



Academic Booklet

Academic Year 2024-25

**Bachelor of Technology in Computer science
Engineering
(B.Tech CSE)**

Semester - 5

**Department of Computer Science and Engineering
Parul Institute of Technology
Faculty of Engineering and Technology
Parul University**

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About the University

A multidisciplinary destination of learning and innovation, propelling quality in higher education with a record of being India's youngest private university to receive NAAC A++ accreditation in the first cycle. Situated in Vadodara, Gujarat, Parul University, is an embodiment of the nation's essence of cultural heritage blended with modern innovations and academic practices for student enrichment, while fostering national and global development. The University is an amalgamation of faculties and institutes that offer a plethora of diploma, undergraduate, postgraduate and doctoral programs in numerous disciplines. Through its uniquely structured, industry linked and field aligned programs, the University holds a noteworthy record of fulfilling the infinite dreams of students, by launching their lucrative careers towards high trajectories through start-up incubation and impeccable placement records. The 150+ acre eco-friendly campus is home to over 50,000+ students from every State of India and over 3,500 international students from 75+ countries, making Parul University a truly culturally global destination. In addition to its NAAC A++ accreditation, the University holds global memberships in bodies such as the Association of Commonwealth Universities. The University's stamps of quality extend to its DSIR recognition for quality research, NABL accreditation for quality in clinical medical research, NABH accreditation for quality healthcare and ARIIA Top 50 ranking for innovation achievements nationwide. In recognition of Parul University's excellence in education it has been awarded for being the Best Private University in Western India by Praxis Media and Best University in Placements by ASSOCHAM and the Most Outstanding University in West Zone for having Highest Nationalities in Campus at the World Education Summit Awards.

VISION

To make successful academic quests through entrepreneurship. Research, modernization and partnerships, thus making PU the finest educational destination

MISSION

- Bridging the gap between academia and career, by laying emphasis on development programs for both students and staff.
- Promoting healthy relationships between PU's existing students, alumni, teachers and staff
- Forming associations with other universities and corporate firms of the nation and the world
- Presenting state of the art infrastructure with high quality and work ethics.

QUALITY POLICY

About the Institute

To strive towards attaining the status of global educational university by setting higher benchmarks in quality education to deliver excellence in academics, research, innovation and extension activities through the implementation of best practices adopted by renowned academic institutes in teaching and learning processes by continuously monitoring the effectiveness of the University's practices, fostering a quality learning ecosystem through state-of-the-art facilities to enable the beneficiaries to enhance their skillsets and knowledge, with enhanced emphasis on comprehensive development.

About the Department

The Computer Science and Engineering department at Parul Institute of Technology is a hub of academic excellence, fostering global success. Our state-of-the-art labs, manned by highly qualified faculty, offer hands-on learning. Partnering with industry giants like Microsoft, Oracle, Intel, and SAP, we ensure our curriculum remains cutting-edge, enhancing placement prospects in esteemed firms such as Juspay, Civica, Mastek Ltd, Sophos etc. Apple authorized training center and advanced networking and IoT labs, help students to delve into emerging technologies. We promote innovation through platforms like Google Developer Students Club and industry internships. Our alumni network bolsters this synergy, offering mentorship to our existing students by ASMP (Alumni Student Membership Program). Certifications from Coursera, NPTEL, and Edx refine technical skills of students, while hackathons provide platform to showcase the technical talent. Beyond academics, we emphasize holistic development, including sports, extracurriculars and NCC participation. At Parul Institute of Technology, we groom the next generation of tech leaders for success in the digital era.

VISION

To pursue prosperous academic endeavors via entrepreneurship. Research, modernization, and collaborations make CSE the best place to pursue engineering Program.

MISSION

- Creating a bridge between education and the workplace by emphasizing staff and student development initiatives.
- CSE Department aims to foster positive relationships among its current student body, alumni, faculty, and staff.
- It also seeks to establish partnerships with other academic institutions and international corporations. Finally, it presents cutting-edge facilities that are of the highest calibre and uphold ethical standards.

