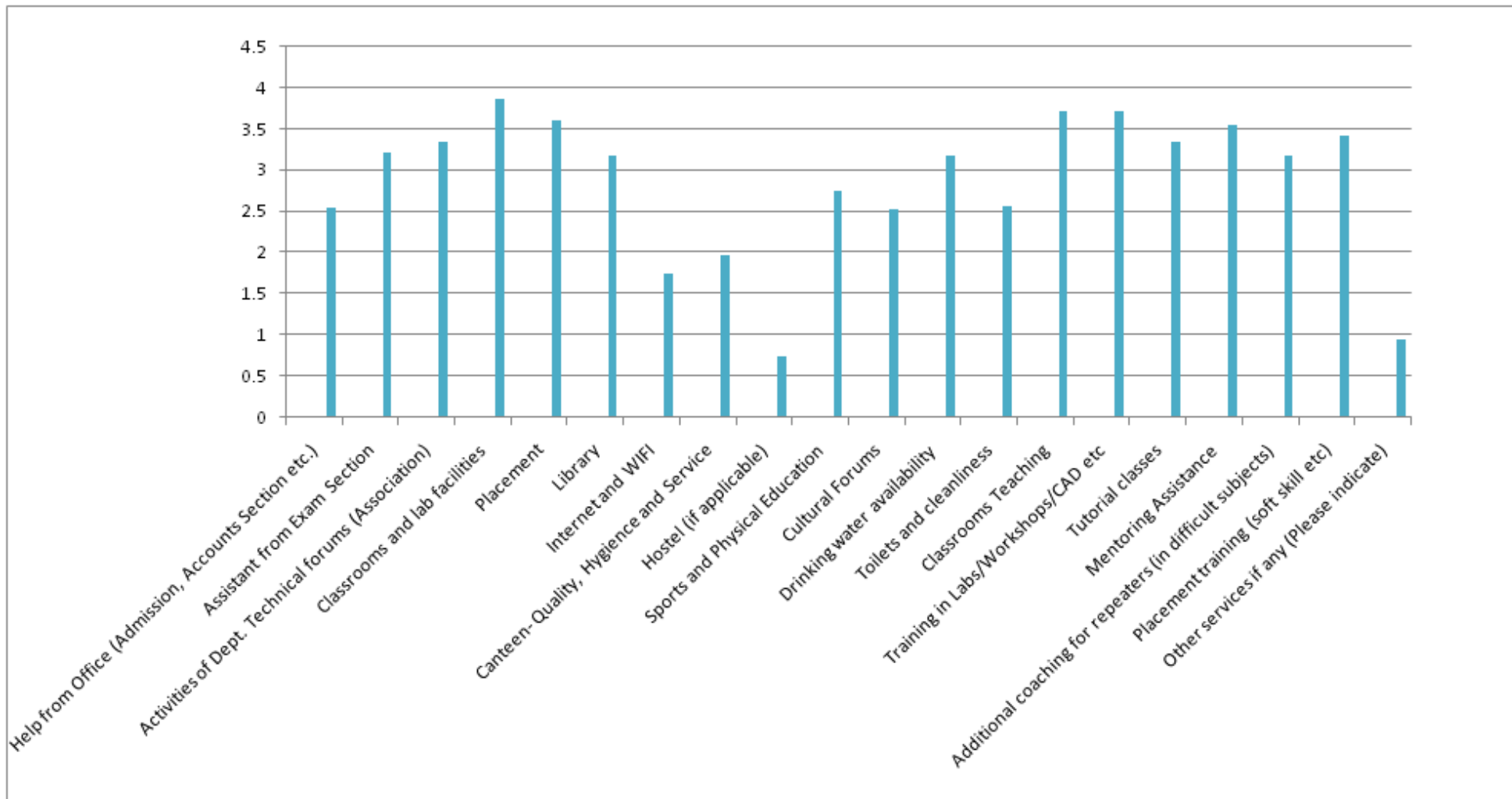


Fig 9.3b: Feedback on Facilities for the Academic Year 2018-19

#### 9.4 Self-Learning (5)

Total Marks 4.00

Institute Marks : 4.00

##### Scope for Self- Learning

- The curriculum offers courses like self-study, mini project, major projects where the topics are self-selected or based on guide suggestion. The component of self-learning is evaluated in these courses.
- In every lecture 5-10 minutes discussion on new technology and its application in real life that is beyond the syllabus occasionally. Past year projects & working models are made available to students for improvement & innovation.

- Every student has to submit a home assignment in every course which has been evaluated for 10 marks. Some of these tasks are beyond syllabus to encourage out- standing students to develop their self-learning capabilities.
- Some of the tasks in the lab courses are challenge based which has to be solved by the students on their own enhancing their skills.
- Department library with sufficient number of volumes on core and application areas, technology awareness journals are opened during college working hours.
- Apart from the above, the college actively promotes self-learning through the following resources procured through NPTEL, Virtual lab.

## Department Library

Table 9.1: List of Department Library Books

Sl. No.	Book Titles	Authors
1	Computer Architecture, A Quantitative Approach, 4th Edition, Elsevier, 2007	John L. Hennessey and David A. Patterson
2	Multicore programming- Increasing performance through software multithreading, Intel press, 2006	Shameem Akhter and Jason Roberts
3	Data Structures Using C And C++; 2nd Edition; Prentice-Hall 2009	Langsam Yedidyah, Augenstein Moshe J., Tenenbaum Aaron M
4	Introduction to the Design and Analysis of Algorithms A Strategic Approach, TMH, 2005	R.C.T. Lee, S.S. Tseng, R.C. Chang & Y.T.Tsai,
5	“Machine Learning”, 2017	T. M. Mitchell & McGraw Hill
6	Introduction to Machine Learning, Second Edition, The MIT Press, 2004	Ethem Alpaydin
7	Java – How to Program, 2004	H. M. Deitel & Prentice Hall
8	Data base System Concepts”, Sixth Edition, 2010	Silberschatz, Korth and Sudharshan & Mc-GrawHill,
9	“Programming in Python 3 - A Complete Introduction to the Python Language”, Second Edition,2009	Mark Summerfield
10	”Python Cookbook”, Third Edition, Publishers & Distributors Pvt. Ltd., ISBN : 978-93-5110-140-6,2013	David Beazley and Brian K. Jones, Shroff
11	“Implementing Automated Software Testing: How to Save Time and Lower Costs While Raising Quality”, Addison-Wesley Professional,2009	Elfriede Dustin
12	Software Defined Networks A Comprehensive Approach, 2014	Paul Goransson, Chuck Black, Elsevier
13	Parallel Programming with OpenMP, 2001. ISBN 1-55860-671-8	Rohit Chandra,

14	Mobile Computing, 2nd Edition; 2014, McGraw Hill Education (India) private Limited , ISBN-13:978-07-014457-6/ISBN10:0-07-14457-5.	Ashok K Talukder, Hasan Ahmad, Roopa R Yavagal
15	Internet & World Wide Web How to H program, 3rd Edition, 2004, Pearson Education / PHI, ISBN-10: 0-130-89550-4	M. Deitel, P.J. Deitel, A. B. Goldberg
16	Distributed Computing and Cloud Computing, from parallel processing to internet of things, 1st Edition, 2012, Elsevier(MK), ISBN: 978-0-12-385880-1.	Kai Hwang, GeofferyC.Fox, Jack J Dongarra
17	UNIX Network Programming – The sockets networking API Vol. 1, 3rd edition, 2010, PHI, ISBN: 978-0131411555.	W.Richard Stevens, Bill Fenner, Andrew M. Rudoff
18	Frenetic: A network programming language, Vol. 46. No. 9. ACM, 2011.	Foster, Nate, et al. ACM Sigplan Notices
19	George J. Klir, Bo Yuan “Fuzzy Sets and Fuzzy Logic-Theory and Applications, 1st Edition; 2008, ISBN: 81-203-0695-3.	Prentice Hall
20	“Fuzzy Logic Intelligence, Control and Information”, 1st edition, 9th Impression, 2012, Pearson, ISBN: 978-81-317-0534-6.	John Yen, Reza Langari
21	Linux Kernel Development; Pearson Education; 3rd Edition; 2010, ISBN8131758182	Robert Love
22	Understanding the Linux Kernel, O’Reilly, 1st Edition, 2000, ISBN-10: 0596000022.	Daniel Bovet
23	The Linux virtual machine monitor." Proceedings of the Linux symposium. Vol. 1. 2007	Kivity, Avi, et al
24	Principles of Operations Research – Theory and Practice, 2nd Edition, 2000, ISBN 13: 978-81-265-1256-0.	Philips, Ravindran and Solberg & , John Wiley & Sons (Asia) Pte Ltd
25	Operations Research Theory and Application, Pearson Education Pvt Ltd, 4th Edition, 2009, ISBN 13: 978-0-23-063885-3	J K Sharma
26	Biomimetics: Biologically Inspired technologies, 2005, CRC press, ISBN: 9780849331633	Yoseph Bar-Cohen

27	Web Programming Building Internet Applications, 3rd Edition, , 2006, Wiley India, ISBN : 978-81-265-1290-4	Chris Bates
28	A Guide to the Project Management Body of Knowledge, Project Management Institute, 5th Edition, 2013, ISBN: 978-1-935589-67-9	PMBOK Guide
29	Android Application Development: Programming with the Google SDK, 2009, OReilly Media, Inc. ISBN: 9788184047332	John Lombardo, Blake Meike, Rick Rogers and Zigurd Mednieks
30	Wireless and Mobile Networks Concepts and Protocols, 2010, Willey India Pvt. Ltd., ISBN: 978-81-265-2069-5.	Dr. sunil Kumar s Manvi
31	Cloud Computing for Dummies	Judith Hurwitz, Robin Bloor, Marcia Kaufman, Fern Halper.
32	Cloud Computing Bible	Barrie Sosinsky
33	Implementing Cloud Privacy and Security	Raj Samani, Brian Honan, Jim Reavis
34	Cloudonomics: The Business Value of Cloud Computing	Joe Weinman
35	The Great Cloud Migration	Michael C. Daconta
36	Internet of Things Principles and Paradigms	Dr. Rajkumar buyya
37	The Internet of Things	Samuel Greengard
38	The Fourth Industrial Revolution	Klaus Schwab
39	Getting started with Internet of Things	Cuno Pfister
40	Learning Internet of Things	Peter Waher
41	Precision: Principles, Practices and Solutions for the Internet of Things	Timothy Chou.
42	Machine Learning For Absolute Beginners: A Plain English Introduction (Second Edition)	Oliver Theobald
43	Machine Learning For Dummies	John Paul Mueller and Luca Massaron
44	“Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies”	John D. Kelleher, Brian Mac Namee, and Aoife D'Arcy
45	Programming Collective Intelligence	Toby Segaran
46	Machine Learning for Hackers	Drew Conway and John Myles White
47	Machine Learning in Action	Peter Harrington

48	Data Mining: Practical Machine Learning Tools and Techniques	Ian H. Witten, Eibe Frank and Mark A. Hall
49	Data and File Structures Using C	Reema Thareja
50	Files and data structures with COBOL	James Mensching
51	Introduction to data mining, 2006	Tan, Steinbach & Kumar
52	Data Mining: Concepts and Techniques	Third Edition by Han, Kamber & Pei (2013)
53	Data Mining and Analysis Fundamental Concepts and Algorithms	Zaki & Meira (2014)
54	Data Mining and Analysis: Fundamental Concepts and Algorithms	Mohammed J. Zaki and Wagner Meira JR.
55	Head First Android Development: A Brain-Friendly Guide	Dawn Griffiths and David Griffiths
56	Head First Learn to Code: A Learners Guide to Coding and Computational Thinking	by Eric Freeman
57	Head First Agile: A Brain-Friendly Guide to Agile and the PMI-ACP Certification	Andrew Stellman and Jennifer Greene
58	Head First Data Analysis	by Michael Milton
59	Head First Ajax	by Riordan
60	Head First Software Development: A Learners Companion to Software Development	Dan Pilone and Russ Miles
61	Head First Excel	by Milton Michael
62	Discrete Mathematics: Theory and Applications	M.K. Sen and D.S. Malik
63	A Text Book of Engineering Mathematics	N. P. Bali and Manish Goyal
64	Automated Data Collection with R: A Practical Guide to Web Scraping and Text Mining	Simon Munzert , Christian Rubba , et al
65	Electronic Devices and Circuit Theoryll, 10th edition PHI/Pearson Education. 2009.	Robert L. Boylestad and Louis Nashelsky
66	Electronic Devices and Circuitsll, MGH, 1967	MillimanHalkias
67	Electronic Devices & Circuitsll, IV Edition, Prentice Hall of India/Pearson Education, ninth printing, 2007.	David A. Bell
68	Electronic Devices and Circuits —, 2 nd edition Tata McGraw Hill, 2008.	Jacob Millman& Christos. C. Halkias, SatyabrataJit
69	Electronic Devices and Circuitsll, John Wiley & Sons, 2009.	Anil Kumar Maini, VarshaAgrawal

