



# POORNIMA

## COLLEGE OF ENGINEERING

Approved by AICTE  
Affiliated to Rajasthan Technical University, Kota  
Recognized by UGC under Section 2(f) of the UGC Act, 1956

Department of Information Technology

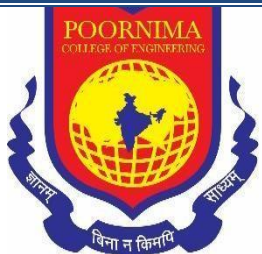
*Department Level File*

File Number and Name	PCE/IT/2023-24/020: Curriculum Delivery Plan
Contents	Curriculum Delivery Plan

ISI-6, RIICO Institutional Area, Sitapura, Jaipur-302022 (Rajasthan)  
• Phone: +91-9829255102, +91-9414728922 • E-mail: principal.pce@poornima.org  
• Website: www.pce.poornima.org

## INDEX

<b>S. No.</b>	<b>Particulars</b>	<b>Page No</b>
1.	<b>Curriculum Delivery Plan 2023-24 Odd Sem</b>	3-85
2.	<b>Curriculum Delivery Plan 2023-24 Even Sem</b>	86-165



# POORNIMA

## COLLEGE OF ENGINEERING

### DEPARTMENT OF INFORMATION TECHNOLOGY

### CURRICULUM DELIVERY PLAN

### OUTLINE-ODD SEM-2023-24



**ISI-6, RIICO Institutional Area, Sitapura, Jaipur-302022 (Rajasthan)**

• Phone: +91-141-2770790 • E-mail: [infor@poornima.org](mailto:infor@poornima.org)

• Website: [www.poornima.org](http://www.poornima.org)

## Table of Contents

1	The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of Continuous Internal Assessment (CIA) .....	6
2	Vision & Mission Statements .....	7
2.1	Vision & Mission Statements of the Institute .....	7
2.2	Vision & Mission Statements of the Programme B. Tech. (Information Technology) .....	7
2.2.1	Vision of Department .....	7
2.2.2	Mission of Department .....	7
2.2.3	PEO of the Department .....	7
2.2.4	Program Specific Outcome (PSOs) .....	7
2.3	Program Outcomes (PO) .....	8
3	Department Academic & Administrative Bodies - Structure & Functions .....	8
3.1	Department Advisory Board (DAB) .....	9
3.1.1	Primary Objective .....	9
3.1.2	Roles & Responsibilities .....	9
3.1.3	Department-Wise Composition .....	9
3.1.4	Meeting Frequency & Objectives .....	10
3.2	Program Assessment Committee .....	11
3.2.1	Primary Objective .....	11
3.2.2	Roles & Responsibilities .....	11
3.2.3	Department-Wise Composition .....	11
3.2.4	Meeting Frequency & Objectives .....	12
4	List of Faculty Members & Technical Staff .....	13
5	Institute Academic Calendar .....	15
6	Department Activity Calendar .....	16
7	Teaching Scheme .....	17
8	PCE Teaching Scheme .....	21
8.1	Marking Scheme .....	22
9	Department Load Allocation .....	23
10	Time Table .....	24
10.1	Orientation Time Table .....	24
10.2	Academic Time Table .....	26
11	Course Outcome Attainment Process: .....	29
11.1	Course Outcome Attainment Process .....	29
11.2	List of CO & CO mapping with PO .....	30
12	Course File Sample .....	54



12.1	Labelling your course file.....	54
12.2	List of Documents: .....	54
13	Outcome Based Process Implementation Guidelines for Faculty .....	55
14	File Formats.....	67
14.1	List of File Formats .....	67
14.2	Front Page of Course File.....	68
14.3	ABC Analysis Format .....	69
14.4	Blown-up Format .....	70
14.5	Deployment Format.....	71
14.6	Zero Lecture Format.....	72
14.7	Lecture Note Front page Format .....	75
14.7.1	Detailed Lecture Note Format-1 .....	76
14.7.2	Detailed Lecture Note Format-2.....	77
14.8	Assignment Format .....	78
14.9	Tutorial Format.....	79
14.10	Mid Term/ End Term Practical Question Paper Format.....	80
14.11	Mid Term Theory Question Paper Format .....	81

# **1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of Continuous Internal Assessment (CIA)**

PCE is affiliated to RTU, Kota and follows the planned and prescribed curriculum of University. The Internal Quality Assurance Cell (IQAC) of PCE takes the responsibility of monitoring the effective delivery of the curriculum through a well-planned and documented process. To ensure effective curriculum delivery, a Curriculum Delivery Plan (CDP) is prepared by all PAC's of the respective departments. A CDP includes detailed planning for preparation, verification, execution and adherence to all documents related to academic delivery of all courses. As per the directions received from IQAC, the Examination cell plans for the Continuous Internal Assessment. Examination cell then circulate CIA planning to the PAC. Examination cell sends all the CIE Data to Director's Office for the final approval before its submission to RTU. Detail outlines are as follows.

1. Director Office, PCE receives the curriculum from RTU, Kota through university website.
2. IQAC prepares institute academic calendar aligned with RTU academic calendar considering input received in last GC meeting and other stakeholders. IQAC forwards the Institute Academic Calendar to PAC (Program Assessment Committee) for identifying curriculum gaps and examination cell for CIE. PACs then prepares CDPs after consolidating the course specific planning received from the respective faculty members.
3. A CDP includes activities for gap abridgement which are proposed to be carried out by the faculty members.
4. IQAC also instructs PACs to prepare the department activity calendar. PACs receives approval of department activity calendars and CDPs from DABs before its final approval from IQAC.
5. IQAC also reviews the CDPs approved by DABs and gives suggestions/ approvals periodically. All the activities (SPL, Industrial visit, workshop etc.) planned are taken into consideration for the Department activity calendar after the approval from DABs.
6. Subject wise Course files are prepared by respective faculty, comprising of Syllabus, ABC analysis, Blown-Up, Deployment, Lecture notes, Zero Lecture, Tutorial and Assignment sheets, COs Statements, and Mapping with POs and PSOs.
7. Faculty frequently use ICT tools for more effective content delivery using PPTs, video lectures etc.
8. Student attendance is monitored by tutors and chief proctor office with help of SHARP ERP software. Attendance defaulters are regularly counseled through their tutors for improving their attendance.
9. Institute also conducts Annual Internal Academic Audit for the effectiveness of teaching-learning methodologies and the necessary actions are taken as suggested by the audit team.
10. Conferences, seminars, webinars, workshops, expert lectures, STTPs, and FDPs are organized throughout the year on the recent advances in the field of engineering.
11. Continuous Internal Assessment process includes Midterm exam, Tutorials, Assignments, Quizzes, presentation, Class Test, viva-voce etc.
12. As per the RTU examination scheme, mid semester examinations are conducted centrally by examination cell as per the planning & academic calendar and other assessments are conducted at departmental level.
13. All the evaluations are carried out by the faculty members which include COs-POs attainment, Gap identification & action taken for the fulfillment of gap.
14. Student feedback and attainment of COs-POs are reviewed by the PAC for any revision in planning & Delivery.
15. End term semester examinations are conducted by the RTU, Kota.

## 2 Vision & Mission Statements

### 2.1 *Vision & Mission Statements of the Institute*

#### **Vision of Institution**

To create knowledge based society with scientific temper, team spirit and dignity of labor to face the global competitive challenges

#### **Mission of Institution**

To evolve and develop skill based systems for effective delivery of knowledge so as to equip young professionals with dedication & commitment to excellence in all spheres of life

### 2.2 *Vision & Mission Statements of the Programme B. Tech. (Information Technology)*

#### 2.2.1 **Vision of Department**

To attain distinction in education to enable students for their establishment as **globally competent professional** and empowering them with proficiency, **knowledge** and **research ability** required to be successful in field of Information Technology.

#### 2.2.2 **Mission of Department**

1. To provide **state-of-the-art facilities** with **modern IT tools** to students and faculty thereby enabling them to develop **sustainable solutions** for real world problems.
2. To create and propagate knowledge in field of Information Technology through **research, teaching and learning** for meeting **societal challenges**.
3. To inculcate **analytical, leadership** and **team working** skills with **ethical behavior** in students and provide an environment for **continuous learning**.

#### 2.2.3 **PEO of the Department**

##### **Program Educational Objectives (PEOs)**

1. **PEO 1:** Graduate will have **Fundamental & multidisciplinary knowledge** with an ability to **analyze, design, innovates** and handles the **realistic problems**.
2. **PEO 2:** Graduate will possess **ethical conduct**, sense of **responsibility** to serve **society** and protect the **environment**.
3. **PEO 3:** Graduate will have strong foundation in academics, **leadership qualities** and **lifelong learning** for a prosperous professional career.

#### 2.2.4 **Program Specific Outcome (PSOs)**

**PSO1.** Design, analyze and innovate solutions to technical issues in Thermal, Production and Design Engineering.

**PSO2.** Exhibit the knowledge and skills in the field of Mechanical & Allied engineering concepts.

**PSO3.** Apply the knowledge of skills in HVAC&R and Automobile engineering.

### 2.3 Program Outcomes (PO)

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.

### 3 Department Academic & Administrative Bodies - Structure & Functions

### 3.1 Department Advisory Board (DAB)

#### 3.1.1 Primary Objective

Department Advisory Board (DAB) of Department of Information Technology, PCE, Jaipur is formed to provide necessary suggestions for developing a structured approach for continuous improvement in curriculum delivery, planning and incorporation of Curricular, Extra and Co-Curricular activities needed to abridge the pre-identified curriculum gaps.

#### 3.1.2 Roles & Responsibilities

1. Suggest improvement in academic plans and recommend standard practices/system for attainment of Program Educational Objectives, Program Outcomes, Program Specific Outcomes and Course Outcomes.
2. Provide guidelines for industry-institute interactions to bridge up curriculum/industry gap and suggest quality improvement initiatives to enhance employability.
3. Develop a structured Curriculum Delivery Plan, Department Academic Calendar and seek approval for them from Internal Quality Assurance Cell.
4. Incorporate suggestions received from Program Assessment Committee (PAC) by including proposed activities for bridging curricular gaps identified.
5. To identify and suggest thrust areas to conduct various activities (final year projects, training courses and additional experiments to meet PEOs, and propose necessary action plan for skill development of students, required for entrepreneurship development and quality improvement.

#### 3.1.3 Department-Wise Composition

S. No.	Category	Nominated by	Name of Members	Address
1	Chairman, DAB-IT	Chairman, IQAC	Dr. Mahesh M. Bunde (Principal & Director, PCE)	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
2	Member Secretary	Chairman, DAB-IT	Dr. Gajendra Singh Rajawat Head, Department of Information Technology	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
3	Faculty representative-1	Chairman, DAB-IT	Dr. Vishnu Sharma Associate Prof. -IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
4	Faculty representative-2	Chairman, DAB-IT	Mr. Amol Saxena Asst. Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur

5	Faculty representative-3	Chairman, DAB-IT	Ms. Shazia Haque Asst. Prof.-IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
6	Faculty representative-4	Chairman, DAB-IT	Ms. Shivani Saxena Asst. Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
7	Special Invitee	Chairman, DAB-IT	Dr. Rekha Nair Dean I Year, Poornima College of Engineering, Jaipur	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
8	Alumni Representative-1	Chairman, DAB-IT	Akshita Parakh (2020 passout)	INFOSYS
9	Alumni Representative-2	Chairman, DAB-IT	Prabhav Jain (2020 passout)	Celebal
10	Student Representative	Chairman, DAB-IT	Dhruv Jain (2023 batch)	Final Year IT
11	Industry Representative	Chairman, DAB-IT	Mr. Ankur Dalmiya,	Quality Analyst Shubhashish IT Services, Jaipur
12	Parents Representative-1	Chairman, DAB-IT	Mr. Rakesh Singh Chandawat (F/o Harshvardhan Singh Chandawat),	A-39, Ganesh Nagar New Sanganer Road, Sodala Jaipur 302019 Rajasthan
13	Parents Representative-2	Chairman, DAB-IT	Mr. Mahesh Khandelwal (F/o Yashika Khandelwal )	C 74, Pani Pech Prem Colony, Nehru Nagar Jaipur 302016 Rajasthan

### 3.1.4 Meeting Frequency & Objectives

Meeting No.	Meeting Code	Meeting Month-Week	Meeting Objective
1.	DAB-1	July First Week	<ul style="list-style-type: none"> <li>Consideration of gaps and proposed activities by PAC last meeting to be implemented in DAC and CDP.</li> <li>Prepares final draft of CDP and DAC to be proposed in upcoming IQAC meeting</li> </ul>
2.	DAB-2	September Second Week	<ul style="list-style-type: none"> <li>Approval / Suggestions of proposals from last PAC Meeting.</li> <li>Revision of DAB Drafts for being proposed in upcoming GC</li> </ul>
3	DAB-3	December First Week	<ul style="list-style-type: none"> <li>Draft preparation for DAC and CDP for upcoming semester after considering inputs from PAC.</li> </ul>

			<ul style="list-style-type: none"> <li>● Review Semester closure draft from PAC.</li> </ul>
4.	DAB-4	April Last Week / May First Week	<ul style="list-style-type: none"> <li>● Draft of PCE Academic Calendar and CDP proposed</li> <li>● Previous session closure with gaps and feedback.</li> <li>● Completion of ATR-2 for current semester based on last GC sessions and compiling it with ATR-1</li> </ul>

### 3.2 Program Assessment Committee

#### 3.2.1 Primary Objective

The primary objective of Program Assessment Committee (PAC) is to identify, bridge and assess the gaps in Program's Curriculum received from University through attainment calculation.

#### 3.2.2 Roles & Responsibilities

1. Identify gaps in curriculum laid down by University and propose activities for bridging identified gaps.
2. Implement academic plans and standard practices/system for attainment of Program Educational Objectives, Program Outcomes, Program Specific Outcomes and Course Outcomes.
3. Regular Monitoring of curriculum gap abridgement and course deployment practices through pre-defined methods.
4. Execute Industry-Institute Interactions to enhance the employability thereby meeting the industry standards and requirements.
5. Implement Curriculum Delivery Plan & Department Academic Calendar.

#### 3.2.3 Department-Wise Composition

S. No.	Category	Nominated by	Name of Members	Address
1	Chairman, PAC-IT	Chairman, IQAC / Head of Institution	Dr. Gajendra Singh Rajawat Head, Department of Information Technology	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
2	Member Secretary	Chairman, PAC-IT	Dr. Vishnu Sharma Associate Prof. -IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
3	Faculty representative-1	Chairman, PAC-IT	Dr. Sandeep Bhargava Assoc. Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
4	Faculty representative-2	Chairman, PAC-IT	Ms. Shivani Saxena Asst. Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur



5	Faculty representative-3	Chairman, PAC-IT	Ms. Shazia Haque Asst. Prof.-IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
---	--------------------------	------------------	------------------------------------	---

### 3.2.4 Meeting Frequency & Objectives

Meeting No.	Meeting Code	Meeting Month-Week	Meeting Objective
1.	PAC-1	July Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
2.	PAC-2	August Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
3	PAC-3	September Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of academics gaps as previous attainment</li> <li>Assessment of activities required for being proposed in upcoming GC</li> <li>Submit report to Governing Council about previous semester &amp; planning of next semester.</li> </ul>
4.	PAC-4	October Last Week	<ul style="list-style-type: none"> <li>Inclusion of suggestions for revising gaps</li> <li>Execution of Academic, Extra and Co-Curricular activities according to suggestions in GC</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of academics gaps as previous attainment</li> </ul>
5.	PAC-5	November Third Week	<ul style="list-style-type: none"> <li>Revision of academics gaps as previous attainment</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Identification and proposal of gaps and activities to be considered by DAB to prepare Department Academic Calendar and CDP for upcoming semester.</li> <li>Semester closure report draft to be prepared</li> <li>Elective proposals/CBCS</li> </ul>
6.	PAC-6	December Third Week	<ul style="list-style-type: none"> <li>Incorporation of suggestions from IQAC and DAB meetings in execution of Semester activities</li> <li>Execution and assessment of Academic, Extra and Co-Curricular activities</li> <li>Revision of academics gaps as previous attainment</li> <li>Calculation of attainments</li> </ul>
7.	PAC-7	January Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
8.	PAC-8	February Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
9.	PAC-9	March Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> </ul>

			<ul style="list-style-type: none"> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> <li>Draft preparation of Semester closure</li> </ul>
10.	PAC-10	April Second Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
11.	PAC-11	May Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> <li>Report submission of Semester closure</li> <li>Identification and proposal of gaps and activities to be considered by DAB to prepare Department Academic Calendar and CDP for upcoming semester.</li> </ul>
12.	PAC-12	June Last Week	<ul style="list-style-type: none"> <li>Feedback of last IQAC and suggestions for new semester to be implemented in CDP and DAC</li> <li>Elective proposals/CBCS</li> </ul>

#### 4 List of Faculty Members & Technical Staff

Sr. No.	Faculty Name	Emp.ID	Designation	Email ID	Mobile No.
1.	MR. AMOL SAXENA	1114	ASST PROFESSOR	amolsaxena@hotmail.com	9982776883
2.	MS. SHAZIA HAQUE	1218	ASST PROFESSOR	shaziahaque@hotmail.com	9829318125
3.	MS. SHIVANI JAIN	3640	ASST PROFESSOR	shivani.jain@poornima.org	7665444433
4.	Dr. VISHNU SHARMA	6922	ASSOCIATE PROFESSOR	vishnu.sharma@poornima.org	9783142141
5.	MS. SHIVANI SAXENA	6996	ASSIT PROFESSOR	shivani.saxena@poornima.org	9785851994
6.	Dr. GAJENDRA SINGH RAJAWAT	6698	PROFESSOR	gajendra.rajawat@poornima.org	9414719108
7.	MS. MAINA CHANGERIWAL	7276	ASST PROFESSOR	maina.changeriwal@poornima.org	9782641192
8.	MR. NEERAJ PRATIHAR	7512	ASST PROFESSOR	neeraj.pratihar@poornima.org	8077331061
9.	DR. SHILPI JAIN	1220	PROFESSOR	shilpijain1310@yahoo.co.in	9928279174
10.	MS. KALPANA SHARMA	6050	ASST PROFESSOR	klpna.sharma88@gmail.com	9413077523
11.	MS. HEMLATA PANWAR	7264	ASST PROFESSOR	hemlata.panwar@poornima.org	9782270989
12.	MR. AMIT GUPTA	1209	ASST PROFESSOR	amit.gupta@poornima.org	9001893265

13.	MS. PRIYA SHEKHAWAT	8023	ASST PROFESSOR	priya.shekhawat@poornima.org	6375761904
-----	------------------------	------	----------------	------------------------------	------------

5 Institute Academic Calendar

JULY 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

AUGUST 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30



3 Decades • 8 Institutions • 45000 Alumni Worldwide • 12000+ Students • 1200+ Faculty &amp; Staff

# POORNIMA GROUP

Achieving Excellence Together

## ACADEMIC CALENDAR 2023-24<sup>\*#</sup>

### ODD SEMESTER

#### JULY 2023

RTU THEORY EXAMINATION OF FIRST YEAR [EVEN SEM 2022-23]

#### AUGUST 2023

Practical Training [After II, IV, VI Sem.]

Celebration of Independence Day.

#### SEPTEMBER 2023

Commencement of Classes-Odd Semesters B. Tech. III/V/VII Sem.

Induction Program B.Tech. I Sem

Commencement of Classes-Odd Semesters B. Tech. I Sem.

Celebration of Teachers' Day &amp; Activities under WISE

Engineers' Day

Blood Donation Camp

#### OCTOBER 2023

Annual Day KALANIDHI\* &amp; Faculty Felicitation Program

Manthan- Inter-college Debate Competition

First Mid Term Theory &amp; Practical Exam for B.Tech VII Sem

First Mid Term Theory &amp; Practical Exam for B.Tech V &amp; III Sem

#### NOVEMBER 2023

First Mid Term Theory &amp; Practical Exam for B.Tech I Sem

Second Mid-Term Theory &amp; Practical Exam for B.Tech VII Sem

Last Teaching Day for B.Tech VII Sem

Second Mid Term Theory &amp; Practical Exam for B.Tech V &amp; III Sem

#### DECEMBER 2023

As Per RTU Exmination Schedule End-Term Practical Exams for B.Tech VII Sem

Tuesday 05 Last Teaching Day for B.Tech V &amp; III Sem

As Per RTU Exmination Schedule End-Term Practical Examination for B.Tech V &amp; III Sem

Monday 18, to Saturday 23 Second Mid-Term Theory &amp; Practical Exam for B.Tech I Sem

Saturday 23 Last Teaching Day for B.Tech I Sem

#### JANUARY 2023

As Per RTU Exmination Schedule End-Term Practical Examination for B.Tech I Sem

#### HOLIDAYS IN ODD SEMESTER

- > Independence Day Celebration - 14 August, Monday - 15 August, Tuesday
- > Raksha Bandhan - 30 August, Wednesday
- > Krishna Janmashtami - 7 September, Thursday - 9 September, Saturday
- > Vijaydashami - 24 October, Tuesday
- > Diwali Break - 10 November, Friday - 14 November, Tuesday
- > Gurunank Jayanti - 25 November, Saturday - 27 November, Monday
- > Christmas - 23 December, Saturday - 25 December, Monday
- > New Year - 01 January, Monday - 02 January, Tuesday

\*Subject to revision as per RTU notifications

#For all Engineering Faculty and Students of PCE

6 Department Activity Calendar**Poornima College of Engineering, Jaipur****Calendar for Information Technology : Odd Semester - Session 2023-24**

## (A) Academic Processes

S. No.	Activity/ Process	B.Tech. I Sem.	B.Tech. III Sem.	B.Tech. V Sem.	B.Tech. VII Sem.
1	Date of Registration & start of regular classes for students	Monday, September 18, 23	Monday, September 11, 23	Monday, September 11, 23	Monday, September 11, 23
2	Orientation programme	Monday, September 18, 23 to Saturday, September 23, 23	Monday, September 11, 23 to Wednesday September 13, 23	Monday, September 11, 23 to Wednesday September 13, 23	Monday, September 11, 23 to Wednesday September 13, 23
3	Date of submission of question papers by faculty members to secrecy for 1st Mid-term	Monday, October 30, 23	Saturday, 7 October 10, 23	Saturday, 7 October 10, 23	Saturday, 7 October 10, 23
4	I Mid Term Theory & Practical Exam	Wednesday, November 02, 23 to Thursday, November 08, 23	Monday, October 16, 23 to Saturday, October 21, 23	Monday, October 16, 23 to Saturday, October 21, 23	Wednesday, October 11, 23 to Friday, October 13, 23
5	Showing evaluated answer books of 1st Mid-term exam to students in respective classes	Upto Saturday, November 18, 23	Upto Saturday, October 28, 23	Upto Saturday, October 28, 23	Upto Saturday, October 21, 2023
6	Last date of submission of Evaluated Answer Books and Mark of First Mid-term Theory & Practical exam to Exam and Secrecy Cell respectively	Upto Thursday, November 30, 23	Upto Monday, October 30, 23	Upto Monday, October 30, 23	Upto Monday, October 23, 2023
7	Date of submission of question papers by faculty members to secrecy for 2nd Mid-term	Upto Thursday, November 30, 23	Thursday, November 17, 2022	Wednesday, November 30, 2022	Monday, October 17, 2022
8	Revision classes	To be declared later according to RTU Exam Schedule			
9	Last Teaching Day	Saturday, December 23, 2023	Tuesday, December 05, 23	Tuesday, December 05, 23	Thursday, November 30, 2023
10	2nd Mid-term theory & Practical Exams	Monday-Saturday, December 18-23, 2023	Tuesday 28 November, 23 to Tuesday December 05, 23	Tuesday 28 November, 23 to Tuesday December 05, 23	Tuesday - Thursday, November 28-30, 2023
11	End-Term Practical Exams	In January 2024, As Per RTU examination schedule	In December 2023, As Per RTU examination schedule	In December 2023, As Per RTU examination schedule	In December 2023, As Per RTU examination schedule

## (B) Events and Activities

12	Teachers Day Celebration	05 September 2023			
13	Celebration of Engineers Day	15 September 2023			
14	Alumni Session taken by Keshav Goyal 2021 Batch IT	02 October 2023			

15	Manthan-Inter College Debate Competition 2023	02 October 2023			
16	Seminar on Cloud Computing	Tuesday, 10th October, 2023			
17	Seminar on Machine Learning Applications	Saturday, 21st October, 2023			
18	A seminar on Cyber security and Ethical Hacking	07 November 2023			
(C) Holidays					
19	Independence Day Celebration	14 August, Monday-15 August, Tuesday			
20	Raksha Bandhan	30 August, Wednesday			
21	Krishna Janmashtami	7 September, Thursday- 9 September, Saturday			
22	Vijayadashami	24 October, Tuesday			
23	Diwali Break	10 November, Friday-14 November, Tuesday			
24	Gururanak Jayanti	25 November, Saturday- 27 November, Monday			
25	Christmas	23 December, Saturday- 25 December, Monday			
26	New Year	01 January, Monday- 02 January, Tuesday			
"स्वच्छ भारत.. सम्पन्न भारत.."					

## 7 Teaching Scheme

### 7.1 RTU Teaching Scheme



# RAJASTHAN TECHNICAL UNIVERSITY, KOTA

## Teaching & Examination Scheme B.Tech. : Information Technology 2<sup>nd</sup> Year - III Semester

THEORY											
SN	Category	Course		Contact hrs/week			Marks				Cr
		Code	Title	L	T	P	Exm Hrs	IA	ETE	Total	
1	BSC	3IT2-01	Advanced Engineering Mathematics	3	0	0	3	30	70	100	3
2	HSMC	3IT1-02/ 3IT1-03	Technical Communication/ Managerial Economics and Financial Accounting	2	0	0	2	30	70	100	2
3	ESC	3IT3-04	Digital Electronics	3	0	0	3	30	70	100	3
4	PCC	3IT4-05	Data Structures and Algorithms	3	0	0	3	30	70	100	3
5		3IT4-06	Object Oriented Programming	3	0	0	3	30	70	100	3
6		3IT4-07	Software Engineering	3	0	0	3	30	70	100	3
			<b>Sub Total</b>	17	0	0					17
PRACTICAL & SESSIONAL											
8	PCC	3IT4-21	Data Structures and Algorithms Lab	0	0	3		60	40	100	1.5
9		3IT4-22	Object Oriented Programming Lab	0	0	3		60	40	100	1.5
10		3IT4-23	Software Engineering Lab	0	0	3		60	40	100	1.5
11		3IT4-24	Digital Electronics Lab	0	0	3		60	40	100	1.5
13	PSIT	3IT7-30	Industrial Training	0	0	1		60	40	100	1
14	SODE CA	3IT8-00	Social Outreach, Discipline & Extra Curricular Activities	0	0	0				100	0.5
			<b>Sub- Total</b>	0	0	13					7.5
			<b>TOTAL OF III SEMESTER</b>	17	0	13					24.5

**L:** Lecture, **T:** Tutorial, **P:** Practical, **Cr:** Credits

**ETE:** End Term Exam, **IA:** Internal Assessment

Office of Dean Academic Affairs  
Rajasthan Technical University, Kota

Scheme of 2<sup>nd</sup> Year B. Tech. (IT) for students admitted in Session 2021-22 onwards. Page 1





# RAJASTHAN TECHNICAL UNIVERSITY, KOTA

## Teaching & Examination Scheme B.Tech. : Information Technology 3<sup>rd</sup> Year – V Semester

THEORY												
SN	Categor ory	Course		Contact hrs/week			Marks				Cr	
		Code	Title	L	T	P	Exm Hrs	IA	ETE	Total		
1	ESC	5IT3-01	Microprocessor And Interfaces	2	0	0	3	30	70	100	2	
2	PCC/ PEC	5IT4-02	Compiler Design	3	0	0	3	30	70	100	3	
3		5IT4-03	Operating System	3	0	0	3	30	70	100	3	
4		5IT4-04	Computer Graphics & Multimedia	3	0	0	3	30	70	100	3	
6		5IT4-05	Analysis of Algorithms	3	0	0	3	30	70	100	3	
7		Professional Elective 1 (any one)			2	0	0	3	30	70	100	2
		5IT5-11	Wireless Communication									
		5IT5-12	Software Testing and Project Management									
		5IT5-13	Bioinformatics									
		Sub-Total			16	0	0				16	
PRACTICAL & SESSIONAL												
8	PCC	5IT4-21	Computer Graphics & Multimedia Lab	0	0	2	2	60	40	100	1	
9	PCC	5IT4-22	Compiler Design Lab	0	0	2	2	60	40	100	1	
10	PCC	5IT4-23	Analysis of Algorithms Lab	0	0	2	2	60	40	100	1	
11	PCC	5IT4-24	Advanced Java Lab	0	0	2	2	60	40	100	1	
12	PSIT	5IT7-30	Industrial Training	0	0	1		60	40	100	2.5	
13	SODE CA	5IT8-00	Social Outreach, Discipline & Extra Curricular Activities						100	100	0.5	
		Sub- Total			0	0	9				7	
		TOTAL OF V SEMESTER			16	0	9				23	

**L:** Lecture, **T:** Tutorial, **P:** Practical, **Cr:** Credits

**ETE:** End Term Exam, **IA:** Internal Assessment\*

Office of Dean Academic Affairs  
Rajasthan Technical University, Kota



# RAJASTHAN TECHNICAL UNIVERSITY, KOTA

## Scheme & Syllabus

IV Year- VII & VIII Semester: B. Tech. (Information Technology)

### Teaching & Examination Scheme

### B.Tech.: Information Technology

### 4<sup>th</sup> Year – VII Semester

THEORY												
SN	Category	Course		Contact hrs/week			Marks				Cr	
		Code	Title				Exm Hrs	IA	ETE	Total		
				L	T	P						
1	PCC	7IT4-01	Big Data Analytics	3	0	0	3	30	120	150	3	
2	OE		Open Elective - I	3	0	0	3	30	120	150	3	
		Sub-Total			6	0	0	6	60	240	300	6
PRACTICAL & SESSIONAL												
3	PCC	7IT4-21	Big Data Analytics Lab	0	0	4	2	60	40	100	2	
4	PCC	7IT4-22	Cyber Security Lab	0	0	4	2	60	40	100	2	
5	PSIT	7IT7-30	Industrial Training	1	0	0				125	2.5	
6	PSIT	7IT7-40	Seminar	2	0	0				100	2	
7	SODE CA	7IT8-00	Social Outreach, Discipline & Extra Curricular Activities			1				25	0.5	
		Sub- Total			0	0	10	4	120	80	450	9
		TOTAL OF VII SEMESTER			6	0	10	10	180	320	750	15

**L:** Lecture, **T:** Tutorial, **P:** Practical, **Cr:** Credits

**ETE:** End Term Exam, **IA:** Internal Assessment

## 8 PCE Teaching Scheme

### Poornima Group, Jaipur

Format for Teaching Scheme of Odd Semester 2023-24

Working Group	Year	Sem	Students	Deptt.	Teaching Scheme				Course Name	Subject Code	No. of Sec	No. of Batche s	Batch Size (T/H/F)	Total Load (L)	Total Load (T)	Total Load (P)	Total Load (L+T+P)	Teaching Dept.
					L	T	P	Credit										
CS/IT	2	3	60	IT	3	1	0	3	Advanced Engineering Mathematics	3IT2-01	1	3	F	3	3	0	6	Maths
CS/IT	2	3	60	IT	2	0	0	2	Managerial Economics and Financial Accounting	3IT1-03	1	3	F	2	0	0	2	Humanities
CS/IT	2	3	60	IT	3	1	0	3	Digital Electronics	3IT3-04	1	3	F	3	3	0	6	EC
CS/IT	2	3	60	IT	4	0	0	3	Data Structures and Algorithms	3IT4-05	1	3	F	4	0	0	4	IT
CS/IT	2	3	60	IT	3	0	0	3	Object Oriented Programming	3IT4-06	1	3	F	3	0	0	3	IT
CS/IT	2	3	60	IT	3	0	0	3	Software Engineering	3IT4-07	1	3	F	3	0	0	3	IT
CS/IT	2	3	60	IT	0	0	3	1.5	Data Structures and Algorithms Lab	3IT4-21	1	3	T	0	0	9	9	IT
CS/IT	2	3	60	IT	0	0	2	1.5	Object Oriented Programming Lab	3IT4-22	1	3	T	0	0	6	6	IT
CS/IT	2	3	60	IT	0	0	2	1.5	Software Engineering Lab	3IT4-23	1	3	T	0	0	6	6	IT
CS/IT	2	3	60	IT	0	0	2	1.5	Digital Electronics Lab	3IT4-24	1	3	T	0	0	6	6	EC
CS/IT	2	3	60	IT	0	0	1	1	Industrial Training/ NSP	3IT7-30	1	3	T	0	0	3	3	IT
CS/IT	3	5	64	IT	3	0	0	2	Microprocessor And Interfaces	5IT3-01	1	3	F	3	0	0	3	EC
CS/IT	3	5	64	IT	4	0	0	3	Compiler Design	5IT4-02	1	3	F	4	0	0	4	IT
CS/IT	3	5	64	IT	3	0	0	3	Operating System	5IT4-03	1	3	F	3	0	0	3	IT
CS/IT	3	5	64	IT	4	0	0	3	Computer Graphics & Multimedia	5IT4-04	1	3	F	4	0	0	4	IT
CS/IT	3	5	64	IT	4	0	0	3	Analysis of Algorithms	5IT4-05	1	3	F	4	0	0	4	IT
CS/IT	3	5	64	IT	3	0	0	2	Wireless Communication	5IT5-11	1	3	F	3	0	0	3	EC
CS/IT	3	5	64	IT	3	0	0	2	Software Testing and Project Management	5IT5-12	1	3	F	3	0	0	3	IT
CS/IT	3	5	64	IT	0	0	2	1	Computer Graphics & Multimedia Lab	5IT4-21	1	3	T	0	0	6	6	IT
CS/IT	3	5	64	IT	0	0	2	1	Compiler Design Lab	5IT4-22	1	3	T	0	0	6	6	IT
CS/IT	3	5	64	IT	0	0	2	1	Analysis of Algorithms Lab	5IT4-23	1	3	T	0	0	6	6	IT
CS/IT	3	5	64	IT	0	0	2	1	Advanced Java Lab	5IT4-24	1	3	T	0	0	6	6	IT
CS/IT	3	5	64	IT	0	0	1	2.5	Industrial Training/ NSP	5IT7-30	1	3	T	0	0	3	3	IT
CS/IT	4	7	64	IT	3	0	0	3	Big Data Analytics	7IT4-01	1	3	F	3	0	0	3	IT
CS/IT	4	7	64	IT	3	0	0	3	Open Elective	7IT6-60.1	1	3	F	3	0	0	3	OE
CS/IT	4	7	64	IT	0	0	3	2	Big Data Analytics Lab	7IT4-21	1	3	T	0	0	9	9	IT
CS/IT	4	7	64	IT	0	0	3	2	Cyber Security Lab	7IT4-22	1	3	T	0	0	9	9	IT
CS/IT	4	7	64	IT	0	0	1	2.5	Industrial Training	7IT7-30	1	3	T	0	0	3	3	IT
CS/IT	4	7	64	IT	0	0	2	2	Seminar	7IT7-40	1	2	H	0	0	4	4	IT
CS/IT	4	7	64	IT	0	0	3	NA	Minor Project	7ITPR	1	3	T	0	0	9	9	IT