CODE OF CONDUCT FOR STUDENTS

- All students of Parul University shall compulsorily display their University ID cards by wearing it round their neck. If any student is found without an ID card on any day, he/she will be marked absent for that day.
- The university expects all the students to behave in a manner expected of a prudent person.
- The students shall be dressed in a presentable manner which does not invite criticism from any quarter
- The students shall strictly adhere to the class timings and be punctual in attending all classes
- The students shall display cordial, genial and respectful behaviour towards their teachers
- The students should be polite, cooperative and respectful in dealing with the employees of the University
- The students shall maintain the highest order of cleanliness in the classroom as well as in the college premises
- The students should not indulge in boisterous behaviour at any place on the university campus
- The students shall follow the directions issued in accessing common places such as library, canteen, sports fields, auditorium, gymnasium, swimming pool etc...
- The students shall strictly follow the schedules given by the class teacher regarding the assignments, class tests, examinations, practicals etc...and shall complete the assigned work within the duration specified by their teachers.
- The students shall follow the instructions given by the teacher during practicals in relation to the use of laboratory/workshops/implements/equipments...
- Whenever the student has queries regarding their performance from either the class teacher or from any office in the College/University, they should follow the procedures laid down for the same and approach the concerned with utmost respect to the Authority.
- The students shall pay all prescribed fees at the stipulated times and avoid being penalized for non-payment of fees
- The students shall not indulge in unfair means during the conduct of class tests/ internal and external examinations
- The students shall not indulge in unlawful assembly at any place in the campus.
- Any problem encountered by the students should be brought to the notice of the Authorities immediately available in the College/University

- The students should never take law into their own hands and report any matter of lawlessness or harassment to the College Authorities immediately which, in turn, will initiate suitable action.
- The students shall participate in all national events such as Independence Day, Republic Day organized by the University.
- The students should not indulge in any of the activities which adversely affect the reputation of the University.
- The students shall not consume prohibited substances such as alcohol, narcotics, Marijuana, Heroin, Cocaine etc. and shall not keep in their custody/hostel premises illegal objects/materials such as firearms, missiles, bombs, narcotics, alcohol or other intoxicants etc.
- Smoking and chewing of tobacco is strictly prohibited in the campus.
- UGC has directed all the universities to strictly implement anti-ragging measures in universities and colleges. It is also the responsibility of the institutions in the university to ensure safety of the newcomers and to protect them from any incidence which may harm either their physical or mental faculties. Any student, who has been found involved in the incident related to ragging, strict disciplinary action as enumerated in UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009 will be initiated against the delinquent student.
- Any violation of the provisions mentioned above will be viewed as an Act of Misconduct and university, after conducting a thorough probe into such incidents, shall initiate strict disciplinary action against delinquent students.

**CODE OF CONDUCT FOR FOREIGN STUDENTS WHILE RESIDING OUTSIDE
THE UNIVERSITY CAMPUS:**

A number of foreign nationals are studying in the University under various degree programmes. Those foreign students who stay outside the campus will have to adhere to certain code of conduct as mentioned below.

- They have to enter into a Rent Agreement with the owners of the accommodation and submit a copy of the same to the ISAC in the University
- They shall inform the local police about their residence
- Boys and girls should necessarily stay in separate accommodation
- They shall not consume any narcotic substance such as Marijuana, Heroin, Cocaine etc....
In case, they consume alcohol, they should necessarily have obtained permit for the same from competent authorities. Any violation would make them liable for disciplinary action from the concerned authorities.
- They should not play loud music in their accommodation which would serve as a nuisance to the neighbours. They should maintain cordial relations with their neighbours and shall live in harmony with them. Further, they should not indulge in any boisterous behavior such as getting into altercation with neighbours, causing disturbance to them etc...Moreover, they shall always maintain the social decorum by behaving politely, wearing appropriate attire so as to ensure the amicable living atmosphere with others.
- Whenever they leave town for any reason, they should necessarily inform the authorities in ISAC and also their counsellor.

Regulations for boarders residing in the university hostels:

GENERAL:

- All students shall conform to the rules of good conduct and shall respect the authorities of the university.
- Students shall put in efforts to protect the property of the university and make proper use of the facilities provided.
- No student shall deface or destroy any university or public property.
- Students shall maintain proper decorum in all places such as classrooms, hostels, laboratories, sports facilities, transport facilities etc...
- Students shall not disturb the normal work of the university by disorderly conduct, boisterous behaviour and unauthorized assembly.
- Ragging in any form is strictly prohibited.
- Consumption of alcohol or drunkenness or drug addiction or gambling on the campus is strictly prohibited.
- Students should not indulge in celebration of any festivals on days other than those notified by the university.
- Violation of any of the regulations will be treated as an act of indiscipline and shall be brought to the notice of the Hostel Superintendent by the concerned student.
- The Hostel Superintendent in consultation with the concerned Rectors shall enquire into the matter and may implement immediate measures such as giving a warning, imposing a fine or debarring from the hostel for a period not exceeding one month.
- In further cases of serious indiscipline, an Inquiry cum Disciplinary Committee may be formed comprising officials in the university and the said Committee shall inquire into acts of indiscipline and suggest punitive measures to the Higher Authorities in the University.
- The decision of the higher authorities in the university in all these matters shall be final and binding on all concerned.
- The Rector of each hostel shall hold weekly open meetings with the boarders on designated day and time to address the grievances of the boarders, if any.
- Similar open meetings will be held by the Hostel Superintendent with the boarders once a month on designated day and time to address the grievances of the boarders, if any.

ADMISSION TO THE HOSTELS:

- Any student admitted to any institution in the university is eligible to be admitted to the concerned hostel subject to the availability of accommodation.
- Preference will be given to the regular students of the university.
- Application may be made to the Rector of the hostel on payment of prescribed application fees.
- The Rector of the hostel in consultation with the Hostel Superintendent shall allot rooms to the applicants depending upon the availability.

PAYMENT OF HOSTEL FEES

- Every boarder in the hostel shall pay the prescribed fees from time to time.
- The Hostel Fees will be decided by the Management of the Trust running the hostels.
- In case, the prescribed fees are not paid in time, the boarder shall have to pay the fine as decided by the Management of the Trust

BEHAVIOUR OF BOARDERS IN THE HOSTEL

- The boarders shall not change the room allotted to them by the Rector without the permission of the Rector.
- The boarders shall keep their rooms neat and tidy and shall cooperate with the hostel management in safe upkeep of the common utilities provided to them.
- The boarders shall allow the Rector to inspect their rooms whenever demanded.
- The corridors, toilets, reading room, TV room, mess etc... are common utilities provided by the hostel and it is the responsibility of every boarder to use them appropriately without causing any damage.
- The boarders themselves are responsible for the safety of their belongings and are advised not to keep any valuable items in their rooms.
- The boarders shall not consume prohibited substances such as alcohol, narcotics, Marijuana, Heroin, Cocaine etc. and shall not keep in their custody/hostel premises illegal objects/ materials such as firearms, missiles, bombs, narcotics, alcohol or other intoxicants etc.
- Smoking and chewing of tobacco is strictly prohibited
- Gambling in any form is strictly prohibited

- Viewing prohibited material on personal computers, laptops, mobile and other electronics devices will be strictly viewed as an act of indiscipline.
- No person other than the boarders shall be allowed to enter the hostel premises without the permission of the Rector.
- Boarders shall not allow any guests to stay overnight in their rooms.
- No boarder shall stay outside the hostel after 9:00 PM without prior permission of the Rector. However, boarders in the Ladies' Hostel shall not remain outside the hostel beyond 7:30 PM without prior permission of the Rector. Any violation of this provision shall be viewed seriously and disciplinary proceedings will be initiated.
- Boarders shall treat all employees of the hostel with courtesy and respect.
- Boarders shall not hold any unauthorized meeting in the hostel premises.
- Boarders shall vacate the hostel during vacations to facilitate upkeep of the hostels.
- Boarders shall wear proper dresses when they visit the common room, dining hall or any public place on the university campus.
- Any complaint or grievances which the boarders have shall be reported to the Rector who in turn shall bring it to the notice of the Hostel Superintendent immediately for redressal.

HOSTEL MESS

- There shall be as many number of messes as is required in the university premises.
- All meals, breakfast etc... will be served only in the mess.
- Boarders shall have food only in that mess to which they are allotted.
- The mess charges shall be collected along with the hostel fees as determined by the Trust.
- Boarders shall treat all mess workers with courtesy and respect.
- Food will not be taken out of the mess for any reason.
- Any complaints regarding the quality of food shall be brought to the notice of the concerned Rectors and Hostel Superintendent.
- The boarders shall strictly adhere to the timings of the mess.
- The boarders will have to be properly dressed while coming to the mess.



Registrar

Parul University
Faculty of Engineering & Technology
Department of Computer Science &
Engineering
COs, POs and PSOs
Academic Year 2024-25

Introduction: Outcome Based Education (OBE) has become the standard of practice in Higher Education Institutions. Hence, Course Outcomes, Program Outcomes and attainment of COs and POs play vital role as far as Outcome Based Education is concerned.