70	Basic Electronics for Scientists and EngineersII, Cambridge Press, 2011.	Dennis Eggleston
71	Network AnalysisII, 3rd Edition, PHI / Pearson Education, Reprint 2002.	M. E. Van Valkenburg
72	Networks and SystemsII, 2nd Edition, New Age International Publications, 2010.	Roy Choudhury
73	Engineering Circuit AnalysisII, 7th Edition, TMH, 2010.	Hayt, Kemmerly and Durbin
74	Electric CircuitsII Schaum's Outline Series, McGraw Hill, 2003.	Basic Engineering Circuit AnalysisII, 8th Edition, John Wiley, 2006.
75	"A Practical Guide to Industrial Entrepreneurs"	Srivastava & Sultan Chand.
76	Digital signal processing using MATLAB V.4 —, PWS Publishing Company .	Vinay K. Ingle and John G. Proakis
77	Introduction to Algorithms, 3rd Edition, PHI, 2010.	Thomas H. Cormen, Charles E. Leiserson, Ronal L. Rivest, Clifford Stein
78	Introduction to the Design & Analysis of Algorithms", 2nd Edition, Pearson Education, 2007.	Anany Levitin
79	"Software Engineering -A Practitioners Approach", Seventh Edition, McGraw-Hill, 2007	Roger.S.Pressman
80	"An Integrated Approach to Software Engineering", Wiley India, 2009	PankajJalote
81	Unix Network Programming- The Sockets Networking APIII, Volume-1, 3 rd Edi, Addison Wesley, 2003.	W. Richard Stevens, Bill Fenner, and Andrew M. Rudoff
82	UNIX Network ProgrammingII, PHI, 2001	W. Richard Stevens
83	Professional IOS Network Programming: Connecting the Enterprise to the Iphone and IpadII, Wiley India Private Limited 2012	Jack Cox
84	Fundamentals of Digital Image Processing," Pearson Education (Asia) Pvt. Ltd./Prentice Hall of India, 2004.	Anil K. Jain
85	Digital Video ProcessingII, Prentice Hall, USA, 1995.	M. Tekalp
86	Data Warehousing, Data Mining and OPALII, Computing McGraw Hill Publisher, 1997.	Alex Berson and Stephen J. Smith

87	Introduction to Embedded SystemsII, Tata McGraw Hill Education Private Limited, 2009.	Shibu K V
88	Computer Architecture, A Quantitative Approach, 5th Edition	John L. Hennessey and David A. Patterson
89	Genetic algorithms: synthesis and applications by Rajasekharan and Rai – PHI Publication.	Neural Networks, Fuzzy logic
90	Principles of Soft ComputingII, Wiley India Edition,2010	S.N. Sivanandam, S.N.Deepa
91	Grid Computing, Pearson/PHI PTR, 2003	Joshy Joseph and Craig Fellenstein
92	Grid Computing: A Practical Guide to Technology and Applications,” Charles River media, 2003.	Ahmar Abbas
93	Multimedia – Computing, Communications & Applications”, Pearson Education, 2004	Ralf Steinmetz, KlaraNahrstedt
94	Fundamentals of Network Security, McGraw-Hill, 2003	Eric Maiwald
95	Ethical Hacking for Beginners 2019: Complete step by step Guide Beginner to Advance	Shekhar Mishra
96	Computer Systems Design and Architecture, 2nd Ed.Pearson Education, 2004.	Vincent P. Heuring & Harry F. Jordan
97	Software Engineering	PankajJalote, Tata McGraw Hill
98	Books: 1. Interactive Computer Graphics A Top-Down Approach with OpenGL, 6th Edition,	Edward Angel & Addison Wesley
99	“Storage Area Network Essentials a Complete Guide to understanding and Implementing SANs”, Wiley India, 2006.	Richard Barker and Paul Massiglia
100	“Pattern Recognition: Statistical, Structural and Neural approaches”, John Wiley & Sons, Inc.1992. 2. Christopher M. Bishop ,“Pattern	Robert Schalkoff

**Self– Learning Facilities, Materials for Learning beyond the Syllabus, Webinars, Podcast, MOOCs.**

**Industrial Training/Tours for Students**

**Table 2.** List of industrial tours/programs organized for students for year 2017-18.



Sl. No.	Name of company/ organization	No. of students	Nature of training	Date	No. of days
1	A1 Logic, Mangalore	50	Skill Improvement	14/04/2018	01

Final year students and all faculty members visited to “A1 Logic” Software development Company, Mangalore. Mr. Praveen Udupa, CEO and Founder of A1 Logic, gave presentation on "Emerging Technologies in IT" and awareness about work nature of IT Industry.



Fig 9.4: Industrial Visit to A1 Logic, Mangalore


Table 9.2:Details of Internship

SL. NO	USN	STUDENT NAME	Company Name
14PM13IS012		DIVYA Y RAIKAR	Net Soft Tech, Bangalore
24PM14IS005		AMAN S V	Bit Ramp, Shivamogga
34PM14IS008		BHAGYASHREE A R	Net Soft Tech, Bangalore
44PM14IS033		NAVYA R	Srichid, Bangalore
54PM14IS038		PRASANNA KUMAR PRABHU	Ignus Learning and Educare Solutions Pvt Ltd, Mysore
64PM15IS003		ANAGHA M G JOIS	Apsis Solutions, Bangalore
74PM15IS004		ANUSHREE B	Net Soft Tech, Bangalore
84PM15IS005		ARPITA SETHI	Tek Systems Global Services, Bangalore
94PM15IS006		ASFIYA KHANUM	Apsis Solutions, Bangalore
104PM15IS007		ASHWINI M V	Venus Cloud Technology, Shivamogga
114PM15IS008		BHAVYA D	HAL, Bangalore

12	4PM15IS009	CHAYA A M	Bit Ramp, Shivamogga
13	4PM15IS010	DEEPIKA B R	Net Soft Tech, Bangalore
14	4PM15IS012	KOMAL G R	Bit Ramp, Shivamogga
15	4PM15IS013	HALASWAMY H S	Bit Ramp, Shivamogga
16	4PM15IS014	KAJOL SHIDRAMSHETTAR	Bit Ramp, Shivamogga
17	4PM15IS015	M S SIRISAPTHAMI	Tech Fortune, Bangalore
18	4PM15IS016	MANASA H S	Bit Ramp, Shivamogga
19	4PM15IS018	MEGHANA B P	Bit Ramp, Shivamogga
20	4PM15IS019	MEGHANA K HEGDE	Srichid, Bangalore
21	4PM15IS020	MONIKA K S	Bit Ramp, Shivamogga
22	4PM15IS021	NANDINI G V	Tech Fortune, Bangalore
23	4PM15IS023	NAVEEN SATYANARAYANA DHARESHWAR	Bit Ramp, Shivamogga
24	4PM15IS024	NIKHIL S V	Apsis Solutions, Bangalore
25	4PM15IS026	POOJA N M	Net Soft Tech, Bangalore
26	4PM15IS027	POOJA S G	Bit Ramp, Shivamogga
27	4PM15IS028	POOJA S R	Net Soft Tech, Bangalore
28	4PM15IS029	PRAJNA H R	Net Soft Tech, Bangalore
29	4PM15IS030	PRANAMYA G HANDE	Net Soft Tech, Bangalore
30	4PM15IS032	PRIYANKA S P	Infolic Research, Bangalore
31	4PM15IS033	PRUTHVI T R	Net Soft Tech, Bangalore
32	4PM15IS034	RACHANA E	Net Soft Tech, Bangalore
33	4PM15IS035	RAGHAVA D D	Bit Ramp, Shivamogga
34	4PM15IS037	RAKESH C M	Bit Ramp, Shivamogga
35	4PM15IS039	RASHMI B M	Net Soft Tech, Bangalore
36	4PM15IS040	SANJAY B S	Code Wave Technologies, Bangalore
37	4PM15IS041	SARIKA K S	Venus Cloud Technology, Shivamogga
38	4PM15IS043	SHIFA ANJUM A	Apsis Solutions, Bangalore
39	4PM15IS045	SHWETHA A	Net Soft Tech, Bangalore
40	4PM15IS046	SOWMYA S	Apsis Solutions, Bangalore
41	4PM15IS048	SUDEEP SHRIPAD HEGDE	Srichid, Bangalore
42	4PM15IS049	SUNIL KUMAR SURESH KERUDI	HP Enterprises, Mangalore
43	4PM15IS050	SUPREETHA S	Net Soft Tech, Bangalore
44	4PM15IS051	SWATHI S	Net Soft Tech, Bangalore

45	4PM15IS052	VARSHINI K	Bit Ramp, Shivamogga
46	4PM15IS053	VARSHINI K M	Net Soft Tech, Bangalore

Internship Certificate Sample Copy for the year 2018-19



**Internship Completion  
Certificate**  
Bangalore  
Aug 3rd, 2018

TO WHOMSOEVER IT MAY CONCERN


This is to certify that **Mr. SANJAY BS** bearing USN **4PM15IS040** S/o Shantharaj BS, a student of BE from PES Institute of Technology and Management, Shivamogga (Branch - Information science and engineering), Visvesvaraya Technological University, BELGAUM, KARNATAKA has successfully completed 04 (four) weeks ( from 9th July, 2018 to 4th August, 2018) of internship program at **Codewave Technologies, Bengaluru** as a part of academic requirement under the guidance of Shruthi BS(Software developer).

During the period of his internship program with us, he was involved in learning and contributing to **Mobile application development (Hybrid Mobile Application)**.

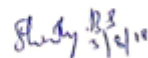
During the above period, we found him to be punctual, hardworking and inquisitive.

Wishing him all the success in the future.