145		
IT Load		116
EC Load		18
Maths Load		6
Humanities Load		2
OE Load		3

## 8.1 Marking Scheme

Code	SUBJECT	I-II Mid Term Exam			Atten & Performance			End Term Exam			Max. Marks
		Exo.	Viva	Total	Attn.	Perf.	Total	Exo.	Viva	Total	
1FY2-20	Engineering Physics Lab	30	10	40	10	30	40	30	10	40	100
1FY2-21	Engineering Chemistry Lab	30	10	40	10	30	40	30	10	40	100
1FY1-22	Language Lab	30	10	40	10	30	40	30	10	40	100
1FY1-23	Human Values Activities & Sports	30	10	40	10	30	40	30	10	40	100
1FY3-24	Computer Programming Lab	30	10	40	10	30	40	30	10	40	100
1FY3-25	Manufacturing Practices Workshop	30	10	40	10	30	40	30	10	40	100
1FY3-26	Basic Electrical Engineering Lab	30	10	40	10	30	40	30	10	40	100
1FY3-27	Basic Civil Engineering Lab	30	10	40	10	30	40	30	10	40	100
1FY3-28	Computer Aided Engineering Graphics	30	10	40	10	30	40	30	10	40	100
1FY3-29	Computer Aided Machine Drawing	30	10	40	10	30	40	30	10	40	100
3CE4-21	Surveying Lab	30	10	40	10	30	40	30	10	40	100
3CE4-22	Fluid Mechanics Lab	30	10	40	10	30	40	30	10	40	100
3CE4-23	Computer Aided Civil Engineering Drawing	30	10	40	10	30	40	30	10	40	100
3CE4-24	Civil Engineering Materials Lab	30	10	40	10	30	40	30	10	40	100
3CE4-25	Geology Lab	30	10	40	10	30	40	30	10	40	100
3CE7-30	Training Seminar			60						40	100
3CS4-21	Data Structures and Algorithms Lab	30	10	40	10	30	40	30	10	40	100
3CS4-22	Object Oriented Programming Lab	30	10	40	10	30	40	30	10	40	100
3CS4-23	Software Engineering Lab	30	10	40	10	30	40	30	10	40	100
3CS4-24	Digital Electronics Lab	30	10	40	10	30	40	30	10	40	100
3CS7-30	Training Seminar			60						40	100
3AID4-21	Data Structures and Algorithms Lab	30	10	40	10	30	40	30	10	40	100
3AID4-22	Object Oriented Programming Lab	30	10	40	10	30	40	30	10	40	100
3AID4-23	Software Engineering Lab	30	10	40	10	30	40	30	10	40	100
3AID4-24	Digital Electronics Lab	30	10	40	10	30	40	30	10	40	100
3AID7-30	Industrial Training			60						40	100
3CAI4-21	Data Structures and Algorithms Lab	30	10	40	10	30	40	30	10	40	100
3CAI4-22	Object Oriented Programming Lab	30	10	40	10	30	40	30	10	40	100
3CAI4-23	Software Engineering Lab	30	10	40	10	30	40	30	10	40	100
3CAI4-24	Digital Electronics Lab	30	10	40	10	30	40	30	10	40	100
3CAI7-30	Industrial Training			60						40	100
3CCB4-21	Data Structures and Algorithms Lab	30	10	40	10	30	40	30	10	40	100
3CCB4-22	Object Oriented Programming Lab	30	10	40	10	30	40	30	10	40	100
3CCB4-23	Software Engineering Lab	30	10	40	10	30	40	30	10	40	100
3CCB4-24	Digital Electronics Lab	30	10	40	10	30	40	30	10	40	100
3CCB7-30	Industrial Training			60						40	100
3EC4-21	Electronics Devices Lab	30	10	40	10	30	40	30	10	40	100
3EC4-22	Digital System Design Lab	30	10	40	10	30	40	30	10	40	100
3EC4-23	Signal Processing Lab	30	10	40	10	30	40	30	10	40	100
3EC3-24	Computer Programming Lab-I	30	10	40	10	30	40	30	10	40	100
3EC7-30	Training Seminar			60						40	100
3EE4-21	Analog Electronics Lab	30	10	40	10	30	40	30	10	40	100
3EE4-22	Electrical Machine-I Lab	30	10	40	10	30	40	30	10	40	100
3EE4-23	Electrical circuit design Lab	30	10	40	10	30	40	30	10	40	100
3EE7-30	Training Seminar			60						40	100
3IT4-21	Data Structures and Algorithms Lab	30	10	40	10	30	40	30	10	40	100
3IT4-22	Object Oriented Programming Lab	30	10	40	10	30	40	30	10	40	100
3IT4-23	Software Engineering Lab	30	10	40	10	30	40	30	10	40	100
3IT4-24	Digital Electronics Lab	30	10	40	10	30	40	30	10	40	100
3IT7-30	Industrial Training			60						40	100
3ME4-21	Machine drawing practice	30	10	40	10	30	40	30	10	40	100
3ME4-22	Materials Testing Lab	30	10	40	10	30	40	30	10	40	100
3ME4-23	Basic Mechanical Engineering Lab	30	10	40	10	30	40	30	10	40	100
3ME4-24	Programming using MATLAB	30	10	40	10	30	40	30	10	40	100
3ME7-30	Training Seminar			60						40	100
5CE4-21	Concrete Structures Design	30	10	40	10	30	40	30	10	40	100
5CE4-22	Geotechnical Engineering Lab	30	10	40	10	30	40	30	10	40	100
5CE4-23	Water Resource Engineering Design	30	10	40	10	30	40	30	10	40	100
5CE7-30	Industrial Training			60						40	100
5CS4-21	Computer Graphics & Multimedia Lab	30	10	40	10	30	40	30	10	40	100
5CS4-22	Compiler Design Lab	30	10	40	10	30	40	30	10	40	100
5CS4-23	Analysis of Algorithms Lab	30	10	40	10	30	40	30	10	40	100
5CS4-24	Advance Java Lab	30	10	40	10	30	40	30	10	40	100
5CS7-30	Industrial Training			60						40	100
5EC4-21	RF Simulation Lab	30	10	40	10	30	40	30	10	40	100
5EC4-22	Digital Signal Processing Lab	30	10	40	10	30	40	30	10	40	100
5EC4-23	Microwave Lab	30	10	40	10	30	40	30	10	40	100
5EC7-30	Industrial Training			60						40	100
5EE4-21	Power System - I Lab	30	10	40	10	30	40	30	10	40	100
5EE4-22	Control System Lab	30	10	40	10	30	40	30	10	40	100
5EE4-23	Microprocessor Lab	30	10	40	10	30	40	30	10	40	100
5EE4-24	System Programming Lab	30	10	40	10	30	40	30	10	40	100
5EE7-30	Industrial Training			60						40	100
5IT4-21	Computer Graphics & Multimedia Lab	30	10	40	10	30	40	30	10	40	100
5IT4-22	Compiler Design Lab	30	10	40	10	30	40	30	10	40	100
5IT4-23	Analysis of Algorithms Lab	30	10	40	10	30	40	30	10	40	100
5IT4-24	Advanced Java Lab	30	10	40	10	30	40	30	10	40	100
5IT7-30	Industrial Training			60						40	100
5ME4-21	Mechatronic Lab	30	10	40	10	30	40	30	10	40	100
5ME4-22	Heat Transfer Lab	30	10	40	10	30	40	30	10	40	100
5ME4-23	Production Engineering Lab	30	10	40	10	30	40	30	10	40	100
5ME4-24	Machine Design Practice I	30	10	40	10	30	40	30	10	40	100
5ME7-30	Industrial Training			60						40	100
7CE4-21	Road Material Testing Lab	15	5	20	5	15	20	15	5	20	50
7CE4-22	Professional Practices & Field Engineering	15	5	20	5	15	20	15	5	20	50
7CE4-23	Soft Skills Lab	15	5	20	5	15	20	15	5	20	50
7CE4-24	Environmental Monitoring and Design Lab	15	5	20	5	15	20	15	5	20	50
7CE7-30	Practical Training			75						50	125
7CE7-40	Seminar			60						40	100
7CS4-21	Internet of Things Lab	30	10	40	10	30	40	30	10	40	100
7CS4-22	Cyber Security Lab	30	10	40	10	30	40	30	10	40	100
7CS7-30	Industrial Training			75						50	125
7CS7-40	Seminar			60						40	100
7EC4-21	VLSI Design Lab	30	10	40	10	30	40	30	10	40	100
7EC4-22	Advance communication lab (MATLAB)	15	5	20	5	15	20	15	5	20	50
7EC4-23	Optical Communication Lab	15	5	20	5	15	20	15	5	20	50
7EC7-30	Industrial Training			75						50	125
7EC7-40	Seminar			60						40	100
7EE4-21	Embedded Systems Lab	30	10	40	10	30	40	30	10	40	100
7EE4-22	Advance control system lab	30	10	40	10	30	40	30	10	40	100
7EE7-30	Industrial Training			75						50	125
7EE7-40	Seminar			60						40	100
7IT4-21	Bio Data Analytics Lab	30	10	40	10	30	40	30	10	40	100
7IT4-22	Cyber Security Lab	30	10	40	10	30	40	30	10	40	100
7IT7-30	Industrial Training			75						50	125
7IT7-40	Seminar			60						40	100
7ME4-21	FEA Lab	22	8	30	8	22	30	22	8	30	75
7ME4-22	Thermal Engineering Lab II	22	8	30	8	22	30	22	8	30	75
7ME4-23	Quality Control Lab	15	5	20	5	15	20	15	5	20	50
7ME7-30	Industrial Training *			75						50	125
7ME7-40	Seminar *			60						40	100

NOTE: - (1) In Attendance &amp; Performance marks should be given on the basis of student overall performance in semester i. e. continuous evaluation.

(2) In Common Pool marks should be given by HOD on the basis of student Assignment, Non Syllabus Activity, Online Exam Exam, Application/Survey / Case Study based Learning, Pre-Placement Activity, Department Level Career Oriented Activities through out the semester.



## 9 Department Load Allocation

POORNIMA COLLEGE OF ENGINEERING, JAIPUR							
Department of Information Technology							
Class Wise Load Allotment Session 2022-23(ODD)							
Section	Subject Code	Subject Name	L	T	P	No. of Batches	Faculty Name
A	3IT2-01	Advanced Engineering Mathematics	3	1	0	3	Dr. Shilpi Jain
A	3IT1-03	Managerial Economics and Financial Accounting	2	0	0	3	Kalpana Sharma
A	3IT3-04	Digital Electronics	3	1	0	3	Hemlata Panwar
A	3IT4-05	Data Structures and Algorithms	4	0	0	3	Shazia Haque
A	3IT4-06	Object Oriented Programming	3	0	0	3	Amol Saxena
A	3IT4-07	Software Engineering	3	0	0	3	Shivani Saxena
A	3IT4-21	Data Structures and Algorithms Lab	0	0	3	3	Shazia Haque
A	3IT4-22	Object Oriented Programming Lab	0	0	2	3	Amol Saxena
A	3IT4-23	Software Engineering Lab	0	0	2	3	Shivani Saxena
A	3IT4-24	Digital Electronics Lab	0	0	2	3	Hemlata Panwar
A	3IT7-30	Industrial Training/ NSP	0	0	1	3	Shivani Saxena, Shivani Jain
A	5IT3-01	Microprocessor And Interfaces	3	0	0	3	Hemlata Panwar
A	5IT4-02	Compiler Design	4	0	0	3	Maina Changeriwal
A	5IT4-03	Operating System	3	0	0	3	Shivani Saxena
A	5IT4-04	Computer Graphics & Multimedia	4	0	0	3	Priya Shekhawat
A	5IT4-05	Analysis of Algorithms	4	0	0	3	Neeraj Pratihari
A	5IT5-11	Wireless Communication	3	0	0	3	Hemlata Panwar
A	5IT5-12	Software Testing and Project Management	3	0	0	3	Amit Gupta
A	5IT4-21	Computer Graphics & Multimedia Lab	0	0	2	3	Priya Shekhawat
A	5IT4-22	Compiler Design Lab	0	0	2	3	Maina Changeriwal
A	5IT4-23	Analysis of Algorithms Lab	0	0	2	3	Neeraj Pratihari
A	5IT4-24	Advanced Java Lab	0	0	2	3	Amit Gupta
A	5IT7-30	Industrial Training/ NSP	0	0	1	3	Neeraj Pratihari, Priya Shekhawat
A	7IT4-01	Big Data Analytics	3	0	0	3	Dr. Vishnu Sharma
A	7IT6-60.1	Open Elective	3	0	0	3	
A	7IT4-21	Big Data Analytics Lab	0	0	3	3	Dr. Gajendra Singh Rajawat
A	7IT4-22	Cyber Security Lab	0	0	3	3	Shivani Jain
A	7IT7-30	Industrial Training	0	0	2	3	Dr. Gajendra Singh Rajawat, Dr. Vishnu Sharma
A	7IT7-40	Seminar	0	0	2	3	Shivani Jain, Priya Shekhawat
A	7ITPR	Minor Project	0	0	3	3	Maina Changeriwal, Dr. Vishnu Sharma, Neeraj Pratihari

**10 Time Table****10.1 Orientation Time Table****II Year Orientation Details Session 2023-24 (Odd Semester)****POORNIMA COLLEGE OF ENGINEERING****Department of Information Technology****TIME TABLE -ODD SEM 2023-2024****Orientation Programme (III Semester)****11<sup>th</sup> -12<sup>th</sup> Sept, 2023**

<b>Day/ Period</b>	<b>I 8:00-9:00</b>	<b>II 9:00-10:00</b>	<b>III 10:00- 11:00</b>		<b>IV 11:50- 12:50</b>	<b>V 12:50- 1:50</b>	<b>VI 1:50-2:50</b>
<b>TUES 16/08/22</b>	Tutor Interaction (Shazia Haque) 2B03	MOOC/ NPTEL/Add- on Courses (Dr. Ghanshyam Singh) 2B03	Project /NSP & its Importance ( Mr. Amol Saxena ) 2B03	<b>LUNCH 11:00- 11:50</b>	As per time table		
<b>WED 17/08/22</b>	Placements/ GATE (Ms. Maina Changeriwal) 2B03	HOD Interaction (Dr.Gajendra Singh Rajawat) 2B03	Industrial Training & its guidelines ( Ms. Shivani Saxena) 2B03		As per time table		

3IT1-03: Managerial Economics and Financial Accounting, 3IT4-05: Data Structures & Algorithms, 3IT3-04: Digital Electronics, 3IT4-06: Object Oriented Programming, 3IT4-07: Software Engineering, 3IT2-01: Adv. Engg. Mathematics, 3IT4-23: Software Engineering Lab, 3IT4-21: Data Structure Lab, 3IT4-24: Digital Electronics Lab, 3IT4-22: Object Oriented Programming Lab

**Ms. Shazia Haque**  
TT Coordinator, IT

**Dr. Gajendra S. Rajawat**  
HoD, IT

**Dr. Pankaj Dhemia**  
Vice Principal, PCE

**Dr. Mahesh Bunde**  
Director, PCE

### III Year Orientation Details Session 2023-24 (Odd Semester)

#### POORNIMA COLLEGE OF ENGINEERING

#### Department of Information Technology

#### TIME TABLE -ODD SEM 2023-2024

#### Orientation Programme (V Semester)

11-12 September, 2023

Day/ Period	I 8:00-9:00	II 9:00-10:00	III 10:00- 11:00		IV 11:50- 12:50	V 12:50- 1:50	VI 1:50-2:50
<b>MON</b> <b>19/09/22</b>	Tutor Interaction (Dr. Ghanshyam Singh ) 2B07	MOOC/ NPTEL/Add- on Courses ( Dr. Vishnu Sharma ) 2B07	Project /NSP & its Importance ( Mr. Amol Saxena ) 2B07	<b>LUNCH</b> <b>11:00- 11:50</b>	As per time table		
<b>TUE</b> <b>20/09/22</b>	Placements/ GATE (Ms. Maina Changeriwal) 2B07	HOD Interaction (Dr.Gajendra Singh Rajawat) 2B07	Industrial Training & its guidelines ( Ms. Nikita Sharma) 2B07		As per time table		

5IT3-01: Microprocessor And Interfaces, 5IT4-02: Compiler Design, 5IT4-03: Operating Systems, 5IT4-04: Computer Graphics & Multimedia, 5IT4-05: Analysis of Algorithms, 5IT5-11: Wireless Communication, 5IT5-12: Software Testing and Project Management, 5IT4-21: Computer Graphics & Multimedia Lab, 5IT4-22: Compiler Design Lab, 5IT4-23: Analysis of Algorithms Lab, 5IT4-24: Advanced Java Lab

**Ms. Shazia Haque**  
TT Coordinator, IT

**Dr.Gajendra S. Rajawat**  
HoD, IT

**Dr. Pankaj Dhemla** **Dr. Mahesh Bunde**  
Vice Principal, PCE Director, PCE



## 10.2 Academic Time Table

## 3 Sem IT

Class teacher : Ms. Shazia Haque  
2B03

Minha Escola

	1 8:00 - 9:00	2 9:00 - 10:00	3 10:00 - 11:00	Lunch Break 11:00 - 11:50	4 11:50 - 12:50	5 12:50 - 13:50	6 13:50 - 14:50
Mo	DE HP	AEM SJ	SE SS		2B09C DSA Lab SH		A1 SH
					2B09G SE Lab SS	AEM Tute Tutoring Room SJ	A2 SJ
					2B05 DE Lab DE Lab HP		A3 HP
Tu	OOP AS	DE HP	MEFA KS		SE SS	DSA SH	III Sem Library Period SH
We	AEM SJ	MEFA KS	DSA SH		Industrial Training SS / SJ	III Sem NSP SS / SJ	
Th	DSA SH	SE SS	OOP AS		2B09G SE Lab SS	AEM Tute SJ	A1 SJ
					DE Tute HP	OOP Lab AS	A2 AS
					2B09C DSA Lab SH		A3 SH
Fr	DE Tute HP	2B05 DE Lab DE Lab A1 HP				III Sem CRT C	
	2B09C DSA Lab SH						
	AEM Tute SJ	2B05E OOP Lab AS					
Sa	OOP AS	DE HP	AEM SJ		DSA SH	2B05E OOP Lab AS	A1 AS
						2B05 DE Lab DE Lab HP	A2 HP
						2B09G SE Lab SS	A3 SS

Timetable generated:31-08-2023

aSc Timetables

## 5 Sem IT

Class teacher : Ms. Hemlata Panwar

2B07

Minha Escola

	1 8:00 - 9:00	2 9:00 - 10:00	3 10:00 - 11:00	Lunch Break 11:00 - 11:50	4 11:50 - 12:50	5 12:50 - 13:50	6 13:50 - 14:50
Mo	OS SS	CG&MM PS	Elec Sub <small>Group 1 Tutorial room HP</small> Elec Sub <small>Group 2 M</small>		AOA NP	CD MC	AOA NP
Tu	AOA Lab <small>2B09F NP</small> Adv Java Lab <small>A2 M</small> CG&MM Lab <small>2B09C PS</small>		V Sem Library Period PS		V Sem CRT CRT F2		
We	CG&MM PS	CD MC	MPI HP		Elec Sub <small>Group 1 Tutorial room HP</small> Elec Sub <small>Group 2 M</small>	AOA NP	MPI HP
Th	OS SS	Elec Sub <small>Group 1 Tutorial room HP</small> Elec Sub <small>Group 2 M</small>	MPI HP		CG&MM PS	Adv Java Lab <small>A1 M</small> AOA Lab <small>2B09F NP</small> CD Lab <small>A3 MC</small>	
Fr	AOA NP	CD MC	OS SS		CD Lab <small>2B09G MC</small> CG&MM Lab <small>2B09C PS</small> Adv Java Lab <small>2B09F M</small>	CG&MM PS	
Sa	Industrial Training NP / PS	V Sem NSP NP / PS			CD MC	CG&MM Lab <small>2B09C PS</small> CD Lab <small>A2 MC</small> AOA Lab <small>2B09F NP</small>	

Timetable generated:31-08-2023

aSc Timetables

# 7 Sem IT

Class teacher : Ms. Maina Changeriwal  
2B04

Minha Escola

	1 8:00 - 9:00	2 9:00 - 10:00	3 10:00 - 11:00	Lunch Break 11:00 - 11:50	4 11:50 - 12:50	5 12:50 - 13:50	6 13:50 - 14:50
Mo	BDA Lab 2B00E A1 GSR				BDA VS	OE OO	BDA VS
	Minor Project 2B00F A2 MC / VS						
	CyS Lab 2B00C A3 SJ						
Tu	OE OO	Minor Project A1 VS / MC			Minor Project A1 PS / MC	Seminar	
		CyS Lab A2 SJ			CyS Lab A2 SJ		
		BDA Lab A3 GSR			BDA Lab A3 GSR		
We	CyS Lab 2B00C A1 SJ				BDA VS	OE OO	Industrial Training GSR / VS
	BDA Lab 2B00E A2 GSR						
	Minor Project 2B00G A3 NP / VS						
Th							
Fr							
Sa							

Timetable generated:31-08-2023

aSc Timetables

## 11 Course Outcome Attainment Process:

### 11.1 Course Outcome Attainment Process

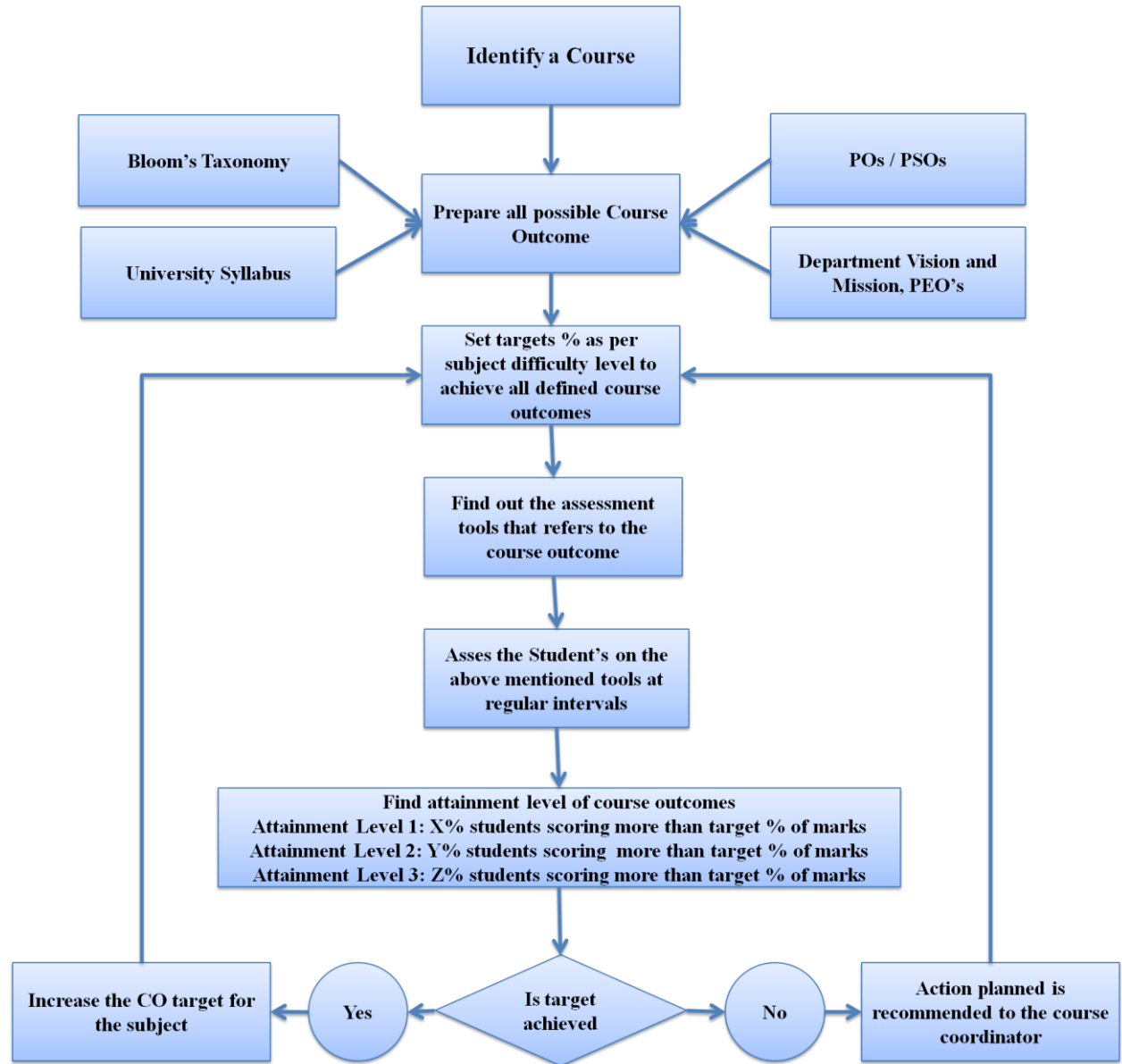


Figure. Course Outcome Attainment Process

### 11.2 List of CO & CO mapping with PO

S. No.	Course Co	Course Name	CO No.	Course Outcomes	P O1 : the kn	P O2 : Pr obl	P O3 : De sig	P O4 : Co nd	P O5 : M od	P O6 : Th e	P O7 : En vir	P O8 : Et hic	P O9 : In div	P O10 : Co m	P O11 : Pr oje	P O12 : Lif e-	PS O 1: De sig	PS O 2: Ex hib	PS O 3: Ap ply
1	1F Y2 - 01	Engineering Mathematics-I	CO1	Students will be able to apply basic concepts and properties of definite integrals, beta and gamma function to solve practical problems in science and engineering field.	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Students will be able to explain and identify convergence of sequence and series and lay down foundation for further investigations in signal processing.	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	The students will be able to analyze the spectral characteristics of periodic functions by using Fourier series representation.	2	3	1	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Students will be able to evaluate partial derivatives and apply to estimate maxima and minima of multivariable function.	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-
			CO5	Students will be able to apply multiple integrals for regions in the plane to evaluate surface area, volume, area of the region bounded by curves, mass, centre of gravity of	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-
					2.60	2.40	1.00	-	-	-	-	-	-	-	-	-	-	-	-
2	1F Y2 - 03	Engineering Chemistry	CO1	Describe characteristics of water, fuel and Engineering materials	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Determine of hardness of water and calorific value of fuels for Industrial as well as domestic purposes	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			CO3	Compare different techniques of water treatment, fuel analysis, Manufacturing of engineering materials and corrosion protection methods	3	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Prepare the generic drugs or medicines by understanding the applications of organic reaction mechanism and manufacturing of engineering materials	-	2	-	-	-	-	-	-	-	-	-	-	-	-
					2.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-
3	1F Y1 - 04	Communicati on Skills	CO1	Describe the process of communication, basics of Grammar and Writing and Literary Aspects	-	-	-	-	-	-	-	-	-	1	-	-	-	-
			CO2	Explain the types of communication, barriers and channels of communication and the concept of Literature through Short Stories and poetry	-	-	-	-	-	-	-	-	-	2	-	-	-	-
			CO3	Write and prepare professional reports, paragraph and business letters with the correct use of grammar	-	-	-	-	-	-	-	-	-	3	-	-	-	-
			CO4	Discuss and illustrate the impact of social and moral values by implying the basics of English Writing Skills through literary aspects	-	-	-	-	-	-	-	2	-	-	-	-	-	-
			CO5	Restate and outline the basic areas of English Language Skills with the applications of literature	-	-	-	-	-	-	-	-	-	-	-	2	-	-
					-	-	-	-	-	-	-	2.00	-	2.00	-	2.00	-	-
4	1F Y3	Basic Mechanical Engineering	CO1	Describe concepts of thermal, functional design of machine elements, materials and primary manufacturing process.	1	-	-	-	-	-	-	-	-	-	-	-	1	-

	-07		CO2	Classify different types of turbines and power plants, pumps and IC engines, refrigeration system, transmission of power, engineering materials and primary manufacturing	2	-	-	-	-	-	-	-	-	-	-	2	-	-
			CO3	Apply the fundamental knowledge of thermal engineering, in addition to understanding of materials and primary manufacturing process to solve the industrial and societal issues.	3	-	-	-	-	-	-	-	-	-	-	2	-	-
			CO4	Examine about the turbine & pumps, IC engines, refrigeration system, modes of transmission of power, materials and primary manufacturing process	-	1	-	-	-	-	-	-	-	-	-	-	2	1
					2.00	1.00	-	-	-	-	-	-	-	-	-	1.67	2.00	1.00
5	1F Y3 - 08	Basic Electrical Engineering	CO1	Define various ac and dc circuit related problems	1	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Explain electromechanical energy conversion process	2	-	-	-	-	-	-	-	-	-	-	1	-	-
			CO3	Classify characteristics of various power electronic devices.	3	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Identify knowledge of protective devices and energy consumption calculations.	-	2	-	-	-	-	-	-	-	-	-	2	-	-
					2.00	2.00	-	-	-	-	-	-	-	-	-	1.50	-	-
6	1F Y2	Engineering Chemistry Lab	CO1	Determine the strength of unknown solution by volumetric analysis.	1	-	-	-	-	-	-	-	-	-	-	-	-	-



	- 21		CO2	Examine the characteristics of lubricating oil in groups	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
			CO3	Analyze different characteristics of water and fuel to solve societal and environmental problems	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
			CO4	Students will show an ability to work as a team member ethically	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-
					1.00	-	-	-	-	-	2.00	2.00	2.50	-	-	-	-	-	-
7	1F Y1 - 22	Language Lab	CO1	Use and pronounce the words correctly.	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
			CO2	Acquire knowledge of the correct expressions,vocabulary etc. in personal and professional lives.	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
			CO3	Plan successfully for leadership and teamwork,crack GD's, interviews and other professional activities.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
			CO4	Synthesize the process of communication using LSRW.	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
					-	-	-	-	-	-	-	-	2.00	2.00	-	-	-	-	-
8	1F Y3	Basic Electrical	CO1	Discuss measurement of electrical quantites	1	-	-	-	-	-	-	-	-	-	-	-	1	2	-

	- 26	<b>Engineering Lab</b>	CO2	Compare different connections of transformer	2	-	-	-	-	-	-	-	-	-	-	-	1	2	-
			CO3	Demonstrate constructional features of electrical machines and converters	3	-	-	-	-	-	-	-	-	-	-	-	2	2	-
			CO4	Students will show an ability to communicate effectively and work as a team member ethically	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-
					2	-	-	-	-	-	-	2	3	2	-	-	1.33	2	-
9	1F Y3 - 25	<b>Manufacturing Practices Workshop</b>	CO1	Describe the working of Lathe machine.	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
			CO2	Apply the basic concepts of Foundry Shop	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-
			CO3	Develop various carpentry joints, welding joints and sheet metal objects.	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-
			CO4	Students will show an ability to work as a team member ethically	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-
					1.50	2.00	-	-	-	-	-	2.00	3.00	-	-	-	1.00	-	-
10	1F Y3	<b>Computer Aided</b>	CO1	Describe engineering drawing terminology, concept of scales and conic sections.	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-

	- 28	Engineering Graphics	CO2	Draw Projection of Points, lines, planes, solids and section of solids	-	1	-	-	-	-	-	-	-	-	-	2	-	-	
			CO3	Draft 2D engineering problems on CAD software.	-	-	-	-	3	-	-	-	-	-	-	-	1	1	
			CO4	Students will show an ability to work as a team member ethically	-	-	-	-	-	-	-	2	3	-	-	-	-	-	
					1.000	1.000	-	-	3.000	-	-	2.000	3.000	-	-	-	1.500	1.000	1.000
21	3I T1 - 03	Managerial Economics and Financial Accounting	CO1	Describe the fundamental concepts of Economics and Financial Management and define the meaning of national income, demand, supply, cost, market structure, and	-	-	-	-	-	1	-	-	-	2	3	-	-	-	
			CO2	Calculate the domestic product, national product and elasticity of price on demand and supply.	-	2	-	-	-	-	-	-	-	-	3	-	-	1	
			CO3	Draw the cost graphs, revenue graphs and forecast the impact of change in price in various perfect as well as imperfect market structures.	3	-	2	-	-	-	-	-	-	-	-	-	-	1	
			CO4	Compare the financial statements to interpret the financial position of the firm and evaluate the project investment decisions.	-	3	-	2	-	-	-	-	-	-	3	-	-	1	
					3.000	2.500	2.000	2.000	-	1.000	-	-	-	2.000	3.000	-	-	-	1.000
22	3I T4	Data Structures	CO1	Define and compare various Linear and Non-Linear Data Structures along with their applications.	-	-	3	2	-	-	-	-	-	-	2	2	2	1	-

	- 05	and Algorithms	CO2	Explain the memory representation of arrays, linked lists, stacks, queues, trees, and graphs; and apply various operations on these data structures.	-	-	-	3	-	-	-	-	-	-	2	2	3	1	1
			CO3	Choose appropriate data structure for the specified problem definition and compare the benefits of dynamic and static implementation of data structures.	-	-	3	2	-	-	-	-	-	-	2	3	3	-	1
			CO4	Select appropriate sorting and searching technique for an application and explain the concept of Hashing.	-	-	3	2	-	-	-	-	-	-	-	2	3	-	1
					-	-	3.00	2.25	-	-	-	-	-	-	2.00	2.25	2.75	1.00	1.00
23	3I T3 - 04	Digital Electronics	CO1	Describe number representation and conversion between different number representation .	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
			CO2	Apply different simplification methods for digital logic .	3	3	-	-	-	-	-	-	-	-	-	2	-	-	2
			CO3	Compare various logic family.	3	3	-	-	-	-	-	-	-	-	-	2	2	-	-
			CO4	Design sequential and combinational logic circuit for given problem.	3	3	-	-	-	-	-	-	-	-	-	2	-	2	-
					3.00	3.00	-	-	-	-	-	-	-	-	-	2.00	2.00	2.00	2.00
24	3I T4	Object Oriented Programming	CO1	Explain basic object oriented programming concepts and principles through C++ language.	3	3	-	-	-	-	-	-	-	-	-	2	-	-	-

	- 06		<b>CO2</b>	Apply the concepts of classes and objects while designing applications.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO3</b>	Identify the need to use memory handling and pointer concepts in various applications.	3	-	-	-	-	-	-	-	-	-	-	3	-	-
			<b>CO4</b>	Assess the types of Inheritance according to the need of application designing.	-	3	-	-	-	-	-	-	-	-	2	-	3	-
			<b>CO5</b>	Construct the applications using generic programming, exception handling and file handling.	-	3	-	-	-	-	-	-	-	-	-	-	-	3
					<b>3.00</b>	<b>3.00</b>	-	-	-	-	-	-	-	-	<b>2.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>
25	<b>3I T4 - 07</b>	<b>Software Engineering</b>	<b>CO1</b>	Plan software development life cycle , including the specification, design, implementation, and testing of software systems that meet specification, performance,	-	3	2	-	-	-	-	-	-	-	2	-	3	2
			<b>CO2</b>	Able to use engineering tools necessary for software project management, evaluate cost estimation and risk analysis.	-	3	2	-	-	-	-	-	-	-	-	3	2	-
			<b>CO3</b>	Identify and outlines the engineering process of software requirement analysis.	3	3	3	-	-	-	-	1	-	-	-	2	3	3
			<b>CO4</b>	Analyze and translate a specification into design, and then realize that design practically, using an appropriate software engineering methodology.	2	3	3	2	-	-	-	2	-	-	2	3	3	3
			<b>CO5</b>	Explain the object- oriented software development process.	3	3	3	3	3	-	-	2	-	-	2	2	3	2

					2. 6 7	3. 0 0	2. 6 0	2. 5 0	3. 0 0	-	-	1. 6 7	-	-	2. 0 0	2. 2 5	3. 0 0	2. 6 0	2. 5 0
26	3I T2 - 01	Advanced Engineering Mathematics	CO1	Describe probability models using probability mass (density) functions ,need and classification of optimization terminology.	2	2	3	3	3	-	-	2	-	-	3	3	2	2	3
			CO2	Determine the probability distributions of discrete and continuous random variables and work binomial, Poisson, uniform, exponential, normal distribution and their statistical	2	3	3	2	-	-	-	-	-	-	2	3	2	2	3
			CO3	Interpret the correlation between two variables and regression applications for purposes of description and prediction.	3	2	2	-	-	-	-	-	-	-	-	1	2	-	1
			CO4	Create mathematical models of the real world problems in optimization. For example: Finance, Budgeting, Investment, Transportation, Traveling salesman and many	3	3	2	2	-	-	-	-	-	-	-	1	2	-	-
			CO5	Solve Assignments and transportation problems using linear programming methods.	3	2	2	2	-	-	-	-	-	-	-	1	2	-	-
					2. 6 0	2. 4 0	2. 4 0	2. 2 5	3. 0 0	-	-	2. 0 0	-	-	2. 5 0	1. 8 0	2. 0 0	2. 0 0	2. 3 3
27	3I T4 - 23	Software Engineering Lab	CO1	Develop a systematic, disciplined and quantifiable approach to the development, operation and maintenance of software.	3	3	3	3	-	-	-	-	-	-	-	1	2	-	1
			CO2	Develop Software Requirements Specification (SRS) for a given problem.	3	2	2	2	-	-	-	-	-	-	-	1	3	-	2
			CO3	Use appropriate CASE tools in the software life cycle.	-	2	2	-	-	-	-	-	2	-	2	2	3	2	2

			<b>CO4</b>	Develop DFD model using structured design.	-	3	3	-	-	-	-	-	2	-	2	3	3	2	-
			<b>CO5</b>	Develop projects using object-oriented design and UML.	-	2	2	-	-	-	-	-	2	-	3	2	3	3	2
					<b>3.00</b>	<b>2.40</b>	<b>2.40</b>	<b>2.50</b>	-	-	-	-	<b>2.00</b>	-	<b>2.33</b>	<b>1.80</b>	<b>2.80</b>	<b>2.33</b>	<b>1.75</b>
28	<b>3I T4 - 21</b>	<b>Data Structures and Algorithms Lab</b>	<b>CO1</b>	Compare and implement elementary data structures such as stacks, queues, linked lists, trees and graphs.	-	3	3	-	2	-	-	-	2	-	3	3	-	-	2
			<b>CO2</b>	Identify the appropriate data structure for a given problem.	-	3	2	-	2	-	-	-	2	-	2	2	2	2	3
			<b>CO3</b>	Select and implement appropriate sorting/searching technique for given problem.	-	-	2	1	-	-	-	-	-	-	1	1	3	2	1
			<b>CO4</b>	Implement various operations like creation, insertion, deletion and traversal on Linear and Non-Linear data structures.	-	2	3	-	-	-	-	-	-	-	-	1	2	2	1
					-	<b>2.67</b>	<b>2.50</b>	<b>1.00</b>	<b>2.00</b>	-	-	-	<b>2.00</b>	-	<b>2.00</b>	<b>1.75</b>	<b>2.33</b>	<b>2.00</b>	<b>1.75</b>
29	<b>3I T4 - 24</b>	<b>Digital Electronics Lab</b>	<b>CO1</b>	Understand Digital Circuits & Systems	-	-	3	-	-	-	-	-	-	-	-	1	-	2	-
			<b>CO2</b>	Verify truth tables of basic logic gates.	-	2	2	-	-	-	-	-	-	-	-	2	-	-	2



			<b>CO3</b>	Realize and verify different types of logic gates.	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO4</b>	Realize different types of Combinational and Sequential circuits	-	-	3	2	2	-	-	-	-	-	3	3	-	2	-
					-	2. 0 0	2. 6 7	2. 0 0	2. 0 0	-	-	-	-	-	3. 0 0	2. 0 0	2. 0 0	2. 0 0	2. 0 0
30	<b>3I T4 - 22</b>	<b>Object Oriented Programming Lab</b>	<b>CO1</b>	Demonstrate the knowledge of C++ programming language (its syntax, characteristic), objects and class concepts, and different Types of conversion techniques in	-	-	3	2	2	-	-	-	-	-	3	3	3	-	-
			<b>CO2</b>	Apply different memory allocation techniques and functions in C++	-	-	3	3	2	-	-	-	-	-	3	3	-	3	-
			<b>CO3</b>	Implement Inheritance concept in C++ programming model	-	-	3	2	-	-	-	-	-	-	3	3	-	-	3
			<b>CO4</b>	Formulate abstract classes with help of polymorphism in C++	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2
					-	-	3. 0 0	2. 3 3	2. 0 0	-	-	-	-	-	3. 0 0	3. 0 0	3. 0 0	3. 0 0	2. 5 0
31	<b>3I T7 - 30</b>	<b>Industrial Training</b>	<b>CO1</b>	Identify the importance of emerging technologies and advancements	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO2</b>	Explain the theoretical aspects directly viewing development and other activity in industry and can decide his/her career.	-	3	-	-	-	-	-	-	-	-	-	-	-	-	2