Course Outcomes are statements that are in the view of what the students are expected to attain at the end of the course.

Program Outcomes (POs) represent the knowledge, skills and attitudes the students should have at the end of the Program. There are 12 POs.

Program Specific Outcomes (PSOs) are the statements that define outcomes of a program which make students realize the fact that the knowledge and techniques learnt in this course has direct implication for the advancement of society and its sustainability. PSOs are what the students should be able to do at the time of graduation. The PSOs are program specific written by the department offering the program. There are usually two to four PSOs for a department.

Methodology:

The calculation is based on marks obtained by the students in their Internal Assessment (assignments, weekly examinations, midterm examination/s, Internal Practical/s) and External Assessment (end semester theory and practical examination). After result analysis of the said components, the marks are to be converted to see if they meet the course outcome set by the teachers. The teacher shall get the score of course outcome to measure the contribution of each course until students complete their entire program.

Program Outcomes (POs): (An example for detailed understanding of POs)

Engineering Graduates will be able to:

- 1. Engineering knowledge:** Apply the knowledge of engineering fundamentals, science, Mathematics and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, frame, review research literature, and analyze complex engineering problems reaching authenticated 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 stated needs with suitable 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 cogent 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 evaluate societal, health, safety, legal and cultural issues and the resultant responsibilities pertinent 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, 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 understand and write effective reports, 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 as a leader in a team, to manage projects in multidisciplinary environments.

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

Program Specific Outcomes (PSOs):

PSO1 - An ability to analyze, design, verify, validate, code and maintain the solution of given problem to derive execution of software system.

PSO2 - An ability to understand, apply and work with one or more domain using knowledge of mathematical techniques and principles with relevant areas of computer science.

(As far as PSOs are concerned, there can be from two to four PSOs)

ACADEMIC CALENDAR FOR ODD TERM - YEAR : 2024 - 25

Bachelor of Technology/DiplomaEngineering/IEDP/M.Tech Courses (Reg Sem - III, V, VII)

Week	MONDAY	Tuesday	Wednesday	Thursday	Friday	Saturday
01 June	10 Teaching Start	11	12	13	14	15
02	17	18	19	20	21	22
03	24	25	26	27	28	29 Weekly 1
04 July	01	02	03	04	05	06 Weekly 2
05	08	09	10	11	12	13 Weekly 3
06	15	16	17	18	19	20 Weekly 4
07	22	23	24	25	26	27 Weekly 5
08 July/Aug	29	30	31	01	02	03 Weekly 6
09	05 Mid Sem Exam	06 Mid Sem Exam	07 Mid Sem Exam	08 Mid Sem Exam	09 Mid Sem Exam	10 Mid Sem Exam
10	12	13	14	15 Independence Day	16	17
11	19 Rakshabandhan	20	21	22	23	24
12	26 Janmashtmi	27	28	29	30	31
13 September	02	03	04	05	06	07 Ganesh Chaturthi
14	09	10	11	12	13	14
15	16	17	18	19	20	21
16	23	24	25	26	27	28
17 Sept/Oct	30	01 Mahatma Gandhi Jayanti	02	03	04	05
18	07 TW Submission	08 TW Submission	09 TW Submission	10 TW Submission	11 TW Submission	12 Dusshera
19	14	15	16	17	18	19 Teaching End
20	21 ESE (Practical)	22 ESE (Practical)	23 ESE (Practical)	24 ESE (Practical)	25 ESE (Practical)	26 ESE (Practical)
21 Oct/Nov	28 Diwali Break	29 Diwali Break	30 Diwali Break	31 Diwali Break	01 Diwali Break	02 Diwali Break
22	04 Diwali Break	05 Diwali Break	06 Diwali Break	07 Diwali Break	08 Diwali Break	09 Diwali Break
23	11 ESE (Theory)	12 ESE (Theory)	13 ESE (Theory)	14 ESE (Theory)	15 ESE (Theory)	16 ESE (Theory)
24	18 ESE (Theory)	19 ESE (Theory)	20 ESE (Theory)	21 ESE (Theory)	22 ESE (Theory)	23 ESE (Theory)
Important Notes	1. Marks Locking date by HOD : 14 Oct, 2024 2. Marks Locking date by Principal and Dean : 15 Oct, 2024 3. End Sem Practical Dates : 21 Oct - 26 Oct, 2024 4. End Sem Theory Dates : 11 Nov - 23 Nov, 2024 5. End Sem Supplementary Exam Dates : 25 Nov, 2024 Onwards 6. New Term (Even) Commencement : 25 Nov, 2024 Onwards					
	 Dr. Vipul Vekariya Dean - Faculty of Engineering & Technology					