From Codewave Technologies Pvt. Ltd, Bengaluru




Abhijith HK  
Founder and CEO, Codewave



Shruthi BS [Guide]  
Software Developer

**Codewave Technologies Pvt. Ltd.**  
307, Shree Chambers, 1st Floor,  
Outer Ring Road, Banashankri  
3rd Stage, Bengaluru,  
Karnataka - 560 085



**Codewave Technologies Pvt. Ltd.**  
307, Shree Chambers, 1st Floor,  
Outer Ring Road, Banashankri  
3rd Stage, Bengaluru,  
Karnataka - 560 085

Table 9.3: Internship details for the academic year 2019-20

SL. NO	USN	STUDENT NAME	Company Name	Place
1	4PM15IS011	DHANYASHREE S H	CONTRIVER	MYSORE
2	4PM15IS017	MEGHA C M	DHS INFORMATICS	BANGALORE

3	4PM15IS022	NAVEEN KUMAR M R	INNOVANT IT SOLUTION	SHIVAMOGGA
4	4PM15IS038	RAMYA N P	LOGINWARE SOFTTECH PVT LTD	BANGALORE
5	4PM15IS044	SHOBHA RANI G T	CONTRIVER	MYSORE
6	4PM15IS047	SOWMYASHREE M C	THYNK RYT	SHIVAMOGGA
7	4PM15IS054	VARUN K	INNOVANT IT SOLUTION	SHIVAMOGGA
8	4PM16IS001	A S SINCHANA	TECH FORTUNE TECHNOLOGIES	BANGALORE
9	4PM16IS002	ABHIGNA K	TECH FORTUNE TECHNOLOGIES	BANGALORE
10	4PM16IS004	AKSHATHA S	TECH FORTUNE TECHNOLOGIES	BANGALORE
11	4PM16IS005	AMRUTHA YADAV	TECH FORTUNE TECHNOLOGIES	BANGALORE
12	4PM16IS006	AMULYA B P	TECH FORTUNE TECHNOLOGIES	BANGALORE
13	4PM16IS007	ANITHA K	TECH FORTUNE TECHNOLOGIES	BANGALORE
14	4PM16IS008	ANUSHA H K	LOGINWARE SOFTTECH PVT LTD	BANGALORE
15	4PM16IS009	ARCHANA M	LOGINWARE SOFTTECH PVT LTD	BANGALORE
16	4PM16IS010	ARTHIKA S SHETTY	LOGINWARE SOFTTECH PVT LTD	BANGALORE
17	4PM16IS011	ARUNKUMAR G	PARVAM CONSUL TECH PVT LTD	BANGALORE
18	4PM16IS013	BHARGAVI	LOGINWARE SOFTTECH PVT LTD	BANGALORE
19	4PM16IS014	CHAITRA S	NEXUS EDUTECH	MYSORE
20	4PM16IS015	GAGANA B	THYNK RYT	SHIVAMOGGA
21	4PM16IS016	GOWDA SAKSHI RAVICHANDRA	HAWLETT PACKARD ENTERPRISES	MANGALORE
22	4PM16IS017	KAIVALYA S JAIN	PARVAM CONSUL TECH PVT LTD	BANGALORE

23	4PM16IS018	KARTHIK U D	LOGINWARE SOFTTECH PVT LTD	BANGALORE
24	4PM16IS019	KAVYA G	HAWLETT PACKARD ENTERPRISES	MANGALORE
25	4PM16IS020	LAVANYA N SHASTRY	NEXUS EDUTECH	MYSORE
26	4PM16IS021	LIKHITHA T D	LOGINWARE SOFTTECH PVT LTD	BANGALORE
27	4PM16IS022	MADHU TARAPUR	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	MYSORE
28	4PM16IS023	MEGHANA N V	NEXUS EDUTECH	MYSORE
29	4PM16IS024	MEGHASHREE B S	TECH FORTUNE TECHNOLOGIES	BANGALORE
30	4PM16IS025	MOHAMMED SUHAIL	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
31	4PM16IS026	MUTTU RAJ S	LOGINWARE SOFTTECH PVT LTD	BANGALORE
32	4PM16IS027	NANDHINI H V	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	MYSORE
33	4PM16IS028	NIKHIL R BHOOPALAM	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
34	4PM16IS029	NISCHITHA S	TECH FORTUNE TECHNOLOGIES	BANGALORE
35	4PM16IS030	PAVAN KUMAR B C	THYNK RYT	SHIVAMOGGA
36	4PM16IS031	POOJA H P	TECH FORTUNE TECHNOLOGIES	BANGALORE
37	4PM16IS032	PRATHIBHA HEBBAR D S	TECH FORTUNE TECHNOLOGIES	BANGALORE
38	4PM16IS033	PRATHIKSHA B P	THYNK RYT	SHIVAMOGGA
39	4PM16IS034	PRIYA A J	LOGINWARE SOFTTECH PVT LTD	BANGALORE

40	4PM16IS035	RAHUL G	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	MYSORE
41	4PM16IS036	RAJATH M S	THYNK RYT	SHIVAMOGGA
42	4PM16IS037	RAVEENA T G	DHS INFORMATICS	BANGALORE
43	4PM16IS038	SACHIN DESAI	PARVAM CONSUL TECH PVT LTD	BANGALORE
44	4PM16IS039	SAGAR KUMAR B	HEXAGON GLOBAL IT SERVICE PVT LTD	BANGALORE
45	4PM16IS041	SAMMITHA H	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
46	4PM16IS042	SATHWIKA G N	THYNK RYT	SHIVAMOGGA
47	4PM16IS043	SHREESHESH K S	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
48	4PM16IS044	SHRUTHI D	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
49	4PM16IS045	SHRUTHI K S	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
50	4PM16IS046	SHWETHA S	TECH FORTUNE TECHNOLOGIES	BANGALORE
51	4PM16IS049	SUDARSHANA GOPALA SHETTY	LOGINWARE SOFTTECH PVT LTD	BANGALORE
52	4PM16IS050	SUPRIYA H L	DHS INFORMATICS	BANGALORE
53	4PM16IS051	SWATHI SARANG	PARVAM CONSUL TECH PVT LTD	BANGALORE
54	4PM16IS052	VIGNESH S	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	BANGALORE
55	4PM16IS053	VINAY S V	LOGINWARE SOFTTECH PVT LTD	BANGALORE
56	4PM16IS054	VINUTHA B S	PARVAM CONSUL TECH PVT LTD	BANGALORE

57	4PM16IS055	VISHWAPRIYA D	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	MYSORE
58	4PM16IS056	VRUNDA B	PARVAM CONSUL TECH PVT LTD	BANGALORE
59	4PM16IS057	PRAKASH BASAGI	INVENTERON TECHNOLOGIES & BUSINESS SOLUTIONS	MYSORE

Internship Smaple Copy for the year 2019-20

Ref - TFT/INT/2019/0161

2<sup>nd</sup> AUGUST 2019

**TO WHOM IT MAY CONCERN**

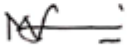
This is to certify that Ms. A S Sinchana Bearing USN-4PM16IS001 a student of PES Institute of Technology and Management of Shivamogga, Under VTU Belagavi has successfully completed her Internship in Our Organization "Tech Fortune Technologies" from 8<sup>th</sup> July 2019 to 2<sup>nd</sup> August 2019.

She was working on the "Association Rule Mining -MACHINE LEARNING USING R LANGUAGE". The time she joined, she was very fast to pick up the technical details of the project. She is really hardworking and capable.

We wish her all the very best for a successful career ahead.

For Tech Fortune Technologies

Supervisor



Authorised Signatory

Place: Bangalore



Manoj Mashal

TechLead- Tech Fortune



**Details of NPTEL videos shown to Students for effective understanding of the Subject**

Table 9.4: Details of NPTEL videos

Subject Id	Discipline Name	Subject	Coordinators	Institute
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106101060	Computer Science and Engineering	Design and Analysis of Algorithms	Prof. Abhiram G Ranade, Prof. Ajit A Diwan,Prof. Sundar Viswanathan	IIT Bombay
106105031	Computer Science and Engineering	Cryptography and Network Security	Dr. Debdeep Mukhopadhyay	IIT Kharagpur
106105081	Computer Science and Engineering	Computer Networks	Prof. Sujoy Ghosh	IIT Kharagpur
106105082	Computer Science and Engineering	Data Communication	Prof. Ajit Pal	IIT Kharagpur
106106092	Computer Science and Engineering	Computer Organization	Prof. S. Raman	IIT Madras
106108052	Computer Science and Engineering	Compiler Design	Prof. Y.N. Srikanth	IISc Bangalore

  
 Roll No: NPTEL19CS30551161517  
 To  
 SANDHYA S HEGDE  
 D/O B SATISH HEGDE, BASOOR VILLAGE,  
 DYAWANAHALLI POST  
 SORABA TQ  
 SHIMOGGA  
 KARNATAKA  
 572419  
 PH. NO :9945624401



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:3



## NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to  
**SANDHYA S HEGDE**  
 for successfully completing the course

### Social Networks

with a consolidated score of **51** %

Online Assignments	14.25/25	Proctored Exam	36.74/75
--------------------	----------	----------------	----------

Total number of candidates certified in this course: **868**

Prof. A. Ramesh  
 Chairman  
 Centre for Continuing Education, IITM

Jan-Apr 2019  
 (12 week course)

Prof. Andrew Thangaraj  
 NPTEL Coordinator  
 IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL19CS30551161517

To validate and check scores: <http://npTEL.ac.in/hoc>

Fig 9.5: NPTEL Certification



Fig 9.6: UDEMY Certification

## 9.5 Career Guidance, Training, Placement (10)

Total Marks 8.C

Institute Marks : 8.C

Following are the trainings given on Placement and Career opportunities.

- Technical training
- Aptitude test
- Mock interview
- Industry interaction for training/internship/placement.

### Counseling for Higher Studies (GATE/GRE, GMAT, etc.)

- The following activities were organized for Career Guidance and Placement training by the department. A team consisting of Institution placement officer, department placement coordinator and student volunteers from final year and pre final year are involved in the coordination of various training activities. Final year has a separate placement WhatsApp group for sharing information regarding placements.

### Placement Training Details -2018-19

Fourth Year: Total Number of Students: 47

DAY-1		DAY-2		DAY-3		DAY-4		DAY-5		DAY-6		DAY-7		DAY-8		DAY-9		DAY-10		DAY-11	
17-09-2018		18-09-2018		19-09-2018		20-09-2018		24-09-2018		25-09-2018		26-09-2018		27-09-2018		28-09-2018		29-09-2018		30-09-2018	
M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A	M	A
41	40	45	42	42	35	46	40	46	40	42	37	40	19	38	38	43	41	41	35	45	45

**Trainer Details 2018-19**

SL NO	COURSE	TRAINING DATES	DAYS	TRAINING DURATION	TRAINING COMPANY	TRAINER NAMES
1	B.E FINAL YEAR	17 <sup>th</sup> , 20 <sup>th</sup> Sep to 24 <sup>th</sup> to 30 <sup>th</sup> Sep, 2018	11 DAYS	72 HOURS	CAREER PRIME	Mr. Arasu M T Mr. Shamanth G S Mr. Mahendra Kumar K M Mr. Yuvaraj V Mr. Balakrishna Ramnath R S Ms. Sowmya K Mr. Vigneshwar R S Ms. Dhivyalakshmi
2	B.E PRE-FINAL YEAR	8 <sup>th</sup> , 9 <sup>th</sup> Sep, 2018 & 15 <sup>th</sup> & 16 <sup>th</sup> Sep, 2018	4 DAYS	24 HOURS	CAREER PRIME	Mrs. Tanu Mr. Balakrishna Ramnath R S Mr. Inba Mr. Rakshith Mr. Nithin Ms. Yashaswini Mrs. Angel Mr. Justin Mr. Sharavanan
3	B.E SECOND YEAR	16 <sup>th</sup> , 20 <sup>th</sup> , 21 <sup>st</sup> , 23 <sup>rd</sup> , 24 <sup>th</sup> , 27 <sup>th</sup> , & 28 <sup>th</sup> , Aug, 2018.	Integrated training	24 HOURS	GENESIS	Mr. Krishna Mr. Shivakumar Ms. Smruthi Ms. Arathi Mr. Sanjay Ms. Manisha Mr. Arjun Mr. Prabhu Ms. Soujanya
4	B.E FIRST YEAR	16 <sup>th</sup> , 18 <sup>th</sup> , 20 <sup>th</sup> , 21 <sup>st</sup> , 23 <sup>rd</sup> , 24 <sup>th</sup> ,	Integrated	12 HOURS	GENESIS	Mr. Akshay

	25th, & 28th, Aug, 2018	training 3HOURS per Sections		Mr. Vinsent
				Mr. Vishwas
				Mr.Sagar
				Ms.Rashmi
				Ms. Vidhi
				Mrs.Majula
				Mr. Nidhal
				Mr. Norman

### 9.6 Entrepreneurship Cell (5)

Total Marks 4.00

Institute Marks : 4.00

#### Entrepreneurship initiatives & Data on students benefitted

The department has constituted a committee for Entrepreneurship Development Cell. The mission of EDC is producing successful entrepreneurs assimilate with qualities using innovative and ethical business practices to make global impact. Instill the passion and spirit among students to pursue entrepreneurship.

#### INTRODUCTION

Entrepreneurship Development Cell, the abbreviation of which is EDC, has been established in PES Institute of Technology and Management, Shivamogga. Ever since its inception, the cell has embarked on its flagship programme of continuous innovative thinking in order to enhance the country's economy. At the same time, the cell also concentrates on the rural fronts so as to develop the potential of the rural youth and revamp their traditional mindset.