			<b>CO3</b>	Develop the practical skill, team work and ethical thinking while working in industry.	-	-	-	-	-	-	-	3	3	-	-	-	-	2	-
			<b>CO4</b>	Communicate effectively through technical presentation, report and interactions.	-	-	-	-	-	2	-	-	-	3	-	-	2	-	-
			<b>CO5</b>	Present and demonstrate the report using modern tools.	-	-	-	-	3	-	-	-	-	-	-	-	2	-	-
					3.00	3.00	-	-	3.00	2.00	-	3.00	3.00	3.00	-	-	2.00	2.00	2.00
43	51 T3 - 01	Microprocesso r And Interfaces	<b>CO1</b>	Describe the architecture and organization of Microprocessor along with Instruction Set format.	-	3	-	-	-	-	-	-	-	-	-	-	-	2	-
			<b>CO2</b>	Illustrate the operation of various instructions and addressing modes.	-	3	-	-	-	-	-	-	-	-	-	-	-	-	2
			<b>CO3</b>	Compare the various interrupts and Delay Techniques.	-	-	3	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO4</b>	Develop assembly language program using various programming tools for given problem.	-	-	3	-	-	-	-	-	-	-	-	-	-	2	-
			<b>CO5</b>	Design Interfacing of Microprocessor with External Device.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	2
					-	3.00	3.00	3.00	-	-	-	-	-	-	-	-	2.00	2.00	2.00

44	5I T4 - 02	Compiler Design	<b>CO1</b>	Describe the phases of the compilation process and other implicit phase specific procedures	-	3	-	-	-	-	-	-	-	-	2	2	2	-
			<b>CO2</b>	Compare different parsing methods, error handling methods, and parameter parsing approaches	-	-	3	-	-	-	-	-	-	-	2	3	2	2
			<b>CO3</b>	Examine basic block and its control flow, TAC, DAG representation, optimizations sources, methods of code generation	-	-	3	-	-	-	-	-	-	-	-	2	2	-
			<b>CO4</b>	Analyze syntax directed definition, storage allocation, parameter passing and data structures using symbol tables	-	-	3	-	-	-	-	-	-	-	2	3	2	-
			<b>CO5</b>	Create compiler programs using YACC and Lex thereby constructing Lexical Analyzers and Parsers.	-	-	3	-	-	-	-	-	-	-	-	3	2	-
					-	<b>3.00</b>	<b>3.00</b>	-	-	-	-	-	-	-	<b>2.00</b>	<b>2.60</b>	<b>2.00</b>	<b>2.00</b>
45	5I T4 - 03	Operating System	<b>CO1</b>	Describe the characteristics of different structures of the operating systems and identify the core functions of the operating systems.	3	-	-	-	-	-	-	-	-	-	-	2	-	2
			<b>CO2</b>	Interpret features and strengths of various contemporary operating systems (UNIX, Linux and Mobile OSs).	2	3	-	-	-	-	-	-	-	-	2	-	3	-
			<b>CO3</b>	Apply methods to solve basic problems related to core functioning of OS such as synchronization, scheduling, deadlocks, memory management, file management etc.	-	-	3	-	-	-	-	-	-	-	2	3	-	-
			<b>CO4</b>	Analyze and evaluate various policies and algorithms used for the management of processes, resource control, physical and virtual memory, scheduling, I/O and files.	-	-	3	-	-	-	-	-	-	-	2	-	-	3

					2. 5 0	3. 0 0	3. 0 0	-	-	-	-	-	-	-	-	2. 0 0	2. 5 0	3. 0 0	2. 5 0
46	5I T4 - 04	Computer Graphics & Multimedia	<b>CO1</b>	Understand the concept of different display techniques, 2D & 3D, Co-ordinate system and primitive drawing components like line, circle etc.	-	3	3	-	-	-	-	-	-	-	-	2	3	-	2
			<b>CO2</b>	Use geometric transformations on graphics objects and their application in composite form.	-	2	2	-	-	-	-	-	-	-	-	2	3	2	3
			<b>CO3</b>	Apply visible surface detection methods in 3D objects.	-	3	3	-	-	-	-	-	-	-	-	2	3	2	3
			<b>CO4</b>	Compare Illumination color models and clipping techniques to graphics application.	-	3	3	-	-	-	-	-	-	-	-	2	3	-	-
			<b>CO5</b>	Implement the concept and applications of multimedia in computer animation.	-	3	3	-	-	-	-	-	-	-	-	2	-	-	3
					-	2. 8 0	2. 8 0	-	-	-	-	-	-	-	-	2. 0 0	3. 0 0	2. 0 0	2. 7 5
47	5I T4 - 05	Analysis of Algorithms	<b>CO1</b>	Explain design techniques of algorithm and concepts of complexity and Notations	-	3	3	2	-	-	-	-	-	-	-	-	3	-	2
			<b>CO2</b>	Analyze and evaluate time complexity of different computational problems in worst, best and average case	2	3	3	3	-	-	-	-	-	-	-	-	3	-	2
			<b>CO3</b>	Choose appropriate algorithm design techniques and formulate the solution of different computational problems.	2	3	3	3	-	-	-	-	-	-	-	-	3	-	2

			<b>CO4</b>	Design algorithmic solution to solve the computational problems using divide & conquer, Greedy, Dynamic Programming, Pattern Matching, Branch & Bound &	2	3	3	3	-	-	-	-	-	-	-	-	3	-	2
					<b>2.00</b>	<b>3.00</b>	<b>3.00</b>	<b>2.75</b>	-	-	-	-	-	-	-	-	<b>3.00</b>	-	<b>2.00</b>
48	5I T5 - 12	Software Testing and Project Management	<b>CO1</b>	Define and explain software project management concepts like project planning, organizing project teams, and roles of a Project Manager.	-	2	3	2	-	-	-	-	-	-	2	2	2	1	-
			<b>CO2</b>	Estimate effort and duration and calculate software size.	-	-	3	-	-	-	-	-	-	-	2	2	3	1	1
			<b>CO3</b>	Define and compare Black Box and White Box Testing.	-	-	3	2	-	-	-	-	-	-	2	3	3	-	1
			<b>CO4</b>	Explain various types of testing techniques and design test cases.	-	-	3	2	-	-	-	-	-	-	-	2	3	-	1
					-	<b>2.00</b>	<b>3.00</b>	<b>2.00</b>	-	-	-	-	-	-	<b>2.00</b>	<b>2.25</b>	<b>2.75</b>	<b>1.00</b>	<b>1.00</b>
49	5I T4 - 21	Computer Graphics & Multimedia Lab	<b>CO1</b>	Write programs to draw two dimensional images using OpenGL.	-	2	2	3	-	-	-	-	-	-	-	2	2	2	2
			<b>CO2</b>	Implement algorithms for line, ellipse and circle drawing using OpenGL.	-	3	3	2	3	-	-	-	-	-	-	2	3	-	2
			<b>CO3</b>	Demonstrate algorithms of clipping of Images.	-	2	2	2	3	-	-	-	-	-	-	2	3	2	3

			<b>CO4</b>	Implement basic transformations on objects using OpenGL.	-	3	2	2	3	-	-	-	-	-	-	2	3	2	3
			<b>CO5</b>	Apply the concept of Color Generation on objects.	-	2	3	3	3	-	-	-	-	-	-	2	3	2	2
					-	<b>2.40</b>	<b>2.40</b>	<b>2.40</b>	<b>3.00</b>	-	-	-	-	-	-	<b>2.00</b>	<b>2.80</b>	<b>2.00</b>	<b>2.40</b>
50	5I T4 - 22	Compiler Design Lab	<b>CO1</b>	Analyze various system programming concepts, by designing a lexical analyzer for pattern recognition in C Language	-	-	3	2	3	-	-	-	-	-	-	2	3	2	2
			<b>CO2</b>	Design programs to implement different parsing approaches thereby implementing parse tables.	-	-	3	2	-	-	-	-	-	-	-	2	3	2	-
			<b>CO3</b>	Construct a program for generating for various intermediate code forms, especially TAC, and Polish code.	-	-	3	2	-	-	-	-	-	-	-	2	2	2	2
			<b>CO4</b>	Create various storage allocation strategies, parameter passing and data structures using symbol tables	-	-	3	-	-	-	-	-	-	-	-	2	3	2	-
			<b>CO5</b>	Create a Lexical Analyzer using LEX, and language processor development using YACC.	-	3	2	2	3	-	-	-	-	-	-	2	3	2	2
					-	<b>3.00</b>	<b>2.80</b>	<b>2.00</b>	<b>3.00</b>	-	-	-	-	-	-	<b>2.00</b>	<b>2.80</b>	<b>2.00</b>	<b>2.00</b>
51	5I T4	Analysis of Algorithms Lab	<b>CO1</b>	Analyze the time complexity of algorithm & synthesize efficient algorithms.	-	3	3	3	3	-	-	-	-	-	-	-	3	-	-

	- 23		<b>CO2</b>	Implement programs for classical sorting, searching problems using various design techniques of algorithm	-	3	3	3	2	-	-	-	-	-	-	3	3	-	2
			<b>CO3</b>	Implement programs for optimization and graph problems using various design techniques of algorithm	-	3	3	3	2	-	-	-	-	-	-	3	3	-	3
			<b>CO4</b>	Synthesize efficient algorithms for sorting, optimization, graph based problems	-	3	3	3	3	-	-	-	-	-	-	3	3	-	-
					-	3.00	3.00	3.00	2.50	-	-	-	-	-	-	3.00	3.00	-	2.50
52	51 T4 - 24	Advanced Java Lab	<b>CO1</b>	Create a Swings application with GUI components and design Java Applet programs	-	3	-	-	2	-	-	-	-	-	-	2	2	-	-
			<b>CO2</b>	Connect a web application to a database using JDBC drivers, and construct Client Server programs	-	3	-	-	2	-	-	-	-	-	-	2	2	-	-
			<b>CO3</b>	Apply Java RMI to write distributed applications, and incorporate JNDI lookup and Object serializations.	-	-	3	-	3	-	-	2	-	-	-	-	3	2	2
			<b>CO4</b>	Analyze J2EE Architecture and develop programs to implement Java Servlets and Session Handling	-	-	3	2	3	-	-	2	-	-	-	2	2	3	3
			<b>CO5</b>	Design an application using JSP pages with XML tab library and integration of SQL functions.	-	-	3	2	3	-	-	2	-	-	-	2	3	3	3
					-	3.00	3.00	2.00	2.60	-	-	2.00	-	-	-	2.00	2.40	2.67	2.67



53	5I T7 - 30	Industrial Training	<b>CO1</b>	Identify the importance of emerging technologies and advancements	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO2</b>	Explain the theoretical aspects directly viewing development and other activity in industry and can decide his/her career.	-	3	-	-	-	-	-	-	-	-	-	-	-	-	2
			<b>CO3</b>	Develop the practical skill, team work and ethical thinking while working in industry.	-	-	-	-	-	-	-	3	3	-	-	-	-	2	-
			<b>CO4</b>	Communicate effectively through technical presentation, report and interactions.	-	-	-	-	-	2	-	-	-	3	-	-	2	-	-
			<b>CO5</b>	Present and demonstrate the report using modern tools.	-	-	-	-	3	-	-	-	-	-	-	-	2	-	-
					<b>3.00</b>	<b>3.00</b>	-	-	<b>3.00</b>	<b>2.00</b>	-	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	-	-	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>
65	7I T4 - 01	Big Data Analytics	<b>CO1</b>	Understand the key issues in big data management and its associated applications in intelligent business and scientific computing.	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-
			<b>CO2</b>	Differentiate various big data technologies like Hadoop, MapReduce, Pig, Hive, Hbase and No-SQL	-	3	-	-	-	-	-	-	-	-	-	-	-	3	-
			<b>CO3</b>	Apply tools and techniques to analyze Big Data	-	3	-	-	3	-	-	-	-	-	-	-	-	-	3
			<b>CO4</b>	Design a solution for a given problem using suitable Big Data Techniques	-	-	3	-	3	-	-	-	-	-	-	-	-	-	3

					3.00	3.00	3.00	-	3.00	-	-	-	-	-	-	-	3.00	3.00	3.00
66	7E E6 - 60. 1	Electrical Machines and Drives (OPEN ELECTIVE)	CO1	Understand the constructional details and principle of operation of rotating electrical machines	3	-	-	3	3	-	-	-	-	-	3	-	-	-	-
			CO2	Acquire knowledge about the working principle and various aspects of electric drives.	3	-	-	2	3	-	-	-	-	-	2	-	-	-	-
			CO3	Study and analyze the various control techniques for speed control on various electric drives.	2	-	-	3	3	-	-	-	-	-	3	-	-	-	-
			CO4	Develop design knowledge on how to design the speed control and current control loops of an electric drive	3	-	-	3	2	-	-	-	-	-	3	-	-	-	-
					2.75	-	-	2.75	2.75	-	-	-	-	-	2.75	-	-	-	-
67	7 M E6 - 60. 2	Quality Management (OPEN ELECTIVE)	CO1	Describe the basic concept of Quality Management.	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			CO2	Explain a system, component, and process to meet desired needs within limits using modeling process quality and learn the concept of control charts.	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			CO3	Illustrate the concept of Quality Assurance, Acceptance sampling and study quality systems like ISO9000, ISO 14000 and Six Sigma.	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Identify engineering problems, concept of reliability and Taguchi Method of Design of experiments.	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-

					2. 0 0	2. 0 0	-	-	-	-	-	-	-	-	-	2. 0 0	-	-
68	7E C6 - 60. 1	Principle of Electronic communication (OPEN ELECTIVE)	CO1	Describe the principles of various digital modulation systems and their properties, including bandwidth, channel capacity, transmission over bandlimited	3	2	-	2	-	-	-	-	-	-	-	3	-	-
			CO2	Apply the concepts to practical applications in telecommunication	2	3	-	2	-	-	-	-	-	2	-	3	1	1
			CO3	Analyse communication systems in both the time and frequency domains.	2	3	2	-	2	-	2	-	-	-	-	3	-	2
			CO4	Design a communication system comprised of both analog and digital modulation techniques.	-	3	2	-	-	-	-	-	-	2	-	3	-	-
					2. 3 3	2. 7 5	2. 0 0	2. 0 0	2. 0 0	-	2. 0 0	-	-	2. 0 0	-	3. 0 0	1. 0 0	1. 5 0
69	7E C6 - 60. 2	Micro and Smart System Technology (OPEN ELECTIVE)	CO1	Explain the smart grids components and architecture	3	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Apply different measuring methods and sensors used in smart grid	3	3	2	-	-	-	-	-	-	-	-	-	1	-
			CO3	Analyze various renewable energy technologies	3	3	-	2	-	-	-	-	-	-	-	-	-	-
			CO4	Design various smart grid technology based devices.	-	-	3	3	3	-	-	-	-	-	-	-	1	1

					<b>3. 0 0</b>	<b>3. 0 0</b>	<b>2. 5 0</b>	<b>2. 5 0</b>	<b>3. 0 0</b>	-	-	-	-	-	-	-	<b>1. 0 0</b>	-	<b>1. 0 0</b>
70	7C E6 - 60. 1	Environmental Impact Analysis (OPEN ELECTIVE)	<b>CO1</b>	Define terms used in Environmental impact assessment, quality standards for environmental Components	2	1	-	-	-	-	1	-	-	-	-	1	-	1	-
			<b>CO2</b>	Understand the concepts about EIA i.e; ecological imbalance, effects of pollution, importance of stakeholders in the EIA process	2	1	-	-	-	-	1	-	-	-	-	1	-	1	-
			<b>CO3</b>	Organize an environmental impact assessment for a proposed project/activity	1	2	1	-	1	1	2	-	-	-	-	2	1	1	1
			<b>CO4</b>	Analyze different methodologies and impacts related to EIA	1	3	1	-	1	1	2	-	-	-	-	2	1	1	1
					<b>1. 5 0</b>	<b>1. 7 5</b>	<b>1. 0 0</b>	-	<b>1. 0 0</b>	<b>1. 0 0</b>	<b>1. 5 0</b>	-	-	-	-	<b>1. 5 0</b>	<b>1. 0 0</b>	<b>1. 0 0</b>	<b>1. 0 0</b>
71	7C E6 - 60. 2	Disaster Management (OPEN ELECTIVE)	<b>CO1</b>	Understand concept of disasters, risks, hazards, capacity building, coping with disaster and disaster management act and policy in India	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO2</b>	Explain concept of disasters, risks, hazards, capacity building, coping with disaster and disaster management act and policy in India	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO3</b>	Classify disasters, risks, hazards, management techniques	1	2	1	-	-	-	-	-	-	-	-	-	-	1	1
			<b>CO4</b>	Apply the concept of capacity building, coping with disaster and disaster management act and policy in India	1	2	1	-	1	1	-	-	-	-	-	-	1	1	-

			<b>CO5</b>	Investigate natural and manmade disasters	-	2	2	1	2	1	-	-	-	-	-	-	1	-	-
					<b>1.50</b>	<b>1.75</b>	<b>1.33</b>	<b>1.00</b>	<b>1.50</b>	<b>1.00</b>	-	-	-	-	-	-	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>
72	7I T4 - 21	Big Data Analytics Lab	<b>CO1</b>	Implement the basics of data structures like Linked list, stack, queue, set and map in Java.	-	3	-	-	2	-	-	-	-	-	-	-	2	-	-
			<b>CO2</b>	Perform setting up Hadoop in different operating modes, install and run Pig, Hive.	-	-	3	-	3	-	-	-	-	-	-	-	-	-	2
			<b>CO3</b>	Apply different file management task in Hadoop Map Reduce and perform different operations on data using Pig Latin scripts and Hive.	-	-	3	-	3	-	-	-	-	-	-	-	-	-	2
			<b>CO4</b>	Design solutions of some real life big data applications	-	-	-	3	3	-	-	-	-	-	-	-	3	-	-
					-	-	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	-	-	-	-	-	-	-	<b>3.00</b>	-	<b>2.00</b>
73	7I T4 - 22	Cyber Security Lab	<b>CO1</b>	Apply techniques to identify network vulnerability	-	-	3	-	-	2	-	2	-	-	-	-	2	2	-
			<b>CO2</b>	Perform analysis of Network traffic using network based tools	-	2	3	-	-	2	-	2	-	-	-	-	2	-	2
			<b>CO3</b>	Implement techniques for network scanning and simulation of Intrusion detection systems	-	1	3	-	-	2	-	1	-	-	-	-	3	-	2

			<b>CO4</b>	Design programs to implement encryption and network attack simulations.	-	-	3	2	-	2	-	2	-	-	-	-	2	-	2
			<b>CO5</b>	Design network security solution for a given case study	-	-	3	2	-	2	-	2	-	-	-	-	2	2	2
					-	<b>1.50</b>	<b>3.00</b>	<b>2.00</b>	-	<b>2.00</b>	-	<b>1.80</b>	-	-	-	-	<b>2.20</b>	<b>2.00</b>	<b>2.00</b>
74	71 T7 - 30	Industrial Training	<b>CO1</b>	Identify the importance of emerging technologies and advancements	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO2</b>	Explain the theoretical aspects directly viewing development and other activity in industry and can decide his/her career.	-	3	-	-	-	-	-	-	-	-	-	-	-	-	2
			<b>CO3</b>	Develop the practical skill, team work and ethical thinking while working in industry.	-	-	-	-	-	-	-	3	3	-	-	-	-	2	-
			<b>CO4</b>	Communicate effectively through technical presentation, report and interactions.	-	-	-	-	-	2	-	-	-	3	-	-	2	-	-
			<b>CO5</b>	Present and demonstrate the report using modern tools.	-	-	-	-	3	-	-	-	-	-	-	-	2	-	-
					<b>3.00</b>	<b>3.00</b>	-	-	<b>3.00</b>	<b>2.00</b>	-	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	-	-	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>
75	71 T7	Seminar	<b>CO1</b>	Identify the importance of emerging technologies and advancements.	2	-	2	2	3	2	-	-	2	2	2	2	1	3	2

	- 40		<b>CO2</b>	Review the present literature of any emerging technology to find suitable knowledge.	-	-	-	-	-	2	2	-	-	-	-	2	-	-	2
			<b>CO3</b>	Assemble the knowledge into presentable format.	-	-	-	-	-	2	2	-	2	2	2	2	-	1	1
			<b>CO4</b>	Write the technical report ethically.	-	-	-	-	-	-	-	3	-	-	1	2	-	1	-
			<b>CO5</b>	Present and demonstrate the report using modern tools.	-	-	2	2	2	-	-	-	-	-	-	3	2	-	-
					2. 0 0	-	2. 0 0	2. 0 0	2. 5 0	2. 0 0	2. 0 0	3. 0 0	2. 0 0	2. 0 0	1. 6 7	2. 2 0	1. 5 0	1. 6 7	1. 6 7



## 12 Course File Sample

### **Outcome Based Process Implementation Guidelines for Faculty**

#### **12.1 Labelling your course file**

- **Name of faculty:**
- **Class- SEM:**
- **Branch:**
- **Course Code:**
- **Course Name:**
- **Session:**

#### **12.2 List of Documents:**

1. **Vision & Mission Statements of the Institute**
2. **Vision & Mission Statements of the Department**
3. **List of PEO, PSO and PO of department**
4. **Personal Time Table**
5. **RTU Syllabus**
6. **Document as per point no. 1-4 in guidelines**
7. **Course Plan**
8. **Document as per point no 6-12 in guidelines**
9. **Document for CO Assessment Stage 1: As per point no 13, up to 13.2.5**
10. **Document for CO Assessment Stage 2: As per point no 13, up to 13.2.5, with comparison to previous**
11. **Document for CO Assessment Stage 3: As per point no 13, up to 13.2.5, with comparison to previous**
12. **Document for CO Attainment through RTU Component: Previous RTU Result: point no. 13.3 upto 13.3.2**
13. **Document for PO attainment through RTU Component: Previous RTU Result: point no. 13.4 upto 13.4.2**
14. **Document for Overall Attainment of PO through CO: As per point no 13.5**
15. **Document for last three years (Repeat process from 6-14 above): Comparative data should be included in course file**
16. **Lecture Notes**
17. **Copy of Assignments questions given from time to time**
18. **Copy of Tutorial Sheets given (if applicable)**
19. **RTU Question Papers with answer**
20. **Internal Assessment Question Papers with answer from time to time**
21. **Topics covered beyond syllabus- References**
22. **Details of any other activity and its assessment through rubric be included**
23. **Mapping department level/ focus activities with your COs**

### 13 Outcome Based Process Implementation Guidelines for Faculty

#### Course CO-PO, Preparation, Assessment Formats

Academic Session: 2022-2023

Class:

Semester:

Name of the Faculty:

Subject:

Subject Code:

This document is meant as guidelines for implementing Outcome based education system as a part of NBA process.

1. **Vision & Mission of Department: Statement and Mapping with Institute Mission** Here you have to include department mission & vision statements and show mapping of keywords with institute mission.
2. **Program Educational Objectives (PEOs): Statement and Mapping with Department Vision & Mission**  
Here you have to include department PEO statements and show mapping of keywords with department vision & mission.
3. **Program Specific Outcome (PSOs): Statement and Mapping with Department Vision & Mission**  
Here you have to include department PSO statements and show mapping of keywords with department vision & mission.
4. **Program Outcome (POs): Statement and Mapping with PEO and PSO**  
Here you have to include PO statements and show mapping of keywords with department PEOs & PSOs.
5. **Course Plan (Deployment):**

(Please write how you intend to cover the contents: i.e., coverage of Units by lectures, guest lectures, design exercises, solving numerical problems, demonstration of models, model preparation, or by assignments, etc.), **for example**

- ☐ coverage of Units by lectures
- ☐ design exercises
- ☐ demonstration of models
- ☐ by assignments

Lecture No.	Lect. No.	Topics, Problems, Applications	CO/LO	Target Date of Coverage	Actual Date of Coverage	Ref. Book/Journal with Page No.
1.	1	Introduction of OS	CO1	12/07/2019	12/07/2019	T1 Page 121 - 126
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Example T1: Principles of OS, By Ramesh Soni, Tata MGHill, Edition 2019

6. **Course Outcomes:** Look for strong mapping of course with specific PO (2-3). Define Generic Course Outcomes (max 4 to 6) using Blooms Taxonomy. (In case of Lab Course define generic Lab Outcomes LO and refer CO as LO in this document).

- i. 5IT4-03.1(CO1)-
- ii. 5IT4-03.2(CO2)-
- iii. 5IT4-03.3(CO3)-
- iv. 5IT4-03.4(CO4)-
- v. 5IT4-03.5(CO5)-

**7. CO-PO-PSO Mapping: Mapping Levels: 1- Low, 2- Moderate, 3-Strong**

**First try to find out 2-3 PO those are strongly related to your subject contents. Go through the contents and try to formulate 4-5 Course Outcome as per bloom taxonomy. Map each CO with PO and PSO as above. While mapping please rethink if you map any PO with 3, it means you are planning to deliver the contents of that level and you will also examine the students at that level.**

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1															
CO2															
CO3															
CO4															
CO5															

**7.1 PO Strongly Mapped: (Example):**

**○ PO2: Write full statement with keywords highlighted ○ PO3: Write full statement with keywords highlighted ○ PO4: Write full statement with keywords highlighted**

**7.2 PO Moderately Mapped: (Example)**

**○ PO1: Write full statement with keywords highlighted  
○ PO11: Write full statement with keywords highlighted**

**7.3 PO Low Mapped: (Example)**

**○ PO12: Write full statement with keywords highlighted**

**7.4 PSO Strongly Mapped: (Example)**

**○ PSO 1 : Write full statement with keywords highlighted**

**7.5 PSO Moderately Mapped: (Example)**

**○ PSO 2: Write full statement with keywords highlighted**

**6.6 PSO Low Mapped: (Example)**

**○ PSO 3: Write full statement with keywords highlighted**

**8. Rules for CO/LO Attainment Levels: (Targets)**

**All the courses of your department should be divided into three categories A-Most Difficult course, B-Medium level of Difficulty, C- Low level of Difficulty –(Easy)**

**According to difficulty level, you can decide specific range for CO attainment targets for Continuous assessment from the following table.**

**Remember that targets for internal assessment should be higher.**

Course Category	Level 3	Level 2	Level 1
A	60 % of students getting > 60% marks	50-60 % of students getting > 60% marks	40-50 % of students getting > 60% marks
B	80 % of students getting > 60% marks	60-80 % of students getting > 60% marks	40-60 % of students getting > 60% marks
C	90 % of students getting > 60% marks	70-90 % of students getting > 60% marks	40-70 % of students getting > 60% marks

#### 9. End Term RTU Component: CO Attainment Levels

**All the courses of your department should be divided into three categories A-Most Difficult course, B-Medium level of Difficulty, C- Low level of Difficulty –(Easy)**

**According to difficulty level and the results of past 3-5 years, you can decide specific range for CO attainment targets for RTU component from the following table.**

Course Category	Level 3	Level 2	Level 1
A	50 % of students getting > 60% marks	40-50 % of students getting > 60% marks	30-40 % of students getting > 60% marks
B	60 % of students getting > 60% marks	40-60 % of students getting > 60% marks	30-40 % of students getting > 60% marks
C	80 % of students getting > 60% marks	60-80 % of students getting > 60% marks	40-60 % of students getting > 60% marks

**For the specific CO/LO attainment levels of your respective course please use the above tables as reference according your subject difficulty level and prepare following table.**

S. No.	Course Type	Attainment Level=1	Attainment Level=2	Attainment Level=3
1	Theory Courses Mid Semester Exams			
2	Theory Courses University Exam			
4	Practical Courses – Internal Exams			
5	Practical Courses - University Exam			
6	Assignments/Unit Test			
7.	Any other			

#### 10. CO wise Assessment Activities (as Mentioned in Session Plan):

**You can plan for each CO, activities/ assessment tools to be conducted/ used for its achievement.**

**Use X to those you select for specific CO. Remove all unused columns.**

	Activities															
CO	Pre Mid I Test	Post Mid I Test	Quiz 1	Quiz 2	Pre Mid II Test	Post Mid II Test	Assignment 1	Assignment 2	Workshop	Seminar	Project	Training	Discussion	Mid 1	Mid 2	Ind. visit
CO1																
CO2																
CO3																
CO4																
CO5																
CO6																

In case of Lab course some activities are as follows:

LO	Internal Practical exams	Laboratory Tests	Viva	Records	Project Presentation	Project Evaluation	External practical exams
LO1							
LO2							
LO3							
LO4							

#### 11. CO wise Assessment Activities:

Based on CO-PO mapping, determine targets for each CO as average of targets of all relevant POs.

CO	PO												Avg.	PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	CO Targets	PSO1	PSO2	PSO3
CO1																
CO2																
CO3																
CO4																
CO5																

**12. Activity wise Assessment Tools:**

**This gives you generalized view of different direct and indirect tools those can be used for assessment / achievement of CO/PO. (Decide which tools are required for assessing a particular CO/LO and in reference to Course A, B, C difficulty level).**

Sr. No.	Activity	Assessment Method	Tools	Weightage Marks	Recommendation
1.	Pre-Mid Term 1	Direct	Marks	10	For CO
2.	Post-Mid Term 1	Direct	Marks	10	For CO
3.	Quiz 1	Direct	Marks	10	For CO
4.	Quiz 2	Direct	Marks	10	For CO
5.	Pre Mid Term 2	Direct	Marks	10	For CO
6.	Post Mid Term 2	Direct	Marks	10	For CO
7.	Mid Term 1	Direct	Marks	20	For CO
8.	Mid Term 2	Direct	Marks	20	For CO
9.	Assignment 1	Direct	Marks	10	For CO
10.	Assignment 2	Direct	Marks	10	For CO
11.	Workshop	Indirect	Rubrics	5	For LO
12.	Seminar/ SPL	Indirect	Rubrics	5	For CO/LO
13.	Project (Mini or NSP)	Indirect	Rubrics	20	For LO
14.	Discussion	Indirect	Rubrics	5	For LO
15.	Training	Indirect	Rubrics	20	For LO
16.	Industrial Visit	Indirect	Rubrics	20	For LO
17.	Or any other activity	Direct/ Indirect	Marks/ Rubrics	any	For LO
18.					
Note that for every rubrics you need to decide assessment criteria, range of marks or weightage – above values are indicative					

**13. CO Assessment Process:**

**After every activity (Ideally as per above table): (Frequency of Assessment- Can be taken as monthly). So the assessment can be for all activities held during the month. Do the following.**

**13.1 Attainment of COs****13.1.1 Attainment Table for CO1: 5IT4-03.1**



**CO1: SIT4-03.1: Attainment Table (Columns) As Applicable CO wise-Monthly**

Student	Pre Mid I Test 10	Quiz 1 10	Assignment 10	Quiz 1 10	WS 10	Training 10	Total (60)	% Of Marks	Level of Attainment
Name1									3
Name2									2
Name 3									1
Name 4									2
Name 5									1
Name 6									2
----									--
-----									--
	No. of Students attained level 3=					% of Students Attained Level 3=			
	No. of Students attained level 2=					% of Students Attained Level 2=			
	No. of Students attained level 1=					% of Students Attained Level 1=			
	Target Achieved= ? (Check Level 3 % attainment -If No Find Gap)								
	Mark X for absent- Take avg. of all present								

**(Repeat it for all other COs, (CO2 – CO5))**

**13.1.2 CO-Gap Identifications**

COs	CO 1	CO 2	CO 3	CO4	CO5
Target					
Achieved					
Gap					

**13.1.3 Gaps Identified:**

Describe what the reasons for gaps are

- i.
- ii.

**Overall CO Attainment Table: Example**

COs	CO 1	CO 2	CO 3	CO4	CO5	Co6
Attainment level as per rules set	3	1	3	3	3	3
Average CO attainment through internal assessment	<b>2.67</b>					

**13.1.4: Activities Decided to bridge the gap**

**Please do analyze whether you could get improvement through activities decided and conducted for improvements. Reason should be noted why / how it is improved or not.**

### 13.2 Attainment of POs & PSO:

**13.2.1 Target-Expected Attainment of PO by attainment of CO- Put all mappings of 3, 2 and 1. Based on CO-PO mapping, determine targets for each PO as average of targets of all relevant COs.**

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
3ITA101.1															
3ITA101.2															
3ITA101.3															
3ITA101.4															
3ITA101.5															
Obtain Average-PO/PSO Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets

### 13.2.2 Attainment of POs & PSO through CO as Continuous Evaluation:

**Put all attainment values of CO as per mappings with 3, 2, 1 as evaluated in 13.1.1 (Frequency- Monthly)**

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
5IT4-03.1															
5IT4-03.2															
5IT4-03.3															
5IT4-03.4															
5IT4-03.5															
Obtain Avg. PO/PSO Attainment	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved

### 13.2.3 PO Gap Identification:

	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Targets															
Achieved															
Gap															

### 13.2.4 Gaps Identified:

Describe what the reasons for gap (for PO) are.

- i.
- ii.

### 13.2.5 Activities Decided to bridge the gap

Please do analyze whether you could get improvement through activities decided and conducted for improvements. Reason should be noted why / how it is improved or not.

Repeat whole process after one month, Two months, and three months. Plot bar chart for improvement in CO, PO & PSO. (Every month)

### 13.3 Attainment of CO through RTU Exam:

This may be possible for previous semester results so overall attainment. If faculty is changed, data will be evaluated by concerned faculty who taught and handed over to current faculty. If faculty not available, then current faculty will do the same.

Attainment of CO: 3CSA101: Subject:			
Student	RTU Marks (80)	% Of Marks	Level of Attainment
Name1			3
Name2			2
Name 3			1
Name 4			2
Name 5			1
Name 6			2
----			--
-----			--
No. of Students attained level 3=		% of Students Attained Level 3=	
No. of Students attained level 2=		% of Students Attained Level 2=	
No. of Students attained level 1=		% of Students Attained Level 1=	
CO Attainment = ? (Check Level 3 % attainment -If No Find Gap)			
Mark X for absent- Take avg. of all present			

### 13.3.1 Attainment of CO through RTU Component:

CO: Course Code: Course Name					
Target					
Achieved					
Gap					

### 13.3.1 Gaps for CO attainment through RTU Component:

Analyze RTU Question paper with respect to COs formulated, contents delivered and students examined, find out reasons for gaps

- i.
- ii.

### 13.3.2 Action to be taken:

**Prepare recommendations for improvement in planning & teaching for gaps identified.**

### 13.4 Attainment of PO through CO (RTU) Component

**Put RTU Results as per target achieved only and mapping level, in following table**

Attainment of PO through CO (RTU) Component															
CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
3ITA101															

Attainment of PO through CO (RTU) Component															
3ITA101	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
<b>Targets</b>															
Achieved															
Gap															

#### 13.4.1 Gaps in PO through CO from RTU component:

**Analyze RTU Question paper with respect to COs formulated & mapped, contents delivered and students examined, find out reasons for gaps**

**Describe what are the reasons for gap**

- i.
- ii.