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A1_CSE_2024-25					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	DAA::(ARJ)::324	DAA::(ARJ)::324	DAA::(ARJ)::324	5A1-1::EP::(MKV)::324 5A1-2::EP::(MKV)::324	DAA::5A1-1::(ARJ)::324 DAA::5A1-2::(ARJ)::324	LIBRARY / SELF STUDY
08:30 - 09:30	EP::(MKV)::324	SE:AC:324	SE:AC:324			LIBRARY / SELF STUDY
09:30 - 09:45	RECESS					
09:45 - 10:45	PCE 324(FM)	EP::(MKV)::324	5A1-1:SE:AC:324 5A1-2:SE:AKD:324	LIBRARY / SELF STUDY	DADV:VKP:201	LIBRARY / SELF STUDY
10:45 - 11:45	SE:AC:324	DADV:VKP:324		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	5A1-1:DADV:VKP:324 5A1-2:DADV:AHS:324	AF:RI:324	TOC:ASP:324	DAA::5A1-1::(ARJ)::324 DAA::5A1-2::(ARJ)::324	TOC:ASP:201	LIBRARY / SELF STUDY
01:35 - 02:25		AF:RI:324	DADV:VKP:324		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Abhishek Rajaram Jagtap	ARJ	jagtapab89@gmail.com	32830
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Abhishek Rajaram Jagtap	ARJ	jagtapab89@gmail.com	32830
303105306	Theory of Computation	TOC	Mr. Akash Suresh Patil	ASP	akash.patil24157@paruluniversity.ac.in	24157
303105253	Software Engineering	SE	Mr. Amar Chandra	AC	Amar.chandra30046@paruluniversity.ac.in	30046
303105254	Software Engineering Laboratory	SE-L	Mr. Amar Chandra Mr. Asheesh Kumar Dwivedi	AC AKD	Amar.chandra30046@paruluniversity.ac.in asheesh.dwivedi33172@gmail.com	30046 33172
303105309	Enterprise Programming	EP	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248
303105310	Enterprise Programming Laboratory	EP-L	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248
303193304	Professionalism & Corporate Ethics	PCE	Fedrick Mecwan	FM	fedrick.mecwan20035@paruluniversity.ac.in	20035
303105314	Data Analytics and Data visualization	DADV	Dr. Vinod Patidar	VKP	Vinod.patidar28579@paruluniversity.ac.in	28579
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Vinod Patidar Mr. Ajaykumar Harishbhai Solanki	VKP AHS	Vinod.patidar28579@paruluniversity.ac.in Ajaykumar.solanki31533@paruluniversity.ac.in	28579 31533
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458
CLASSROOM NO:		324				Meenu Maam 9558473396
LAB/ TUTORIAL LOCATION:		324				
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A2_CSE_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	LIBRARY / SELF STUDY	SE:AC:325	EP::(MKV)::325	SE:AC:325	5A2-1::EP::(MKV)::325 5A2-2::EP::(ARJ)::325	5A2-1::DAA::(ARJ)::324 5A2-2::DAA::(ARJ)::324
08:30 - 09:30	LIBRARY / SELF STUDY	DAA::(ARJ)::325	DAA::(ARJ)::325	DAA::(ARJ)::325		
09:30 - 09:45	RECESS					
09:45 - 10:45	LIBRARY / SELF STUDY	DADV:VKP:325	AF:RI:325	5A2-1:SE:AC:324 5A2-2:SE:AKD:324	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY
10:45 - 11:45	LIBRARY / SELF STUDY	PCE (325) BJ	AF:RI:325		TOC:ASP:201	EP::(MKV)::361
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	LIBRARY / SELF STUDY	5A2-1:DADV:VKP:325 5A2-2:DADV:NP:325	DADV:VKP:325	DADV:VKP:325	5A2-1::DAA::(ARJ)::324 5A2-2::DAA::(ARJ)::324	LIBRARY / SELF STUDY
01:35 - 02:25	LIBRARY / SELF STUDY		SE:AC:325	TOC:ASP:325		LIBRARY / SELF STUDY