Battling against odds appears to have become something of a habit for the unemployed youth. The EDC tries to extricate these youngsters from their wrangle with employment opportunities by crowning them as young and dynamic entrepreneurs. These dynamic youngsters evolve from the corporate shadows and reach an enviable position. From the position of job seekers, they get ordained as job givers. They expand the availability of jobs, thereby minimizing the nation's anxiety over the rapidly increasing unemployment rate.

The EDC redefines the role of the youth to make them more independent. The youngsters are thus shaken out of their complacent mood regarding their employment opportunities. Such entrepreneurs become icons of success with the help of the prospective tool called innovation. They also cater to the ever-growing employment needs of the society. Leaving no stone unturned in their innovative and constructive pathway, they prove to be the heartbeat of a nation's progress and prosperity. Thus, the EDC empowers the youth with entrepreneurial skills.

Table 9.5: EDC Cell Committee Members

Sl. No.	Names	Designation	Department	Category
1	Dr. Chandrappa D. N.	Professor	E & C	Chairman
2	Dr. Basavarajappa Y. H.	Professor	Mechanical	Member
3	Mr. Pramod Prabhudev	Placement Manager	CDC	Member
4	Mr. Kunjan D. Shinde	Assistant Professor	E & C	Member
5	Mr.Pradeep	Assistant Professor	CSE & ISE	Member

6	Mr. Nandan Shenoy	Assistant Professor	CV	Member
7	Mr. Santhosh M. B.	Assistant Professor	Mechanical	Member
8	Mr. Kiran M. R.	Assistant Professor	EEE	Member

In our institute Entrepreneurship Development Cell is organized one day Awareness Program on entrepreneurship. Through the “DISHA” entrepreneurship development cell the CEDOK presented one day awareness program on “INNOVATION & ENTREPRENEURSHIP DEVELOPMENT” interaction with the entrepreneur is organized. Through entrepreneurship development cell competitions are arranged for new innovative business ideas.



Fig 9.7: Program under EDC, PESITM

### 9.7 Co-curricular and Extra-curricular Activities (10)

Total Marks 8.00

Institute Marks : 8.00

**Co-curricular and Extra-curricular Activities**  
**Co-curricular activities**

Every year there is an abundance of stimulating programs and activities are conducted from which students learn a lot. Co-curricular activities are an integral part of college life, offering students additional values to explore their talents, passions and interests. Participating in co-curricular activities which are conducted by our college and other institutions, our students continue to apply what they learn in the classroom to enhance their knowledge and performance.

### **Extra Curricular Activities**

The following Extra Curricular Activities are undertaken throughout the year:

- Publication of magazines

ISE students publish an annual magazine "MAHITHI" with the objective of establishing connectivity among the students. These magazine provides students an opportunity to express their feelings and exhibit their hidden talents in a variety of fields like writing articles and poems, technical articles, painting and photography skills.

### **Availability of Sports and Cultural Facilities**

#### **Sports Activities and Achievements**

The college offers wide range of opportunities and facilities for sports and games activities. The institution has a huge sports ground. There are well equipped gym and sports kits. A full-fledged gym is available to make the students fit with a physique. Annual sports meet and annual carnival are conducted. Students are encouraged to participate in various zonal and inter-zonal tournaments; they are paid daily allowances and travelling expenses. Students are provided with various sports kits and equipments. To manage all sport activities, well qualified physical education faculty members are appointed. The department of Physical Education provides opportunities to involve in outdoor and indoor games.

Indoor Games: Carom, Chess, Badminton, Table Tennis

Outdoor Games: Volleyball, Football, Kabaddi, Basketball, Ball Badminton, Cricket.

#### **Achievements**

- Mr.Dheeraj, 7th sem Information Science Branch student secured Silver Medal in 105 KG Category on for VTU Intercollegiate Weight Lifting competition held in Nov 2016. Mr.Dheeraj also secured 3rd place in VTU Intercollegiate( State Level) Wrestling Competition held in October 2016.



Fig 9.8:Mr. Dheeraj of ISE department secured medal in VTU Weightlifting & Wrestling competition

## NSS

The motto of NSS “Not Me, But You”, reflects the essence of democratic living and upholds the need for self-less service. PESITM NSS volunteers are highly motivated to strive hard for the well-being of the society. PESITM NSS team continuously organizes many events. The college nominated one of college faculty as NSS coordinator. The college organizes special camps once in a year comprising of boys and girls volunteers keeping in a mind of women equality. The camps were organized based on the themes as per the recommendations of the University.

The various NSS activities held are follows:

- **NSS Camp** on Healthy Youth for Healthy India. Annual Special **NSS Camp** was Successfully conducted at Konagavalli Village, **Shimoga(T)**, **Shimoga(D)** from 4/1/2018 to 10/1/2018 with the theme of Healthy Youth for Healthy India. Many programs and events were organized and conducted for the benefit of volunteers and villagers.





Fig 9.9: NSS camp at Konagavalli, Shivamogga

- The Information Science Department of organized an activity to promote “Swachh Bharat Abhiyan” lieu of Swachh Bharat Abhiyaan which is being organised by Govt. of India. On this occasion, department participated in this campaign. All participants have taken oath to make and keep campus clean. They have also cleaned the campus on the occasion Dr.APJ.Abdul Khalam Cricket Stadium,PES Campus, Shivamogga. This activity was also dedicated to Mahatma Gandhi on the eve of his birth anniversary 2nd October, 2018.



Fig 9.10: NSS camp to promote “Swachh Bharat Abhiyan” at PESITM Campus, Shivamogga

- PESITM conducted campaign for road safety under NSS banner. Dr. Ashok kumar T. Principal, PESITM took the lead and read out the oath as follows:
  - Slow down the speed and save lives

- Care for my life and lives of my family members, friends, relatives, neighbors and every single road user
- Follow the signboard and speed limits
- Avoid using phones while driving
- Avoid using my vehicle as a toy
- Obey the traffic rules
- Create awareness among all in the society about the road safety



Fig 9.11: NSS camp for road safety at PESITM Campus, Shivamogga

### Annual Students Activities

PESITM College students won Second Place in VTU State Level Intercollegiate Cultural Events in Folk Dance category conducted by AITM, Belagavi from 11-04-2019 to 15-04-2019.



Fig 9.12: Second place in VTU State Level Cultural Event

Mr. Mihirkumar Lathore H of 1<sup>st</sup> year student secured 3<sup>rd</sup> place in ISTALLATION (Clay Modelling) event in 20<sup>th</sup> VTU youth festival "INSIGNIA" held at SDM College of Engineering & Technology, Dharwad in November 2019.



Fig 9.13: Third place in VTU Youth Festival

**10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)**

**Total Marks 110.00**

**10.1 Organization, Governance and Transparency (40)**

**Total Marks 40.00**

**10.1.1 State the Vision and Mission of the Institute (5)**

**Institute Marks : 5.00**

**Vision :**

To be the most preferred institution for engineering & management education, research and entrepreneurship by creating professionally superior and ethically strong global manpower.

**Mission :**

To prepare students for professional accomplishments and responsible global citizenship while fostering continuous learning and to provide state-of-the-art education through the committed and highly skilled faculty by partnering and collaborating with industry

**10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10)**

**Institute Marks : 10.00**

### **Governing Council of the institute**

The Governing Council of the Institute is constituted as per the norms of AICTE, New Delhi, Affiliating University & Govt. of Karnataka and it is the supreme administrative body. The Governing Council of the institute has a robust framework for the governance and it works towards meeting the interests of all stake holders. The Governing Council meets a minimum of two times a year or whenever needed.

**The Governing Council of PESITM is given below**

<b>Name</b>	<b>Designation</b>	<b>Position</b>
<b>Prof. M R Doreswamy</b>	Chancellor, PES University, Bengaluru	<b>Chairman</b>
<b>Sri B Y Raghavendra</b>	Management Trustee, PES Trust (R), Shivamogga Member of Parliament, Shivamogga	<b>Member</b>
<b>Prof. JawaharDoreswamy</b>	Treasurer, PES Institutions. Pro-Chancellor- PES University, Bengaluru	<b>Member</b>
<b>Sri B. Y. Vijayendra</b>	Joint Treasurer, PES Trust (R), Shivamogga	<b>Member</b>
<b>Smt. S. Y. Arunadevi</b>	Joint Secretary, PESITM & Trustee	<b>Member</b>
<b>Smt. S. Y. Umadevi</b>	Industry Executive	<b>Member</b>
<b>Smt. Tejaswini Raghavendra</b>	Trustee	<b>Member</b>
<b>Dr. S. S. Gupta</b>	Director, Rajiv Gandhi Institute for Steel Technology, JSW steels, Bellary, Karnataka. Member.	<b>Member</b>
<b>Dr. M R Shivakumar.</b>	Principal, SRSIT, Bangalore	<b>VTU Nominee Member.</b>
<b>Dr. G P Prabhukumar</b>	Emeritus Professor New Horizon College of Engineering, Bangalore	<b>Member</b>
<b>Dr. L S Nandeesh</b>	Professor of Chemistry, Academic Director and NAAC Consultant (Sri Jagadguru Renukacharya Education Society, Bangalore)	<b>Member</b>
<b>Prof. Dr. R. Nagaraja</b>	Chief Coordinator – Administration, PES Trust (R), Shivamogga	<b>Member</b>
<b>Dr. Jagadeesh S N.</b>	HOD & Professor PESITM, Shivamogga	<b>Member</b>
<b>Dr. Guruvareddy</b>	Professor, Dept of ECE PESITM, Shivamogga.	<b>Member</b>
<b>Dr. Chaitanya Kumar M V</b>	Principal PESITM, Shivamogga	<b>Member Secretary</b>

### **Major Responsibilities of the Governing Council**

- To uphold the legal stature of the college in view of AICTE, UGC, State Government and affiliating University (VTU) or any other body or agency.
- To take decisions regarding the intake and addition or discontinuation of any program accordingly recommending the Principal to take formal steps with the affiliating body to put this into action.



- Fix the fee structure and any charges applicable in accordance with the recommendation of administrative bodies and the prescribed fee structure of affiliating university.
- Extension, Renovation or Procurement plans recommended by Core Committee.
- Decide the promotions or penalties as recommended by the Academic Committee.
- Approve the budget and recommend necessary corrections.
- Nominate and constitute other central committees for smooth discharge of responsibilities

### **Powers and Functions of the Governing Council**

The Governing Council shall exercise powers and discharge the functions as follows:

- Ensure proper management & maintenance of the institution in relation to land, infrastructure, equipment, and funds, including loans and grants received from AICTE, Central Government and Government of Karnataka.
- Ensure compliance with norms and standards prescribed by the Government of Karnataka and affiliating University.
- To ensure implementation of provision of acts, instructions, rules, and regulations prescribed by AICTE and Government of Karnataka in matters of service conditions of the staff relating to appointment, leave Provident Fund, age of retirement and disciplinary actions.
- To submit reports and returns from time to time to AICTE, Government of Karnataka and affiliating University.
- Create a peaceful and favorable atmosphere for study free from ragging.

### **Powers and Functions of Chairperson of Governing Council**

- The Chairperson shall ensure that the Governing Council is functioning properly to meet the desired deliverables.
- In the event of taking a vote on any decision and if a tie occurs, then the decision of Chairperson shall be final.
- The Chairperson shall ensure that the decisions taken in the Governing Council meeting are implemented by Member Secretary.

### **Powers and Functions of Member Secretary of Governing Council**

- Principal of the institution, by default, is the Member Secretary of the Governing Council.
- Member Secretary executes the decisions taken in the Governing Council on behalf of the Governing Council.
- He would take correspondence on behalf of the Governing Council meeting in relation to the decisions taken in it and get it confirmed by the Chairperson and members present. With confirmation, the proceedings would be forwarded to AICTE, Government of Karnataka and affiliating University.
- He will exercise powers and functions as maybe imposed and assigned by the Governing Council from time to time.
- The Member Secretary would issue appointment letters to the staff selected by the Recruitment Committee after the approval from the sponsoring trust and the Governing Council of the institute.