#### 13.4.2 Action to be taken:

**Prepare recommendations for improvement in planning & teaching for gaps identified.**

### 13.5 Overall Attainment of PO & PSO: Through Continuous Assessment & RTU

**While combining attainment through Continuous evaluation and RTU component, following weightage be considered.**

1. Internal Assessment – Total weightage- 40 %
2. RTU Component ----- Weightage – 60 %

**Put all attainments in the following table and compute.**

13.5.1: Table 1

Student	RTU Component			Internal Assessment			Total (A+B)	Level of Attainment
	RTU Marks (80)	% of Marks	60% Weightage X6/100 (A)	Overall CO (-----)	% of Marks	Weightage X4/100 (B)		
Name1								3
Name2								2
Name 3								1
Name 4								2
Name 5								1
Name 6								2
----								--
-----								--
No. of Students attained level 3= % of Students Attained Level 3=								
No. of Students attained level 2= % of Students Attained Level 2=								
No. of Students attained level 1= % of Students Attained Level 1=								
PO Attainment = ? (Check Level 3 % attainment -If No Find Gap)								
Mark X for absent- Take avg. of all present								

OR

13.5.2: Table 2

Student	RTU			Internal CO1/ Activity 1 (Weightage %)			Internal CO2/ Activity 2 (Weightage %)			Internal CO3/ Activity 3 (Weightage %)			Total (A+B+C+D)	Level of Attainment
	RTU Marks (80)	% of Marks	60% Weightage X-----/100 A	Overall CO (-----)	% of Marks	Weightage X--/100 B	Overall CO (-----)	% of Marks	Weightage X--/100 C	Overall CO (-----)	% of Marks	Weightage X--/100 D		
Name1														3
Name2														2
Name 3														1
Name 4														2
Name 5														1
Name 6														2
----														--
-----														--

No. of Students attained level 3= Attained Level 3=	% of Students
No. of Students attained level 2= Attained Level 2=	% of Students
No. of Students attained level 1= Attained Level 1=	% of Students
PO Attainment = ? (Check Level 3 % attainment -If No Find Gap)	
Mark X for absent- Take avg. of all present	

### 13.5.3: Overall PO & PSO Attainment through Course:

**Put Overall PO & PSO attainment as per mapping 3,2,1 above:**

Attainment of Overall PO for Session 2018-2019															
CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
3ITA101															
PO Attainment															

### 13.5.4: Overall Gaps for Attainment of PO and PSO from the Course

**Put Overall PO & PSO targets & attainment as per mapping 3,2,1 above:**

Attainment & Gap of Overall PO Session -----															
3ITA101	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Targets															
Achieved															
Gap															

### 13.5.5. Overall Gaps for Course taught:

**Go through all gaps identified above and summarize. Describe what the reasons are.**

- 
- 

### 13.5.6 Action to be taken:

**Prepare recommendations for improvement in planning & teaching (Internal & RTU) for gaps identified. Decide Activities to be conducted to bridge the gaps in COs.**

**Repeat whole process after One year before, Two year before, and three year before. Plot bar charts for Continuous improvements check in CO, PO & PSO. (Every Year).**

## 14 **File Formats**

### **14.1 List of File Formats**

- i. Front Page of Course File
- ii. ABC Analysis Format
- iii. Blown-up Format
- iv. Deployment Format
- v. Zero Lecture Format
- vi. Tutorial Format
- vii. Assignment Format
- viii. Lecture Note Format
- ix. Mid Term Practical Exam Format
- x. Mid Term Question Paper Format
- xi. Evaluation Sheets Format
- xii. Activity Report Format

**14.2 Front Page of Course File**



**POORNIMA**  
**COLLEGE OF ENGINEERING**

**TEACHING MANUAL**

**COURSE:** \_\_\_\_\_

**SEMESTER:** \_\_\_\_\_

**SUBJECT:** \_\_\_\_\_

**SUB. CODE:** \_\_\_\_\_

**CONTENT:** PGC Syllabus, Blown-up, Deployment, Zero Lectures,  
Detailed lecture notes with cover page, Tutorial/Home-Assignment Sheets

\_\_\_\_\_

**SESSION: 20\_\_ - \_\_**

**NAME OF FACULTY:** \_\_\_\_\_

**DEPARTMENT:** \_\_\_\_\_

**CAMPUS:** \_\_\_\_\_



### 14.3 ABC Analysis Format



# POORNIMA

## COLLEGE OF ENGINEERING

Department of Information Technology  
Even Semester 2021-22

### ABC Analysis

Course: B. Tech.  
Name of Faculty: XYZ

Class/Section: 3<sup>rd</sup> Year/A  
Name of Subject: DME-II

Date: 10/01/2022  
Subject Code: 6IT 4-04

Sr. No.	Category A (Hard topics)	Category B (Topics with average hardness level)	Category C (Easy to understand topics)	Preparedness for "A" topics
1	Bolts subjected to variable stresses.	Goodman line, Soderberg line, Design of machine members subjected to combined, steady and alternating stresses. Design for finite life, Design of Shafts under Variable Stresses,	Variable load, loading pattern, endurance stresses, Influence of size, surface finish, notch sensitivity and stress concentration.	PPT & Notes
2	Design of IC Engine parts: Piston, Connecting rod, Crank shaft	-----	-----	PPT & Notes
3	Design of IC Engine components: Piston, Cylinder, Connecting Rod and Crank Shaft.	Design of helical compression, tension, torsional springs, springs under variable stresses.	Design of belt, rope and pulley drive system,	SPL & PPT
4	Design and force analysis of spur, helical, bevel and worm gears, Bearing reactions due to gear tooth forces.	Design of gear teeth: Lewis and Buckingham equations, wear and dynamic load considerations.		PPT
5	Design of Sliding and Journal Bearing: Methods of lubrication, hydrodynamic, hydrostatic, boundary etc. Minimum film thickness and thermal equilibrium.	Selection of anti-friction bearings for different loads and load cycles, Mounting of the bearings, Method of lubrication.		SPL & PPT

#### 14.4 Blown-up Format



# POORNIMA

## COLLEGE OF ENGINEERING

### BLOWN UP SYLLABUS

Campus: PCE Course: B.Tech.		Class/Section: VI <sup>th</sup> sem./A	Date: 06/01/2022
Name of Faculty: XYZ		Name of Subject: DME-II	Code: 6IT4-04
Sr. No.	Topic as per Syllabus	BLOWN UP TOPICS ( Upto 10 Times Syllabus)	
1	<b>PART-1</b> <b>FATIGUE CONSIDERATION IN DESIGN</b>		
	1.1 Review of Fatigue (Loading pattern)	1.1.1 Types of load 1.1.2 What is fatigue? 1.1.3 Fatigue curve 1.1.4 Endurance limit	
	1.2 Factor affecting endurance limit	1.2.1 Surface finish factor 1.2.2 Size factor 1.2.3 Reliability factor 1.2.4 Temperature factor	
	1.3 Notch sensitivity & Stress concentration	1.3.1 factor of safety 1.3.2 stress concentration 1.3.3 stress concentration curve 1.3.4 notch sensitivity 1.3.5 theoretical stress concentration factor	
	<b>DESIGN OF MACHINE MEMBER</b>		
2	1.4 Goodman, Soderberg line, Design of machine member under steady, Variable and alternating stress, Design for variable stresses	1.4.1 Goodman line, Soderberg line, Gerber parabola method 1.4.2 Design under axial, bending and torsional stress 1.4.3 Mean and variable stress 1.4.4 Design for combined stress 1.4.4 Numerical approach for the design of member	
	1.5 Design for finite life	1.5.1 Requirement of finite life design 1.5.2 Goodman approach toward finite life 1.5.3 Numerical approach for finite life design	
	<b>PART-2</b> <b>DESIGN OF I.C ENGINE PARTS</b>		
	2.1 Design of I.C Engine Piston	2.1.1 What is Piston and its importance? 2.1.2 Different materials used for the piston. 2.1.3 Effect of materials on the Piston design 2.1.4 Calculation of various pressure and inertia forces	

## 14.5 Deployment Format



# POORNIMA

## COLLEGE OF ENGINEERING

## SYLLABUS DEPLOYMENT

Campus: PCE Course: B.Tech.		Class/Section: VI <sup>th</sup> sem./A		Date: 05/01/2022			
Name of Faculty: XYZ		Name of Subject: DME-II		Code: 6IT4-04			
S.No.	TOPIC AS PER BLOWNUP SYLLABUS	LECT. NO.	CO/LO	Target Date of Coverage	Actual Date of Coverage	Teaching method	Ref. Book/Journal with Page No.
1	<b>ZERO LECTURE</b>	L-1	CO1	11/01/2022	11/01/2022	PPT	Machine design by V.B Bhandari & R. S Khurmi
2	<b>Introduction to Unit :1</b> <b>Introduction of the lecture</b> 1.1.1 Types of load 1.1.2 What is fatigue 1.1.3 Fatigue curve 1.1.4 Endurance limit <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-2	CO1	12/01/2022	12/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 34-38
3	<b>Introduction of the lecture</b> 1.2.1 Surface finish factor 1.2.2 Size factor 1.2.3 Reliability factor 1.2.4 Temperature factor <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-3	CO1	14/01/2022	14/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 44-52
4	<b>Introduction of the lecture</b> 1.3.1 Factor of safety 1.3.2 Stress concentration 1.3.3 Stress concentration curve <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-4	CO1,2	16/01/2022	16/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 58-62
5	<b>Introduction of the lecture</b> 1.3.4 Notch sensitivity 1.3.5 Theoretical stress concentration factor <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-5	CO1	17/01/2022	17/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 73-82
6	<b>Introduction of the lecture</b> 1.4.1 Goodman line, Soderberg line, Gerber parabola method the design of member	L-6	CO1,2	18/01/2022	18/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 82-88



## 14.6 Zero Lecture Format



# POORNIMA

## COLLEGE OF ENGINEERING

### ZERO LECTURE

Session: 20 - ( Sem.)

Campus: ..... Course: ..... Class/Section: .....

Name of Faculty: .....

### Zero Lecture

1). Name of Subject: ..... Code: .....

#### 2). Self-Introduction:

a). Name:

b). Qualification:

c). Designation:

d). Research Area:

e). E-mail Id: .....@poornima.org

f). Other details: Information about areas of proficiency/ expertise such as subject taught, laboratory taken, Member of Professional body, Academic Proficiency, Book Authored, Paper published in National and International Conference/Journals etc.

#### 3). Introduction of Students:

a). Records of students in 12<sup>th</sup>

Sr. No.	Average result of 12 <sup>th</sup>	Name of student scored highest marks	Marks 60% above (No. of students)	Marks between 40%-60% (No. of students)	English Medium Students (No.)	Hindi Medium Students (No.)	No. of Hostellers	No. of Day Scholar

b). Name of 05 best students based on previous results: ....., ....., ....., ....., .....

4). Instructional Language: - .....%English; .....% Hindi (English not less than 60%)

5). Introduction to subject: - (Pl. separate out subject specific matter and general matter valid for all subjects and group/place them appropriately)

a). Relevance to Branch:

b). Relevance to Society:

c). Relevance to Self:

d). Relation with laboratory:

e). Connection with previous year and next year:

#### 6). Syllabus of Poornima Group of Colleges, Jaipur

a). Unit Name:

b). ABC analysis (RGB method) of unit & topics

#### 7). Books/ Website/Journals & Handbooks/ Association & Institution:

a). *Recommended Text & Reference Books and Websites:*

S. No.	Title of Book	Authors	Publisher	Cost (Rs.)	No. of books in Library
Text Books					
T1					
T2					
T3					
Reference Books					
R1					
R2					
R3					
Websites related to subject					
1					
2					

b). *Journals & Handbooks:* - To give information about different Journals & Handbooks available in library related to the subject and branch.

c). *Associations and Institutions:* - To give information about different Associations and Institutions related to the subject and branch.

**8). Syllabus Deployment: -**

a). *Total weeks available for academics (excluding holidays) as per Poornima Foundation calendar-*

Semester	
No. of Working days available(Approx.)	
No. of Weeks (Approx.)	

- Total weeks available for special activities (as mentioned below)- 02 weeks (Approx.)

**Note: Individual faculty must calculate the exact no. of lectures available according to time table etc. after consultation with HOD.**

b). *Special Activities* (To be approved by HOD & Dean & must be mentioned in deployment):

- Open Book Test- Once in a semester
- Quiz - Once in a semester
- Special Lectures (SPL)- Minimum 10% of total no. of lectures including following
  - Smart Class by the faculty, who is teaching the subject
  - SPL by expert faculty at PGC level
  - SPL by expert from industry/academia (other institution)
- Revision classes (Solving Important Question Bank):- 1 class before Mid Term and 2 classes before End Term Exam

c). *Lecture schedule per week*

i). University scheme (L+T+P) = ...+....+.....

Sr. No.	Name of Unit	No. of lectures	Broad Area	Degree of difficulty (High/Medium/Low)	Text/ Reference books
1.					
2.					
3.					
4.					
5.					

d). *Introduction & Conclusion:* Each subject, unit and topic shall start with introduction & close with conclusion. In case of the subject, it is Zero lecture.

e). *Time Distribution in lecture class:* - Time allotted: 60 min.

- First 5 min. should be utilized for paying attention towards students who were absent for last lecture or continuously absent for many days + taking attendance by calling the names of the students and also sharing any new/relevant information.



- ii. Actual lecture delivery should be of 50 min.
- iii. Last 5 min. should be utilized by recapping/ conclusion of the topic. Providing brief introduction of the coming up lecture and suggesting portion to read.
- iv. After completion of any Unit/Chapter a short quiz should be organized.
- v. During lecture student should be encouraged to ask questions.

**Note:** Pl. ensure that each student is having Lecture Note Book. Also, write on the black board day and date, name of the teacher, name of subject with code, unit and lecture no. and topics to be covered at the beginning of each lecture and ensure that students write in lecture note book. Ask students to leave 4/5 pages blank for copying the note from fellow students in case of their absenteeism.

**9). Tutorial: - An essential component of Teaching- Learning process in Professional Education.**

Objective: - To enhance the recall mechanism.

To promote logical reasoning and thinking of the students.

To interact personally to the students for improve numerical solving ability.

a). *Tutorial processing:* - Tutorial sheet shall be provided to each students

I<sup>st</sup> Phase: - It is consisting of questions to be solved in the class assignment session in test mode on perforated sheet given in tutorial notebook and to be collected & kept by respective faculty for review & analysis (20 minutes).

II<sup>nd</sup> Phase: - Indicating/Initializing the weak issues/ drawback and Evaluating and providing the grade. Making a group with good student for assisting the weak students to explain/solve questions by every student on plain papers given in tutorial note book (20 minutes).

III<sup>rd</sup> Phase: - Solving/ explaining difficulties of lecture class and providing the new home assignment (20 minutes). To be done in tutorial note book.

b). *Home assignment shall comprise of two parts:*

Part (i) Minimum essential questions, which are to be solved and submitted by all with in specified due date.

Part (ii) Other important questions, which may also be solved and submitted for examining and guidance by teacher.

**10). Examination Systems:**

**A. FOR ALL THEORY COURSES:-**

<b>a. Continuous Internal Evaluation (CIE)</b>	<b>20%</b>
-Assignment / Project / Papers / Essays / Class Participation	10%
-Quiz / Class Test (Announced / Unannounced)	5%
- Attendance and Discipline	5%
<b>b. Mid Semester Exams (MSE) – Two</b>	<b>20%</b>
<b>c. End Semester Exam (ESE) - One</b>	<b>60%</b>
<b>TOTAL</b>	<b>100 %</b>

**B. FOR ALL PRACTICAL (LABORATORY) COURSES:-**

<b>a. Continuous Internal Evaluation (CIE)</b>	<b>40%</b>
-Performance (Lab Record, Viva, )	30%
-Attendance and Participation in laboratory work	10%
<b>b. Mid Semester Exam (MSE)– Two</b>	<b>20 %</b>
<b>c. End Semester Exam (ESE) - One</b>	<b>40%</b>
<b>TOTAL</b>	<b>100 %</b>

**11). Any other important point:**

Place & Date:

Name of Faculty with Designation

14.7 Lecture Note Front page Format



# POORNIMA

## COLLEGE OF ENGINEERING

### LECTURE NOTES

Campus: ..... Course: ..... Class/Section: ..... Date: .....  
Name of Faculty: ..... Name of Subject: ..... Code: .....  
Date (Prep.): ..... Date (Del.): ..... Unit No.: ..... Lect. No: .....

**OBJECTIVE:** To be written before taking the lecture (Pl. write in bullet points the main topics/concepts etc., which will be taught in this lecture)

---

---

---

---

**IMPORTANT & RELEVANT QUESTIONS:**

---

---

---

---

**FEED BACK QUESTIONS (AFTER 20 MINUTES):**

---

---

---

---

**OUTCOME OF THE DELIVERED LECTURE:** To be written after taking the lecture (Pl. write in bullet points about students' feedback on this lecture, level of understanding of this lecture by students etc.)

---

---

---

---

**REFERENCES:** Text/Ref. Book with Page No. and relevant Internet Websites:

---

---

---

### 14.7.1 Detailed Lecture Note Format-1



# POORNIMA

## COLLEGE OF ENGINEERING

### DETAILED LECTURE NOTES

Campus: ..... Course: .....

Class/Section: .....

Date: .....

Name of Faculty: .....

Name of Subject: .....

Code: .....



**14.7.2 Detailed Lecture Note Format-2**



**POORNIMA**  
**COLLEGE OF ENGINEERING**

**DETAILED LECTURE NOTES**

PAGE NO. ....

### 14.8 Assignment Format



# POORNIMA

## COLLEGE OF ENGINEERING

<b><u>Assignment Sheet-1</u></b>				
<b>Campus:</b> PCE <b>Course:</b> B.Tech.		<b>Class/Section:</b> III		<b>Date:</b> .....
<b>Name of Faculty:</b> SKT		<b>Name of Subject:</b> Analysis of Algorithms		<b>Code:</b> 6IT4-04
<b>Date of Preparation:</b> .....		<b>Scheduled Date of Submission:</b> .....		
Q. No.	Questions	COs	POs	PSOs
1	Discuss influence of size, surface, reliability and modifying factor on endurance limit of material.	CO1	PO2	PSO1
2	Discuss various methods of mitigation of stress concentration.	CO1	PO2	PSO1
3	Define the following terms used in design of machine elements (i) Size Factor (ii) Notch Sensitivity (iii) Surface Finish Factor	CO1	PO2	PSO1
4	What do you mean by stress concentration? How do you take it into consideration in case of components subjected to dynamic loads?	CO1	PO2	PSO1
5	Explain difference between Soderberg, Goodman and Gerber criteria in detail.	CO1	PO2	PSO1
6	What is physical significance of notch sensitivity factor being one of zero.	CO1	PO2	PSO1
7	What is fluctuating stresses? Draw stress-time curves for different fluctuating stresses.	CO1	PO2	PSO1
8	What is endurance strength? Draw S-N diagram and list various factors affecting it.	CO1	PO2	PSO1
9	Draw and describe Goodman and Soderberg diagram.	CO1	PO2	PSO1
10	Explain modified Goodman diagram for bending stresses.	CO1	PO2	PSO1

# 14.9 Tutorial Format



# POORNIMA

## COLLEGE OF ENGINEERING

### TUTORIAL SHEET

#### TUTORIAL SHEET

SHEET No.....

Campus: ..... Course: ..... Class/Section: ..... Date: .....  
 Name of Faculty: ..... Name of Subject: ..... Code: .....  
 Date of Tut. Sheet Preparation:..... Scheduled Date of Tut.:.....Actual Date of Tut. :.....  
 Name of Student:.....Scheduled & Actual Date of H.A. Submission:.....&.....

	Questions	CO	PO
FIRST 20 MT. CLASS QUESTIONS			
2 HRS. SOLVABLE HOME ASSIGNMENT (H.A.) QUESTIONS			
OTHER IMPORTANT QUESTIONS			

**14.10 Mid Term/ End Term Practical Question Paper Format**

**Poornima College of Engineering, Jaipur  
Department of Information Technology  
Odd Sem. 2021-22  
3IT4-22: Object Oriented Programming Lab  
I Midterm Practical Exam (Set-1)**

Name of Faculty: \_\_\_\_\_  
Date of Exam: \_\_\_\_\_

Time Duration: 2 hours  
Max Marks: 30

Q. No.	CO	PO	Question	Marks
1				
2				
...				

**Poornima College of Engineering, Jaipur  
Department of Information Technology  
Odd Sem. 2021-22  
3IT4-22: Object Oriented Programming Lab  
I Midterm Practical Exam (Set-2)**

Name of Faculty: \_\_\_\_\_  
Date of Exam: \_\_\_\_\_

Time Duration: 2 hours  
Max Marks: 30

Q. No.	CO	PO	Question	Marks
1				
2				
...				

**Poornima College of Engineering, Jaipur  
Department of Information Technology  
Odd Sem. 2021-22  
3IT4-22: Object Oriented Programming Lab  
I Midterm Practical Exam (Set-3)**

Name of Faculty: \_\_\_\_\_  
Date of Exam: \_\_\_\_\_

Time Duration: 2 hours  
Max Marks: 30

Q. No.	CO	PO	Question	Marks
1				
2				
...				

### 14.11 Mid Term Theory Question Paper Format

**POORNIMA COLLEGE OF ENGINEERING, JAIPUR**

III B.TECH. (VI Sem.) Roll No. \_\_\_\_\_

**FIRST MID TERM EXAMINATION 2022-23**

Code: 6CE3-01 Category: PCC Subject Name—CONSTRUCTION TECHNOLOGY & EQUIPMENTS  
(BRANCH – CIVIL ENGINEERING)

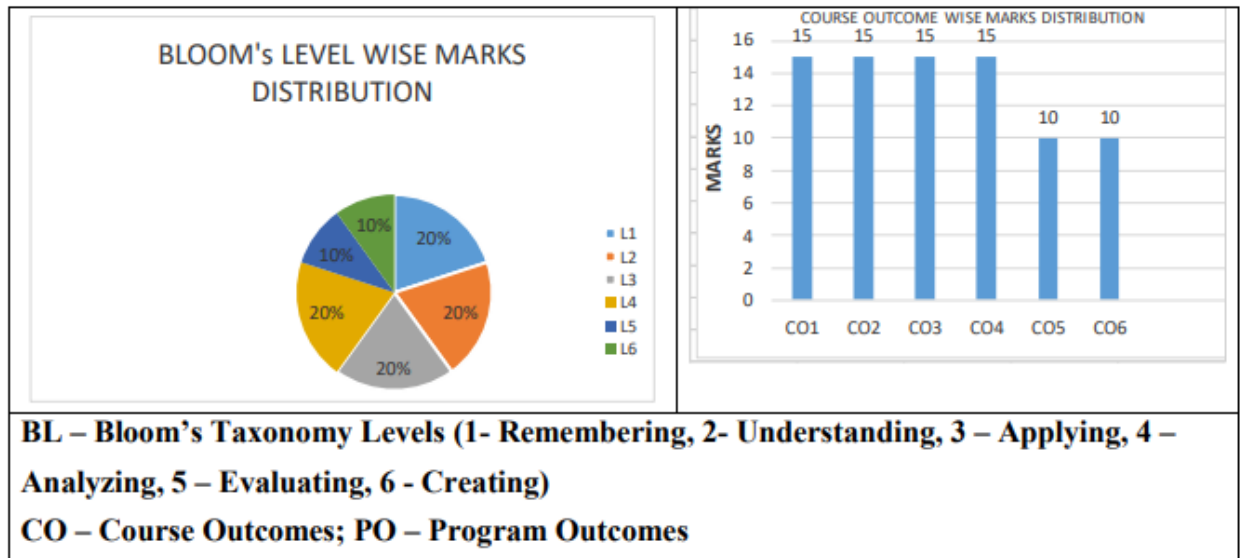
Max. Time: 2 hrs. Course Credit: \_\_\_\_  
 NOTE:- Read the guidelines given with each part carefully. Max. Marks: 60

#### Course Outcomes (CO):

At the end of the course the student should be able to:

- CO1:
- CO2:
- CO3:
- CO4:
- CO5:
- CO6:

PART - A: (All questions are compulsory) Max. Marks (10)					
		Marks	CO	BL	PO
Q.1		2			
Q.2		2			
Q.3		2			
Q.4		2			
Q.5		2			
PART - B: (Attempt 4 questions out of 6) Max. Marks (20)					
Q.6		5			
Q.7		5			
Q.8		5			
Q.9		5			
Q.10		5			
Q.11		5			
PART - C: (Attempt 3 questions out of 4) Max. Marks (30)					
Q.12		10			
Q.13		10			
Q.14		10			
Q.15		10			



-----

### 14.12 Evaluation Sheet Format (Theory)

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																					
I MID TERM THEORY EXAM, 2022-23						EVALUATION SHEET						B. TECH. II YEAR (III SEM.)									
Subject Code :				Subject Name :																	
Date of Exam :				Name of Examiner :																	
Branch				IT	SUBJECTS WISE MARKS															2IT1	
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total
					LO No.																
					BL No.																
					PO No.																
					Max. Marks:																60
1	2IT	2IT1	21/IT/01	AAYUSH KUMAR JHA .	PCE21IT001																0
2	2IT	2IT1	21/IT/02	AAYUSH SHARMA	PCE21IT002																0
3	2IT	2IT1	21/IT/03	ABHISHEK .	PCE21IT003																0
4	2IT	2IT1	21/IT/04	ADITYA SHARMA	PCE21IT004																0
5	2IT	2IT1	21/IT/05	AMAN BATRA	PCE21IT005																0
6	2IT	2IT1	21/IT/06	ANIMESH KUMAR GARG	PCE21IT007																0
7	2IT	2IT1	21/IT/07	ANSHIKA JAIN	PCE21IT009																0
8	2IT	2IT1	21/IT/08	ANUSH AGARWAL	PCE21IT010																0
9	2IT	2IT1	21/IT/09	ARPIT JAIN	PCE21IT011																0
10	2IT	2IT1	21/IT/10	ASHISH AGRAWAL	PCE21IT012																0
11	2IT	2IT1	21/IT/11	AVINASH KUMAR	PCE21IT013																0
12	2IT	2IT1	21/IT/12	AYUSH KUMAR	PCE21IT014																0
13	2IT	2IT1	21/IT/13	AYUSHI SHARMA	PCE21IT015																0
14	2IT	2IT1	21/IT/14	BHAVIN GARG	PCE21IT016																0
15	2IT	2IT1	21/IT/15	CHINU GUPTA	PCE21IT017																0
16	2IT	2IT1	21/IT/16	CHIRAG VUAYVERGIYA	PCE21IT018																0
17	2IT	2IT1	21/IT/17	DEEPANSHU SINGH BHADORIYA	PCE21IT019																0
18	2IT	2IT1	21/IT/18	DEVANSH SHARMA	PCE21IT020																0
19	2IT	2IT1	21/IT/19	DIKSHA SHARMA	PCE21IT021																0
20	2IT	2IT1	21/IT/20	DIVAKAR SHARMA	PCE21IT022																0
21	2IT	2IT1	21/IT/21	DIVYA JAIN	PCE21IT023																0
22	2IT	2IT1	21/IT/22	DIVYANSHU SINGH RATHORE	PCE21IT024																0
23	2IT	2IT2	21/IT/23	HARSH KATTEL	PCE21IT025																0
24	2IT	2IT2	21/IT/24	HARSH KUMAR	PCE21IT026																0
25	2IT	2IT2	21/IT/25	HARSHIT SENGAR	PCE21IT027																0
26	2IT	2IT2	21/IT/26	HIMANSHU BANSAL	PCE21IT028																0
27	2IT	2IT2	21/IT/27	HITESH SHARMA	PCE21IT029																0
28	2IT	2IT2	21/IT/28	JITENDRA VERMA	PCE21IT030																0
29	2IT	2IT2	21/IT/29	KHWAISH MOHINANI	PCE21IT031																0
30	2IT	2IT2	21/IT/30	KRISHNA JODHA	PCE21IT032																0
31	2IT	2IT2	21/IT/31	LAVI .	PCE21IT033																0
32	2IT	2IT2	21/IT/32	LAVISH AGARWAL	PCE21IT034																0
33	2IT	2IT2	21/IT/33	LOKENDRA SINGH SHEKHAWAT	PCE21IT035																0
34	2IT	2IT2	21/IT/34	LUCKY TAK	PCE21IT036																0
35	2IT	2IT2	21/IT/35	MAYANK UPAMANYU	PCE21IT037																0
36	2IT	2IT2	21/IT/36	MUDIT VUAY	PCE21IT038																0
37	2IT	2IT2	21/IT/37	NIDHI JANGIR	PCE21IT039																0
38	2IT	2IT2	21/IT/38	NIHIT JANGID	PCE21IT040																0
39	2IT	2IT2	21/IT/39	NIKHAR JAIN	PCE21IT041																0
40	2IT	2IT2	21/IT/40	NIKHIL ACHOLIYA	PCE21IT042																0
41	2IT	2IT2	21/IT/41	PARTH MITTAL	PCE21IT043																0
42	2IT	2IT2	21/IT/42	PRIYANSH SINGH SOLANKI	PCE21IT044																0
43	2IT	2IT2	21/IT/43	PURVI JAIN	PCE21IT045																0
44	2IT	2IT2	21/IT/44	RITESH KUMAR SINGH	PCE21IT046																0
45	2IT	2IT3	21/IT/45	RITU SINGH	PCE21IT047																0
46	2IT	2IT3	21/IT/46	RITU TIWARI	PCE21IT048																0
47	2IT	2IT3	21/IT/47	ROHIT KUMAR	PCE21IT049																0
48	2IT	2IT3	21/IT/48	SHASHANK SHARMA	PCE21IT050																0
49	2IT	2IT3	21/IT/50	SHRISH KUMAR	PCE21IT051																0
50	2IT	2IT3	21/IT/51	SHUBHAM SARIN	PCE21IT052																0
51	2IT	2IT3	21/IT/52	SUPRIYA RANI	PCE21IT053																0
52	2IT	2IT3	21/IT/53	TANMAY KUMAWAT	PCE21IT054																0
53	2IT	2IT3	21/IT/54	TANMAY SHARMA	PCE21IT055																0
54	2IT	2IT3	21/IT/55	TARUN SAINI	PCE21IT056																0
55	2IT	2IT3	21/IT/56	TUSHAR SINGHAL	PCE21IT057																0
56	2IT	2IT3	21/IT/57	VAIBHAV DUBEY	PCE21IT058																0
57	2IT	2IT3	21/IT/58	VAIBHAV JAIN	PCE21IT059																0
58	2IT	2IT3	21/IT/59	VIDHI JAIN .	PCE21IT060																0
59	2IT	2IT3	21/IT/60	VINIT KHANDELWAL .	PCE21IT061																0
60	2IT	2IT3	21/IT/61	YASH GODHWANI	PCE21IT062																0
61	2IT	2IT3	21/IT/62	YASH SHARMA	PCE21IT063																0
62	2IT	2IT3	21/IT/63	YOGESH YADAV	PCE21IT064																0
63	2IT	2IT3	21/IT/64	TANISHQUE SAXENA	PCE21IT300																0
64	2IT	2IT3	21/IT/65	YASH CHATURVEDI	PCE21IT301																0

% OF CLASS AVERAGE			
A		Total Marks of Present Students	0
B		Total No. of Present Students	0
C		Average Marks of students = A / B	#DIV/0!
D		Marks award out of (each student)	60
E		% Average marks per student (C/D*100)	#DIV/0!
F		Total No. of PASS Students	0
G		Total No. of FAIL Students	64
H		Total No. of ABSENT Students	0

## 14.13 Evaluation Sheet Format (Lab)

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																					
I MID TERM PRACTICAL EXAM, 2022-23					EVALUATION SHEET					B. TECH. II YEAR (III SEM.)											
Subject Code :					Subject Name :																
Date of Exam :					Name of Examiner :																
Branch					IT					Experiments / Observation / Written / Performance / Team					Viva					2IT1	
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total
					LO No.																
					BL No.																
					PO No.																
					Max. Marks:																40
1	2IT	2IT1	21/IT/01	AAYUSH KUMAR JHA	PCE21IT001																0
2	2IT	2IT1	21/IT/02	AAYUSH SHARMA	PCE21IT002																0
3	2IT	2IT1	21/IT/03	ABHISHEK	PCE21IT003																0
4	2IT	2IT1	21/IT/04	ADITYA SHARMA	PCE21IT004																0
5	2IT	2IT1	21/IT/05	AMAN BATRA	PCE21IT005																0
6	2IT	2IT1	21/IT/06	ANIMESH KUMAR GARG	PCE21IT007																0
7	2IT	2IT1	21/IT/07	ANSHIKA JAIN	PCE21IT009																0
8	2IT	2IT1	21/IT/08	ANUSH AGARWAL	PCE21IT010																0
9	2IT	2IT1	21/IT/09	ARPT JAIN	PCE21IT011																0
10	2IT	2IT1	21/IT/10	ASHISH AGRAWAL	PCE21IT012																0
11	2IT	2IT1	21/IT/11	AVINASH KUMAR	PCE21IT013																0
12	2IT	2IT1	21/IT/12	AYUSH KUMAR	PCE21IT014																0
13	2IT	2IT1	21/IT/13	AYUSHI SHARMA	PCE21IT015																0
14	2IT	2IT1	21/IT/14	BHAVIN GARG	PCE21IT016																0
15	2IT	2IT1	21/IT/15	CHINU GUPTA	PCE21IT017																0
16	2IT	2IT1	21/IT/16	CHIRAG VUAYVERGIYA	PCE21IT018																0
17	2IT	2IT1	21/IT/17	DEEPANSHU SINGH BHADORIYA	PCE21IT019																0
18	2IT	2IT1	21/IT/18	DEVANSH SHARMA	PCE21IT020																0
19	2IT	2IT1	21/IT/19	DIKSHA SHARMA	PCE21IT021																0
20	2IT	2IT1	21/IT/20	DIVAKAR SHARMA	PCE21IT022																0
21	2IT	2IT1	21/IT/21	DIVYA JAIN	PCE21IT023																0
22	2IT	2IT1	21/IT/22	DIVYANSHU SINGH RATHORE	PCE21IT023																0

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																					
I MID TERM PRACTICAL EXAM, 2022-23					EVALUATION SHEET					B. TECH. II YEAR (III SEM.)											
Subject Code :					Subject Name :																
Date of Exam :					Name of Examiner :																
Branch					IT					Experiments / Observation / Written / Performance / Team					Viva					2IT2	
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total
					LO No.																
					BL No.																
					PO No.																
					Max. Marks:																40
23	2IT	2IT2	21/IT/23	HARSH KATTEL	PCE21IT024																0
24	2IT	2IT2	21/IT/24	HARSH KUMAR	PCE21IT025																0
25	2IT	2IT2	21/IT/25	HARSHIT SENGAR	PCE21IT026																0
26	2IT	2IT2	21/IT/26	HIMANSHU BANSAL	PCE21IT027																0
27	2IT	2IT2	21/IT/27	HITESH SHARMA	PCE21IT028																0
28	2IT	2IT2	21/IT/28	JITENDRA VERMA	PCE21IT029																0
29	2IT	2IT2	21/IT/29	KHWAHISH MOHINANI	PCE21IT030																0
30	2IT	2IT2	21/IT/30	KRISHNA JODHA	PCE21IT031																0
31	2IT	2IT2	21/IT/31	LAVI	PCE21IT032																0
32	2IT	2IT2	21/IT/32	LAVISH AGARWAL	PCE21IT033																0
33	2IT	2IT2	21/IT/33	LOKENDRA SINGH SHEKHAWAT	PCE21IT034																0
34	2IT	2IT2	21/IT/34	LUCKY TAK	PCE21IT035																0
35	2IT	2IT2	21/IT/35	MAYANK UPAMANYU	PCE21IT036																0
36	2IT	2IT2	21/IT/36	MUDIT VUJAY	PCE21IT037																0
37	2IT	2IT2	21/IT/37	NIDHI JANGIR	PCE21IT038																0
38	2IT	2IT2	21/IT/38	NHIT JANGID	PCE21IT039																0
39	2IT	2IT2	21/IT/39	NIKHAR JAIN	PCE21IT040																0
40	2IT	2IT2	21/IT/40	NIKHIL ACHOLYA	PCE21IT041																0
41	2IT	2IT2	21/IT/41	PARTH MITTAL	PCE21IT042																0
42	2IT	2IT2	21/IT/42	PRIYANSH SINGH SOLANKI	PCE21IT043																0
43	2IT	2IT2	21/IT/43	PURVI JAIN	PCE21IT044																0
44	2IT	2IT2	21/IT/44	RITESH KUMAR SINGH	PCE21IT044																0

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																					
I MID TERM PRACTICAL EXAM, 2022-23					EVALUATION SHEET					B. TECH. II YEAR (III SEM.)											
Subject Code :					Subject Name :																
Date of Exam :					Name of Examiner :																
Branch					IT					Experiments / Observation / Written / Performance / Team					Viva					2IT3	
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total
					LO No.																
					BL No.																
					PO No.																
					Max. Marks:																40
45	2IT	2IT3	21/IT/45	RITU SINGH	PCE21IT045																0
46	2IT	2IT3	21/IT/46	RITU TIWARI	PCE21IT046																0
47	2IT	2IT3	21/IT/47	ROHIT KUMAR	PCE21IT047																0
48	2IT	2IT3	21/IT/48	SHASHANK SHARMA	PCE21IT048																0
49	2IT	2IT3	21/IT/49	SHRISH KUMAR	PCE21IT049																0
50	2IT	2IT3	21/IT/50	SHUBHAM SARIN	PCE21IT050																0
51	2IT	2IT3	21/IT/51	SUPRIYA RANI	PCE21IT051																0
52	2IT	2IT3	21/IT/52	TANMAY KUMAWAT	PCE21IT052																0
53	2IT	2IT3	21/IT/53	TANMAY SHARMA	PCE21IT053																0
54	2IT	2IT3	21/IT/54	TARUN SAINI	PCE21IT054																0
55	2IT	2IT3	21/IT/55	TUSHAR SINGHAL	PCE21IT055																0
56	2IT	2IT3	21/IT/56	VAIBHAV DUBEY	PCE21IT056																0
57	2IT	2IT3	21/IT/57	VAIBHAV JAIN	PCE21IT057																0
58	2IT	2IT3	21/IT/58	VIDHI JAIN	PCE21IT058																0
59	2IT	2IT3	21/IT/59	VINIT KHANDELWAL	PCE21IT059																0
60	2IT	2IT3	21/IT/60	YASH GODHWANI	PCE21IT060																0
61	2IT	2IT3	21/IT/61	YASH SHARMA	PCE21IT061																0
62	2IT	2IT3	21/IT/62	YOGESH YADAV	PCE21IT062																0
63	2IT	2IT3	21/IT/63	TANISHQUE SAXENA	PCE21IT063																0
64	2IT	2IT3	21/IT/64	YASH CHATURVEDI	PCE21IT064																0

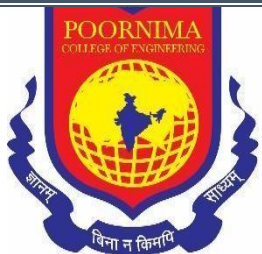
  

% OF CLASS AVERAGE				
A	Total Marks of Present Students			0
B	Total No. of Present Students			0
C	Average Marks of students = A / B			#DIV/0!
D	Marks award out of (each student)			40
E	% Average marks per student (C/D*100)			#DIV/0!
F	Total No. of PASS Students			0
G	Total No. of FAIL Students			64
H	Total No. of ABSENT Students			0