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Abhishek Rajaram Jagtap	ARJ	jagtapab89@gmail.com	32830
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Abhishek Rajaram Jagtap	ARJ	jagtapab89@gmail.com	32830
303105306	Theory of Computation	TOC	Mr. Akash Suresh Patil	ASP	akash.patil24157@paruluniversity.ac.in	24157
303105253	Software Engineering	SE	Mr. Amar Chandra	AC	Amar.chandra30046@paruluniversity.ac.in	30046
303105254	Software Engineering Laboratory	SE-L	Mr. Amar Chandra Mr. Asheesh Kumar Dwivedi	AC AKD	Amar.chandra30046@paruluniversity.ac.in asheesh.dwivedi33172@gmail.com	30046 33172
303105309	Enterprise Programming	EP	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248
303105310	Enterprise Programming Laboratory	EP-L	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248
303193304	Professionalism & Corporate Ethics	PCE	Bhumi Joshi	BJ	bhumi.joshi23650@paruluniversity.ac.in	23650
303105314	Data Analytics and Data visualization	DADV	Dr. Vinod Patidar	VKP	Vinod.patidar28579@paruluniversity.ac.in	28579
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Vinod Patidar Mr. Nitin Pal	VKP NP	Vinod.patidar28579@paruluniversity.ac.in nitin.pal34737@paruluniversity.ac.in	28579 34737
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458
CLASSROOM NO:		324, 325			FACULTY REPRESENTATIVE / MFT	Yachna Modi
LAB/ TUTORIAL LOCATION:		324, 325				8866856585
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

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FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A3_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	EP:::(MKV)::325	LIBRARY / SELF STUDY	5A3-1:DADV:VKP:326 5A3-2:DADV:NP:326	AF:RI:326	SE:AC:326	(PCE) 325 CK	
08:30 - 09:30	SE:AC:325	LIBRARY / SELF STUDY		AF:RI:326	DADV:VKP:326	SE:AC:325	
09:30 - 09:45	RECESS						
09:45 - 10:45	DAA:::(ARJ)::325	LIBRARY / SELF STUDY	5A3-1::EP:::(MKV)::326 5A3-2::EP:::(MKV)::326	DAA:::(ARJ)::325	DAA:::(ARJ)::326	LIBRARY / SELF STUDY	
10:45 - 11:45	TOC:ASP:325	LIBRARY / SELF STUDY		EP:::(MKV)::325	DADV:VKP:326	LIBRARY / SELF STUDY	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5A3-1::DAA:::(ARJ)::326 5A3-2::DAA:::(ARJ)::326	TOC:ASP:326	5A3-1:SE:AC:326 5A3-2:SE:AKD:326	5A3-1::DAA:::(ARJ)::324 5A3-2::DAA:::(ARJ)::324	
01:35 - 02:25	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		DADV:VKP:326			
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Abhishek Rajaram Jagtap	ARJ	jagtapab89@gmail.com	32830	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Abhishek Rajaram Jagtap	ARJ	jagtapab89@gmail.com	32830	
303105306	Theory of Computation	TOC	Mr. Akash Suresh Patil	ASP	akash.patil24157@paruluniversity.ac.in	24157	
303105253	Software Engineering	SE	Mr. Amar Chandra	AC	Amar.chandra30046@paruluniversity.ac.in	30046	
303105254	Software Engineering Laboratory	SE-L	Mr. Amar Chandra Mr. Asheesh Kumar Dwivedi	AC AKD	Amar.chandra30046@paruluniversity.ac.in asheesh.dwivedi33172@gmail.com	30046 33172	
303105309	Enterprise Programming	EP	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248	
303105310	Enterprise Programming Laboratory	EP-L	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248	
303193304	Professionalism & Corporate Ethics	PCE	Chetna kumari	CK	chetna.kumari29505@paruluniversity.ac.in	29505	
303105314	Data Analytics and Data visualization	DADV	Dr. Vinod Patidar	VKP	Vinod.patidar28579@paruluniversity.ac.in	28579	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Vinod Patidar Mr. Nitin Pal	VKP NP	Vinod.patidar28579@paruluniversity.ac.in nitin.pal34737@paruluniversity.ac.in	28579 34737	
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458	
CLASSROOM NO:		324, 325, 326				FACULTY	
LAB/ TUTORIAL LOCATION:		324, 325, 326				REPRESENTATIVE / MFT	
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal		