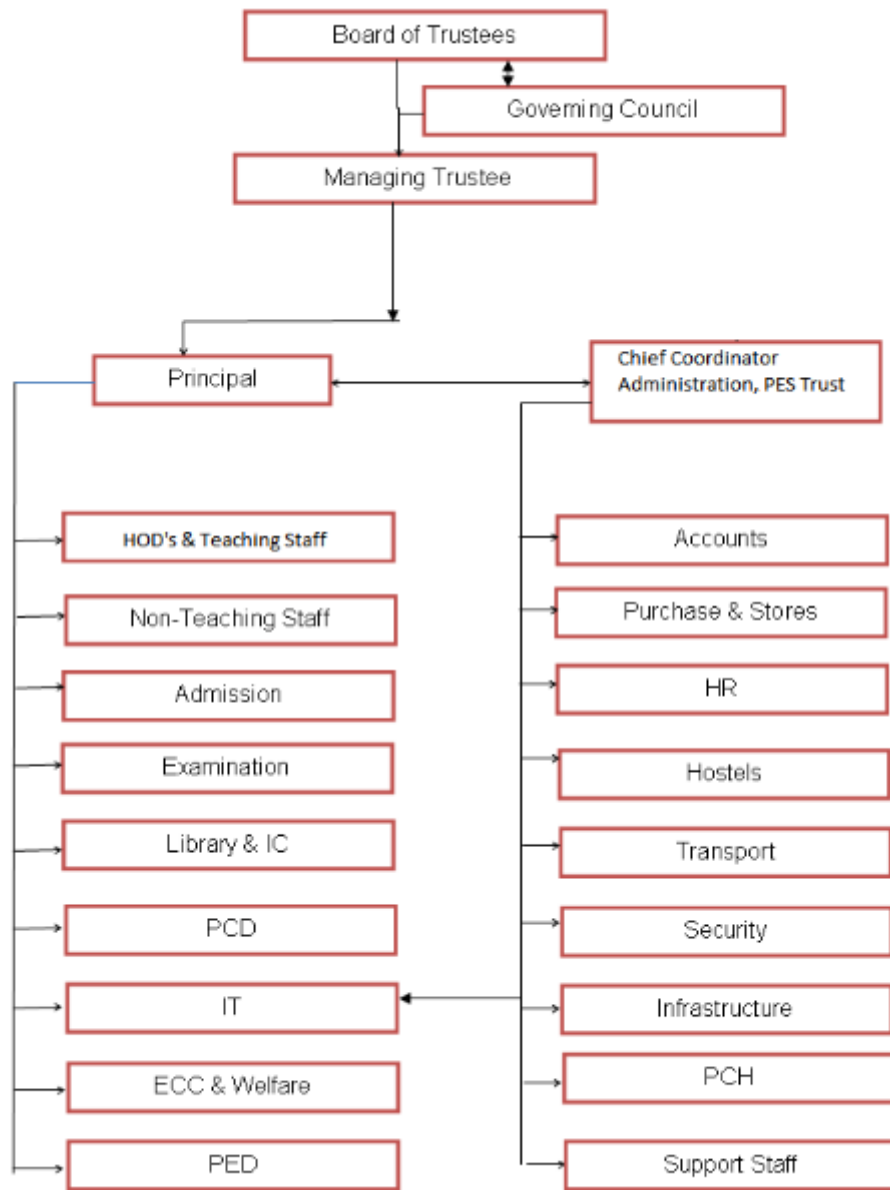


Fig 10.1: Organizational Chart

**Functions of key administrative positions**

Position	Functions
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Principal	<ul style="list-style-type: none"> <li>• He functions as the Head of the Institution and is the Member-Secretary of the GC.</li> <li>• He is responsible for the overall development of the Institution.</li> <li>• Ensure the attainment of the vision of the Institution through strategic mission.</li> <li>• Define quality policy and objectives.</li> <li>• Define &amp; delegate responsibilities of various positions in the organization.</li> <li>• He is the final authority for all academic, admission, administrative, co-curricular and extracurricular, research, placement, innovation, resource mobilization, planning and development, recruitment.</li> <li>• He also coordinate the needs of meeting statutory and regulatory requirements of the government (AICTE, UGC, DTE) and University (VTU).</li> <li>• He channelizes the growth and benchmarking activities of accreditation (NBA/NAAC) and affiliation (VTU) processes for the institute.</li> <li>• He is the single point contact (SPC) for external bodies (industries, academia, regulators, institutions/organizations, companies) and also for stakeholders: industries, parents, and alumni.</li> </ul>
Vice-Principal	<ul style="list-style-type: none"> <li>• To discharge the routine duty of Principal in his absence.</li> <li>• Head of the Internal Quality Assurance cell.</li> <li>• Alumni interaction.</li> <li>• Branding tasks &amp; admissions</li> <li>• Prepare and execute the academic calendar.</li> <li>• Oversee the teaching-learning process.</li> <li>• Carry out result analysis and submit corrective measures to Principal.</li> <li>• Initiate better teaching-learning methods.</li> <li>• Co-curricular activities.</li> <li>• Formation of the student council.</li> <li>• Sports &amp; Cultural activities.</li> </ul>

<p>Head of Departments</p>	<ul style="list-style-type: none"> <li>• He / She is the functional and administrative head of the concerned department.</li> <li>• He/she ensures the smooth running of the concerned department by laying goals and milestones of the department. Vision and Mission statements too are chalked out for streamlining all further actions.</li> <li>• HOD builds and leads the team of required numbers of faculty members</li> <li>• The HOD ensures planning, execution, troubleshooting of all academic activities (theory and lab classes), examination (CIE) along with supporting smooth conduction of VTU examinations, research and publication, projects and developmental activities.</li> <li>• He/she coordinates intra (with IIIC, T &amp; P and other depts. /centers at the institute) and inter (with other academia and industries) institutional communicational roles.</li> <li>• HOD plans and organizes events (conferences, seminars, workshops, and training) and conducts industrial visits and guest lectures for the benefit of dept. (students and faculty members).</li> <li>• He/she organizes meetings with stakeholders (particularly, parents) in the form of PTM.</li> <li>• Develop Calendar of events, Timetables for each section/semester, Upkeep and maintain records of the department, maintain laboratories and assets, assign duties and monitor faculty performance, verifies faculty appraisal, benchmark the growth parameters, monitor mentoring of students by the mentors (faculty team), identify and execute action on departmental needs, develop team towards audits and compliance, monitor R&amp;D and project activities of the department, ensure up-keeping of departmental library, lead team towards publications and IP, seek MOUs from related industries.</li> <li>• He/she renders all support to the team lead, Principal.</li> <li>• He/she encourages and motivates the team to contribute to the positive growth of the department, in turn, the institution.</li> </ul>
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<p>Manager, Training &amp; Placements</p>	<ul style="list-style-type: none"> <li>• Director T &amp; P is solely responsible for planning, connecting, organizing, culminating all activities leading to the placement needs of the graduating students.</li> <li>• He develops and nurtures contacts/connects with industries/companies/ organizations/alumni database in view of placement needs.</li> <li>• He ensures the smooth coordination with various stakeholders required for the process of placement.</li> <li>• He initiates the process of feedback collection from the visiting companies/organizations for offering placement and shares with concerned departments for better understanding and possible improvements in the subsequent sessions/years.</li> <li>• He coordinates activities for pool-in placement drives.</li> <li>• Facilitate career guidance to the students.</li> <li>• He significantly contributes to building the brand value of the institution.</li> </ul>
<p>I/C Library</p>	<ul style="list-style-type: none"> <li>• The Librarian is responsible for the resources of the Library and Information Centre comprising of assets in both hard and soft forms.</li> </ul> <p>The associated duties are:</p> <ul style="list-style-type: none"> <li>• He envisages the plans, initiates actions for addressing all possible needs of primary stakeholders - students, teachers and research scholars (via identifying and ordering books, reference material, journals, online resources, issue of resources and maintenance of records).</li> <li>• He with his team undertakes series of tasks towards optimal utilization and for maintenance of the library.</li> <li>• Maintain library discipline and culture.</li> <li>• Prepare annual budget for library</li> </ul>
<p>Director Physical Education</p>	<ul style="list-style-type: none"> <li>• Proposing an annual budget.</li> <li>• Creation and upkeep of sports facilities.</li> <li>• Purchasing of sport items.</li> <li>• Conduct training camps.</li> <li>• Ensure the smooth conduct of sports.</li> <li>• Encourage students to participate in regional / zonal / VTU tournaments.</li> </ul>

Majority of the decisions within the department are made by the respective heads of the departments.

Sl. No	Name	Head of the department
1.	Dr. Jagadeesha S. N.	Computer Science & Engineering
2.	Dr. Hiremath M. N.	Civil Engineering
3.	Dr. Manoj Kumar	Electrical and Electronics Engineering
4.	Dr. Chandrappa D.N	Electronics and Communication Engineering
5.	Dr. Prasanna Kumar H. R.	Information Science & Engineering
6.	Dr. Basavarajappa Y H	Mechanical Engineering
7.	Dr. Prasanna Kumar T M	MBA

A number of committees are present in the college that is formed taking into the considerations of the stakeholders. There is diversification that ensures that the committees address any issues faced by the stake holders and also aims for the improvements under the purview of the respective committees. The various committees, their in-charge, roles and responsibilities & meeting details are given below:

### 1. Academic Monitoring Committee (AMC)

Name	Position
Dr. S N Jagadeesha, HOD-CSE	Chairman
Dr. Guruva Reddy , Vice-Principal	Member
Mr. Rakesh, Dept. of ECE	Member
Dr. Girish, Dept. of ME	Member
Mr. Kiran Kumar, Dept. of EEE	Member
Dr. Manu, Dept. of CSE	Member
Dr. Pramod, Dept. of ISE	Member
Dr. ArvindMallik D M, Dept. of MBA	Member
Dr. Shivkumar, Dept. of Basic Science	Member

### Roles & Responsibilities:

- The AMC thoroughly works on designing the educational process
- It continuously reviews and monitors the process keeping in view the emerging needs and expectations of the industry
- The AMC along with the strength of the faculty members continuously works on updating and restructuring the innovative skill sets for promoting academic excellence
- To verify faculty –academic pre-preparation and generate verification reports.
- To conduct monthly audit of course delivery and submit report to HOD.

- To conduct midterm & end term academic monitoring /verification and submit report to HOD
- To maintain departmental academic file
- To prepare departmental academic calendar
- To make sure that daily attendance report of each class is filled properly before submitting.
- To monitor works of class teacher and smooth conduction of academics.
- To conduct departmental audit per semester
- To conduct interdepartmental audit per semester
- To observe lecture conduction of faculty member along with senior faculty members.

## Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	30/10/2019	09	0
	16/01/2020	09	0
CAYm1	18/10/2018	06	3
	29/01/2019	09	0
	26/04/2019	09	0
CAYm2	20/10/2017	07	2
	29/01/2018	09	0
	27/04/2018	09	0
	26/07/2018	09	0
CAYm3	26/08/2016	09	0
	26/10/2016	07	2
	27/01/2017	09	0
	28/04/2017	09	0
	31/07/2017	08	1

## Time Table Committee

Name	Designation
Dr. Aveesh S T, Dept. of Mathematics	Coordinator
Mr. Shivanand D C, Dept. of M.E	Member

Mr. Rakesh M K, Dept. of Civil Engineering	Member
Mr. Raghavendra K, Dept. of CSE	Member
Mr. Vishnu V M, Dept. of ECE	Member
Mr. Arjun U, Dept. of ISE	Member
Mrs. Neetha H M, Dept. of EEE	Member
Dr. Chandru K, First Year	Member

### Roles & Responsibilities:

- Time-Table preparation for each department.
- To Prepare Individual Timetable & Room wise Timetable get approval by the Principal.
- Allotment of Classrooms, Labs, Tutorial Rooms etc.
- Correlate the timetable with the calendar of events of the department & College.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	22-01-2020	7	01
CAYm1	06-06-2019	8	00
	05-01-2019	8	00
CAYm2	12-06-2018	8	00
	08-01-2018	8	00
CAYm3	05-06-2017	7	00
	09-01-2017	7	00

### 2. Discipline Committee

Name	Position
Dr. Girisha L, Associate Professor , Dept. of ME	Chairman
Dr. Praveen Kumar C M, Asst. Professor, Dept. of Chemistry	Member
Mr. Rakesh, Asst. Professor, Dept. of Civil Engineering	Member
Mrs. Neetha, Asst. Professor, Dept. of EEE	Member
Mrs. Prathibha, Asst. Professor , Dept. of CSE	Member
Dr. Sendhil, Physical Director	Member

Dr. M N Hiremath, HOD- CV & Chief Warden – Boys Hostel	Member
Mrs. Yagnodhbhavi, Asst. Professor, Dept. of CV & Chief Warden – Girls Hostel	Member

### Roles & Responsibilities:

- To maintain and enforce strict discipline within the college campus.
- All the students should wear their ID Cards while they are in the campus and their respective class rooms.
- In case of any violation of dress code or disturbance in the class, the ID card will be confiscated from the student which will be handed over to the student on the same day with a warning and advice from the Disciplinary Committee Members.
- In case of any misbehavior or violation of the college rules, the ID cards of the students will be kept with the Disciplinary Committee Members till the enquiry is over.
- To enforce total prohibition of cell phone usage by the students within the college campus. Please note that cell phone is prohibited in the college campus and if a student is found carrying a cell phone, it will be taken away and handed over to the Principal.
- To monitor the movement of the students in the college and prevent students loitering around in the corridors during the college working hours.
- To ensure that all the students attend classes without bunking and prevent them from leaving the college early. Please note that no student can leave the college early without prior permission from the concerned authorities.
- Smoking is strictly prohibited in the college campus and ensures that this is being strictly followed.
- To ensure that students maintain complete silence in the library.
- To maintain proper discipline in the college canteen and student common boys/girl resting room during the college working hours.
- If any damage is caused to the college property by any student / group of students, the cost of the same will be recovered with a fine from the said student / group of this will be followed by disciplinary action.
- If any indiscipline is found by any of the students, warn them on the first instance. Take disciplinary action based on the rules and regulations of the committee, if the pattern of misconduct continues.
- Submit the enquiry report of any incidents/issues after conducting a committee meeting.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	17.08.2019	7	0
	28.09.2019	5	2
	23.09.2019	7	0
	26.11.2019	7	0
	19.12.2019	7	0
	25.02.2020	6	1
CAYm1	03.09.2018	7	0
	24.10.2018	7	0
	31.10.2018	7	0

	24.11.2018	5	2
	20.12.2018	7	0
	11.01.2019	6	1
	23.02.2019	7	0
	27.03.2019	7	0
	20.04.2019	7	0
	29.05.2019	7	0
	22.06.2019	7	0
CAYm2	26.09.2017	7	0
	21.10.2017	7	0
	24.11.2017	5	2
	29.12.2017	7	0
	02.02.2018	6	1
	30.03.2018	7	0
	26.04.2018	7	0
	31.05.2018	5	2
	23.06.2018	7	0

### 3. Anti-Ragging Committee

<b>Name</b>	<b>Designation</b>
Dr. Chaitanya Kumar M V,Principal	Chairman
Dr. Prasanna Kumar T M, HOD-MBA	Coordinator
Dr. Jagadeesha S N, HOD-CSE	Member
Dr. Manoj Kumar, HOD - EEE	Member
Dr. Shivkumar K, HOD-Chemistry	Member
Dr. Sendhil, Physical Education Director	Member
Dr. Basavarajappa Y H, HOD-M.E	Member
Dr. Prasanna Kumar H R, HOD-ISE	Member
Dr. M N Hiremath, HOD-Civil & Warden-Boys Hostel	Member
Dr. Chandrappa D N, HOD-ECE	Member
Dr. Aveesh, HOD-Maths	Member
Dr. PramodPai, HOD-Physics	Member
Mrs. Yagnodbhavi H M, Dept. of Civil Engg.	Member
Mr. Ramesh, Resident Warden – Boys Hostel	Member
Mrs. Manjula, Resident Warden – Girls Hostel	Member

Mr. SuhasBharadwaj, Student – ME	Member
Ms.SwathiSarang, Student - ISE	Member
Mr. Abhijith H K, Student – Civil Engg.	Member

#### Roles & Responsibilities:

- Preventing the menace of ragging in the college and making the campus zero ragging zone.
- Ensure anti-ragging instructions are displayed at prominent places in college campus and hostels
- To make surprise raids in the college, hostels and other vulnerable places where students generally visit and where either the incidents of ragging have occurred or which are potentially prone to ragging.
- To conduct an on-the-spot enquiry into any incident of ragging referred to it by any member of the committee or any faculty as the case may be.
- If any such above incidents are observed, take immediate action to prevent the same and report the same to the principal without any delay.

#### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	27/09/2019	18	0
	25/07/2019	14	4
CAYm1	09/08/2018	11	1
CAYm2	09/08/2017	12	0
CAYm3	25/08/2016	10	0

#### 4. Co-curricular and Extra-Curricular Activities Committee

Name	Position
Dr. Prasanna Kumar T M, HOD-MBA	Chairman
Mr. Rakesh M K, Dept. of Civil Engineering	Member
Mrs. Deeksha Kamath, Dept. of Basic Science	Member
Mr. Shivayogappa H. J., Dept. Of ECE	Member
Mr. Puneeth B. H., Dept. of CSE	Member
Mr. Vinay S. K, Dept. of ISE	Member
Mrs. Neetha H. M., Dept. of EEE	Member
Mr. Maltesh Kumar Deshpande, Dept. of M.E	Member
Ms. Divya H. A, Dept. of Civil Engineering	Member

#### Roles & Responsibilities:

- The Cultural Committee shall be responsible for all intra and inter collegiate cultural events in the Institute.

- To plan and schedule cultural events for the academic year.
- The Convener of the committee shall conduct a meeting of the committee to discuss and delegate tasks.
- To prepare the Annual Budget for various cultural events.
- Motivating students to participate in cultural events organized at College, University, National and International levels.
- Organizing cultural events for staff members

### Meetings

Academic Year	Date Meeting	No. of Members Attended	No. of Members Absent
CAY	17/11/2019	09	0
	17/02/2020	09	0
	24/02/2020	09	0
CAYm1	17/08/2018	08	0
	15/11/2018	07	1
	04/02/2019	08	0
	05/04/2019	08	0
CAYm2	19/08/2017	08	0
	14/11/2017	07	1
	03/02/2018	08	0
	12/02/2018	07	1
	26/02/2018	08	0
	19/05/2018	08	0
CAYm3	24/08/2016	08	0
	10/11/2016	08	0
	06/02/2017	07	1
	18/02/2017	05	3
	25/02/2017	08	0
	13/05/2017	08	0

### 5. Sports Committee

Name	Designation
Dr. Shivkumar, Professor, Basic Science	Chairman
Dr. Sendhil, PED	Member Secretary
Mr. Sunil M E, Dept. of CSE	Member
Mr. Shanthaveeresh, Dept. of EEE	Member



Mr. Shashank B, Dept. of ECE	Member
Mr. Arjun U, Dept. of ISE	Member
Mr. Sanjay, Dept. of Civil Engineering	Member
Mr. Ganesh U L, Dept. of M.E	Member
Mr. Praveen Gujjar, Dept. of MBA	Member

### Roles & Responsibilities:

- To provide an environment for physical development of the students.
- To develop team spirit among the students.
- To provide opportunity for the students to showcase their talent in sports.
- To promote sportsmanship among students by organizing various sports activities.
- Organizing various indoor and outdoor games during sports week.
- Motivating students to participate in sports events organized at University, national and international levels.
- Organizing sports events for staff members.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	01/08/2019	09	0
	23/01/2020	09	0
CAYm1	06/08/2018	09	0
	30/01/2019	09	0
CAYm2	02/08/2017	09	0
	05/01/2018	09	0
CAYm3	05/08/2016	09	0
	05/01/2017	09	0

### 6. NSS Committee

Name	Designation
Mr. Prasanna Nayak H, Dept. of ME	NSS Officer
Mr. Ganesh U L, Dept. of ME	Member
Mr. Puneeth B H, Dept. of CSE	Member
Mr. Amshith Kumar, Dept. of Civil Engineering	Member
Mr. Venkatesh, Dept. of ISE	Member
Mr. Shivayogi, Dept. of ECE	Member

Mr. Shantveeresh, Dept. of EEE	Member
Mr. Arjun J, Dept. of MBA	Member
Dr. Chandru K, First Year	Member

### Roles & Responsibilities:

- Develop a sense of social and civic responsibility among students.
- Utilize student's knowledge in finding practical solution to individual and community problems.
- Acquire leadership qualities and democratic attitude.
- Develop community service attitude during emergencies and natural disasters.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	07/08/2019	09	0
	11/02/2020	08	1
CAYm1	08/08/2018	07	0
	07/02/2019	08	0
CAYm2	11/08/2017	06	1
	13/02/2018	07	0
CAYm3	09/08/2016	08	0
	20/02/2017	07	0

### 7. Grievance Redressal Committee

Grievance Redressal Committee is constituted as per AICTE regulations. The committee shall meet within a week from the date of receipt of any petition/complaint from any student and take necessary action as deem fit and initiate necessary action for solving problem.

#### Mechanism for redressing grievance.

- The departmental level grievances are attended by the concerned Class Coordinators, Mentors / or Department Heads.
- Unresolved grievances at the departmental level are referred to the Grievance Redressal Committee of the institution.
- The committee shall send report with recommendations to all concerned within 15 days from the date of receipt of the complaint

*Note: Student can register complaint through online using college website.*

#### Grievance Redressal Committee: 2019-20

Name	Position
Dr. Chaintanya Kumar M V, Principal	Chairperson
Dr. Prasanna Kumar T M, HOD-MBA	Member

Mrs. Shyamala S. C., Assistant Professor, ECE	Member
Dr. Praveen Kumar C.M., Assistant Professor, Basic Science	Member
Mr. Roshan, Student - CSE	Special Invitee

### Roles & Responsibilities:

- To resolve student grievances related to both academic as well as non-academic matters.
- To ensure there is no bias or prejudices while dealing with students
- To promote and establish transparent practices related to students
- To create a conducive environment for learning

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	27/09/2019	05	0
CAYm1	09/08/2018	08	0
CAYm2	09/08/2017	08	0
CAYm3	25/08/2016	08	0

### 8. Anti-Sexual harassment Committee

Name	Designation
Dr. Sunitha B S, Associate –Professor , CSE	Chairperson
Mrs. Yagnodhbavi H M, Assistant Professor, Civil	Member
Mrs. Shymala S C, Assistant Professor, ECE	Member
Dr. Prasanna Kumar H R, HOD-ISE	Member
Mrs. Vani G S, Assistant Professor, ISE	Member
Mrs. Manjula, Office-Executive	Member

### Roles & Responsibilities:

- Prevent discrimination and sexual harassment against women (active and preventive in nature) in the campus, hostel and college premises by promoting gender amity among students.
- Prevention of sexual harassment to ensure safe learning environment for girl students
- To ensure provision of an educational environment that is free from sexual harassment.
- To address any oral, written or online complaint at WECARE about sexual harassment.

Sexual harassment includes oral or written statements of a sexual nature to a person , or in a person's presence.

- Aiming at ensuring support services to the victimized and termination of the harassment.
- If any such incidents occur / found, report the same to the Principal immediately.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	09/09/2019	7	2
	18/11/2019	6	0
CAYm1	16/08/2018	9	2
	14/09/2020	6	0
CAYm2	09/08/2017	9	0
	23/10/2017	6	0
CAYm3	25/08/2016	9	0

### 9. Entrepreneur Development Cell (EDC)

Name	Position
Dr. Chandrappa D N, HOD- ECE	Coordinator
Dr. Basavarajappa Y H , HOD- ME	Member
Dr. Pramod S P, CDC	Member
Dr. Nandan N Shenoy, Dept. of Civil Engineering	Member
Mr. Kunja D Shinde, Dept. of ECE	Member
Mr. Santosh M B, Dept. of ME	Member
Mr. Pradeep K. Dept of CSE	Member
Mr. Kiran Kumar G R, Dept. of EEE	Member
Mr. Arjun J, Dept of MBA	Member

### Roles & Responsibilities:

- To create an entrepreneurship eco-system in the institute, where students would learn the technicalities of entrepreneurship and become job providers instead of job seekers.
- To be in continuous contact with District Industry Officer, KSFC and other Government and private nodal agencies.
- To arrange lectures on establishment of new start-ups, MSM enterprises.
- Strive to establish an incubation centre with Governmental funding.
- Create a strong network of mentors who would provide sector specific knowledge & real world practical guidance.
- To arrange Entrepreneurship training programs, conduct events and inspirational programs.