**15. List of Important Links**

<b>List of Important Links</b>		
<b>Sr. No.</b>	<b>Link</b>	<b>Particulars</b>
1	<a href="https://www.rtu.ac.in/index/">https://www.rtu.ac.in/index/</a>	Rajasthan Technical University
2	<a href="http://www.pce.poornima.org">http://www.pce.poornima.org</a>	Institute Website
3	<a href="http://www.pce.poornima.org/Downloads.html">http://www.pce.poornima.org/Downloads.html</a>	Format of Students & Employees
4	<a href="https://www.turnitin.com/login_page.asp?lang=en_us">https://www.turnitin.com/login_page.asp?lang=en_us</a>	Plagiarism Checker
5	<a href="http://pcelibrary.poornima.org/">http://pcelibrary.poornima.org/</a>	PCE Digital Library
6	<a href="https://ndl.iitkgp.ac.in/">https://ndl.iitkgp.ac.in/</a>	National Digital Library of India (NDLI)
7	<a href="https://swayam.gov.in/">https://swayam.gov.in/</a>	SWAYAM MOOCs platform
8	<a href="https://www.vlab.co.in/">https://www.vlab.co.in/</a>	Virtual Labs
9	<a href="https://spoken-tutorial.org/">https://spoken-tutorial.org/</a>	Spoken Tutorial
10	<a href="https://fossee.in/">https://fossee.in/</a>	FOSSEE (Free/Libre and Open Source Software for Education)
11	<a href="https://www.sih.gov.in/">https://www.sih.gov.in/</a>	Smart India Hackathon
12	<a href="https://www.swayamprabha.gov.in/">https://www.swayamprabha.gov.in/</a>	32 high quality educational channels through DTH on 24X7 basis.
13	<a href="https://ieeexplore.ieee.org/Xplore/home.jsp&gt;You">https://ieeexplore.ieee.org/Xplore/home.jsp.You</a>	IEEE All Society Periodicals Package
14	<a href="https://booksc.org/">https://booksc.org/</a>	Link for Free for book and articles
15	<a href="https://jgateplus.com/home/">https://jgateplus.com/home/</a>	J-gate Plus (JOURNALS -GATE) subscriptions
16	<a href="http://www.delnet.nic.in/">http://www.delnet.nic.in/</a>	Developing Library Network
17	<a href="https://dst.rajasthan.gov.in/content/dst-gov/en/home.html">https://dst.rajasthan.gov.in/content/dst-gov/en/home.html</a>	Department of Science & Technology, Government of Rajasthan
18	<a href="https://ipindia.gov.in/index.htm">https://ipindia.gov.in/index.htm</a>	Official website of Intellectual Property India
19	<a href="http://pce.poornima.org/Downloads.html">http://pce.poornima.org/Downloads.html</a>	Academic Formats Word File
Note:- Required Credentials can be taken from Respective Department Heads		



# POORNIMA

## COLLEGE OF ENGINEERING

### DEPARTMENT OF INFORMATION TECHNOLOGY

#### CURRICULUM DELIVERY PLAN

#### OUTLINE- EVEN SEM-2023-24



**ISI-6, RIICO Institutional Area, Sitapura, Jaipur-302022 (Rajasthan)**

• Phone: +91-141-2770790 • E-mail: [infor@poornima.org](mailto:infor@poornima.org)

• Website: [www.poornima.org](http://www.poornima.org)

## Table of Contents

<b>1</b>	<b>The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of Continuous Internal Assessment (CIA) .....</b>	<b>89</b>
<b>2</b>	<b>Vision &amp; Mission Statements.....</b>	<b>90</b>
<b>2.1</b>	<b>Vision &amp; Mission Statements of the Institute.....</b>	<b>90</b>
<b>2.2</b>	<b>Vision &amp; Mission Statements of the Programme B. Tech. (Information Technology).....</b>	<b>90</b>
2.2.1	Vision of Department .....	90
2.2.2	Mission of Department .....	90
2.2.3	PEO of the Department .....	90
2.2.4	Program Specific Outcome (PSOs).....	91
<b>2.3</b>	<b>Program Outcomes (PO) .....</b>	<b>91</b>
<b>3</b>	<b>Department Academic &amp; Administrative Bodies - Structure &amp; Functions .....</b>	<b>92</b>
<b>3.1</b>	<b>Department Advisory Board (DAB) .....</b>	<b>92</b>
3.1.1	Primary Objective.....	92
3.1.2	Roles & Responsibilities .....	92
3.1.3	Department-Wise Composition .....	92
3.1.4	Meeting Frequency & Objectives.....	93
<b>3.2</b>	<b>Program Assessment Committee .....</b>	<b>94</b>
3.2.1	Primary Objective.....	94
3.2.2	Roles & Responsibilities .....	94
3.2.3	Department-Wise Composition .....	94
3.2.4	Meeting Frequency & Objectives.....	95
<b>4</b>	<b>List of Faculty Members &amp; Technical Staff.....</b>	<b>96</b>
<b>5</b>	<b>Institute Academic Calendar .....</b>	<b>98</b>
<b>6</b>	<b>Department Activity Calendar .....</b>	<b>99</b>
<b>7</b>	<b>Teaching Scheme .....</b>	<b>101</b>
<b>8</b>	<b>PCE Teaching Scheme .....</b>	<b>104</b>
<b>8.1</b>	<b>Marking Scheme.....</b>	<b>105</b>
<b>9</b>	<b>Department Load Allocation .....</b>	<b>106</b>
<b>10</b>	<b>Time Table .....</b>	<b>108</b>
<b>10.1</b>	<b>Orientation Time Table .....</b>	<b>108</b>
<b>10.2</b>	<b>Academic Time Table .....</b>	<b>108</b>
<b>11</b>	<b>Course Outcome Attainment Process:.....</b>	<b>111</b>
<b>11.1</b>	<b>Course Outcome Attainment Process .....</b>	<b>111</b>
<b>11.2</b>	<b>List of CO &amp; CO mapping with PO.....</b>	<b>112</b>
<b>12</b>	<b>Course File Sample.....</b>	<b>134</b>

12.1	Labelling your course file .....	134
12.2	List of Documents:.....	134
13	Outcome Based Process Implementation Guidelines for Faculty.....	135
14	File Formats .....	147
14.1	List of File Formats .....	147
14.2	Front Page of Course File .....	148
14.3	ABC Analysis Format .....	149
14.4	Blown-up Format .....	150
14.5	Deployment Format .....	151
14.6	Zero Lecture Format.....	152
14.7	Lecture Note Front page Format .....	155
14.7.1	Detailed Lecture Note Format-1 .....	156
14.7.2	Detailed Lecture Note Format-2.....	157
14.8	Assignment Format .....	158
14.9	Tutorial Format.....	159
14.10	Mid Term/ End Term Practical Question Paper Format .....	160
14.11	Mid Term Theory Question Paper Format.....	161

# **1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of Continuous Internal Assessment (CIA)**

PCE is affiliated to RTU, Kota and follows the planned and prescribed curriculum of University. The Internal Quality Assurance Cell (IQAC) of PCE takes the responsibility of monitoring the effective delivery of the curriculum through a well-planned and documented process. To ensure effective curriculum delivery, a Curriculum Delivery Plan (CDP) is prepared by all PAC's of the respective departments. A CDP includes detailed planning for preparation, verification, execution and adherence to all documents related to academic delivery of all courses. As per the directions received from IQAC, the Examination cell plans for the Continuous Internal Assessment. Examination cell then circulate CIA planning to the PAC. Examination cell sends all the CIE Data to Director's Office for the final approval before its submission to RTU. Detail outlines are as follows.

1. Director Office, PCE receives the curriculum from RTU, Kota through university website.
2. IQAC prepares institute academic calendar aligned with RTU academic calendar considering input received in last GC meeting and other stakeholders. IQAC forwards the Institute Academic Calendar to PAC (Program Assessment Committee) for identifying curriculum gaps and examination cell for CIE. PACs then prepares CDPs after consolidating the course specific planning received from the respective faculty members.
3. A CDP includes activities for gap abridgement which are proposed to be carried out by the faculty members.
4. IQAC also instructs PACs to prepare the department activity calendar. PACs receives approval of department activity calendars and CDPs from DABs before its final approval from IQAC.
5. IQAC also reviews the CDPs approved by DABs and gives suggestions/ approvals periodically. All the activities (SPL, Industrial visit, workshop etc.) planned are taken into consideration for the Department activity calendar after the approval from DABs.
6. Subject wise Course files are prepared by respective faculty, comprising of Syllabus, ABC analysis, Blown-Up, Deployment, Lecture notes, Zero Lecture, Tutorial and Assignment sheets, COs Statements, and Mapping with POs and PSOs.
7. Faculty frequently use ICT tools for more effective content delivery using PPTs, video lectures etc.
8. Student attendance is monitored by tutors and chief proctor office with help of SHARP ERP software. Attendance defaulters are regularly counseled through their tutors for improving their attendance.
9. Institute also conducts Annual Internal Academic Audit for the effectiveness of teaching-learning methodologies and the necessary actions are taken as suggested by the audit team.
10. Conferences, seminars, webinars, workshops, expert lectures, STTPs, and FDPs are organized throughout the year on the recent advances in the field of engineering.
11. Continuous Internal Assessment process includes Midterm exam, Tutorials, Assignments, Quizzes, presentation, Class Test, viva-voce etc.
12. As per the RTU examination scheme, mid semester examinations are conducted centrally by examination cell as per the planning & academic calendar and other assessments are conducted at departmental level.
13. All the evaluations are carried out by the faculty members which include COs-POs attainment, Gap identification & action taken for the fulfillment of gap.
14. Student feedback and attainment of COs-POs are reviewed by the PAC for any revision in planning & Delivery.
15. End term semester examinations are conducted by the RTU, Kota.

## 2 Vision & Mission Statements

### 2.1 Vision & Mission Statements of the Institute

#### Vision of Institution

To create knowledge based society with scientific temper, team spirit and dignity of labor to face the global competitive challenges

#### Mission of Institution

To evolve and develop skill based systems for effective delivery of knowledge so as to equip young professionals with dedication & commitment to excellence in all spheres of life

### 2.2 Vision & Mission Statements of the Programme B. Tech. (Information Technology)

#### 2.2.1 Vision of Department

To attain distinction in education to enable students for their establishment as **globally competent professional** and empowering them with proficiency, **knowledge** and **research ability** required to be successful in field of Information Technology.

#### 2.2.2 Mission of Department

1. To provide **state-of-the-art facilities** with **modern IT tools** to students and faculty thereby enabling them to develop **sustainable solutions** for real world problems.
2. To create and propagate knowledge in field of Information Technology through **research, teaching and learning** for meeting **societal challenges**.
3. To inculcate **analytical, leadership** and **team working** skills with **ethical behavior** in students and provide an environment for **continuous learning**.

#### 2.2.3 PEO of the Department

##### Program Educational Objectives (PEOs)

1. **PEO 1:** Graduate will have **Fundamental & multidisciplinary knowledge** with an ability to **analyze, design, innovates** and handles the **realistic problems**.
2. **PEO 2:** Graduate will possess **ethical conduct**, sense of **responsibility** to serve **society** and protect the **environment**.
3. **PEO 3:** Graduate will have strong foundation in academics, **leadership qualities** and **lifelong learning** for a prosperous professional career.



#### 2.2.4 Program Specific Outcome (PSOs)

**PSO1.** Design, analyze and innovate solutions to technical issues in Thermal, Production and Design Engineering.

**PSO2.** Exhibit the knowledge and skills in the field of Mechanical & Allied engineering concepts.

**PSO3.** Apply the knowledge of skills in HVAC&R and Automobile engineering.

### 2.3 Program Outcomes (PO)

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.

### **3 Department Academic & Administrative Bodies - Structure & Functions**

#### **3.1 Department Advisory Board (DAB)**

##### **3.1.1 Primary Objective**

Department Advisory Board (DAB) of Department of Information Technology, PCE, Jaipur is formed to provide necessary suggestions for developing a structured approach for continuous improvement in curriculum delivery, planning and incorporation of Curricular, Extra and Co-Curricular activities needed to abridge the pre-identified curriculum gaps.

##### **3.1.2 Roles & Responsibilities**

1. Suggest improvement in academic plans and recommend standard practices/system for attainment of Program Educational Objectives, Program Outcomes, Program Specific Outcomes and Course Outcomes.
2. Provide guidelines for industry-institute interactions to bridge up curriculum/industry gap and suggest quality improvement initiatives to enhance employability.
3. Develop a structured Curriculum Delivery Plan, Department Academic Calendar and seek approval for them from Internal Quality Assurance Cell.
4. Incorporate suggestions received from Program Assessment Committee (PAC) by including proposed activities for bridging curricular gaps identified.
5. To identify and suggest thrust areas to conduct various activities (final year projects, training courses and additional experiments to meet PEOs, and propose necessary action plan for skill development of students, required for entrepreneurship development and quality improvement.

##### **3.1.3 Department-Wise Composition**

<b>S. No.</b>	<b>Category</b>	<b>Nominated by</b>	<b>Name of Members</b>	<b>Address</b>
1	Chairman, DAB-IT	Chairman, IQAC	Dr. Mahesh M. Bunde (Principal & Director, PCE)	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
2	Member Secretary	Chairman, DAB-IT	Dr. Gajendra Singh Rajawat Head, Department of Information Technology	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
3	Faculty representative-1	Chairman, DAB-IT	Ms. Priya Shekhawat Asst Prof. -IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur



4	Faculty representative-2	Chairman, DAB-IT	Mr. Amol Saxena Asst. Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
5	Faculty representative-3	Chairman, DAB-IT	Ms. Shazia Haque Asst. Prof.-IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
6	Faculty representative-4	Chairman, DAB-IT	Dr. Brijraj Singh Solanki Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
7	Special Invitee	Chairman, DAB-IT	Dr. Rekha Nair Dean I Year, Poornima College of Engineering, Jaipur	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
8	Alumni Representative-1	Chairman, DAB-IT	Aditi Maheshwari (2023 passout)	Poornima University, Jaipur
9	Alumni Representative-2	Chairman, DAB-IT	Keshav Goyal (2021 passout)	Samsung
10	Student Representative	Chairman, DAB-IT	Gaurav Singh Rathore (2024 batch)	Final Year IT
11	Industry Representative	Chairman, DAB-IT	Dr. Sunil Jangid	CEO, Wisflux Tech Labs
12	Parents Representative-1	Chairman, DAB-IT	Mrs. Munita Rani (M/o Jiya Verma)	A-39, Ganesh Nagar New Sanganer Road, Sodala Jaipur 302019 Rajasthan
13	Parents Representative-2	Chairman, DAB-IT	Mrs. Reenu Khandelwal (M/o Jayesh Khandelwal)	A 1/11, Mahesh Nagar, Jaipur 302019 Rajasthan

### 3.1.4 Meeting Frequency & Objectives

Meeting No.	Meeting Code	Meeting Month-Week	Meeting Objective
1.	DAB-1	July First Week	<ul style="list-style-type: none"> <li>Consideration of gaps and proposed activities by PAC last meeting to be implemented in DAC and CDP.</li> <li>Prepares final draft of CDP and DAC to be proposed in upcoming IQAC meeting</li> </ul>
2.	DAB-2	September Second Week	<ul style="list-style-type: none"> <li>Approval / Suggestions of proposals from last PAC Meeting.</li> <li>Revision of DAB Drafts for being proposed in upcoming GC</li> </ul>
3	DAB-3	December First Week	<ul style="list-style-type: none"> <li>Draft preparation for DAC and CDP for upcoming semester after considering inputs from PAC.</li> <li>Review Semester closure draft from PAC.</li> </ul>

4.	DAB-4	April Last Week / May First Week	<ul style="list-style-type: none"> <li>● Draft of PCE Academic Calendar and CDP proposed</li> <li>● Previous session closure with gaps and feedback.</li> <li>● Completion of ATR-2 for current semester based on last GC sessions and compiling it with ATR-1</li> </ul>
----	-------	----------------------------------	---

### 3.2 Program Assessment Committee

#### 3.2.1 Primary Objective

The primary objective of Program Assessment Committee (PAC) is to identify, bridge and assess the gaps in Program's Curriculum received from University through attainment calculation.

#### 3.2.2 Roles & Responsibilities

1. Identify gaps in curriculum laid down by University and propose activities for bridging identified gaps.
2. Implement academic plans and standard practices/system for attainment of Program Educational Objectives, Program Outcomes, Program Specific Outcomes and Course Outcomes.
3. Regular Monitoring of curriculum gap abridgement and course deployment practices through pre-defined methods.
4. Execute Industry-Institute Interactions to enhance the employability thereby meeting the industry standards and requirements.
5. Implement Curriculum Delivery Plan & Department Academic Calendar.

#### 3.2.3 Department-Wise Composition

S. No.	Category	Nominated by	Name of Members	Address
1	Chairman, PAC-IT	Chairman, IQAC / Head of Institution	Dr. Gajendra Singh Rajawat Head, Department of Information Technology	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
2	Member Secretary	Chairman, PAC-IT	Ms. Shazia Haque Asst. Prof.-IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
3	Faculty representative-1	Chairman, PAC-IT	Mr. Amol Saxena Asst. Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
4	Faculty representative-2	Chairman, PAC-IT	Dr. Brijraj Singh Solanki Prof. - IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur

5	Faculty representative-3	Chairman, PAC-IT	Ms. Priya Shekhawat Asst. Prof.-IT	Poornima College of Engineering, ISI-6, RIICO Inst. Area, Sitapura, Jaipur
---	--------------------------	------------------	------------------------------------	--

### 3.2.4 Meeting Frequency & Objectives

Meeting No.	Meeting Code	Meeting Month-Week	Meeting Objective
1.	PAC-1	July Last Week	<ul style="list-style-type: none"> <li>• Execution of Academic, Extra and Co-Curricular activities</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>• Regular calculation of attainments</li> <li>• Revision of Academics gaps</li> <li>• Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
2.	PAC-2	August Last Week	<ul style="list-style-type: none"> <li>• Execution of Academic, Extra and Co-Curricular activities</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>• Regular calculation of attainments</li> <li>• Revision of Academics gaps</li> <li>• Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
3	PAC-3	September Last Week	<ul style="list-style-type: none"> <li>• Execution of Academic, Extra and Co-Curricular activities</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>• Regular calculation of attainments</li> <li>• Revision of academics gaps as previous attainment</li> <li>• Assessment of activities required for being proposed in upcoming GC</li> <li>• Submit report to Governing Council about previous semester &amp; planning of next semester.</li> </ul>
4.	PAC-4	October Last Week	<ul style="list-style-type: none"> <li>• Inclusion of suggestions for revising gaps</li> <li>• Execution of Academic, Extra and Co-Curricular activities according to suggestions in GC</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>• Regular calculation of attainments</li> <li>• Revision of academics gaps as previous attainment</li> </ul>
5.	PAC-5	November Third Week	<ul style="list-style-type: none"> <li>• Revision of academics gaps as previous attainment</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>• Identification and proposal of gaps and activities to be considered by DAB to prepare Department Academic Calendar and CDP for upcoming semester.</li> <li>• Semester closure report draft to be prepared</li> <li>• Elective proposals/CBCS</li> </ul>
6.	PAC-6	December Third Week	<ul style="list-style-type: none"> <li>• Incorporation of suggestions from IQAC and DAB meetings in execution of Semester activities</li> <li>• Execution and assessment of Academic, Extra and Co-Curricular activities</li> <li>• Revision of academics gaps as previous attainment</li> <li>• Calculation of attainments</li> </ul>
7.	PAC-7	January Last Week	<ul style="list-style-type: none"> <li>• Execution of Academic, Extra and Co-Curricular activities</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>• Regular calculation of attainments</li> <li>• Revision of Academics gaps</li> <li>• Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
8.	PAC-8	February Last Week	<ul style="list-style-type: none"> <li>• Execution of Academic, Extra and Co-Curricular activities</li> <li>• Regular assessment of Academic, Extra and Co-Curricular activities</li> </ul>

			<ul style="list-style-type: none"> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
9.	PAC-9	March Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> <li>Draft preparation of Semester closure</li> </ul>
10.	PAC-10	April Second Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> </ul>
11.	PAC-11	May Last Week	<ul style="list-style-type: none"> <li>Execution of Academic, Extra and Co-Curricular activities</li> <li>Regular assessment of Academic, Extra and Co-Curricular activities</li> <li>Regular calculation of attainments</li> <li>Revision of Academics gaps</li> <li>Prepared regular report of program for all assessment, attainment &amp; gaps</li> <li>Report submission of Semester closure</li> <li>Identification and proposal of gaps and activities to be considered by DAB to prepare Department Academic Calendar and CDP for upcoming semester.</li> </ul>
12.	PAC-12	June Last Week	<ul style="list-style-type: none"> <li>Feedback of last IQAC and suggestions for new semester to be implemented in CDP and DAC</li> <li>Elective proposals/CBCS</li> </ul>

#### 4 List of Faculty Members & Technical Staff

Sr. No.	Faculty Name	Emp.ID	Designation	Email ID	Mobile No.
1.	Mr. AMOL SAXENA	1114	ASST PROFESSOR	amolsaxena@poornima.org	9982776883
2.	Ms. SHAZIA HAQUE	1218	ASST PROFESSOR	shaziahaque@poornima.org	9829318125
3.	Mr. NEERAJ PRATI HAR	7512	ASST PROFESSOR	neeraj.pratihar@poornima.org	8077331061
4.	Dr. VISHNU SHARMA	6922	ASSOCIATE PROFESSOR	vishnu.sharma@poornima.org	9783142141
5.	DR. SANDEEP BHARGAVA	5990	ASSOCIATE PROFESSOR	sandeep.bhargava@poornima.org	8118864109
6.	Dr. GAJENDRA SINGH RAJAWAT	6698	PROFESSOR	gajendra.rajawat@poornima.org	9414719108
7.	MS. MAINA CHANGERIWAL	7276	ASST PROFESSOR	maina.changeriwal@poornima.org	9782641192
8.	Ms. PRIYA SHEKHAWAT	8023	ASST PROFESSOR	priya.shekhawat@poornima.org	6375761904
9.	Mr. ALOK SINGH	8490	ASST PROFESSOR	alok.singh@poornima.org	9828530340

<b>10.</b>	Dr. BRIJRAJ SINGH SOLANKI	8373	PROFESSOR	brijraj@poornima.org	9829533943
<b>11.</b>	Ms. SUMITRA SETHI	8075	ASST PROFESSOR	sumitra.sethi@poornima.org	9289632101
<b>12.</b>	MS. KALPANA SHARMA	6050	ASST PROFESSOR	klpna.sharma88@poornima.org	9413077523
<b>13.</b>	Dr. GHANSHYAM SINGH	6919	ASSOCIATE PROFESSOR	kaviya01singh@poornima.org	9887814008
<b>14.</b>	Mr. AMIT GUPTA	1209	ASST PROFESSOR	amit.gupta@poornima.org	9001893265
<b>15.</b>	Ms. SHIVANI JAIN	7409	ASST PROFESSOR	shivani.jain1@poornima.org	7665444433

## 5 Institute Academic Calendar

JANUARY 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

MARCH 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

APRIL 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE 2023						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

JULY 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**POORNIMA**  
**COLLEGE OF ENGINEERING**  
Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • NAAC A+ Accredited

### ACADEMIC CALENDAR 2023-24\*#

#### EVEN SEMESTER

**January 2024**

Monday, 8  
Thursday, 26

**February 2024**

Monday, 19  
Monday, 26

**March 2024**

Monday, 04 to Wednesday, 06  
Thursday, 14 to Saturday 16  
During Second/Third Week

**April 2024**

Monday, 15 to Saturday, 20  
Wednesday, 24  
Thursday, 25 to Saturday, 27  
Monday, 29 to Wednesday 01 (May)  
Monday, 29 to Saturday, 04 (May)

**May 2024**

As Per RTU Schedule  
Saturday, 25 to Sunday, 26

**June 2023**

Saturday, 8  
Monday, 10 to Saturday, 15  
Monday, 17 to Wednesday 19  
As Per RTU Schedule  
Friday, 21  
Monday, 24 to Saturday, 29

**July 2024**

Monday, 01 to Wednesday 03  
As Per RTU Schedule

**January 2024**

First Day, B. Tech. VIII Sem.  
Republic Day Celebration  
RTU THEORY EXAMINATION FOR III & V SEMESTER [ODD SEMESTER 2023-24]

**February 2024**

First Day, B. Tech. IV & VI Sem.  
RTU THEORY EXAMINATION FOR I SEMESTER [ODD SEMESTER 2023-24]  
First Day, B. Tech. II Sem.

**March 2024**

First Mid Term Examination for B.Tech VIII Sem  
Aarohan -2024  
Wise Activity

**April 2024**

First Mid Term Examination for B.Tech IV & VI Sem  
Last Teaching Day for B. Tech VIII Sem  
Second Mid-Term Examination for B. Tech VIII Sem  
End-Term Practical Exams for B. Tech VIII Sem  
First Mid Term Examination for B. Tech II Sem  
Farewell Function Batch 2020-24

**May 2024**

End-Term Theory Exams for B. Tech VIII Sem  
Students' Council Meet

**June 2024**

Last Teaching Day for B. Tech IV & VI Sem  
Second Mid-Term Examination for B. Tech IV & VI Sem  
End-Term Practical Examination for B. Tech IV & VI Sem  
End-Term Theory Examination for B. Tech IV & VI Sem  
Last Teaching Day for B. Tech II Sem  
Second Mid-Term Examination for B. Tech II Sem

**July 2024**

End-Term Practical Examination for B. Tech II Sem  
End-Term Theory Examination for B. Tech II Sem

**HOLIDAYS IN EVEN SEMESTER**

- > New Year
- > Makar Sankranti
- > Republic Day Celebration
- > Holi
- > Eid-ul-Fitr
- > Ambedkar Jayanti
- > Eid-ul-Adha

- 01 January, Monday - 02 January, Tuesday
- 14 January, Sunday, 2024
- 26 January, Friday - 27 January, Saturday, 2024
- 23 March, Saturday - 26 March, Tuesday, 2024
- 11 April, Thursday - 13 April, Saturday, 2024
- 13 April, Saturday - 14 April, Sunday, 2024
- 15 June, Saturday - 17 June, Monday, 2024

\*Subject to revision as per RTU notifications  
#Annual Alumni Meet in December 28, 2024

6 Department Activity Calendar

# Poornima College of Engineering, Jaipur

## Calendar for Information Technology : EVEN Semester - Session 2023-24

(A) Academic Processes					
S. N. O.	Activity/ Process	B.Tech. II Sem.	B.Tech. IV Sem.	B.Tech. VI Sem.	B.Tech. VIII Sem.
1	Date of Registration & start of regular classes for students	Monday, 26, February 2024	Monday, 19, February 2024	Monday, 19, February 2024	Monday, 08, January 2024
2	Orientation programme	Monday, 26 February to Saturday, 02, March 2024	Monday, 19 February to Saturday, 24, February 2023	Monday, 19 February to Saturday, 24, February 2023	Monday, 08 January to Wednesday, 10, January 2024
3	Date of submission of question papers by faculty members to secrecy for 1st Mid-term	Monday, 22 April 2024	Monday 08, April 2024	Monday 08, April 2024	Monday, 26 April 2024
4	I Mid Term Theory & Practical Exam	Monday, 29 April to Saturday, 04, May 2024	Monday, 15 to Saturday, 20, April 2024	Monday, 15 to Saturday, 20, April 2024	Monday, 04 to Wednesday, 06, Mar 2024
5	Showing evaluated answer books of 1st Mid-term exam to students in respective classes	Saturday, 11 May, 2024	Saturday, 27 April 2024	Saturday, 27 April 2024	Wednesday, 13 Mar, 2024
6	Last date of submission of Evaluated Answer Books and Mark of First Mid-term Theory & Practical exam to Exam and Secrecy Cell respectively	Monday, 13 May, 2024	Monday, 29 April 2024	Monday, 29 April 2024	Friday, 15 Mar, 2024
7	Date of submission of question papers by faculty members to	Monday, 17 June, 2024	Monday, 3 June 2024	Monday, 3 June 2024	Wednesday, 17 April 2024



	secrecy for 2nd Mid-term				
8	Revision classes	As per RTU examination Schedule			
9	Last Teaching Day*	Friday, 21 July 2024	Saturday, 8 June 2024	Saturday, 8 June 2024	Wednesday, 24 April, 2024
10	2nd Mid-term theory & Practical Exams*	Monday, 24 June to Saturday, 29 June 2024	Monday, 10 June to Saturday, 15 June 2024	Monday, 10 June to Saturday, 15 June 2024	Thursday, 25 April to Saturday, 27 April 2024
11	End-Term Practical Exams	Monday, 01 July to Wednesday 03 July 2024	As per RTU schedule	As per RTU schedule	As per RTU schedule

## (B) Events and Activities

12	A Session on PIIC by Dr. Manoj Gattani	26 Feb. 2024			
13	Alumini session	05 March, 2024			
14	WISE Activity - Health Session on Ovarian Session	01 March, 2024			
15	International Women's Day Celebration	8 March, 2024			
16	Expert Lecture on IoT	04 April 2024			
17	A Workshop on Salesforce	15-May-24			

## (C) Holidays

18	New Year	01 January, Monday - 02 January, Tuesday 2024
19	Makar Sakranti	Sunday, 14th Jan, 2024
20	Republic Day Celebration	26 January, Friday - 27 January, Saturday, 2024
21	Holi	23 March, Saturday - 26 March, Tuesday, 2024
22	Eid-UI- Fitr	11 April , Thursday - 13 April, Saturday, 2024
23	Ambedkar Jayanti	13 April, Saturday - 14 April, Sunday, 2024
24	Eid-al-Adha	15 June, Saturday - 17 June, Monday, 2024

**"स्वच्छ भारत.. सम्पन्न भारत.."**

**\*Subject to change as per RTU Exam Schedule**



## 7 Teaching Scheme

### 7.1 RTU Teaching Scheme



## RAJASTHAN TECHNICAL UNIVERSITY, KOTA

### Teaching & Examination Scheme B.Tech. : Information Technology 2<sup>nd</sup> Year - IV Semester

THEORY											
SN	Category	Course		Contact hrs/week			Marks				Cr
		Code	Title	L	T	P	Exm Hrs	IA	ETE	Total	
1	BSC	4IT2-01	Discrete Mathematics Structure	3	0	0	3	30	70	100	3
2	HSMC	4IT1-03/ 4IT1-02	Managerial Economics and Financial Accounting / Technical Communication	2	0	0	2	30	70	100	2
3	ESC	4IT3-04	Principle of Communication	3	0	0	3	30	70	100	3
4	PCC	4IT4-05	Database Management System	3	0	0	3	30	70	100	3
5		4IT4-06	Theory of Computation	3	0	0	3	30	70	100	3
6		4IT4-07	Data Communication and Computer Networks	3	0	0	3	30	70	100	3
		Sub Total		17	0	0					17
PRACTICAL & SESSIONAL											
8	PCC	4IT4-21	Linux Shell Programming Lab	0	0	2		60	40	100	1
9		4IT4-22	Database Management System Lab	0	0	3		60	40	100	1.5
10		4IT4-23	Network Programming Lab	0	0	3		60	40	100	1.5
11		4IT4-24	Java Lab	0	0	2		60	40	100	1
12		4IT4-25	Web Technology Lab	0	0	2		60	40	100	1
13	SODE CA	4IT8-00	Social Outreach, Discipline & Extra Curricular Activities							100	0.5
		Sub- Total		0	0	12					6.5
		TOTAL OF IV SEMESTER		17	0	12					23.5

*L: Lecture, T: Tutorial, P: Practical, Cr: Credits*

*ETE: End Term Exam, IA: Internal Assessment*

Office of Dean Academic Affairs  
Rajasthan Technical University, Kota



# RAJASTHAN TECHNICAL UNIVERSITY, KOTA

## Teaching & Examination Scheme B.Tech. : Information Technology 3<sup>rd</sup> Year – VI Semester

THEORY											
SN	Category	Course		Contact hrs/week			Marks				Cr
		Code	Title	L	T	P	Exm Hrs	IA	ETE	Total	
1	ESC	6IT3-01	Digital Image Processing	2	0	0	3	30	70	100	2
2	PCC /PEC	6IT4-02	Machine Learning	3	0	0	3	30	70	100	3
3		6IT4-03	Information Security System	2	0	0	3	30	70	100	2
4		6IT4-04	Computer Architecture and Organization	3	0	0	3	30	70	100	3
5		6IT4-05	Artificial Intelligence	2	0	0	3	30	70	100	2
6		6IT4-06	Distributed System	3	0	0	3	30	70	100	3
7		Professional Elective 1 (Any one)		2	0	0	3	30	70	100	2
		6ITS-11	Information Theory & Coding								
		6ITS-12	Cloud Computing								
		6ITS-13	Ecommerce & ERP								
		Sub Total		17	0	0					17
PRACTICAL & SESSIONAL											
8	PCC	6IT4-21	Digital Image Processing Lab	0	0	3	2	60	40	100	1.5
9		6IT4-22	Machine Learning Lab	0	0	3	2	60	40	100	1.5
10		6IT4-23	Python Lab	0	0	3	2	60	40	100	1.5
11		6IT4-24	Mobile Application Development Lab	0	0	3	2	60	40	100	1.5
12	SODE CA	6ITS-00	Social Outreach, Discipline & Extra Curricular Activities						100	100	0.5
		Sub- Total		0	0	12					6.5
		TOTAL OF VI SEMESTER		17	0	12					23.5

*L*: Lecture, *T*: Tutorial, *P*: Practical, *Cr*: Credits  
*ETE*: End Term Exam, *IA*: Internal Assessment

Office of Dean Academic Affairs  
Rajasthan Technical University, Kota



# RAJASTHAN TECHNICAL UNIVERSITY, KOTA

Scheme & Syllabus

IV Year- VII & VIII Semester: B. Tech. (Information Technology)

## Teaching & Examination Scheme

B.Tech.: Information Technology

4<sup>th</sup> Year - VIII Semester

THEORY											
SN	Category	Course		Contact hrs/week			Marks				Cr
		Code	Title	L	T	P	Exam Hrs	IA	ETE	Total	
1	POC	SIT4-01	Internet of Things	3	0	0	3	30	120	150	3
2	OE		Open Elective - II	3	0	0	3	30	120	150	3
		Sub Total		6	0	0	6	60	240	300	6
PRACTICAL & SESSIONAL											
3	POC	SIT4-21	Internet of Things Lab	0	0	2	2	30	20	50	1
4		SIT4-22	Software Testing and Validation Lab	0	0	2	2	30	20	50	1
5	PSIT	SIT7-50	Project	3	0	0		210	140	350	7
6	SODE CA	SIT8-00	Social Outreach, Discipline & Extra Curricular Activities							25	0.5
		Sub- Total		0	0	4	4	120	80	475	9.5
		TOTAL OF VIII SEMESTER		6	0	4	10	180	320	775	15.5

*L: Lecture, T: Tutorial, P: Practical, Cr: Credits*

*ETE: End Term Exam, IA: Internal Assessment*

**8 PCE Teaching Scheme****POORNIMA COLLEGE OF ENGINEERING****DEPARTMENT OF INFORMATION TECHNOLOGY****Teaching Scheme-Session 2023-24 (EVEN SEMESTER)**

S. No.	Code	Subject	L	T	P	No. of Batches	LOAD	Teaching Department
1	4IT2-01	Discrete Mathematics Structure	4	0	0	2	4	Maths
2	4IT1-02	Technical Communication	2	0	0	2	2	Humanities
3	4IT3-04	Principle of Communication	3	0	0	2	3	ECE
4	4IT4-05	Database Management System	3	0	0	2	3	IT
5	4IT4-06	Theory of Computation	3	0	0	2	3	IT
6	4IT4-07	Data Communication and Computer Networks	3	0	0	2	3	IT
7	4IT4-21	Linux Shell Programming Lab	0	0	4	2	4	IT
8	4IT4-22	Database Management System Lab	0	0	6	2	6	IT
9	4IT4-23	Network Programming Lab	0	0	6	2	6	IT
10	4IT4-24	Java Lab	0	0	4	2	4	IT
11	4IT4-25	Web Technology Lab	0	0	4	2	4	IT
12	6IT3-01	Digital Image Processing	2	0	0	2	2	ECE
13	6IT4-02	Machine Learning	3	0	0	2	3	IT
14	6IT4-03	Information Security System	2	0	0	2	2	IT
15	6IT4-04	Computer Architecture and Organization	3	0	0	2	3	IT
16	6IT4-05	Artificial Intelligence	3	0	0	2	3	IT
17	6IT4-06	Distributed System	3	0	0	2	3	IT
18	6IT5-12	Cloud Computing	2	0	0	1	2	IT
19	6IT5-13	Ecommerce & ERP	2	0	0	1	2	IT
20	6IT4-21	Digital Image Processing Lab	0	0	6	2	6	ECE
21	6IT4-22	Machine Learning Lab	0	0	6	2	6	IT
22	6IT4-23	Python Lab	0	0	6	2	6	IT
23	6IT4-24	Mobile Application Development Lab	0	0	6	2	6	IT
24	8IT4-01	Internet of Things	3	0	0	3	3	IT
25	OE	Open Elective - II	3	0	0	3	3	Other deptt
26	8IT4-21	Internet of Things Lab	0	0	9	3	9	IT
27	8IT4-22	Software Testing and Validation Lab	0	0	9	3	9	IT
28	8IT7-50	Project	0	0	18	3	18	IT