- Build a strong team with adequate knowledge and experience in guiding start-ups, building business plans, facilitating investments, building networks, etc.

## Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	09.01.2020	08	Nil
CAYm1	04.10.2019	08	Nil
CAYm2	06/09/2018	08	Nil
CAYm3	16/04/2018	08	Nil

## 10. Training & Placement Cell

Name	Designation
Dr. Manoj Kumar, HOD-EEE	Chairman
Mr. Pramod S Prabhudev, Manager – T&P	Member Secretary
Mr. Kalpana S - EEE	Member
Mr. Chethan B R -ECE	Member
Dr. Likewin Thomos - CSE	Member
Mr. Arjun U – ISE	Member
Mr. Vinod Rampur - ME	Member
Mr. Sharath S K - Civil	Member
Mr. Arjun J - MBA	Member

### Roles & Responsibilities:

- To review the Training & Placement Performance of every outgoing batch of Graduates.
- To understand the Industry Specific Skills and being aware of trending technologies with respect every specialization.
- To analyze the academic performances of students and orient students about eligibility criteria of Companies.
- To ensure maximum student participation in all Training & development initiatives.
- To facilitate Internships, Guest talks, Industry Specific Workshops, Academic Projects,

Industry initiatives and campus recruitment drives. To maintain connectivity with all campus recruited students for mentoring and training programs.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	21 <sup>st</sup> Sep, 2019	9	0

CAYm1	24 <sup>th</sup> Jan, 2020	8	1
CAYm2	5 <sup>th</sup> oct, 2018	8	1
CAYm3	11 <sup>th</sup> Sep, 2017	9	1

## 11. Purchase Committee

Sl. No.	Designation	Name of the Person	Position
1	CCA, PES Trust (R) &	Dr. Nagaraja R	Chairman (Authorized to sign POs)
2	Principal, PESITM		Member (Authorized to sign POs)
3	Head /Section Head of the concerned Dept		Member
4	Senior Professor, of the concerned Dept		Member
5	Assistant Professor Dept. of Civil Engg.	Mr. Nandan N Shenoy	Member Secretary

### Roles & Responsibilities:

- To scrutinize requisitions for equipment of various departments and decide upon the necessity of purchasing the equipment, keeping in view the requirements specified by the University, AICTE, NBA, NAAC, GOI, GOK etc.
- To coordinate all the purchases of various Departments and ensure the procurement of required items as per schedule
- To call and scrutinize tenders/ quotations for items of purchase, with the help of department.
- To ensure that the supplies/services quoted for comply with what was requested.
- To carry out discussions and negotiations with suppliers and procure the best quality items with competitive price.
- To seek clarification from suppliers/service providers wherever necessary.
- To finalize the terms and conditions in the purchase order.
- To forward the negotiated /finalized quote for approval of the management through
- To arrange for sending the purchase order, inspection and acceptance/ rejection of the equipment received, with the help of department.
- To communicate the decision of the Committee to concerned department.
- Normally frequency of the CPC meeting should be once in 15 days; whereas in case of urgency and necessity CPC can meet as and when required.
- If the value of the purchase falls lesser than Rs 10,000/- (Ten Thousand Rupees), Purchase section/Dept with the consent of the chairman may proceed with purchasing the indented items directly without the approval of the Purchase committee.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	14/02/2020	05	00
CAYm1	23/08/2018	04	00
CAYm2	27/04/2017	04	00
CAYm3	26/08/2016	04	00

## 12. Budget Committee

Sl. No.	Designation	Name of the Person	Position
1	Governing Council Member	Mrs. Umadevi S Y	Chairperson
2	CCA, PES Trust (R)	Dr. Nagaraja R	Member
3	Principal, PESITM		Member
4	All Department HODs		Members
5	Accounts Manager		Member
6	Assistant Professor, Civil Engg	Mr. Nandan N Shenoy	Member Secretary

### Roles & Responsibilities:

- Ensuring that the financial elements of the institution are in accordance with its vision, mission, objectives and strategic plan.
- To assist PES Trust in fulfilling its fiduciary responsibility.
- To protect the organization from legal challenges and liabilities.
- To guard the organization against illegal, unethical, or incompetent activities by fiscal managers.
- To protect the organization from actual or apparent conflict of interest.
- To act as an advisory panel to the financial operations.
- To evaluate both the financial operations and the people in charge of it meticulously.
- To be vigilant of illegal, unethical, or incompetent financial dealings engaged in by individuals or groups that the organization deals with, or financial arrangements that may harm the organization.
- Participating in the annual audit and carry out meticulous pre-audit checks.
- Evaluating PESITM's fiscal operations, and those in charge of it.
- Reporting to the board of trustees about the financial conditions of PESITM, and/or any financial irregularities or inefficiencies regularly.
- To evaluate and approve budget of the programmes, activities, conferences, FDPs, SDPs, Workshops, Symposiums and/or any other academic, curricular and co-curricular, any other events of PESITM.
- Examine and scrutinize the annual budget of the Institute prepared by the principal and make suggestions and recommendations.

- To take up any other activity/responsibility as assigned by the Managing Trustee from time to time.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	09/12/2019	13	00
CAYm1	03/01/2019	13	00
CAYm2	06/12/2017	13	00
CAYm3	05/12/2016	13	00

### 13. Student Welfare Committee

Name	Designation
Dr. Prasanna Kumar H R, HOD-ISE	Chairman
Mrs. Yajnodhbavi, Dept. of Civil Engineering	Member
Mr. Amruth, Dept. of M.E	Member
Mr. Pradeep, Dept. of CSE	Member
Mrs. Neetha, Dept. of EEE	Member
Dr. Pramod, Dept. of ISE	Member
Mr. Praveen Kumar B H, Dept of MBA	Member
Dr. Chandru, Dept. Of Mathematics	Member

### Roles & Responsibilities:

- Addressing the students regarding issues with facilities available in the college.
- Addressing the issues regarding Ragging in the campus.
- Giving awareness to students regarding various scholarship schemes.
- Giving awareness about reporting issues through website link (we care), email to student welfare process, suggestion box
- Conducting the meeting at least two times in a year to resolve the student's issues and taking necessary actions. Meeting can be called as and when required, depending upon the seriousness of the issue.
- If any issues found, immediately report to the Principal.

### Meetings

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY	06/08/2019	08	0



	31/10/2019	08	0
	27/01/2020	07	1
CAYm1	30/08/2018	09	0
	28/11/2018	08	2
	20/02/2019	09	0
	31/08/2017	09	0
CAYm2	28/12/2017	09	0
	12/02/2018	09	0
	16/08/2016	08	1
CAYm3	30/08/2016	09	0
	30/11/2017	09	0
	01/02/2017	07	2
	03/05/2017	09	0

#### 10.1.4 Delegation of financial powers (10)

Institute Marks : 10.00

Preparation of the budget is very important for running any departments. Every department at PESITM prepares a budget before the commencement of the academic year. Department Heads, with Senior Professors give the requisition to the Principal with regard to stationery, lab requirements, etc, for which budget allocations are approved by the Principal in discussion with the Management. Also, every Department Head is expected to give separate budget for FDPs, SDPs and any other activities planned by the department to Principal for approval.

Key administrative personnel are empowered to take decision with regard to spending money for any important operational purpose and the table given below outline financial powers for these personnel.

Sl.No.	Designation	Financial Power (in Rs.)
1	Chief Coordinator – Administration (CCA)	1,00,000.00
2	Principal	50,000.00
3	All HoDs	25,000.00

#### 10.1.5 Transparency and availability of correct/unambiguous information in public domain (5)

Institute Marks : 5.00

Information of PESITM Policies, Rules, Processes and Dissemination made available to the public on the college website. The URL is <http://pestrust.edu.in/pesitm>

**10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30)**

Total Marks 26.00

**10.2.2 Utilization of allocated funds (15)**

Institute Marks : 12.00

The allocated funds are utilized properly and are adequate as per the Academic requirements. The budget funds are utilized on priority basis as per the requirements of each department, based on availability of funds. However, all recurring and non-recurring expenditure of departments is met in full (including salaries, lab consumables etc).

Year	Total budget (in laks)		Actual Expenditure (in laks)	
	Non recurring	Recurring	Non recurring	Recurring
2019-20	9644489	76352428	8767717	69411299
2018-19	10209929	109114409	9281754	99194918
2017-18	23141443	101139232	21037675	91944757
2016-17	10299274	82416287	9362976	74923898

**10.2.3 Availability of the audited statements on the institute's website (5)**

Institute Marks : 5.00

PESITM Financial year 2018-19, 2017-18, and 2016-17 Audit Reports made available on the college website. The URL is <https://pestrust.edu.in/pesitm/audit-report/> (<https://pestrust.edu.in/pesitm/audit-report/>).

**10.2.1 Adequacy of budget allocation (10)**

Institute Marks : 9.00

Before the commencement of every academic year a meeting of all the Heads of departments is convened and budgetary requirement is taken, which includes procurement of new equipment, maintenance/servicing of existing equipment, consumables required, building space and also books required for the library. For buildings detailed plans and estimates are prepared and approval is taken for the same in the Governing Council meetings. A detailed report of all the development works undertaken and their current status is presented in the Governing Council meeting. The budgetary requirements are met through the admission fees collected from the students and the revenue generated. The budget allocated at the beginning of the financial year is adequate for managing the expenditure during that year. In case of any additional funds required, the management provides the requisite support.

**Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years :**

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

CFY : (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

**Table 1 - CFY 2019-20**

Total Income 146168166				Actual expenditure(till...): 108179016			Total No. Of Students 2023
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
115783734	0	0	30384432	69411299	8767717	30000000	53474.55

**Table 2 - CFYm1 2018-19**

Total Income 184698171				Actual expenditure(till...): 128476672			Total No. Of Students 2037
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
134562570	0	0	50135601	99194918	9281754	20000000	63071.51

**Table 3 - CFYm2 2017-18**

Total Income 181521628				Actual expenditure(till...): 132982432			Total No. Of Students 2123
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
131226010	0	0	50295618	91944757	21037675	20000000	62638.92

**Table 4 - CFYm3 2016-17**

Total Income 179185454				Actual expenditure(till...): 104286874			Total No. Of Students 2197
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
129510935	0	0	49674519	74923898	9362976	20000000	47467.85

Items	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till	Budgeted in 2017-18	Actual Expenses in 2017-18 till	Budgeted in 2016-17	Actual Expenses in 2016-17 till
Infrastructure Built-Up	279066.70	253697.00	4000000	2437173	10000000	10090809	2900000	2480133
Library	576816.00	567376.00	1500000	1249517	1500000	1315139	1100000	973480
Laboratory equipment	6729962	5189351	3620000	3281160	6050000	5133139	4300000	3759356
Laboratory consumables	286472.00	286472.00	900000	786085	1300000	1034857	300000	165886
Teaching and non-teaching staff salary	58138580.00	709336804	70000000	69895181	70000000	62841764	60000000	52735441
Maintenance and spares	971159.00	55742.00	6000000	5677020	6500000	6260659	4000000	3819908
R&D	100000	100000	100000	125000	100000	159000	100000	109000
Training and Travel	1608808	1528697	2800000	02441309	6350000	4790414	2825000	2398296
	2458310.00	721359.00	11000000	10896523	10000000	10139267	8800000	8275427
Others, specify	7556778.36	1410791.00	12000000	11940110	10000000	11668210	10000000	10093122
<b>Total</b>	<b>78705952.06</b>	<b>719450289.00</b>	<b>111920000</b>	<b>108729078</b>	<b>121800000</b>	<b>113433258</b>	<b>94325000</b>	<b>84810049</b>

### 10.3.1 Adequacy of budget allocation (10)

Institute Marks : 8.00

The Head of the department instructs the concerned lab in charges to provide the budget required for the coming academic year. The Lab in charge provides, both, recurring and non recurring expenditure budget required for the lab. Based on the budget provided by various lab in charges the a final budget proposal will be prepared with the following items Laboratory equipment

- Laboratory consumables
- Maintenance and spares
- Miscellaneous expenses

The budget provided by the institute to the department is adequate to maintain and procure new items for the departments, to meet the academic requirements. The yearly budget is prepared according to the needs & requirements of the departments taking into consideration of annual intake of students, laboratory & infrastructure developments. The budget allocation and utilization for the last four years is adequate.