## 8.1 Marking Scheme

MARKING SCHEME FOR PRACTICAL EXAM, EVEN SEM., 2023-24.					EXAM & SECRECY CELL, PCE					Max.
Code	SUBJECT	I & II Mid Term Exam			Atten & Performance.		End Term Exam			
		Expo	Viva	Total	Total		Expo	Viva	Total	
2FY2-21	Engineering Chemistry Lab	30	10	40	40		30	10	40	100
2FY2-20	Engineering Physics Lab	30	10	40	40		30	10	40	100
2FY1-23	Human Values Activities and Sports	30	10	40	40		30	10	40	100
2FY1-22	Language Lab	30	10	40	40		30	10	40	100
2FY3-25	Manufacturing Practices Workshop	30	10	40	40		30	10	40	100
2FY3-24	Computer Programming Lab	30	10	40	40		30	10	40	100
2FY3-27	Basic Civil Engineering Lab	30	10	40	40		30	10	40	100
2FY3-26	Basic Electrical Engineering Lab	30	10	40	40		30	10	40	100
2FY3-29	Computer Aided Machine Drawing	30	10	40	40		30	10	40	100
4AID4-21	Microprocessor & Interfaces Lab	30	10	40	40		30	10	40	100
4AID4-22	Database Management System Lab	30	10	40	40		30	10	40	100
4AID4-23	Network Programming Lab	30	10	40	40		30	10	40	100
4AID4-24	Linux Shell Programming Lab	30	10	40	40		30	10	40	100
4AID4-25	Java Lab	30	10	40	40		30	10	40	100
4CAI4-21	Microprocessor & Interfaces Lab	30	10	40	40		30	10	40	100
4CAI4-22	Database Management System Lab	30	10	40	40		30	10	40	100
4CAI4-23	Network Programming Lab	30	10	40	40		30	10	40	100
4CAI4-24	Linux Shell Programming Lab	30	10	40	40		30	10	40	100
4CAI4-25	Java Lab	30	10	40	40		30	10	40	100
4CSR4-21	Microprocessor & Interfaces Lab	30	10	40	40		30	10	40	100
4CSR4-22	Database Management System Lab	30	10	40	40		30	10	40	100
4CSR4-23	Network Programming Lab	30	10	40	40		30	10	40	100
4CSR4-24	Linux Shell Programming Lab	30	10	40	40		30	10	40	100
4CSR4-25	Java Lab	30	10	40	40		30	10	40	100
4CCS4-21	Microprocessor & Interfaces Lab	30	10	40	40		30	10	40	100
4CCS4-22	Database Management System Lab	30	10	40	40		30	10	40	100
4CCS4-23	Network Programming Lab	30	10	40	40		30	10	40	100
4CCS4-24	Linux Shell Programming Lab	30	10	40	40		30	10	40	100
4CCS4-25	Java Lab	30	10	40	40		30	10	40	100
4CE4-21	Material Testing Lab	30	10	40	40		30	10	40	100
4CE4-22	Hydraulics Engineering Lab	30	10	40	40		30	10	40	100
4CE4-23	Building Drawing	30	10	40	40		30	10	40	100
4CE4-24	Advanced Surveying Lab	30	10	40	40		30	10	40	100
4CE4-25	Concrete Lab	30	10	40	40		30	10	40	100
4CS4-21	Microprocessor & Interfaces Lab	30	10	40	40		30	10	40	100
4CS4-22	Database Management System Lab	30	10	40	40		30	10	40	100
4CS4-23	Network Programming Lab	30	10	40	40		30	10	40	100
4CS4-24	Linux Shell Programming Lab	30	10	40	40		30	10	40	100
4CS4-25	Java Lab	30	10	40	40		30	10	40	100
4EC4-21	Analog and Digital Communication Lab	30	10	40	40		30	10	40	100
4EC4-22	Analog Circuits Lab	30	10	40	40		30	10	40	100
4EC4-23	Microcontrollers Lab	30	10	40	40		30	10	40	100
4EC4-24	Electronics Measurement & Instrumentation Lab	30	10	40	40		30	10	40	100
4EE4-21	Electrical Machine - II Lab	30	10	40	40		30	10	40	100
4EE4-22	Power Electronics Lab	30	10	40	40		30	10	40	100
4EE4-23	Digital Electronics Lab	30	10	40	40		30	10	40	100
4EE3-24	Measurement Lab	30	10	40	40		30	10	40	100
4IT4-21	Linux Shell Programming Lab	30	10	40	40		30	10	40	100
4IT4-22	Database Management System Lab	30	10	40	40		30	10	40	100
4IT4-23	Network Programming Lab	30	10	40	40		30	10	40	100
4IT4-24	Java Lab	30	10	40	40		30	10	40	100
4IT4-25	Web Technology Lab	30	10	40	40		30	10	40	100
4ME3-21	Digital Electronics Lab	30	10	40	40		30	10	40	100
4ME4-22	Fluid Mechanics Lab	30	10	40	40		30	10	40	100
4ME4-23	Production practice Lab	30	10	40	40		30	10	40	100
4ME4-24	Theory of machines Lab	30	10	40	40		30	10	40	100
6CE4-21	Environmental Engineering Design and Lab	30	10	40	40		30	10	40	100
6CE4-22	Steel Structure Design	30	10	40	40		30	10	40	100
6CE4-23	Quantity Surveying and Valuation	30	10	40	40		30	10	40	100
6CE4-24	Water and Earth Retaining Structures Design	30	10	40	40		30	10	40	100
6CE4-25	Foundation Design	30	10	40	40		30	10	40	100
6CS4-21	Digital Image Processing Lab	30	10	40	40		30	10	40	100
6CS4-22	Machine Learning Lab	30	10	40	40		30	10	40	100
6CS4-23	Python Lab	30	10	40	40		30	10	40	100
6CS4-24	Mobile Application Development Lab	30	10	40	40		30	10	40	100
REC 4-21	Computer Network Lab	30	10	40	40		30	10	40	100
REC 4-22	Antenna and wave propagation Lab	30	10	40	40		30	10	40	100
REC 4-23	Electronics Design Lab	30	10	40	40		30	10	40	100
REC 4-24	Power Electronics Lab	30	10	40	40		30	10	40	100
REE4-21	Power System - II Lab	30	10	40	40		30	10	40	100
REE4-22	Electric Drives Lab	30	10	40	40		30	10	40	100
REE4-23	Power System Protection Lab	30	10	40	40		30	10	40	100
REE4-24	Modelling and simulation Lab	30	10	40	40		30	10	40	100
6IT4-21	Digital Image Processing Lab	30	10	40	40		30	10	40	100
6IT4-22	Machine Learning Lab	30	10	40	40		30	10	40	100
6IT4-23	Python Lab	30	10	40	40		30	10	40	100
6IT4-24	Mobile Application Development Lab	30	10	40	40		30	10	40	100
6ME4-21	CIMS Lab	30	10	40	40		30	10	40	100
6ME4-22	Vibration Lab	30	10	40	40		30	10	40	100
6ME4-23	Machine Design Practice II	30	10	40	40		30	10	40	100
6ME4-24	Thermal Engineering Lab I	30	10	40	40		30	10	40	100
6CE4-21	Project Planning & Construction Management	30	10	40	40		30	10	40	100
6CE4-22	Pavement Design	30	10	40	40		30	10	40	100
6CE7-50	Project			60				40		100
6CS4-21	Big Data Analytics Lab	30	10	40	40		30	10	40	100
6CS4-22	Software Testing and Validation Lab	30	10	40	40		30	10	40	100
6CS7-50	Project			60				40		100
6EC4-21	Internet of Things (IoT) Lab	30	10	40	40		30	10	40	100
6EC4-22	Skill Development Lab	30	10	40	40		30	10	40	100
6EC7-50	Project			60				40		100
6EE4-21	Energy Systems Lab	30	10	40	40		30	10	40	100
6EE7-50	Project			60				40		100
6IT4-21	Internet of Things Lab	30	10	40	40		30	10	40	100
6IT4-22	Software Testing and Validation Lab	30	10	40	40		30	10	40	100
6IT7-50	Project			120				80		200
6ME4-21	Industrial Engineering Lab	30	10	40	40		30	10	40	100
6ME4-22	Metrology Lab	30	10	40	40		30	10	40	100
6ME7-50	Project *#			60				40		100

NOTE: - (1) In Attendance & Performance marks should be given on the basis of student overall performance in semester i. e. continuous evaluation.  
(2) In Common Pool marks should be given by HOD on the basis of student Assignment,Non Syllabus Activity,Online Exam Exam,Application/Survey / Case Study based Learning, Pre-Placement Activity, Department Level Career Oriented Activities through out the semester.

## **9 Department Load Allocation**

<b>POORNIMA COLLEGE OF ENGINEERING</b>								
<b>Department of Information Technology</b>								
<b>Faculty Wise Subject Allocation Session 2023-24 (Even Sem.)</b>								
<b>S. No</b>	<b>Faculty Name</b>	<b>Sec</b>	<b>Code</b>	<b>Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Load</b>
1	Dr. Gajendra Singh Rajawat	A	8IT4-01	Internet of Things	3	0	0	3
		A	8IT4-21	Internet of Things Lab	0	0	3	9
		A	8IT7-50	Project	0	0	3	3
								<b>15</b>
2	Amol Saxena	A	4IT4-21	Linux Shell Programming Lab	0	0	2	4
		A	6IT4-06	Distributed System	3	0	0	3
		A	8IT7-50	Project	0	0	3	6
								<b>13</b>
3	Shazia Haque	A	4IT4-05	Database Management System	3	0	0	3
		A	4IT4-22	Database Management System Lab	0	0	3	6
		A	8IT4-22	Software Testing and Validation Lab	0	0	3	9
								<b>18</b>
4	Shivani Jain	A	4IT4-06	Theory of Computation	3	0	0	3
			4IT4-23	Network Programming Lab	0	0	3	6
								<b>9</b>
5	Priya Shekhawat	A	4IT4-24	Java Lab	0	0	2	4
		A	6IT4-02	Machine Learning	3	0	0	3
		A	6IT4-22	Machine Learning Lab	0	0	3	6
								<b>13</b>
6	Alok Singh	A	6IT5-12	Cloud Computing	2	0	0	2
		A	6IT4-03	Information Security System	3	0	0	6
		A	6IT4-24	Mobile Application Development Lab	0	0	3	3
								6
7	Dr. Ghanshyam Singh	A	4IT3-04	Principle of Communication	3	0	0	<b>17</b>
		A	6IT3-01	Digital Image Processing	2	0	0	3

		A	6IT4-21	Digital Image Processing Lab	0	0	3	2
								6
8	Dr. Brijraj Singh Solanki	A	4IT4-07	Data Communication and Computer Networks	3	0	0	11
			6IT4-04	Computer Architecture and Organization	3	0	0	3
		A	6IT4-23	Python Lab	0	0	3	3
		A	8IT7-50	Project	0	0	3	9
								15
9	Sumitra Sethi	A	4IT4-25	Web Technology Lab	0	0	2	4
		A	6IT4-05	Artificial Intelligence	3	0	0	3
			6IT4-13	Ecommerce & ERP	2	0	0	2
		A	8IT7-50	Project	0	0	3	6
								15
10	Dr. Vishnu Sharma	A	8IT7-50	Project	0	0	6	6
11	Dr. Sandeep Bhargava	A	8IT7-50	Project	0	0	6	6
12	Mr. Amit Gupta	A	8IT7-50	Project	0	0	6	6
13	Pradeep Kumar	A	4IT2-01	Discrete Mathematics Structure	4	0	0	4
14	Dr. Shalini Shah	A	4IT1-02	Technical Communication	2	0	0	2



## 10 Time Table

### 10.1 Orientation Time Table: N/A

### 10.2 Academic Time Table

POORNIMA COLLEGE OF ENGINEERING							
DEPARTMENT OF INFORMATION TECHNOLOGY							
TIME TABLE (EVEN SEMESTER 2023-24)							
II Year (IV Semester)							w.e.f 19-02-2024
Tutor: Shazia Haque							2B03
Day/ Period	I	II	III	11:30 to 12:20	IV	V	VI
	8:30-9:30	9:30-10:30	10:30-11:30		12:20-1:20	1:20-2:20	2:20-3:20
MON	4IT4-06	4IT4-07	4IT2-01	LUNCH	4IT4-06	4IT2-01	4IT3-04
	TOC (SJ)	DCCN (BS)	DMS (PK)		TOC (SJ)	DMS (PK)	POC (GS)
	2B03	2B03	2B03		2B03	2B03	2B03
TUE	4IT4-22 DBMS Lab (A1) SH 2B09C		4IT2-01		4IT3-04	4IT4-05	
	4IT4-23 NP Lab (A2) SJ 2B09E				DMS (PK)	POC (GS)	DBMS (SH)
					2B03	2B03	2B03
WED	4IT4-06	4IT4-05	4IT1-02		4IT4-07	4IT4-24 JAVA Lab (A1) PS 2B09F	
	TOC (SJ)	DBMS (SH)	TC (SS)		DCCN (BS)	4IT4-21 LSP Lab (A2) AS 2B09E	
	2B03	2B03	2B03		2B03		
THU	4IT4-22 DBMS Lab (A2) SH 2B09C		4IT1-02		4IT4-05	4IT4-07	
	4IT4-23 NP Lab (A1) SJ 2B09E				TC (SS)	DBMS (SH)	DCCN (BS)
					2B03	2B03	2B03
FRI	4IT4-24 JAVA Lab (A2) PS 2B09F		4IT3-04		4IT2-01	4IT4-21 LSP Lab (A1) AS 2B09E	
	4IT4-25 WT Lab (A1) SU 2B09G		POC (GS)		DMS (PK)	4IT4-25 WT Lab (A2) SU 2B09G	
			2B03		2B03		
SAT							
4IT2-01 : Discrete Mathematics Structure ,4IT1-02:Technical Communication, 4IT3-04: Principle of Communication,4IT4-05: Database Management System,4IT4-06:Theory of Computation, 4IT4-07: Data Communication and Computer Networks,4IT4-21: Linux Shell Programming Lab, 4IT4-22:Database Management System Lab,4IT4-23 Network Programming Lab,4IT4-24 Java Lab, 4IT4-25 Web Technology Lab							
AS: Amol Saxena, SH: Shazia Haque, SS: Dr. Shalini Shah, PK: Pradeep Kumar, PS: Priya Shekhawat, SJ: Shivani Jain, BS: Dr. Brijraj Singh Solanki, GS: Dr. Ghanshyam Singh							
Shazia Haque		Dr.Gajendra Singh Rajawat		Dr. Pankaj Dhemia		Dr. Mahesh M. Bunde	
TT Coordinator, IT		Head of Department, IT		Vice Principal, PCE		Director, PCE	



# POORNIMA COLLEGE OF ENGINEERING

## DEPARTMENT OF INFORMATION TECHNOLOGY

### TIME TABLE (EVEN SEMESTER 2023-24)

#### III Year (VI Semester)

w.e.f 19-02-2024

Tutor: Dr. Ghanshyam Singh							2B07	
Day/ Period	I	II	III	11:30 to 12:20	IV	V	VI	
	8:30-9:30	9:30-10:30	10:30-11:30		12:20-1:20	1:20-2:20	2:20-3:20	
MON	6IT4-24 MAD LAB (A1) ALS 2B09E			LUNCH	6IT4-03	6IT4-05	6IT4-02	
	6IT4-21 DIP LAB (A2) GS 2B09C				ISS (ALS)	AI (SU)	ML (PS)	
			2B07		2B07	2B09C		
TUE	6IT4-05	6IT4-04	6IT5-12 CC (ALS) 2B07		6IT4-22 ML LAB (A1) PS 2B09F			
	AI (SU)	CAO (BS)	6IT5-13 EC & ERP (SU) 2B04		6IT4-24 MAD LAB (A2) ALS 2B09E			
	2B07	2B07						
WED	6IT4-23 PY LAB (A1) ALS 2B09G				6IT4-06	6IT3-01	6IT4-04	
	6IT4-22 ML LAB (A2) PS 2B09F				DS (AS)	DIP (GS)	CAO (BS)	
THU	6IT4-06	6IT3-01	6IT4-05		2B07	2B07	2B07	
	DS (AS)	DIP (GS)	AI (SU)		6IT4-21 DIP LAB (A1) GS 2B09C			
	2B07	2B07	2B07		6IT4-23 PY LAB (A2) ALS 2B09G			
FRI	6IT4-04	6IT4-06	6IT5-12 CC (ALS) 2B07		6IT4-02	6IT4-03	6IT4-02	
	CAO (BS)	DS (AS)	6IT5-13 EC & ERP (SU) 2B04		ML (PS)	ISS (ALS)	ML (PS)	
	2B07	2B07			2B07	2B07	2B07	
SAT								
6IT3-01: Digital Image Processing,6IT4-02: Machine Learning, 6IT4-03: Information Security System, 6IT4-04: Computer Architecture and Organization, 6IT4-05: Artificial Intelligence, 6IT4-06: Distributed System, 6IT5-12: Cloud Computing, 6IT4-21: Digital Image Processing Lab, 6IT4-22: Machine Learning Lab, 6IT4-23: Python Lab, 6IT4-24: Mobile Application Development Lab								
GS: Dr.Ghanshyam Singh, AS: Amol Saxena, SJ: Shivani Jain,BS: Dr. Brijraj Singh Solanki, PS: Priya Shekhawat, SU: Sumitra Sethi, ALS: Alok Singh								
Shazia Haque		Dr.Gajendra Singh Rajawat		Dr. Pankaj Dhemla		Dr. Mahesh M. Bundeale		
TT Coordinator, IT		Head of Department, IT		Vice Principal, PCE		Director, PCE		

# POORNIMA COLLEGE OF ENGINEERING

## DEPARTMENT OF INFORMATION TECHNOLOGY

### TIME TABLE (EVEN SEMESTER 2023-24)

IV Year VIII Semester						w.e.f 08-01-2024		
Tutor: Dr. Brijraj Singh Solanki						2B04		
Day/ Period	I	II	III	11:30 to 12:20	IV	V	VI	
	8:30-9:30	9:30-10:30	10:30-11:30		12:20-1:20	1:20-2:20	2:20-3:20	
MON	8ITOE	8IT4-01	8IT4-01	LUNCH	8IT4-21 IoT LAB (A2) GR, 2B05A			
	OE	IoT (GR)	IoT (GR)		8IT4-22 STV LAB (A1) SH, 2B09C			
		2B04	2B04		8IT7-50 Project(A3) BS,AS, VS 2B05			
TUE	8ITOE	8IT4-01	8IT7-50		8IT4-21 IoT LAB (A1) GR, 2B05A			
	OE	IoT (GR)	PROJECT (A1, A2, A3) BS, AS, VS, SB, AG		8IT4-22 STV LAB (A3) SH, 2B09C			
		2B04	2B05A		8IT7-50 Project(A2) BS, SU, AG 2B05			
WED	8ITOE	8IT7-50			8IT4-21 IoT LAB (A3) GR, 2B05A			
	OE	PROJECT (A1, A2, A3)BS, AS			8IT4-22 STV LAB (A2) SH, 2B09C			
		2B05A			8IT7-50 Project(A1) SU, GR, SB 2B05			
THU								
FRI								
SAT								
8IT4-01: Internet of Things, 8ITOE: Open Elective, 8IT4-21: Internet of Things Lab, 8IT4-22: Software Testing and Validation Lab, , 8IT7-50: Project Lab								
GS: Dr. Gajendra Singh Rajawat, AS: Mr. Amol Saxena, BS: Dr. Brijraj Singh Solanki, SH: Ms. Shazia Haque, SU: Sumitra Sethi, VS: Dr. Vishnu Sharma, SB: Dr. Saneep Bhargava, AG: Mr. Amit Gupta								
Shazia Haque		Dr.Gajendra Singh Rajawat			Dr. Pankaj Dhemia		Dr. Mahesh M. Bundele	
TT Coordinator, IT		Head of Department, IT			Vice Principal, PCE		Director, PCE	

## 11 Course Outcome Attainment Process:

### 11.1 Course Outcome Attainment Process

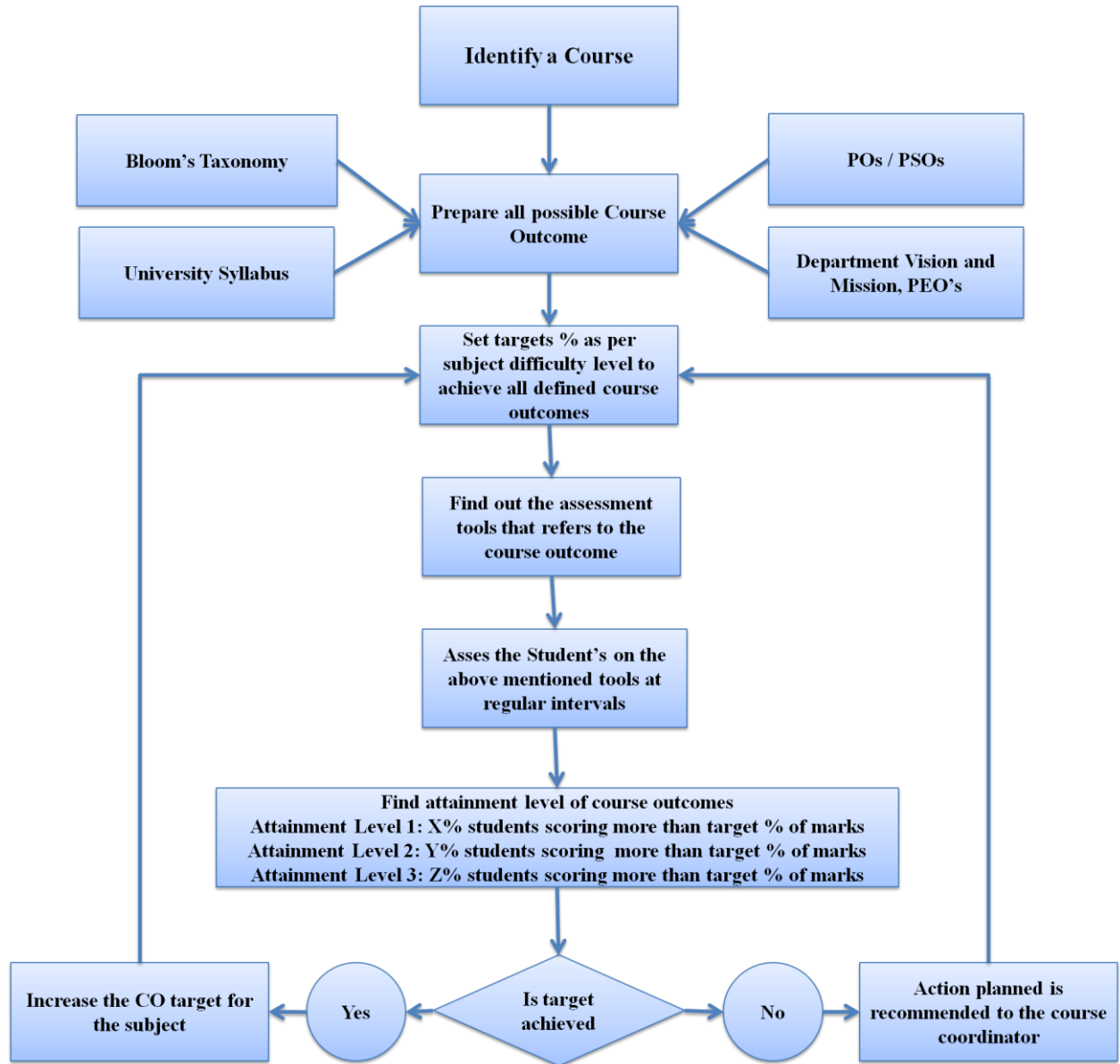


Figure. Course Outcome Attainment Process

## 11.2 List of CO &amp; CO mapping with PO

SN o	Cod e	Subject	CO	Course Outcomes	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	P O10	P O11	P O12	PS O1	PS O2	PS O3
11	2F Y2- 01	Engineering Mathematics-II	CO1	Students will be able to apply basic concepts matrix to find rank of matrix by reducing into normal and echelon form, to solve linear system of equations, to determine linear dependency or independency, to find eigen values and eigen vectors for a linear transformation which is very useful in various field of technology.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Students will be able to apply the knowledge of ordinary differential equation and various methods of solution of ODE to solve complex engineering problems.	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	The students will be able to identify a given differential equation and apply an appropriate analytical technique to find solution of first order and higher order differential equations.	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Students will be able to effectively analyze and apply appropriate mathematical technique to solve linear and non-linear partial differential equations.	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO5	Students will be able to classify higher order partial differential equations and analyze a wide variety of time dependent phenomena of real world including heat conduction, wave equation particle diffusion.	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
					2.2 5	2.0 0	-	-	-	-	-	-	-	-	-	-	-	-	-
12	2F Y2- 02	Engineering Physics	CO1	Describe the concepts of Wave and Quantum mechanics, Laser and Fiber optics, electromagnetic theory and	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Explain the different applications of Laser and optical fibers in communication, engineering, medicine and	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	Find energy states in 1-D and 3-D box with the application of quantum mechanics.	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Analyze the crystal structure through X-ray Diffraction & wavelength of light through Newton's ring experiment and	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
					2.0 0	2.0 0	-	-	-	-	-	-	-	-	-	-	-	-	-
13	2F Y1- 05	Human Values	CO1	Relate sustained happiness through identifying the essentials of human values and skills	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
			CO2	Find the happiness and human values in terms of personal and social life to create harmony in them	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-

			CO3	Use and understand practically the importance of trust, mutually satisfaction and human relationship	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
			CO4	Identify the orders of nature for the holistic perception of harmony for human existence	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
			CO5	Implement professional ethics and natural acceptance of human values in his/her life	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
					-	-	-	-	-	2.00	-	2.33	-	-	-	2.00	-	-	-
14	2F Y3-06	Programming for Problem Solving	CO1	Describe an algorithm using flowchart/pseudo code for a given problem and fundamental of computer system	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Write a c program to compare various Conditional, Iterative statements using arrays, string, pointers, file structure and classify different Representation of numbers	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	Examine the concept of Operators, Pointer, Array, String, structure, union using modularization to solve complex problems using C Programming	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Assess the User Defined functions, Memory management and File concepts to solve real time problems using C Programming	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
					2.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-
15	2F Y3-09	Basic Civil Engineering	CO1	Describe basics of surveying, types of building, mode of transportation and different causes of air and noise pollution	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
			CO2	Explain solid waste management, building by law, chemical cycle, biodiversity, causes of road accident, sanitary landfill and on-site sanitation	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	Illustrate method of levelling, road safety measures, building component, hydrological cycle and environ different types of foundation, treatment and disposal of waste water, chemical cycle, traffic sign and symbol and rain water harvestingmental act	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Compute bearings and elevations of respective points on the ground, various road traffic sign, food chain and contour maps.	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-

					2.0 0	2.0 0	-	-	-	-	-	-	-	-	-	-	-	-	1.0 0
16	2F Y2- 20	Engineering Physics Lab	CO1	Find out the characteristics of optical fiber and laser	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Determine wavelength of different spectral lines and height of an object by sextant	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	Analyze the band gap of semiconductor and type of semiconductor through hall effect	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Students will show an ability to communicate effectively and work as a team member ethically	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-
					1.5 0	1.0 0	-	-	-	-	-	2.0 0	3.0 0	2.0 0	-	-	-	-	-
17	2F Y1- 23	Human Values Activities and Sports	CO1	Recall the natural and social issues and their remedies.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
			CO2	Describe the nature of human values and the impact of external factors over it.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
			CO3	Validate through actions the significance of trust, respect and harmony with self and surroundings.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
			CO4	Outline the relation of human with nature and other factors in terms of human existence	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
			CO5	Associate the knowledge of self and society with clear understanding of social issues and the human beings.	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	2.0 0	2.0 0	1.0 0	2.0 0	-	-	-	-	-	-
18	2F Y3- 24	Computer Programming Lab	CO1	Relate the fundamental of C Programming as variable, operators and taxonomy to write a basic C Program	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Write programs that perform operations using condition control statements and loop control statements, single and multi-dimensional arrays along with specific program of matrix multiplication.(Examine)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			CO3	Use C programs to implement operations related to Array, Macros and inline functions, Dynamic memory allocations, concept of Structure, Unions and Pointers	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Students will show an ability to communicate effectively and work ethically	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-
					2	-	-	-	-	-	-	2	-	2	-	-	-	-	-
19	2F Y3- 27	Basic Civil Engineering Lab	CO1	Describe various sanitary fittings and water supply fittings	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO2	Examine pH, Turbidity, Hardness and Total solids of given water sample	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO3	Use of EDM and Total Station in the field	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO4	Investigate the linear and angular measurements of the points on the ground and levelling	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO5	Students will show an ability to communicate effectively and work as a team member ethically	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-
					2.0 0	1.0 0	-	-	-	-	-	2.0 0	3.0 0	2.0 0	-	-	-	-	-
20	2F Y3- 29	Computer Aided Machine Drawing	CO1	Describe orthographic projections and basic Geometrical Concept	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-
			CO2	Analyze Sectional Views of different mechanical Components and assembly drawing	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-
			CO3	Draft a engineering product using CAD software	-	-	-	-	2	-	-	-	-	-	-	-	2	-	1
			CO4	Students will show an ability to work as a team member ethically	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-
					2	1	-	-	2	-	-	2	3	-	-	-	1.6 7	-	1
	4I T2 - 01	Discrete Mathematics Structure	CO1	Demonstrate knowledge of how Sets, Relations , functions , Permutations and combinations and Graph are defined.	-	-	3	-	-	-	-	-	2	2	-	-	3	-	-

			<b>CO2</b>	Apply the rules of inference , methods of proof including direct and indirect proof forms, proof by contradiction, mathematical induction, Pigeonhole Principles, logic	-	3	-	-	2	-	-	-	2	2	-	2	-	3	-
			<b>CO3</b>	Analyze truth tables, tautologies, normal forms in propositional calculus .	-	-	3	-	2	-	-	-	2	2	-	2	-	-	3
			<b>CO4</b>	Explain finite-state machines to recognize certain sets and graph theory to model relationships and solve problems.	-	3	2	-	2	-	-	-	2	2	-	2	-	3	2
			<b>CO5</b>	Identify recurrence relations , generating functions, concepts and properties of algebraic structures such as groups, rings and fields.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					-	3.00	2.67	-	2.00	-	-	-	2.00	2.00	-	2.00	3.00	3.00	2.50
	<b>4I T1 - 02</b>	<b>Technical Communication</b>	<b>CO1</b>	Describe the objective, scope and outcome of the course.	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-
			<b>CO2</b>	Discuss and understand the process of technical communication in terms of LSRW.	3	2	2	2	-	-	-	-	-	-	-	1	3	1	1
			<b>CO3</b>	Explain the concept of Technical Materials/Texts along with the understanding of technical documents.	3	3	2	2	-	-	-	-	-	-	-	1	3	2	1
			<b>CO4</b>	Write and prepare various professional correspondence documents along with the knowledge of basics of grammar	3	3	2	2	-	-	-	-	-	-	-	1	3	2	1
			<b>CO5</b>	Restate and outline the basic concepts of Technical Reports, articles and their formats.	3	2	2	2	-	-	-	-	-	-	-	1	3	1	1



					3. 0 0	2. 5 0	2. 0 0	2. 0 0	-	-	-	-	-	-	-	1. 0 0	3. 0 0	1. 5 0	1. 0 0
	4I T3 - 04	Principle of Communicati on	CO1	Understand different modulation and demodulation techniques used in analog communication	1	-	-	-	-	-	-	-	-	-	-	3	-	2	-
			CO2	Identify and solve basic communication problems	-	-	-	-	2	-	-	-	2	3	-	3	-	-	2
			CO3	Analyze transmitter and receiver circuits	-	-	-	-	-	-	-	-	-	3	-	3	2	-	-
			CO4	Compare and contrast design issues, advantages, disadvantages and limitations of analog and digital communication systems	-	-	-	-	2	-	-	-	2	3	-	3	-	2	-
					1. 0 0	-	-	-	2. 0 0	-	-	-	2. 0 0	3. 0 0	-	3. 0 0	2. 0 0	2. 0 0	2. 0 0
	4I T4 - 05	Database Management System	CO1	Explain fundamental concepts of a database management system.	-	-	-	-	2	-	-	-	-	3	-	3	-	3	-
			CO2	Identify entities, attributes and their relationship and Model data requirements using conceptual modeling tools like ER diagrams and design database schemas based	3	3	3	-	-	-	-	-	-	3	-	3	3	-	3
			CO3	Formulate the SQL queries for any types of DBMS problems.	3	3	3	-	-	-	-	-	-	-	-	2	3	2	2
			CO4	Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.	3	3	-	-	-	-	-	-	-	-	-	3	3	2	3

			CO5	Determine different serializability and Formulate concurrent schedule and Recovery of database using available techniques.	3	3	3	-	-	-	-	-	-	-	-	-	2	2	3
					3.00	3.00	3.00	-	2.00	-	-	-	-	3.00	-	2.75	2.75	2.25	2.75
	4I T4 - 06	Theory of Computation	CO1	Classify and compare the Automata, Grammars, Languages and Computational problems based on their properties and hierarchy	3	-	-	-	-	-	-	-	-	-	-	-	-	3	-
			CO2	Apply Pumping lemmas of respective languages to determine the grammar and solve problems related to Normal Forms, transformation of automata, and parsing	-	3	-	-	-	-	-	-	-	-	-	-	3	-	3
			CO3	Analyze the working of Automata and Turing Machines	-	3	-	3	-	-	-	-	-	-	-	-	3	2	2
			CO4	Construct the required automata based on the given criteria of string acceptability and/or state transformations	-	3	-	-	-	-	-	-	-	-	-	-	3	2	3
					3.00	3.00	-	3.00	-	-	-	-	-	-	-	-	3.00	2.33	2.67
	4I T4 - 07	Data Communication and Computer	CO1	Acquire knowledge about Network hardware and network software along with architectures of networking	3	-	-	-	-	-	-	-	-	-	-	-	2	2	3
			CO2	Analyse the concept of error detection and correction in data link layer using different methods.	3	-	-	-	-	-	-	-	-	-	-	-	2	2	3
			CO3	Apply the different routing methods and congestion control mechanism in networking.	-	3	-	-	-	-	-	-	-	-	-	-	3	2	2

			<b>CO4</b>	Design network topologies thereby handling design issues, application layer protocol along with network.	-	-	3	-	-	-	-	-	-	-	-	2	2	3
					3.00	3.00	3.00	-	-	-	-	-	-	-	-	2.25	2.00	2.75
	<b>4I T4 - 21</b>	<b>Linux Shell Programming Lab</b>	<b>CO1</b>	Apply the basic commands of linux operating system related to file and directory manipulation	-	-	3	-	-	-	-	-	-	-	-	2	3	2
			<b>CO2</b>	Demonstrate the use of commands related to inode, I/O Redirection and piping, process control commands and mails	3	-	-	-	-	-	-	-	-	-	-	3	-	-
			<b>CO3</b>	Create Shell scripts with implementation of control statements, looping, cases, and arrays to address corresponding problem statements	-	3	-	-	-	-	-	-	-	-	2	-	3	-
			<b>CO4</b>	Create shell scripts for developing specific applications for geometrical shape creation, calculators and other problem statements	-	3	2	-	-	-	-	-	-	-	2	-	-	3
					3.00	3.00	2.50	-	-	-	-	-	-	-	2.00	2.50	3.00	2.50
	<b>4I T4 - 22</b>	<b>Database Management System Lab</b>	<b>CO1</b>	Analyse data requirements of an application and design the database using ERD as a tool.	-	3	2	-	-	-	-	-	-	-	-	-	3	2
			<b>CO2</b>	Retrieve data from the database by writing appropriate query in SQL using sql tool	-	-	2	-	3	2	-	-	-	-	-	2	-	3
			<b>CO3</b>	Apply the required constraints on various tables like Primary Key, Referential Integrity Constraints, check constraint etc.	-	2	-	2	3	2	-	-	-	-	-	-	2	-

			<b>CO4</b>	Implement triggers for various DML operations.	-	-	2	2	3	-	-	-	-	-	-	-	2	-	3
					-	2.50	2.00	2.00	3.00	2.00	-	-	-	-	-	-	2.00	2.50	2.67
	<b>4I T4 - 23</b>	<b>Network Programming Lab</b>	<b>CO1</b>	Analyse the network devices to interface a LAN and simulate.	-	2	-	3	2	3	-	-	-	-	-	-	-	2	3
			<b>CO2</b>	Develop LAN system to communicate with router and servers.	-	-	-	3	-	-	-	-	-	-	-	-	3	1	-
			<b>CO3</b>	Implement algorithms for identifying errors in communication networks.	-	-	-	-	-	-	-	-	-	-	-	2	2	-	3
			<b>CO4</b>	Design a client server channel establishment for message passing using communication protocol.	-	-	3	-	-	-	-	-	-	-	-	2	2	2	3
					-	2.00	3.00	3.00	2.00	3.00	-	-	-	-	-	2.00	2.33	1.67	3.00
	<b>4I T4 - 24</b>	<b>Java Lab</b>	<b>CO1</b>	State basic Object Oriented features of Java.	-	-	2	2	-	-	-	-	-	-	-	1	2	2	3
			<b>CO2</b>	Develop applications using Packages and Interfaces.	-	-	3	-	-	-	-	-	2	2	-	-	3	-	-
			<b>CO3</b>	Implement Process String objects through predefined methods of String and StringBuffer classes.	-	3	-	-	2	-	-	-	2	2	-	2	-	3	-

			<b>CO4</b>	Design applications that can handle Exceptions and demonstrate using Multi-threading and Applets.	-	-	3	-	2	-	-	-	2	2	-	2	-	-	3
					-	3.00	2.67	2.00	2.00	-	-	-	2.00	2.00	-	1.67	2.50	2.50	3.00
	<b>4I T4 - 25</b>	<b>Web Technology Lab</b>	<b>CO1</b>	Use different functions, variables, syntax and different technical tools for building any application	-	3	2	-	2	-	-	-	2	2	-	-	-	3	2
			<b>CO2</b>	Design and implement a static web designing using HTML and CSS	-	-	3	2	-	-	-	-	-	-	-	-	2	1	-
			<b>CO3</b>	Apply the knowledge of web technology in developing web applications.	-	3	2	2	-	-	-	-	-	-	-	-	3	1	1
			<b>CO4</b>	Evaluate different solutions in field of web application development.	-	3	2	2	-	-	-	-	-	-	-	-	3	-	1
			<b>CO5</b>	Implement small to large scale project to provide live solution in web application development fields.	-	-	3	2	-	-	-	-	-	-	-	-	3	-	1
					-	3.00	2.40	2.00	2.00	-	-	-	2.00	2.00	-	-	2.75	1.67	1.25
	<b>6I T3 - 01</b>	<b>Digital Image Processing</b>	<b>CO1</b>	Explain the fundamental concepts of a digital image processing and Image Enhancement.	3	3	2	1	-	-	-	-	-	-	-	2	-	-	-
			<b>CO2</b>	Understand the need for image transforms and their properties.	2	3	2	1	-	-	-	-	-	-	-	2	2	2	2