### 10.3.2 Utilization of allocated funds (20)

Institute Marks : 18.00

The allocated funds are utilized properly, and adequate as per the Academic requirements.

Year	Approved Budget	Actual Expenditure	Percentage of utilization
2019-20	11875170	8763521	74
2018-19	30967000	29710978	96
2017-18	29642000	28062383	95
2016-17	25410000	22412109	88

Institute Marks :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY: (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

**Table 1 :: CFY 2019-20**

11875170		Actual expenditure (till...): 8763521		Total No. Of Students 206
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
5967585	5907585	4412163	4351358	42541.36

**Table 2 :: CFYm1 2018-19**

30967000		Actual expenditure (till...): 29710798		Total No. Of Students 204
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
15791000	15176000	15114884	14595914	145641.17

**Table 3 :: CFYm2 2017-18**

29642000		Actual expenditure (till...): 28062383.5		Total No. Of Students 207
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
14926000	14716000	14106264.5	13956119	135567.07

**Table 4 :: CFYm3 2016-17**

25410000		Actual expenditure (till...): 22412109		Total No. Of Students 192
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
12727500	12682500	11214157	11197952	116729.73

Items	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till	Budgeted in 2017-18	Actual Expenses in 2017-18 till	Budgeted in 2016-17	Actual Expenses in 2016-17 till
Laboratory equipment	0	0	600000	506250	200000	143274	0	0
Software	0	0	0	0	0	0	0	0
Laboratory consumable	7585	7585	0	0	20000	0	30000	5391
Maintenance and spares	250000	177359	25000	93952	200000	79038	250000	48769
R & D	24000	12000	24000	12000	24000	12000	24000	12000
Training and Travel	60000	60805	15000	12720	10000	6871.5	20000	16205
	1100000	139028	10176000	10044135	10696000	10118702	8647500	7767716
<b>Total</b>	<b>1441585</b>	<b>396777</b>	<b>10840000</b>	<b>10669057</b>	<b>11150000</b>	<b>10359885.5</b>	<b>8971500</b>	<b>7850081</b>

#### 10.4 Library and Internet (20)

Total Marks 18.00

##### 10.4.1 Quality of learning resources (hard/soft) (10)

Institute Marks : 8.00

#### LIBRARY AND INFORMATION CENTER

The library occupies a place of pride and is most lively place in the campus. It is well-furnished and its pleasant ambience with spacious reading room creates conducive environment to faculty and students and serves as a creative and innovative partner in supporting teaching, learning and research activities of the college.

- **Relevance of available learning resources including e-resources**

Library is contributing to achieve the goal and mission the institution. The collection of the library is rich and diverse comprising both digital and print form. The collection includes books, e-books, Journals(print and electronic), project reports, Conference proceedings etc., Library gives utmost importance to collection development of learning materials. The department heads in consultation with the department faculties recommend the required learning materials to be added to the library. The number of titles and volumes are added every year in accordance with the norms and standards set by VTU and AICTE.

- **Accessibility to students**

## Library Collection:

The rich collection of the library comprises the following resources:

Sl.	Learning / Reading Materials	Copies
1	Books (Print)	54,641
2	Books (Electronic)	23,629
3	Journals (print)	73
4	Journals (Electronic)	1,113
5	Magazines	15
6	News papers	14
7	CDs/DVDs	469
8	Project reports	315

A campus wide access to various E-resources subscribed to the library through VTU consortium is made through IP enabled access. Any number of users can access to resources at a time. Remote access to the E-resources is provided through KNIMBUS. Users can also access to digital resources through app called mLibrary. Digital library with 16 computers has been established to access E-resources and use NPTEL.

## List of Electronic resources subscribed:

Sl.No	ELECTRONIC RESOURCES	TOTAL RESOURCES	URL to access
1	McGraw Hill Education	505 E-Books	<a href="http://mcgrawhilleducation.pdn.ipublishcentral.com/">http://mcgrawhilleducation.pdn.ipublishcentral.com/</a> ( <a href="http://mcgrawhilleducation.pdn.ipublishcentral.com/">http://mcgrawhilleducation.pdn.ipublishcentral.com/</a> )
2	Knimbus Open access resources	E-Books : 10,000+ E- Journals : 5700+	<a href="https://pesceb.new.knimbus.com/user#/home">https://pesceb.new.knimbus.com/user#/home</a> ( <a href="https://pesceb.new.knimbus.com/user#/home">https://pesceb.new.knimbus.com/user#/home</a> )
3	Taylor and francis (E-Books & Journals)	555 Journals + 4950 E-Books	<a href="http://www.tandfonline.com/">http://www.tandfonline.com/</a> ( <a href="http://www.tandfonline.com/">http://www.tandfonline.com/</a> )
4	Springer nature (E-Books & Journals)	690 Journals+ 13000 E-books	<a href="https://link.springer.com/">https://link.springer.com/</a> ( <a href="https://link.springer.com/">https://link.springer.com/</a> )
5	Sententia Grammar Tool	..	<a href="https://sententia.online/">https://sententia.online/</a> ( <a href="https://sententia.online/">https://sententia.online/</a> )



6	Emerald management collection (Journals)	120 JOURNALS	<a href="https://www.emeraldinsight.com/">https://www.emeraldinsight.com/</a> ( <a href="https://www.emeraldinsight.com/">https://www.emeraldinsight.com/</a> )
7	Institution of Civil Engineers (ICE Journals)	10 Journals + 21 Conference Proceedings	<a href="https://www.ice.org.uk/">https://www.ice.org.uk/</a> ( <a href="https://www.ice.org.uk/">https://www.ice.org.uk/</a> )
8	ELSEVIER – SCIENCEDIRECT (CSE)	436 E-Books (Perpetual Access)	<a href="https://www.sciencedirect.com/">https://www.sciencedirect.com/</a> ( <a href="https://www.sciencedirect.com/">https://www.sciencedirect.com/</a> )
9	New Age International	220 E-Books (Prepetual Access)	<a href="http://www.newagepublishers.com/servlet/nahome/">http://www.newagepublishers.com/servlet/nahome/</a> ( <a href="http://www.newagepublishers.com/servlet/nahome/">http://www.newagepublishers.com/servlet/nahome/</a> )
10	Packt E-Books	5002 E-Books (Perpetual Access)	<a href="https://prod.packtpub.com/in/">https://prod.packtpub.com/in/</a> ( <a href="https://prod.packtpub.com/in/">https://prod.packtpub.com/in/</a> )

### **Area and Seating Capacity:**

Total area of library is 1171.65 Sq. Mtr.

Seating capacity is 120

### **Library hours:**

Library is functional on all week days and remains open for 12 hours a day.

#### **Working hours of the library**

Monday - Friday : 8.00 a.m. to 8.00 p.m.

Saturday : 8.00 a.m. to 5.00p.m.

Sunday : 9.00 a.m. to 12.00 p.m.

### **Library staff:**

There are 8 library staff working in library in shifts with 4 staff with professional degree and 4 non professionals

**Staff details**

Sl. No.	Name	Designation	Qualification
1.	Chandrashekar K. L	Senior Librarian	M.Sc. (lib & Inf science), M.Phil, KSET (PhD)
2.	Raja A	Asst. libn	M.L.I.Sc,
3.	Chandrashekar V. M	Asst. libn	M.L.I.Sc,
4.	Prakash R	Asst. libn	M.L.I.Sc,
5.	Chetan Kumar S. B	Libray Assistant	B.A. (B.L.I. Sc.)
6.	Sunanda M C	Libray Assistant	ITI
7.	Tulasi R	Libray Assistant	PUC
8.	Uday Kumar K	Libraty Attendant	SSLC

**Computerisation of library activities :**

Computerisation of library activities is done using LIBSOFT software. All the activities of library viz. Acquisition, cataloguing, circulation (Issue/Return), Online public access Catalogue (OPAC). For easy handling of data Barcode technology is also used to barcode learning materials.

**Services provided:**

Sl. No.	Services	Descriptions
1.	Reference	Separate section is available in the first floor of library with the collection of 3500 reference copies
2.	Circulation service	Issue and return of books on loan for a period of 14 days
3.	Reprography	Photocopy facility is made available inside the library

5.	Information deployment and notification (Current Awareness service)	Newly procured books are displayed at the entrance of the library and also the list is hosted on to the library website. E-mail alerts are also sent.
6.	Internet Access	Digital library with 16 computers with internet at 10mbps is established for the benefit of users in the library.
7.	Bibliography compilation	Bibliographic compilation of Journal articles.
8.	In-house/remote access to e-resources	All the subscribed resources are accessible in house via LAN and remote access is provided through Knimbus.
9.	User Orientation	Orientation is conducted once in every semester compulsorily and as and when demand placed by users.
10.	Assistance in searching database	User will be assisted in searching database in digital library by library staff.
11	Book bank	Book bank facility for all students under which students can borrow 3-4 books for a whole semester and for SC/ST students 2 extra books under SC/ST book bank scheme.
12	Online public Access catalogue(WEB OPAC)	OPAC will provide the bibliographical details of books, Journal articles.
13	Institution Repository	Scholarly publications of faculty members, Old Question papers, Newspaper clippings and other reading materials are also made available for students. Over 6000 items are available.

- **Support to students for self-learning activities**

The Library provides excellent facilities and academic ambience for its users for self-learning activities with following initiatives

- a. **NPTEL (National programme in Enhanced learning):** Library has established separate NPTEL server to host NPTEL videos which can be accessed via intranet within the campus. One can access the videos in the entire campus without internet. It offers more than 20000 videos of different streams of engineering and Management. These videos serve as a supplement to classroom teaching and learning activities.
- b. **SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) and MOOC (Massive Open Online Courses):** Library has made arrangements for the user to access SWAYAM and MOOC. We encourage students to take online courses.
- c. **e-PG Pathshala:** e-PG Pathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT). Link to e-PG Pathshala is provided to create awareness and to encourage students to take online courses.
- d. **Shodhganga:** The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. Link to Shodhganga is provided to create awareness and to encourage students to use it.
- e. **Open access resources:** Link of many open access resources is provided which helps in self-study of the students.
- f. **National Digital library:** Our library has obtained Institutional membership of NDL. We enroll our students and faculty to NDL and encourage to use lakhs of resources available freely
- g. **DELNET :** Institution is member of DELNET. DELNET offers access to nearly 1.75 crore records of books, periodicals, articles, thesis and dissertations and other databases. Besides this also provides inter library loan and document delivery services all its member libraries.

#### 10.4.2 Internet (10)

Institute Marks : 10.00

Name of the Internet provider	BSNL, Touches communication (AIRTEL) and Jio communication
Available band width	105 Mbps
WiFi availability	Yes -Campus is Wi-Fi enabled and About 24 Access Points are made available in the campus
Internet access in labs, classrooms, library and offices of all Departments	Computer labs are enabled with LAN, and on request basis Internet can be accessed in labs through Ethernet. Registered devices allowed to
Security arrangements	Created Wi-Fi in the building. Library equipped with browsing center with 16 systems having internet connection. Installed for Wi-Fi security protection

**(A) PROGRAM OUTCOME (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.

**(B) PROGRAM SPECIFIC OUTCOME (PSOs)**

PSO1	Analyze the logics, Algorithms and information systems to enable the students to design and implement the software
PSO2	Evaluate working of Hardware and Software aspects of computer using appropriate tools.
PSO3	Apply the standard practices in software development to deliver quality products

# Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall 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 willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

## Head of the Institute

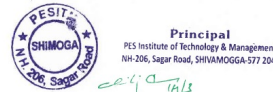
Name : Dr. Chaitanya Kumar M V

Designation : Principal, PES Institute of Technology and Management,  
Shivamogga

Signature :

*ce:lj'd*  
14/3/2020

Seal of The Institution :



Place : Shivamogga

Date : 14-03-2020 13:15:11