			<b>CO3</b>	Compare spatial and frequency domain filtering techniques of image compression.	2	3	3	2	2	-	-	-	-	-	-	2	2	3	2
			<b>CO4</b>	Analyze image segmentation and representation techniques.	2	2	3	3	2	-	-	-	-	-	-	2	2	3	2
					<b>2.25</b>	<b>2.75</b>	<b>2.50</b>	<b>1.75</b>	<b>2.00</b>	-	-	-	-	-	-	<b>2.00</b>	<b>2.00</b>	<b>2.67</b>	<b>2.00</b>
	6I T4 - 02	Machine Learning	<b>CO1</b>	Differentiate various machine learning approaches, and to interpret the concepts of supervised, unsupervised and reinforcement learning.	-	3	3	-	-	-	-	-	-	-	-	-	2	2	2
			<b>CO2</b>	Illustrate the working of classifier models like SVM, Neural Networks and etc and identify classifier model for typical machine learning applications.	-	3	3	2	-	-	-	-	-	-	-	-	2	3	2
			<b>CO3</b>	Apply theoretical foundations of Machine learning algorithms to solve the different real word applications.	-	3	3	2	-	-	-	-	-	-	-	-	3	3	-
			<b>CO4</b>	Design solution for different application using Machine learning algorithms and identify its applicability in real life problems.	-	3	3	3	-	-	-	-	-	-	-	-	3	2	2
					-	<b>3.00</b>	<b>3.00</b>	<b>2.33</b>	-	-	-	-	-	-	-	-	<b>2.50</b>	<b>2.50</b>	<b>2.00</b>
	6I T4 - 03	Information Security System	<b>CO1</b>	Identify and classify system security threats and attacks with their effective counter measures	-	-	3	-	-	-	-	1	-	-	-	2	2	2	2
			<b>CO2</b>	Design and understand the structure and functions of different encryption algorithms	-	3	2	-	-	-	-	1	-	-	-	3	2	3	2

			<b>CO3</b>	Apply and analyze the basic Cryptographic algorithm for security, including substitution, transposition, DES, AES, RSA	-	-	3	-	-	-	-	-	-	-	3	3	3	-
			<b>CO4</b>	Review different message authentication techniques and ability to apply them in practical applications	-	2	3	-	-	-	-	-	-	-	2	3	2	2
			<b>CO5</b>	Analyze the working of security over different level of web architecture.	-	-	3	-	-	-	-	-	-	-	2	3	2	2
					-	<b>2.50</b>	<b>2.80</b>	-	-	-	-	<b>1.00</b>	-	-	<b>2.40</b>	<b>2.60</b>	<b>2.40</b>	<b>2.00</b>
	6I T4 - 04	Computer Architecture and Organization	<b>CO1</b>	Classify and compare microoperations, common bus construction approaches, control, addressing modes, programming methods, register and memory organizations	3	-	-	-	-	-	-	-	-	-	2	3	2	2
			<b>CO2</b>	Apply the concepts of Basic computer data types, number representation schemes, computer arithmetic algorithms, and programming approaches to implement	-	3	-	-	-	-	-	-	-	-	-	3	2	2
			<b>CO3</b>	Analyze and illustrate the architecture of RISC Systems, Pipelining and Vector Processing systems, Direct Memory Access, Input Output Processor and Multiprocessor	-	-	3	-	-	-	-	-	-	-	2	3	2	2
			<b>CO4</b>	Develop the assembly language programs using programming constructs, and construct interconnections for ALU and Control Unit components	-	-	3	-	-	-	-	-	-	-	2	2	3	2
					<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	-	-	-	-	-	-	-	<b>2.00</b>	<b>2.75</b>	<b>2.25</b>	<b>2.00</b>
	6I T4 - 05	Artificial Intelligence	<b>CO1</b>	Explain basic understanding and various applications of AI techniques in intelligent agents, expert systems, game playing, understanding natural language, robotics etc.	3	-	-	-	-	-	-	-	-	-	-	-	-	3

			<b>CO2</b>	Describe core concepts and algorithms of AI including searching, knowledge and reasoning, game playing, planning, various types of learning, natural language processing,	3	2	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO3</b>	Apply various principles and techniques like knowledge representation, reasoning, game playing, planning, learning, NLP etc to provide solutions for different task domains of	-	3	-	-	-	-	-	-	-	-	-	2	-	3
			<b>CO4</b>	Create solutions for AI based tasks by formalizing the problem as a state space, designing heuristics and selecting appropriate search and control techniques to solve them.	-	-	3	-	-	-	-	-	-	-	-	2	3	-
					<b>3.00</b>	<b>2.50</b>	<b>3.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.00</b>	<b>2.50</b>	<b>3.00</b>
	61 T4 - 06	Distributed System	<b>CO1</b>	Explain the distributed systems architecture.	-	2	1	-	-	1	-	-	-	-	-	-	2	-
			<b>CO2</b>	Outline the inter process communication in distributed systems.	-	2	2	1	-	-	-	-	-	-	-	-	2	-
			<b>CO3</b>	Apply the file accessing model and various services in distributed system.	-	2	2	1	-	-	1	-	-	-	-	2	-	2
			<b>CO4</b>	Demonstrate concurrency control and properties of transaction in Distributed systems.	-	3	3	2	2	1	1	-	2	1	-	1	-	2
			<b>CO5</b>	Evaluate resource and process management in distributed system.	-	2	2	-	-	1	1	-	-	-	-	-	2	-
					<b>-</b>	<b>2.20</b>	<b>2.00</b>	<b>1.33</b>	<b>2.00</b>	<b>1.00</b>	<b>1.00</b>	<b>-</b>	<b>2.00</b>	<b>1.00</b>	<b>-</b>	<b>1.50</b>	<b>2.00</b>	<b>2.00</b>



	6I T5 - 12	Cloud Computing	CO1	Identify the basic concepts, key technologies and various dimensions related to cloud computing technology.	-	3	2	-	-	-	-	-	-	-	-	3	3	-
			CO2	Review the architecture and infrastructure of cloud computing, including SaaS,PaaS, IaaS, public cloud, private cloud, hybrid cloud and examine various distributed programming	-	2	3	-	-	-	-	-	-	-	2	2	3	-
			CO3	Evaluate Virtualization Technology used in cloud computing. Data Centers and their applications in cloud computing.	-	3	2	-	-	-	-	-	-	-	2	2	3	-
			CO4	Classify the various security issues and privacy policies of the enterprise adapting cloud computing principles.	-	2	3	-	-	2	-	-	-	-	2	-	3	2
			CO5	Create a cloud services on AWS, GoogleApp Engine etc , Integrating with cloud applications.	-	3	2	-	-	2	-	-	-	-	3	-	3	2
					-	2.60	2.40	-	-	2.00	-	-	-	-	2.25	2.33	3.00	2.00
	6I T4 - 21	Digital Image Processing Lab	CO1	Understand the relevant aspects of digital image representation and conversions.	-	3	2	-	3	-	-	-	-	3	-	-	-	-
			CO2	ability to understand the concept of edge detectors and their operation in noisy images.	-	3	2	-	3	-	-	-	-	3	-	2	2	-
			CO3	Ability to perform spatial and frequency domain analysis	-	2	3	-	2	-	-	-	-	3	-	2	2	-
			CO4	Apply the mechanisms of image compression to meet design specifications	-	2	2	-	2	-	-	-	-	3	-	2	2	-

			<b>CO5</b>	Implement the basic concept of intensities (gray levels) of an image and its histogram.	-	3	3	-	3	-	-	-	-	-	3	-	2	2	-
					-	2.60	2.40	-	2.60	-	-	-	-	-	3.00	-	2.00	2.00	-
	6I T4 - 22	Machine Learning Lab	<b>CO1</b>	State the implementation procedures for the machine learning algorithms	-	2	3	-	-	-	-	-	-	-	-	2	3	2	2
			<b>CO2</b>	Design and demonstrate Python programs for various Learning algorithms.	-	3	3	2	-	-	-	-	-	-	-	3	3	2	2
			<b>CO3</b>	Apply appropriate data sets to the Machine Learning algorithms	-	3	3	3	-	-	-	-	-	-	-	3	3	2	3
			<b>CO4</b>	Identify and apply Machine Learning algorithms to solve real world problems	-	3	3	3	-	-	-	-	-	-	-	-	3	-	-
					-	2.75	3.00	2.67	-	-	-	-	-	-	-	2.67	3.00	2.00	2.33
	6I T4 - 23	Python Lab	<b>CO1</b>	Write, Test and Debug Python Programs	2	-	-	-	3	-	-	-	1	-	-	-	1	2	-
			<b>CO2</b>	Implement Conditionals and Loops for Python Programs	2	-	-	-	3	-	-	-	1	-	-	-	-	2	-
			<b>CO3</b>	Use functions and represent Compound data using Lists, Tuples and Dictionaries	2	-	-	-	3	-	-	-	1	-	-	-	-	-	2

			CO4	Read and write data from & to files in Python and string manipulation	-	-	2	-	3	-	-	-	3	-	3	-	-	3	3
					2.00	-	2.00	-	3.00	-	-	-	1.50	-	3.00	-	1.00	2.33	2.50
	6I T4 - 24	Mobile Application Development Lab	CO1	Describe the architecture of mobile application development platforms (like Android) and analyze the hardware resource requirements for small computing devices.	-	3	3	-	-	-	-	-	-	-	3	2	3	-	
			CO2	Explain how to implement various mobile applications using emulators and deploy them to hand-held devices.	-	2	3	-	-	-	-	-	-	-	3	2	3	-	
			CO3	Design interactive mobile applications using various high level and low level user interface components and event processing for different real world requirements.	-	3	3	-	-	-	-	-	2	-	3	-	3	3	
			CO4	Make use of location identification using GPS in an application	-	3	3	-	-	-	-	-	2	-	3	2	3	3	
					-	2.75	3.00	-	-	-	-	-	2.00	-	3.00	2.00	3.00	3.00	
76	8I T4 - 01	Internet of Things	CO1	Understand the definition and significance of the Internet of Things.	2	-	-	-	-	-	-	-	-	-	-	2	-	-	
			CO2	Discuss the architecture, operation benefits of an IoT solution.	-	2	3	-	-	-	-	-	-	-	-	-	-	3	
			CO3	Examine the potential business opportunities that IoT can uncover.	-	2	2	-	-	-	-	-	-	-	-	1	2	2	

			<b>CO4</b>	Explore the relationship between IoT and cloud computing.	1	2	3	-	-	-	-	-	-	-	-	2	-	-
			<b>CO5</b>	Identify how IoT differs from traditional data collection systems.	-	-	-	-	-	-	-	-	-	-	-	3	2	-
					<b>1.500</b>	<b>2.000</b>	<b>2.67</b>	-	-	-	-	-	-	-	-	<b>2.000</b>	<b>2.000</b>	<b>2.500</b>
77	8E E6 - 60.	Energy Audit and Demand side management	<b>CO1</b>	Understand the current Energy Scenarios in India.	3	-	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO2</b>	Illustrate the energy auditing of motors, lighting system and building, by appropriate analysis methods through survey instrumentations.	3	3	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO3</b>	Understand the Electrical-Load Management and Demand side Management.	3	2	2	-	-	-	-	-	-	-	-	-	-	-
			<b>CO4</b>	apply the Energy Conservation in transport, agriculture , household and commercial sectors.	3	2	2	1	-	-	-	-	-	-	-	-	-	-
					<b>3.000</b>	<b>2.330</b>	<b>2.000</b>	<b>1.000</b>	-	-	-	-	-	-	-	-	-	-
78	8E E6 - 60.	Soft Computing (OPEN ELECTIVE)	<b>CO1</b>	Learn about soft computing techniques and their applications.	2	2	3	-	-	-	-	-	-	-	-	-	-	-
			<b>CO2</b>	Analyze various neural network architectures.	2	2	3	-	-	-	-	-	-	-	-	-	2	-

			<b>CO3</b>	Define the fuzzy systems	-	-	3	-	-	-	-	-	-	-	-	-	1	1	-
			<b>CO4</b>	Understand the genetic algorithm concepts and their applications	3	2	3	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO5</b>	Identify and select a suitable Soft Computing technology to solve the problem.	3	3	3	-	-	-	-	-	-	-	-	-	1	-	-
					<b>2.50</b>	<b>2.25</b>	<b>3.00</b>	-	-	-	-	-	-	-	-	-	<b>1.00</b>	<b>1.50</b>	-
79	8 M E6 -	Operations Research (OPEN ELECTIVE)	<b>CO1</b>	Generate mathematical models of complex engineering problems	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO2</b>	Analyse the various optimization techniques with the appropriate tools	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO3</b>	Identify suitable optimization techniques to solve industrial and societal problems	-	3	-	-	-	-	-	-	-	-	-	-	2	-	-
			<b>CO4</b>	Interpret the solution and apply the results to solve complex engineering problems	-	-	3	-	-	-	-	-	-	-	-	-	2	-	-
					<b>2.50</b>	<b>3.00</b>	<b>3.00</b>	-	-	-	-	-	-	-	-	-	<b>2.00</b>	-	-
80	8 M E6 -	Simulation Modeling and Analysis (OPEN	<b>CO1</b>	Define the simulation modeling and analyze the practical situations in organizations	3	-	-	-	-	-	-	-	-	-	-	-	1	-	1

			<b>CO2</b>	Examine the random numbers and random variates approach in different applications	2	-	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO3</b>	Investigate the sensitivity of simulation solutions for realistic problems	-	3	-	-	-	-	-	-	-	-	-	-	-	-
			<b>CO4</b>	Interpret the model and apply the results to solve critical issues of a realistic problem	-	3	-	-	-	-	-	-	-	-	-	-	-	-
					<b>2.50</b>	<b>3.00</b>	-	-	-	-	-	-	-	-	-	<b>1.00</b>	-	<b>1.00</b>
81	8E C6 - 60.	Industrial and Biomedical applications of RF Energy	<b>CO1</b>	Understanding of basic concepts and Principles of EM wave, propagation reflection and transmission. [Understanding]	3	2	-	-	-	-	-	-	3	-	-	-	-	-
			<b>CO2</b>	Apply the knowledge for interest in complex dielectric constant, dipolar loss mechanism and design mechanism to understand the effect of rate rise of temperature.. [Applying]	3	2	-	-	-	-	-	-	3	-	-	-	1	-
			<b>CO3</b>	Analyze the structure of RF heating in industrial application. [Analyzing]	3	2	3	-	-	-	-	-	3	-	-	-	1	-
			<b>CO4</b>	Design of Hazards and safety standards in various engineering problem. [Create & Design].	3	3	3	3	-	-	-	-	3	-	-	-	1	-
					<b>3.00</b>	<b>2.25</b>	<b>3.00</b>	<b>3.00</b>	-	-	-	-	<b>3.00</b>	-	-	-	<b>1.00</b>	-
82	8C E6 - 60.	Composite Materials (OPEN ELECTIVE)	<b>CO1</b>	Explain the basics of composites, its structure and its properties	2	-	-	-	-	-	-	-	-	-	-	-	-	-

			<b>CO2</b>	Compute the physio-mechanical properties of composites from tests	2	1	-	-	-	-	-	-	-	-	-	-	-	1
			<b>CO3</b>	Assessment of engineering properties of composite materials	1	2	1	-	-	-	-	-	-	-	-	-	-	1
			<b>CO4</b>	Analyze the failure and maintenance of composite materials	1	-	1	1	1	-	-	-	-	-	-	1	-	1
					<b>1.50</b>	<b>1.50</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.00</b>	<b>-</b>	<b>1.00</b>
83	8C E6 - 60.	Fire and Safety Engineering (OPEN ELECTIVE)	<b>CO1</b>	Explain the fundamentals of Fire Engineering	2	-	-	-	-	1	-	-	-	-	-	-	1	-
			<b>CO2</b>	Apply the learned principles in planning, designing and management of fire safe buildings	2	1	1	-	1	1	-	-	-	-	1	-	1	-
			<b>CO3</b>	Assess fire fighting installations, control technologies and hazardous materials	1	2	1	-	1	1	-	-	-	-	-	1	1	1
			<b>CO4</b>	Design of fire safety building for fire resitant construction by following safety legislation	1	-	1	1	1	1	-	1	-	-	-	-	1	1
					<b>1.50</b>	<b>1.50</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>-</b>	<b>1.00</b>	<b>-</b>	<b>-</b>	<b>1.00</b>	<b>-</b>	<b>1.00</b>	<b>1.00</b>
84	8I T4 - 21	Internet of Things Lab	<b>CO1</b>	Recognize the key features of IoT in terms of computer hardware and be able to discuss their functions.	2	-	-	-	-	-	-	-	-	-	-	2	-	-

			<b>CO2</b>	Knowledge of Raspberry Pi in Peripheral and in Trouble shooting.	-	1	3	-	-	-	-	-	-	-	-	-	2	-
			<b>CO3</b>	Analyze basic protocols in wireless sensor network.	-	2	2	-	-	-	-	-	-	-	-	-	-	2
			<b>CO4</b>	Evaluate networking technologies for application within IoT.	1	2	3	-	-	-	-	-	-	-	-	-	2	-
			<b>CO5</b>	Identify the Kits required for solving the Real-World Problem and to write the Code.	-	-	-	-	-	-	-	-	-	-	-	-	3	2
					<b>1.50</b>	<b>1.67</b>	<b>2.67</b>	-	-	-	-	-	-	-	-	-	<b>2.33</b>	<b>2.00</b>
85	8I T4 - 22	Software Testing and Validation Lab	<b>CO1</b>	List a range of different software testing techniques and strategies in software unit test, integration and system testing.	3	-	-	-	-	-	-	-	-	-	-	-	2	2
			<b>CO2</b>	Apply modern software testing processes in relation to software development and project management.	-	3	-	-	3	-	-	-	-	-	-	-	3	2
			<b>CO3</b>	Calculate coverage analysis and mutation scores of programs using various tools like JaBuTi, Eclemma, Jumble etc.	-	3	-	-	3	-	-	-	-	-	-	-	3	-
			<b>CO4</b>	Analyze and measure the performance of different websites using the JMeter tool	-	-	3	-	3	-	-	-	-	-	-	-	3	3
			<b>CO5</b>	Create test strategies and plans, design test cases, prioritize and execute them.	-	-	3	-	3	-	-	-	-	-	-	-	3	3



					-	3.00	3.00	-	3.00	-	-	-	-	-	-	-	3.00	2.67	3.00
86	8I T7 - 50	Project	CO1	Identify a complex problem by reviewing research literature	-	-	3	-	-	-	-	-	-	-	-	3	2	3	2
			CO2	Understand procedures pertaining to architecture, algorithmic design, code implementation, system integration and testing.	-	-	3	-	-	-	-	-	-	-	2	-	2	-	-
			CO3	Design a feasible solution to be undertaken as software project and in multidisciplinary environment with appropriate consideration for security and environmental issues.	-	-	-	3	3	-	-	-	-	-	-	2	3	2	2
			CO4	Implement software life cycle processes and the embodied concepts using modern tools and techniques for project implementation and development.	-	-	-	3	3	-	-	-	-	-	-	3	3	3	2
			CO5	Develop effective project management, time management, leadership, oral and written communication skills with ethical behavior during the different phases of project related	-	-	-	-	-	2	2	3	3	3	3	-	2	3	3
			CO6	Integrate software components and third party tools for efficient project outcomes thereby meeting customer requirements for the project.	-	-	-	-	3	-	-	-	-	-	3	-	-	3	2
			CO7	Document project report which includes feasibility study, cost estimation, project milestones and performance parameters, diagrammatic representations of different	-	-	-	3	-	-	-	-	3	3	2	2	3	2	3
			CO8	Present and deliver the project to the stakeholders thereby demonstrating communication and teamwork skills	-	-	-	-	-	3	2	3	2	3	3	2	2	3	2
					-	-	3.00	3.00	3.00	2.50	2.00	3.00	2.67	3.00	2.60	2.40	2.43	2.71	2.29

## **12 Course File Sample**

### **Outcome Based Process Implementation Guidelines for Faculty**

#### **12.1 Labelling your course file**

- **Name of faculty:**
- **Class- SEM:**
- **Branch:**
- **Course Code:**
- **Course Name:**
- **Session:**

#### **12.2 List of Documents:**

- 1. Vision & Mission Statements of the Institute**
- 2. Vision & Mission Statements of the Department**
- 3. List of PEO, PSO and PO of department**
- 4. Personal Time Table**
- 5. RTU Syllabus**
- 6. Document as per point no. 1-4 in guidelines**
- 7. Course Plan**
- 8. Document as per point no 6-12 in guidelines**
- 9. Document for CO Assessment Stage 1: As per point no 13, up to 13.2.5**
- 10. Document for CO Assessment Stage 2: As per point no 13, up to 13.2.5, with comparison to previous**
- 11. Document for CO Assessment Stage 3: As per point no 13, up to 13.2.5, with comparison to previous**
- 12. Document for CO Attainment through RTU Component: Previous RTU Result: point no. 13.3 upto 13.3.2**
- 13. Document for PO attainment through RTU Component: Previous RTU Result: point no. 13.4 upto 13.4.2**
- 14. Document for Overall Attainment of PO through CO: As per point no 13.5**
- 15. Document for last three years (Repeat process from 6-14 above): Comparative data should be included in course file**
- 16. Lecture Notes**
- 17. Copy of Assignments questions given from time to time**
- 18. Copy of Tutorial Sheets given (if applicable)**
- 19. RTU Question Papers with answer**
- 20. Internal Assessment Question Papers with answer from time to time**
- 21. Topics covered beyond syllabus- References**
- 22. Details of any other activity and its assessment through rubric be included**
- 23. Mapping department level/ focus activities with your COs**

### **13 Outcome Based Process Implementation Guidelines for Faculty**

#### **Course CO-PO, Preparation, Assessment Formats**

**Academic Session: 2023-2024**

**Class:**

**Semester:**

**Name of the Faculty:**

**Subject:**

**Subject Code:**

**This document is meant as guidelines for implementing Outcome based education system as a part of NBA process.**

- 1. Vision & Mission of Department: Statement and Mapping with Institute Mission** **Here you have to include department mission & vision statements and show mapping of keywords with institute mission.**
- 2. Program Educational Objectives (PEOs): Statement and Mapping with Department Vision & Mission**  
**Here you have to include department PEO statements and show mapping of keywords with department vision & mission.**
- 3. Program Specific Outcome (PSOs): Statement and Mapping with Department Vision & Mission**  
**Here you have to include department PSO statements and show mapping of keywords with department vision & mission.**
- 4. Program Outcome (POs): Statement and Mapping with PEO and PSO**  
**Here you have to include PO statements and show mapping of keywords with department PEOs & PSOs.**
- 5. Course Plan (Deployment):**

**(Please write how you intend to cover the contents: i.e., coverage of Units by lectures, guest lectures, design exercises, solving numerical problems, demonstration of models, model preparation, or by assignments, etc.), for example**

- coverage of Units by lectures**
- design exercises**
- demonstration of models**
- by assignments**

Lecture No.	Lect. No.	Topics, Problems, Applications	CO/LO	Target Date of Coverage	Actual Date of Coverage	Ref. Book/Journal with Page No.
1.	1	Introduction of OS	CO1	12/07/2019	12/07/2019	T1 Page 121 - 126
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Example T1: Principles of OS, By Ramesh Soni, Tata MGHill, Edition 2019

6. **Course Outcomes:** Look for strong mapping of course with specific PO (2-3). Define Generic Course Outcomes (max 4 to 6) using Blooms Taxonomy. (In case of Lab Course define generic Lab Outcomes LO and refer CO as LO in this document).

- i. 6IT4-03.1(CO1)-
- ii. 6IT4-03.2(CO2)-
- iii. 6IT4-03.3(CO3)-
- iv. 6IT4-03.4(CO4)-
- v. 6IT4-03.5(CO5)-

**7. CO-PO-PSO Mapping: Mapping Levels: 1- Low, 2- Moderate, 3-Strong**

**First try to find out 2-3 PO those are strongly related to your subject contents. Go through the contents and try to formulate 4-5 Course Outcome as per bloom taxonomy. Map each CO with PO and PSO as above. While mapping please rethink if you map any PO with 3, it means you are planning to deliver the contents of that level and you will also examine the students at that level.**

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1															
CO2															
CO3															
CO4															
CO5															

**7.1 PO Strongly Mapped: (Example):**

○ **PO2:** Write full statement with keywords highlighted ○ **PO3:** Write full statement with keywords highlighted ○ **PO4:** Write full statement with keywords highlighted

**7.2 PO Moderately Mapped: (Example)**

○ **PO1:** Write full statement with keywords highlighted  
○ **PO11:** Write full statement with keywords highlighted

**7.3 PO Low Mapped: (Example)**

○ **PO12:** Write full statement with keywords highlighted

**7.4 PSO Strongly Mapped: (Example)**

○ **PSO 1 :** Write full statement with keywords highlighted

**7.5 PSO Moderately Mapped: (Example)**

○ **PSO 2:** Write full statement with keywords highlighted

**6.6 PSO Low Mapped: (Example)**

○ **PSO 3:** Write full statement with keywords highlighted

**8. Rules for CO/LO Attainment Levels: (Targets)**

**All the courses of your department should be divided into three categories A-Most Difficult course, B-Medium level of Difficulty, C- Low level of Difficulty –(Easy)**

**According to difficulty level, you can decide specific range for CO attainment targets for Continuous assessment from the following table.**

**Remember that targets for internal assessment should be higher.**

Course Category	Level 3	Level 2	Level 1
A	60 % of students getting > 60% marks	50-60 % of students getting > 60% marks	40-50 % of students getting > 60% marks
B	80 % of students getting > 60% marks	60-80 % of students getting > 60% marks	40-60 % of students getting > 60% marks
C	90 % of students getting > 60% marks	70-90 % of students getting > 60% marks	40-70 % of students getting > 60% marks

### 9. End Term RTU Component: CO Attainment Levels

**All the courses of your department should be divided into three categories A-Most Difficult course, B-Medium level of Difficulty, C- Low level of Difficulty –(Easy)**

**According to difficulty level and the results of past 3-5 years, you can decide specific range for CO attainment targets for RTU component from the following table.**

Course Category	Level 3	Level 2	Level 1
A	50 % of students getting > 60% marks	40-50 % of students getting > 60% marks	30-40 % of students getting > 60% marks
B	60 % of students getting > 60% marks	40-60 % of students getting > 60% marks	30-40 % of students getting > 60% marks
C	80 % of students getting > 60% marks	60-80 % of students getting > 60% marks	40-60 % of students getting > 60% marks

For the specific CO/LO attainment levels of your respective course please use the above tables as reference according your subject difficulty level and prepare following table.

S. No.	Course Type	Attainment Level=1	Attainment Level=2	Attainment Level=3
1	Theory Courses Mid Semester Exams			
2	Theory Courses University Exam			
4	Practical Courses – Internal Exams			
5	Practical Courses - University Exam			
6	Assignments/Unit Test			
7.	Any other			

### 10. CO wise Assessment Activities (as Mentioned in Session Plan):

**You can plan for each CO, activities/ assessment tools to be conducted/ used for its achievement.**

**Use X to those you select for specific CO. Remove all unused columns.**

	Activities															
CO	Pre Mid I Test	Post Mid I Test	Quiz 1	Quiz 2	Pre Mid II Test	Post Mid II Test	Assignment 1	Assignment 2	Workshop	Seminar	Project	Training	Discussion	Mid 1	Mid 2	Ind. visit
CO1																
CO2																
CO3																
CO4																
CO5																
CO6																

In case of Lab course some activities are as follows:

LO	Internal Practical exams	Laboratory Tests	Viva	Records	Project Presentation	Project Evaluation	External practical exams
LO1							
LO2							
LO3							
LO4							

#### 11. CO wise Assessment Activities:

Based on CO-PO mapping, determine targets for each CO as average of targets of all relevant POs.

CO	PO												Avg.	PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	CO Targets	PSO1	PSO2	PSO3
CO1																
CO2																
CO3																
CO4																
CO5																

**12. Activity wise Assessment Tools:**

**This gives you generalized view of different direct and indirect tools those can be used for assessment / achievement of CO/PO. (Decide which tools are required for assessing a particular CO/LO and in reference to Course A, B, C difficulty level).**

Sr. No.	Activity	Assessment Method	Tools	Weightage Marks	Recommendation
1.	Pre-Mid Term 1	Direct	Marks	10	For CO
2.	Post-Mid Term 1	Direct	Marks	10	For CO
3.	Quiz 1	Direct	Marks	10	For CO
4.	Quiz 2	Direct	Marks	10	For CO
5.	Pre Mid Term 2	Direct	Marks	10	For CO
6.	Post Mid Term 2	Direct	Marks	10	For CO
7.	Mid Term 1	Direct	Marks	20	For CO
8.	Mid Term 2	Direct	Marks	20	For CO
9.	Assignment 1	Direct	Marks	10	For CO
10.	Assignment 2	Direct	Marks	10	For CO
11.	Workshop	Indirect	Rubrics	5	For LO
12.	Seminar/ SPL	Indirect	Rubrics	5	For CO/LO
13.	Project (Mini or NSP)	Indirect	Rubrics	20	For LO
14.	Discussion	Indirect	Rubrics	5	For LO
15.	Training	Indirect	Rubrics	20	For LO
16.	Industrial Visit	Indirect	Rubrics	20	For LO
17.	Or any other activity	Direct/ Indirect	Marks/ Rubrics	any	For LO
18.					
Note that for every rubrics you need to decide assessment criteria, range of marks or weightage – above values are indicative					

**13. CO Assessment Process:**

**After every activity (Ideally as per above table): (Frequency of Assessment- Can be taken as monthly). So the assessment can be for all activities held during the month. Do the following.**

**13.1 Attainment of COs****13.1.1 Attainment Table for CO1: 6IT4-03.1**



**CO1: 6IT4-03.1: Attainment Table (Columns) As Applicable CO wise-Monthly**

Student	Pre Mid I Test 10	Quiz 1 10	Assignment 10	Quiz 1 10	WS 10	Training 10	Total (60)	% Of Marks	Level of Attainment
Name1									3
Name2									2
Name 3									1
Name 4									2
Name 5									1
Name 6									2
----									--
-----									--
	No. of Students attained level 3=					% of Students Attained Level 3=			
	No. of Students attained level 2=					% of Students Attained Level 2=			
	No. of Students attained level 1=					% of Students Attained Level 1=			
	Target Achieved= ? (Check Level 3 % attainment -If No Find Gap)								
	Mark X for absent- Take avg. of all present								

**(Repeat it for all other COs, (CO2 – CO5))**

**13.1.2 CO-Gap Identifications**

COs	CO 1	CO 2	CO 3	CO4	CO5
Target					
Achieved					
Gap					

**13.1.3 Gaps Identified:**

Describe what the reasons for gaps are

- i.
- ii.

**Overall CO Attainment Table: Example**

COs	CO 1	CO 2	CO 3	CO4	CO5	Co6
Attainment level as per rules set	3	1	3	3	3	3
Average CO attainment through internal assessment	2.67					

**13.1.4: Activities Decided to bridge the gap**

**Please do analyze whether you could get improvement through activities decided and conducted for improvements. Reason should be noted why / how it is improved or not.**

**13.2 Attainment of POs & PSO:**

**13.2.1 Target-Expected Attainment of PO by attainment of CO- Put all mappings of 3, 2 and 1. Based on CO-PO mapping, determine targets for each PO as average of targets of all relevant COs.**

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
4ITA101.1															
4IT A101.2															
4IT A101.3															
4IT A101.4															
4IT A101.5															
Obtain Average-PO/PSO Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets	Targets

**13.2.2 Attainment of POs & PSO through CO as Continuous Evaluation:**

**Put all attainment values of CO as per mappings with 3, 2, 1 as evaluated in 13.1.1 (Frequency- Monthly)**

CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
6IT4-03.1															
6IT4-03.2															
6IT4-03.3															
6IT4-03.4															
6IT4-03.5															
Obtain Avg. PO/PSO Attainment	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved

**13.2.3 PO Gap Identification:**

	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Targets															
Achieved															
Gap															

**13.2.4 Gaps Identified:**

Describe what the reasons for gap (for PO) are.

- i.
- ii.

**13.2.5 Activities Decided to bridge the gap**

Please do analyze whether you could get improvement through activities decided and conducted for improvements. Reason should be noted why / how it is improved or not.

Repeat whole process after one month, Two months, and three months. Plot bar chart for improvement in CO, PO & PSO. (Every month)

**13.3 Attainment of CO through RTU Exam:**

This may be possible for previous semester results so overall attainment. If faculty is changed, data will be evaluated by concerned faculty who taught and handed over to current faculty. If faculty not available, then current faculty will do the same.

Attainment of CO: 3CSA101: Subject:			
Student	RTU Marks (80)	% Of Marks	Level of Attainment
Name1			3
Name2			2
Name 3			1
Name 4			2
Name 5			1
Name 6			2
----			--
-----			--
No. of Students attained level 3=		% of Students Attained Level 3=	
No. of Students attained level 2=		% of Students Attained Level 2=	
No. of Students attained level 1=		% of Students Attained Level 1=	
CO Attainment = ? (Check Level 3 % attainment -If No Find Gap)			
Mark X for absent- Take avg. of all present			

**13.3.1 Attainment of CO through RTU Component:**

CO: Course Code: Course Name					
Target					
Achieved					
Gap					

**13.3.1 Gaps for CO attainment through RTU Component:**

Analyze RTU Question paper with respect to COs formulated, contents delivered and students examined, find out reasons for gaps

- i.
- ii.

**13.3.2 Action to be taken:**

**Prepare recommendations for improvement in planning & teaching for gaps identified.**

**13.4 Attainment of PO through CO (RTU) Component**

**Put RTU Results as per target achieved only and mapping level, in following table**

Attainment of PO through CO (RTU) Component															
CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
4ITA101															

Attainment of PO through CO (RTU) Component															
4ITA101	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
<b>Targets</b>															
Achieved															
Gap															

**13.4.1 Gaps in PO through CO from RTU component:**

**Analyze RTU Question paper with respect to COs formulated & mapped, contents delivered and students examined, find out reasons for gaps**

**Describe what are the reasons for gap**

- i.
- ii.

**13.4.2 Action to be taken:**

**Prepare recommendations for improvement in planning & teaching for gaps identified.**

**13.5 Overall Attainment of PO & PSO: Through Continuous Assessment & RTU**

**While combining attainment through Continuous evaluation and RTU component, following weightage be considered.**

- 1. Internal Assessment – Total weightage- 40 %**
- 2. RTU Component ----- Weightage – 60 %**

**Put all attainments in the following table and compute.**

13.5.1: Table 1

	RTU Component			Internal Assessment				
Student	RTU Marks (80)	% of Marks	60% Weightage X6/100 (A)	Overall CO (-----)	% of Marks	Weightage X4/100 (B)	Total (A+B)	Level of Attainment
Name1								3
Name2								2
Name 3								1
Name 4								2
Name 5								1
Name 6								2
----								--
-----								--
No. of Students attained level 3=				% of Students Attained Level 3=				
No. of Students attained level 2=				% of Students Attained Level 2=				
No. of Students attained level 1=				% of Students Attained Level 1=				
PO Attainment = ? (Check Level 3 % attainment -If No Find Gap)								
Mark X for absent- Take avg. of all present								

OR

13.5.2: Table 2

Student	RTU			Internal CO1/ Activity 1 (Weightage %)			Internal CO2/ Activity 2 (Weightage %)			Internal CO3/ Activity 3 (Weightage %)			Total (A+B+C+D)	Level of Attainment
	RTU Marks (80)	% of Marks	60% Weightage X-----/100 A	Overall CO (-----)	% of Marks	Weightage X--/100 B	Overall CO (-----)	% of Marks	Weightage X--/100 C	Overall CO (-----)	% of Marks	Weightage X--/100 D		
Name1														3
Name2														2
Name 3														1
Name 4														2
Name 5														1
Name 6														2
----														--
-----														--

No. of Students attained level 3= Level 3=	% of Students Attained
No. of Students attained level 2= Level 2=	% of Students Attained
No. of Students attained level 1= Level 1=	% of Students Attained
PO Attainment = ? (Check Level 3 % attainment -If No Find Gap)	
Mark X for absent- Take avg. of all present	

**13.5.3: Overall PO & PSO Attainment through Course:**

**Put Overall PO & PSO attainment as per mapping 3,2,1 above:**

Attainment of Overall PO for Session 2018-2019															
CO	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
4ITA101															
PO Attainment															

**13.5.4: Overall Gaps for Attainment of PO and PSO from the Course**

**Put Overall PO & PSO targets & attainment as per mapping 3,2,1 above:**

Attainment & Gap of Overall PO Session -----															
4ITA101	PO												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Targets															
Achieved															
Gap															

**13.5.5. Overall Gaps for Course taught:**

**Go through all gaps identified above and summarize. Describe what the reasons are.**

- 
- 

**13.5.6 Action to be taken:**

**Prepare recommendations for improvement in planning & teaching (Internal & RTU) for gaps identified. Decide Activities to be conducted to bridge the gaps in COs.**

**Repeat whole process after One year before, Two year before, and three year before. Plot bar charts for Continuous improvements check in CO, PO & PSO. (Every Year).**

## **14 File Formats**

### **14.1 List of File Formats**

- i. Front Page of Course File
- ii. ABC Analysis Format
- iii. Blown-up Format
- iv. Deployment Format
- v. Zero Lecture Format
- vi. Tutorial Format
- vii. Assignment Format
- viii. Lecture Note Format
- ix. Mid Term Practical Exam Format
- x. Mid Term Question Paper Format
- xi. Evaluation Sheets Format
- xii. Activity Report Format

## 14.2 Front Page of Course File



**POORNIMA**  
**COLLEGE OF ENGINEERING**

**TEACHING MANUAL**

**COURSE:** \_\_\_\_\_

**SEMESTER:** \_\_\_\_\_

**SUBJECT:** \_\_\_\_\_

**SUB. CODE:** \_\_\_\_\_

**CONTENT:** PGC Syllabus, Blown-up, Deployment, Zero Lectures,  
Detailed lecture notes with cover page, Tutorial/Home-Assignment Sheets

\_\_\_\_\_

**SESSION: 20** \_\_\_\_ - \_\_\_\_

**NAME OF FACULTY:** \_\_\_\_\_

**DEPARTMENT:** \_\_\_\_\_

**CAMPUS:** \_\_\_\_\_



## 14.3 ABC Analysis Format



# POORNIMA

## COLLEGE OF ENGINEERING

Department of Information Technology  
Even Semester 2021-22

### ABC Analysis

Course: B. Tech.  
Name of Faculty: XYZ

Class/Section: 3<sup>rd</sup> Year/A  
Name of Subject: DME-II

Date: 10/01/2022  
Subject Code: 6IT 4-04

Sr. No.	Category A (Hard topics)	Category B (Topics with average hardness level)	Category C (Easy to understand topics)	Preparedness for "A" topics
1	Bolts subjected to variable stresses.	Goodman line, Soderberg line, Design of machine members subjected to combined, steady and alternating stresses. Design for finite life, Design of Shafts under Variable Stresses,	Variable load, loading pattern, endurance stresses, Influence of size, surface finish, notch sensitivity and stress concentration.	PPT & Notes
2	Design of IC Engine parts: Piston, Connecting rod, Crank shaft	-----	-----	PPT & Notes
3	Design of IC Engine components: Piston, Cylinder, Connecting Rod and Crank Shaft.	Design of helical compression, tension, torsional springs, springs under variable stresses.	Design of belt, rope and pulley drive system,	SPL & PPT
4	Design and force analysis of spur, helical, bevel and worm gears, Bearing reactions due to gear tooth forces.	Design of gear teeth: Lewis and Buckingham equations, wear and dynamic load considerations.		PPT
5	Design of Sliding and Journal Bearing: Methods of lubrication, hydrodynamic, hydrostatic, boundary etc. Minimum film thickness and thermal equilibrium.	Selection of anti-friction bearings for different loads and load cycles, Mounting of the bearings, Method of lubrication.		SPL & PPT

## 14.4 Blown-up Format



# POORNIMA

## COLLEGE OF ENGINEERING

### BLOWN UP SYLLABUS

Campus: PCE Course: B.Tech.		Class/Section: VI <sup>th</sup> sem./A	Date: 06/01/2022
Name of Faculty: XYZ		Name of Subject: DME-II	Code: 6IT4-04
Sr. No.	Topic as per Syllabus	BLOWN UP TOPICS ( Upto 10 Times Syllabus)	
1	<b>PART-1</b> <b>FATIGUE CONSIDERATION IN DESIGN</b>		
	1.1 Review of Fatigue (Loading pattern)	1.1.1 Types of load 1.1.2 What is fatigue? 1.1.3 Fatigue curve 1.1.4 Endurance limit	
	1.2 Factor affecting endurance limit	1.2.1 Surface finish factor 1.2.2 Size factor 1.2.3 Reliability factor 1.2.4 Temperature factor	
	1.3 Notch sensitivity & Stress concentration	1.3.1 factor of safety 1.3.2 stress concentration 1.3.3 stress concentration curve 1.3.4 notch sensitivity 1.3.5 theoretical stress concentration factor	
	<b>DESIGN OF MACHINE MEMBER</b>		
2	1.4 Goodman, Soderberg line, Design of machine member under steady, Variable and alternating stress, Design for variable stresses	1.4.1 Goodman line, Soderberg line, Gerber parabola method 1.4.2 Design under axial, bending and torsional stress 1.4.3 Mean and variable stress 1.4.4 Design for combined stress 1.4.5 Numerical approach for the design of member	
	1.5 Design for finite life	1.5.1 Requirement of finite life design 1.5.2 Goodman approach toward finite life 1.5.3 Numerical approach for finite life design	
	<b>PART-2</b> <b>DESIGN OF I.C ENGINE PARTS</b>		
	2.1 Design of I.C Engine Piston	2.1.1 What is Piston and its importance? 2.1.2 Different materials used for the piston. 2.1.3 Effect of materials on the Piston design 2.1.4 Calculation of various pressure and inertia forces	

## 14.5 Deployment Format



# POORNIMA

## COLLEGE OF ENGINEERING

## SYLLABUS DEPLOYMENT

Campus: PCE		Course: B.Tech.		Class/Section: VI <sup>th</sup> sem./A		Date: 05/01/2022	
Name of Faculty: XYZ		Name of Subject: DME-II		Code: 6IT4-04			
S.No.	TOPIC AS PER BLOWNUP SYLLABUS	LECT . NO.	CO/LO	Target Date of Coverage	Actual Date of Coverage	Teaching method	Ref. Book/Journal with Page No.
1	<b>ZERO LECTURE</b>	L-1	CO1	11/01/2022	11/01/2022	PPT	Machine design by V.B Bhandari & R. S Khurmi
2	<b>Introduction to Unit :1</b> <b>Introduction of the lecture</b> 1.1.1 Types of load 1.1.2 What is fatigue 1.1.3 Fatigue curve 1.1.4 Endurance limit <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-2	CO1	12/01/2022	12/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 34-38
3	<b>Introduction of the lecture</b> 1.2.1 Surface finish factor 1.2.2 Size factor 1.2.3 Reliability factor 1.2.4 Temperature factor <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-3	CO1	14/01/2022	14/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 44-52
4	<b>Introduction of the lecture</b> 1.3.1 Factor of safety 1.3.2 Stress concentration 1.3.3 Stress concentration curve <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-4	CO1,2	16/01/2022	16/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 58-62
5	<b>Introduction of the lecture</b> 1.3.4 Notch sensitivity 1.3.5 Theoretical stress concentration factor <b>Conclusion of the lecture</b> <b>Brief of next lecture</b>	L-5	CO1	17/01/2022	17/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 73-82
6	<b>Introduction of the lecture</b> 1.4.1 Goodman line, Soderberg line, Gerber parabola method the design of member	L-6	CO1,2	18/01/2022	18/01/2022	Chalk/ Board	Machine design by V.B Bhandari & R. S Khurmi Page No 82-88



## 14.6 Zero Lecture Format



# POORNIMA

## COLLEGE OF ENGINEERING

### ZERO LECTURE

Session: 20 - ( Sem.)

Campus: ..... Course: ..... Class/Section: .....

Name of Faculty: .....

### Zero Lecture

1). Name of Subject: ..... Code: .....

**2). Self-Introduction:**

a). Name:

b). Qualification:

c). Designation:

d). Research Area:

e). E-mail Id: .....@poornima.org

f). Other details: Information about areas of proficiency/ expertise such as subject taught, laboratory taken, Member of Professional body, Academic Proficiency, Book Authored, Paper published in National and International Conference/Journals etc.

**3). Introduction of Students:**

a). Records of students in 12<sup>th</sup>

Sr. No.	Average result of 12 <sup>th</sup>	Name of student scored highest marks	Marks 60% above (No. of students)	Marks between 40%-60% (No. of students)	English Medium Students (No.)	Hindi Medium Students (No.)	No. of Hostellers	No. of Day Scholar

b). Name of 05 best students based on previous results: ....., ....., ....., ....., .....

**4). Instructional Language: - .....%English; .....% Hindi (English not less than 60%)**

**5). Introduction to subject: -** (Pl. separate out subject specific matter and general matter valid for all subjects and group/place them appropriately)

a). Relevance to Branch:

b). Relevance to Society:

c). Relevance to Self:

d). Relation with laboratory:

e). Connection with previous year and next year:

**6). Syllabus of Poornima Group of Colleges, Jaipur**

a). Unit Name:

b). ABC analysis (RGB method) of unit & topics

**7). Books/ Website/Journals & Handbooks/ Association & Institution:**

## a). Recommended Text &amp; Reference Books and Websites:

S. No.	Title of Book	Authors	Publisher	Cost (Rs.)	No. of books in Library
Text Books					
T1					
T2					
T3					
Reference Books					
R1					
R2					
R3					
Websites related to subject					
1					
2					

b). *Journals & Handbooks*: - To give information about different Journals & Handbooks available in library related to the subject and branch.

c). *Associations and Institutions*: - To give information about different Associations and Institutions related to the subject and branch.

## 8). Syllabus Deployment: -

a). Total weeks available for academics (excluding holidays) as per Poornima Foundation calendar-

Semester	
No. of Working days available (Approx.)	
No. of Weeks (Approx.)	

- Total weeks available for special activities (as mentioned below)- 02 weeks (Approx.)

**Note: Individual faculty must calculate the exact no. of lectures available according to time table etc. after consultation with HOD.**

b). *Special Activities* (To be approved by HOD & Dean & must be mentioned in deployment):

- Open Book Test- Once in a semester
- Quiz - Once in a semester
- Special Lectures (SPL)- Minimum 10% of total no. of lectures including following
  - Smart Class by the faculty, who is teaching the subject
  - SPL by expert faculty at PGC level
  - SPL by expert from industry/academia (other institution)
- Revision classes (Solving Important Question Bank):- 1 class before Mid Term and 2 classes before End Term Exam

c). *Lecture schedule per week*

i). University scheme (L+T+P) = ...+....+.....

Sr. No.	Name of Unit	No. of lectures	Broad Area	Degree of difficulty (High/Medium/Low)	Text/ Reference books
1.					
2.					
3.					
4.					
5.					

d). *Introduction & Conclusion*: Each subject, unit and topic shall start with introduction & close with conclusion. In case of the subject, it is Zero lecture.

e). *Time Distribution in lecture class*: - Time allotted: 60 min.

- First 5 min. should be utilized for paying attention towards students who were absent for last lecture or continuously absent for many days + taking attendance by calling the names of the students and also sharing any new/relevant information.



- ii. Actual lecture delivery should be of 50 min.
- iii. Last 5 min. should be utilized by recapping/ conclusion of the topic. Providing brief introduction of the coming up lecture and suggesting portion to read.
- iv. After completion of any Unit/Chapter a short quiz should be organized.
- v. During lecture student should be encouraged to ask questions.

**Note:** Pl. ensure that each student is having Lecture Note Book. Also, write on the black board day and date, name of the teacher, name of subject with code, unit and lecture no. and topics to be covered at the beginning of each lecture and ensure that students write in lecture note book. Ask students to leave 4/5 pages blank for copying the note from fellow students in case of their absenteeism.

#### 9). Tutorial: - An essential component of Teaching- Learning process in Professional Education.

Objective: - To enhance the recall mechanism.

To promote logical reasoning and thinking of the students.

To interact personally to the students for improve numerical solving ability.

a). *Tutorial processing:* - Tutorial sheet shall be provided to each students

I<sup>st</sup> Phase: - It is consisting of questions to be solved in the class assignment session in test mode on perforated sheet given in tutorial notebook and to be collected & kept by respective faculty for review & analysis (20 minutes).

II<sup>nd</sup> Phase: - Indicating/Initializing the weak issues/ drawback and Evaluating and providing the grade. Making a group with good student for assisting the weak students to explain/solve questions by every student on plain papers given in tutorial note book (20 minutes).

III<sup>rd</sup> Phase: - Solving/ explaining difficulties of lecture class and providing the new home assignment (20 minutes). To be done in tutorial note book.

b). *Home assignment shall comprise of two parts:*

Part (i) Minimum essential questions, which are to be solved and submitted by all with in specified due date.

Part (ii) Other important questions, which may also be solved and submitted for examining and guidance by teacher.

#### 10). Examination Systems:

##### A. FOR ALL THEORY COURSES:-

<b>a. Continuous Internal Evaluation (CIE)</b>	<b>20%</b>
-Assignment / Project / Papers / Essays / Class Participation	10%
-Quiz / Class Test (Announced / Unannounced)	5%
- Attendance and Discipline	5%
<b>b. Mid Semester Exams (MSE) – Two</b>	<b>20%</b>
<b>c. End Semester Exam (ESE) - One</b>	<b>60%</b>
<b>TOTAL</b>	<b>100 %</b>

##### B. FOR ALL PRACTICAL (LABORATORY) COURSES:-

<b>a. Continuous Internal Evaluation (CIE)</b>	<b>40%</b>
-Performance (Lab Record, Viva, )	30%
-Attendance and Participation in laboratory work	10%
<b>b. Mid Semester Exam (MSE)– Two</b>	<b>20 %</b>
<b>c. End Semester Exam (ESE) - One</b>	<b>40%</b>
<b>TOTAL</b>	<b>100 %</b>

#### 11). Any other important point:

Place & Date:

Name of Faculty with Designation

## 14.7 Lecture Note Front page Format



# POORNIMA

## COLLEGE OF ENGINEERING

### LECTURE NOTES

Campus: ..... Course: ..... Class/Section: ..... Date: .....  
 Name of Faculty: ..... Name of Subject: ..... Code: .....  
 Date (Prep.): ..... Date (Del.): ..... Unit No.: ..... Lect. No: .....

**OBJECTIVE:** To be written before taking the lecture (Pl. write in bullet points the main topics/concepts etc., which will be taught in this lecture)

---

---

---

---

---

**IMPORTANT & RELEVANT QUESTIONS:**

---

---

---

---

---

**FEED BACK QUESTIONS (AFTER 20 MINUTES):**

---

---

---

---

---

**OUTCOME OF THE DELIVERED LECTURE:** To be written after taking the lecture (Pl. write in bullet points about students' feedback on this lecture, level of understanding of this lecture by students etc.)

---

---

---

---

---

**REFERENCES:** Text/Ref. Book with Page No. and relevant Internet Websites:

---

---

---

### 14.7.1 Detailed Lecture Note Format-1



# POORNIMA

## COLLEGE OF ENGINEERING

### DETAILED LECTURE NOTES

Campus: ..... Course: ..... Class/Section: ..... Date: .....  
Name of Faculty: ..... Name of Subject: ..... Code: .....



#### 14.7.2 Detailed Lecture Note Format-2



# POORNIMA

## COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

PAGE NO. ....

## 14.8 Assignment Format



# POORNIMA

## COLLEGE OF ENGINEERING

**Assignment Sheet-1**

Campus: PCE Course: B.Tech.

Class/Section: III

Date: .....

Name of Faculty: SKT

Name of Subject: Analysis of Algorithms

Code: 6IT4-04

Date of Preparation: .....

Scheduled Date of Submission: .....

Q. No.	Questions	COs	POs	PSOs
1	Discuss influence of size, surface, reliability and modifying factor on endurance limit of material.	CO1	PO2	PSO1
2	Discuss various methods of mitigation of stress concentration.	CO1	PO2	PSO1
3	Define the following terms used in design of machine elements (i) Size Factor (ii) Notch Sensitivity (iii) Surface Finish Factor	CO1	PO2	PSO1
4	What do you mean by stress concentration? How do you take it into consideration in case of components subjected to dynamic loads?	CO1	PO2	PSO1
5	Explain difference between Soderberg, Goodman and Gerber criteria in detail.	CO1	PO2	PSO1
6	What is physical significance of notch sensitivity factor being one of zero.	CO1	PO2	PSO1
7	What is fluctuating stresses? Draw stress-time curves for different fluctuating stresses.	CO1	PO2	PSO1
8	What is endurance strength? Draw S-N diagram and list various factors affecting it.	CO1	PO2	PSO1
9	Draw and describe Goodman and Soderberg diagram.	CO1	PO2	PSO1
10	Explain modified Goodman diagram for bending stresses.	CO1	PO2	PSO1

## 14.9 Tutorial Format



# POORNIMA

## COLLEGE OF ENGINEERING

### TUTORIAL SHEET

#### TUTORIAL SHEET

SHEET No.....

Campus: ..... Course: ..... Class/Section: ..... Date: .....

Name of Faculty: ..... Name of Subject: ..... Code: .....

Date of Tut. Sheet Preparation:..... Scheduled Date of Tut.:.....Actual Date of Tut. :.....

Name of Student:.....Scheduled &amp; Actual Date of H.A. Submission:.....&amp;.....

	Questions	CO	PO
FIRST 20 MT. CLASS QUESTIONS			
2 HRS. SOLVABLE HOME ASSIGNMENT (H.A.) QUESTIONS			
OTHER IMPORTANT QUESTIONS			

#### 14.10 Mid Term/ End Term Practical Question Paper Format

**Poornima College of Engineering, Jaipur**  
**Department of Information Technology**  
**Even Sem. 2023-24**  
**4IT4-21: Linux and Shell Programming Lab**  
**I Midterm Practical Exam (Set-1)**

Name of Faculty: \_\_\_\_\_

Time Duration: 2 hours

Date of Exam: \_\_\_\_\_

Max Marks: 30

Q. No.	CO	PO	Question	Marks
1				
2				
...				

**Poornima College of Engineering, Jaipur**  
**Department of Information Technology**  
**Even Sem. 2023-24**  
**4IT4-21: Linux and Shell Programming Lab**  
**I Midterm Practical Exam (Set-2)**

Name of Faculty: \_\_\_\_\_

Time Duration: 2 hours

Date of Exam: \_\_\_\_\_

Max Marks: 30

Q. No.	CO	PO	Question	Marks
1				
2				
...				

**Poornima College of Engineering, Jaipur**  
**Department of Information Technology**  
**Even Sem. 2023-24**  
**4IT4-21: Linux and Shell Programming Lab**  
**I Midterm Practical Exam (Set-3)**

Name of Faculty: \_\_\_\_\_

Time Duration: 2 hours

Date of Exam: \_\_\_\_\_

Max Marks: 30

Q. No.	CO	PO	Question	Marks
1				
2				
...				

## 14.11 Mid Term Theory Question Paper Format

**POORNIMA COLLEGE OF ENGINEERING, JAIPUR**

II B.TECH. (III Sem.) Roll No. \_\_\_\_\_

**FIRST MID TERM EXAMINATION 2022-23**

Code: 3IT2-01 Category: PCC Subject Name-ADVANCE ENGINEERING MATHEMATICS -I  
(BRANCH – INFORMATION TECHNOLOGY)

Max. Time: 2 hrs. Course Credit: \_\_\_\_\_  
Max. Marks: 60

**NOTE:-** Read the guidelines given with each part carefully.

**Course Outcomes (CO):**

At the end of the course the student should be able to:

CO1:

CO2:

CO3:

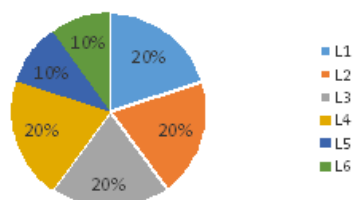
CO4:

CO5:

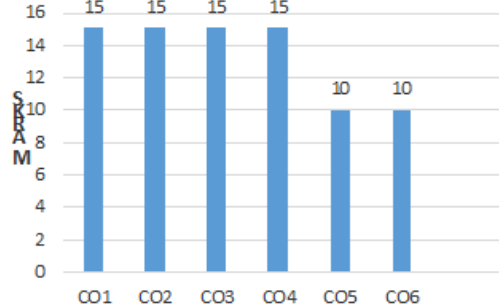
CO6:

PART - A: (All questions are compulsory) Max. Marks (10)				
	Marks	CO	BL	PO
Q.1	2			
Q.2	2			
Q.3	2			
Q.4	2			
Q.5	2			
PART - B: (Attempt 4 questions out of 6) Max. Marks (20)				
Q.6	5			
Q.7	5			
Q.8	5			
Q.9	5			
Q.10	5			
Q.11	5			
PART - C: (Attempt 3 questions out of 4) Max. Marks (30)				
Q.12	10			
Q.13	10			
Q.14	10			
Q.15	10			

**BLOOM'S LEVEL WISE MARKS DISTRIBUTION**



**COURSE OUTCOME WISE MARKS DISTRIBUTION**



**BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 – Evaluating, 6 - Creating)**

**CO – Course Outcomes; PO – Program Outcomes**

## 14.12 Evaluation Sheet Format (Theory)

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																					
I MID TERM THEORY EXAM, 2022-23					EVALUATION SHEET					B. TECH. II YEAR (III SEM.)											
Subject Code :					Subject Name :																
Date of Exam :					Name of Examiner :																
Branch					IT					SUBJECTS WISE MARKS					2IT1						
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total
					LO No.																
					BL No.																
					PO No.																60
					Max. Marks:																
1	2IT	2IT1	21/IT/01	AAYUSH KUMAR JHA .	PCE21IT001																0
2	2IT	2IT1	21/IT/02	AAYUSH SHARMA	PCE21IT002																0
3	2IT	2IT1	21/IT/03	ABHISHEK .	PCE21IT003																0
4	2IT	2IT1	21/IT/04	ADITYA SHARMA	PCE21IT004																0
5	2IT	2IT1	21/IT/05	AMAN BATRA	PCE21IT005																0
6	2IT	2IT1	21/IT/06	ANIMESH KUMAR GARG	PCE21IT007																0
7	2IT	2IT1	21/IT/07	ANSHIKA JAIN	PCE21IT009																0
8	2IT	2IT1	21/IT/08	ANUSH AGARWAL	PCE21IT010																0
9	2IT	2IT1	21/IT/09	ARPIT JAIN	PCE21IT011																0
10	2IT	2IT1	21/IT/10	ASHISH AGRAWAL	PCE21IT012																0
11	2IT	2IT1	21/IT/11	AVINASH KUMAR	PCE21IT013																0
12	2IT	2IT1	21/IT/12	AYUSH KUMAR	PCE21IT014																0
13	2IT	2IT1	21/IT/13	AYUSHI SHARMA	PCE21IT015																0
14	2IT	2IT1	21/IT/14	BHAVIN GARG	PCE21IT016																0
15	2IT	2IT1	21/IT/15	CHINU GUPTA	PCE21IT017																0
16	2IT	2IT1	21/IT/16	CHIRAG VUAYVERGIYA	PCE21IT018																0
17	2IT	2IT1	21/IT/17	DEEPANSHU SINGH BHADORIYA	PCE21IT019																0
18	2IT	2IT1	21/IT/18	DEVANSH SHARMA	PCE21IT020																0
19	2IT	2IT1	21/IT/19	DIKSHA SHARMA	PCE21IT021																0
20	2IT	2IT1	21/IT/20	DIVAKAR SHARMA	PCE21IT022																0
21	2IT	2IT1	21/IT/21	DIVYA JAIN	PCE21IT023																0
22	2IT	2IT1	21/IT/22	DIVYANSHU SINGH RATHORE	PCE21IT024																0
23	2IT	2IT2	21/IT/23	HARSH KATTEL	PCE21IT025																0
24	2IT	2IT2	21/IT/24	HARSH KUMAR	PCE21IT026																0
25	2IT	2IT2	21/IT/25	HARSHIT SENGAR	PCE21IT027																0
26	2IT	2IT2	21/IT/26	HIMANSHU BANSAL	PCE21IT028																0
27	2IT	2IT2	21/IT/27	HITESH SHARMA	PCE21IT029																0
28	2IT	2IT2	21/IT/28	JITENDRA VERMA	PCE21IT030																0
29	2IT	2IT2	21/IT/29	KHWAHISH MOHINIANI	PCE21IT031																0
30	2IT	2IT2	21/IT/30	KRISHNA JODHA	PCE21IT032																0
31	2IT	2IT2	21/IT/31	LAVI .	PCE21IT033																0
32	2IT	2IT2	21/IT/32	LAVISH AGARWAL	PCE21IT034																0
33	2IT	2IT2	21/IT/33	LOKENDRA SINGH SHEKHAWAT	PCE21IT035																0
34	2IT	2IT2	21/IT/34	LUCKY TAK	PCE21IT036																0
35	2IT	2IT2	21/IT/35	MAYANK UPAMANYU	PCE21IT037																0
36	2IT	2IT2	21/IT/36	MUDIT VUAY	PCE21IT038																0
37	2IT	2IT2	21/IT/37	NIDHI JANGIR	PCE21IT039																0
38	2IT	2IT2	21/IT/38	NIHIT JANGID	PCE21IT040																0
39	2IT	2IT2	21/IT/39	NIKHAR JAIN	PCE21IT041																0
40	2IT	2IT2	21/IT/40	NIKHIL ACHOLIYA	PCE21IT042																0
41	2IT	2IT2	21/IT/41	PARTH MITTAL	PCE21IT043																0
42	2IT	2IT2	21/IT/42	PRIYANSH SINGH SOLANKI	PCE21IT044																0
43	2IT	2IT2	21/IT/43	PURVI JAIN	PCE21IT045																0
44	2IT	2IT2	21/IT/44	RITESH KUMAR SINGH	PCE21IT046																0
45	2IT	2IT3	21/IT/45	RITU SINGH	PCE21IT047																0
46	2IT	2IT3	21/IT/46	RITU TIWARI	PCE21IT048																0
47	2IT	2IT3	21/IT/47	ROHIT KUMAR	PCE21IT049																0
48	2IT	2IT3	21/IT/48	SHASHANK SHARMA	PCE21IT050																0
49	2IT	2IT3	21/IT/50	SHRISH KUMAR	PCE21IT051																0
50	2IT	2IT3	21/IT/51	SHUBHAM SARIN	PCE21IT052																0
51	2IT	2IT3	21/IT/52	SUPRIYA RANI	PCE21IT053																0
52	2IT	2IT3	21/IT/53	TANMAY KUMAWAT	PCE21IT054																0
53	2IT	2IT3	21/IT/54	TANMAY SHARMA	PCE21IT055																0
54	2IT	2IT3	21/IT/55	TARUN SAINI	PCE21IT056																0
55	2IT	2IT3	21/IT/56	TUSHAR SINGHAL	PCE21IT057																0
56	2IT	2IT3	21/IT/57	VAIBHAV DUBEY	PCE21IT058																0
57	2IT	2IT3	21/IT/58	VAIBHAV JAIN	PCE21IT059																0
58	2IT	2IT3	21/IT/59	VIDHI JAIN .	PCE21IT060																0
59	2IT	2IT3	21/IT/60	VINIT KHADELWAL .	PCE21IT061																0
60	2IT	2IT3	21/IT/61	YASH GODHWANI	PCE21IT062																0
61	2IT	2IT3	21/IT/62	YASH SHARMA	PCE21IT063																0
62	2IT	2IT3	21/IT/63	YOGESH YADAV	PCE21IT064																0
63	2IT	2IT3	21/IT/64	TANISHQUE SAXENA	PCE21IT300																0
64	2IT	2IT3	21/IT/65	YASH CHATURVEDI	PCE21IT301																0
<b>% OF CLASS AVERAGE</b>																					
A	Total Marks of Present Students																				0
B	Total No. of Present Students																				0
C	Average Marks of students = A / B																				#DIV/0!
D	Marks award out of (each student)																				60
E	% Average marks per student (C/D*100)																				#DIV/0!
F	Total No. of <b>PASS</b> Students																				0
G	Total No. of <b>FAIL</b> Students																				64
H	Total No. of <b>ABSENT</b> Students																				0



## 14.13 Evaluation Sheet Format (Lab)

POORNIMA COLLEGE OF ENGINEERING,JAIPUR																									
I MID TERM PRACTICAL EXAM, 2022-23					EVALUATION SHEET										B. TECH. II YEAR (III SEM.)										
Subject Code :					Subject Name :																				
Date of Exam :					Name of Examiner :																				
Branch					IT					Experiments / Observation / Written / Performance / Team										Viva					21T1
S. No.	Year	Batch	Roll No.	Name of Students																Total					
					Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14		Q.15				
					LO No.																				
					BL No.																				
					PO No.																				
Max. Marks:																				40					
1	21T	21T1	21/IT/01	AAYUSH KUMAR JHA .	PCE21IT001														0						
2	21T	21T1	21/IT/02	AAYUSH SHARMA	PCE21IT002														0						
3	21T	21T1	21/IT/03	ABHISHEK .	PCE21IT003														0						
4	21T	21T1	21/IT/04	ADITYA SHARMA	PCE21IT004														0						
5	21T	21T1	21/IT/05	AMAN BATRA	PCE21IT005														0						
6	21T	21T1	21/IT/06	ANMESH KUMAR GARG	PCE21IT007														0						
7	21T	21T1	21/IT/07	ANSHIKA JAIN	PCE21IT009														0						
8	21T	21T1	21/IT/08	ANUSH AGARWAL	PCE21IT010														0						
9	21T	21T1	21/IT/09	ARPIT JAIN	PCE21IT011														0						
10	21T	21T1	21/IT/10	ASHISH AGRAWAL	PCE21IT012														0						
11	21T	21T1	21/IT/11	AVINASH KUMAR	PCE21IT013														0						
12	21T	21T1	21/IT/12	AYUSH KUMAR	PCE21IT014														0						
13	21T	21T1	21/IT/13	AYUSHI SHARMA	PCE21IT015														0						
14	21T	21T1	21/IT/14	BHAVIN GARG	PCE21IT016														0						
15	21T	21T1	21/IT/15	CHIRU GUPTA	PCE21IT016														0						
16	21T	21T1	21/IT/16	CHIRAG VJAYVERGIYA	PCE21IT017														0						
17	21T	21T1	21/IT/17	DEEPAKSHU SINGH BHADORIYA	PCE21IT018														0						
18	21T	21T1	21/IT/18	DEVANSH SHARMA	PCE21IT019														0						
19	21T	21T1	21/IT/19	DIKSHA SHARMA	PCE21IT020														0						
20	21T	21T1	21/IT/20	DIVAKAR SHARMA	PCE21IT021														0						
21	21T	21T1	21/IT/21	DIVYA JAIN	PCE21IT022														0						
22	21T	21T1	21/IT/22	DIVYANSHU SINGH RATHORE	PCE21IT023														0						

POORNIMA COLLEGE OF ENGINEERING,JAIPUR																						
I MID TERM PRACTICAL EXAM, 2022-23					EVALUATION SHEET					B. TECH. II YEAR (III SEM.)												
Subject Code :					Subject Name :																	
Date of Exam :					Name of Examiner :																	
Branch		IT			Experiments / Observation / Written / Performance / Team										Viva					21T2		
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total	
					LO No.																	
					BL No.																	
					PO No.																	
					Max. Marks:																	
23	21T	21T2	21/IT/23	HARSH KATTEL	PCE21IT012																0	
24	21T	21T2	21/IT/24	HARSH KUMAR	PCE21IT024																0	
25	21T	21T2	21/IT/25	HARSHIT SENGAR	PCE21IT025																0	
26	21T	21T2	21/IT/26	HIMANSHU BANSAL	PCE21IT026																0	
27	21T	21T2	21/IT/27	HITESH SHARMA	PCE21IT027																0	
28	21T	21T2	21/IT/28	JITENDRA VERMA	PCE21IT028																0	
29	21T	21T2	21/IT/29	KHWAISH MOHNIANI	PCE21IT029																0	
30	21T	21T2	21/IT/30	KRISHNA JODHA	PCE21IT030																0	
31	21T	21T2	21/IT/31	LAVI	PCE21IT031																0	
32	21T	21T2	21/IT/32	LAVISH AGARWAL	PCE21IT032																0	
33	21T	21T2	21/IT/33	LOKENDRA SINGH SHEKHAWAT	PCE21IT033																0	
34	21T	21T2	21/IT/34	LUCKY TAK	PCE21IT034																0	
35	21T	21T2	21/IT/35	MAYANK UPAMANYU	PCE21IT035																0	
36	21T	21T2	21/IT/36	MUDIT VUAY	PCE21IT036																0	
37	21T	21T2	21/IT/37	NIDHI JANGIR	PCE21IT037																0	
38	21T	21T2	21/IT/38	NHIT JANGID	PCE21IT038																0	
39	21T	21T2	21/IT/39	NIKHAR JAIN	PCE21IT039																0	
40	21T	21T2	21/IT/40	NPHIL ACHOLYA	PCE21IT040																0	
41	21T	21T2	21/IT/41	PARTH MITTAL	PCE21IT041																0	
42	21T	21T2	21/IT/42	PRIVANSH SINGH SOLANKI	PCE21IT042																0	
43	21T	21T2	21/IT/43	PURVI JAIN	PCE21IT043																0	
44	21T	21T2	21/IT/44	RITESH KUMAR SINGH	PCE21IT044																0	

POORNIMA COLLEGE OF ENGINEERING, JAIPUR																									
I MID TERM PRACTICAL EXAM, 2022-23					EVALUATION SHEET										B. TECH. II YEAR (III SEM.)										
Subject Code :					Subject Name :																				
Date of Exam :					Name of Examiner :																				
Branch					IT	Experiments / Observation / Written / Performance / Team										Viva					21T3				
S. No.	Year	Batch	Roll No.	Name of Students	Q. No.	O.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Total				
					LO No.																				
					BL No.																				
					PO No.																				
					Max. Marks:																				
45	21T	21T3	21/IT/45	RITU SINGH	PCE21IT045																0				
46	21T	21T3	21/IT/46	RITU TIWARI	PCE21IT046																0				
47	21T	21T3	21/IT/47	ROHIT KUMAR	PCE21IT047																0				
48	21T	21T3	21/IT/48	SHASHANK SHARMA	PCE21IT048																0				
49	21T	21T3	21/IT/50	SHRISH KUMAR	PCE21IT049																0				
50	21T	21T3	21/IT/51	SHUBHAM SARNI	PCE21IT063																0				
51	21T	21T3	21/IT/52	SUPRIYA RANI	PCE21IT051																0				
52	21T	21T3	21/IT/53	TANMAY KUMAWAT	PCE21IT052																0				
53	21T	21T3	21/IT/54	TANMAY SHARMA	PCE21IT053																0				
54	21T	21T3	21/IT/55	TARUN SAINI	PCE21IT054																0				
55	21T	21T3	21/IT/56	TUSHAR SINGHAL	PCE21IT055																0				
56	21T	21T3	21/IT/57	VAIBHAV DUBEY	PCE21IT056																0				
57	21T	21T3	21/IT/58	VAIBHAV JAIN	PCE21IT057																0				
58	21T	21T3	21/IT/59	VIDHI JAIN	PCE21IT058																0				
59	21T	21T3	21/IT/60	VINIT KHANDELWAL	PCE21IT059																0				
60	21T	21T3	21/IT/61	YASH GODHWANI	PCE21IT060																0				
61	21T	21T3	21/IT/62	YASH SHARMA	PCE21IT061																0				
62	21T	21T3	21/IT/63	YOGESH YADAV	PCE21IT062																0				
63	21T	21T3	21/IT/64	TANISHQUE SAXENA	PCE21IT300																0				
64	21T	21T3	21/IT/65	YASH CHATURVEDI	PCE21IT301																0				
% OF CLASS AVERAGE																									
A		Total Marks of Present Students																			0				
B		Total No. of Present Students																			0				
C		Average Marks of students = A / B																			%DIV/0				
D		Marks award out of (each student)																			40				
E		% Average marks per student (C/D*100)																			%DIV/0				
F		Total No. of PASS Students																			0				
G		Total No. of FAIL Students																			64				
H		Total No. of ABSENT Students																			0				



**15. List of Important Links**

<b>List of Important Links</b>		
<b>Sr. No.</b>	<b>Link</b>	<b>Particulars</b>
1	<a href="https://www.rtu.ac.in/index/">https://www.rtu.ac.in/index/</a>	Rajasthan Technical University
2	<a href="http://www.pce.poornima.org">http://www.pce.poornima.org</a>	Institute Website
3	<a href="http://www.pce.poornima.org/Downloads.html">http://www.pce.poornima.org/Downloads.html</a>	Format of Students & Employees
4	<a href="https://www.turnitin.com/login_page.asp?lang=en_us">https://www.turnitin.com/login_page.asp?lang=en_us</a>	Plagiarism Checker
5	<a href="http://pcelibrary.poornima.org/">http://pcelibrary.poornima.org/</a>	PCE Digital Library
6	<a href="https://ndl.iitkgp.ac.in/">https://ndl.iitkgp.ac.in/</a>	National Digital Library of India (NDLI)
7	<a href="https://swayam.gov.in/">https://swayam.gov.in/</a>	SWAYAM MOOCs platform
8	<a href="https://www.vlab.co.in/">https://www.vlab.co.in/</a>	Virtual Labs
9	<a href="https://spoken-tutorial.org/">https://spoken-tutorial.org/</a>	Spoken Tutorial
10	<a href="https://fossee.in/">https://fossee.in/</a>	FOSSEE (Free/Libre and Open Source Software for Education)
11	<a href="https://www.sih.gov.in/">https://www.sih.gov.in/</a>	Smart India Hackathon
12	<a href="https://www.swayamprabha.gov.in/">https://www.swayamprabha.gov.in/</a>	32 high quality educational channels through DTH on 24X7 basis.
13	<a href="https://ieeexplore.ieee.org/Xplore/home.jsp.You">https://ieeexplore.ieee.org/Xplore/home.jsp.You</a>	IEEE All Society Periodicals Package
14	<a href="https://booksc.org/">https://booksc.org/</a>	Link for Free for book and articles
15	<a href="https://jgateplus.com/home/">https://jgateplus.com/home/</a>	J-gate Plus (JOURNALS -GATE) subscriptions
16	<a href="http://www.delnet.nic.in/">http://www.delnet.nic.in/</a>	Developing Library Network
17	<a href="https://dst.rajasthan.gov.in/content/dst-gov/en/home.html">https://dst.rajasthan.gov.in/content/dst-gov/en/home.html</a>	Department of Science & Technology, Government of Rajasthan
18	<a href="https://ipindia.gov.in/index.htm">https://ipindia.gov.in/index.htm</a>	Official website of Intellectual Property India
19	<a href="http://pce.poornima.org/Downloads.html">http://pce.poornima.org/Downloads.html</a>	Academic Formats Word File
Note:- Required Credentials can be taken from Respective Department Heads		