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A4_CSE_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	DAA::(AMJ)::327	DAA::(AMJ)::326	LIBRARY / SELF STUDY	5A4-1::DAA::(AMJ)::327 5A4-2::DAA::(AMJ)::327	TOC:ASP:327	5A4-1:SE:AKD:326 5A4-2:SE:AHP:326
08:30 - 09:30	SE:AKD:327	SE:AKD:326	LIBRARY / SELF STUDY		TOC:ASP::327	
09:30 - 09:45	RECESS					
09:45 - 10:45	PCE:370 DB	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	EP::(MKV)::326	5A4-1::DAA::(AMJ)::327 5A4-2::DAA::(AMJ)::327	5A4-1:DADV:BD:326 5A4-2:DADV:VKP:326
10:45 - 11:45	EP::(MKV)::370	DAA::(AMJ)::201	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	5A4-1::EP::(MKV)::326 5A4-2::EP::(MKV)::326	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:RI:327	DADV:BD:327	DADV:BD:326
01:35 - 02:25		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:RI:327	DADV:BD:327	SE:AKD:326

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717
303105306	Theory of Computation	TOC	Mr. Akash Suresh Patil	ASP	akash.patil24157@paruluniversity.ac.in	24157
303105253	Software Engineering	SE	Mr. Asheesh Kumar Dwivedi	AKD	asheesh.dwivedi33172@gmail.com	33172
303105254	Software Engineering Laboratory	SE-L	Mr. Asheesh Kumar Dwivedi Mr. Abhinandan H. Patil	AKD AHP	asheesh.dwivedi33172@gmail.com abhinandan.patil33488@paruluniversity.ac.in	33172 33488
303105309	Enterprise Programming	EP	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248
303105310	Enterprise Programming Laboratory	EP-L	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248
303193304	Professionalism & Corporate Ethics	PCE	Dharna Bhatt	DB	dharna.bhatt20069@paruluniversity.ac.in	20069
303105314	Data Analytics and Data visualization	DADV	Mrs. BHARTI DUBEY	BD	bharti.dubey34662@paruluniversity.ac.in	34662
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mrs. BHARTI DUBEY Dr. Vinod Patidar	BD VKP	bharti.dubey34662@paruluniversity.ac.in Vinod.patidar39570@paruluniversity.ac.in	34662 28579
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458
CLASSROOM NO:		370, 325, 326			FACULTY REPRESENTATIVE / MFT	Jasmin Mansuri 9574023949
LAB/ TUTORIAL LOCATION:		370, 325, 326				
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING			DIVISION: 5A5_CSE_2024-25				
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	5A5-1:DADV:SK:326 5A5-2:DADV:AHS:326	5A5-1::EP::(MKV)::327 5A5-2::EP::(MKV)::327	DADV:SK:327	LIBRARY / SELF STUDY	SE:AKD:328	DADV:SK:327	
08:30 - 09:30			DAA::(AMJ)::327	LIBRARY / SELF STUDY	DAA::(AMJ)::328	DAA::(AMJ)::327	
09:30 - 09:45	RECESS						
09:45 - 10:45	5A5-1::DAA::(AMJ)::326 5A5-2::DAA::(AMJ)::326	LIBRARY / SELF STUDY	PCE:327 JM	LIBRARY / SELF STUDY	EP::(MKV)::325	EP::(MKV)::325	
10:45 - 11:45		LIBRARY / SELF STUDY	TOC:ASP:327	LIBRARY / SELF STUDY	DADV:SK:325	SE:AKD:325	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	SE:AKD:325	5A5-1::DAA::(AMJ)::326 5A5-2::DAA::(AMJ)::326	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:RI:325	5A5-1:SE:AHP:325 5A5-2:SE:AC:325	
01:35 - 02:25	TOC:ASP:325		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:RI:325		
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717	
303105306	Theory of Computation	TOC	Mr. Akash Suresh Patil	ASP	akash.patil24157@paruluniversity.ac.in	24157	
303105253	Software Engineering	SE	Mr. Asheesh Kumar Dwivedi	AKD	asheesh.dwivedi33172@gmail.com	33172	
303105254	Software Engineering Laboratory	SE-L	Mr. Abhinandan H. Patil Mr. Amar Chandra	AHP AC	abhinandan.patil33488@paruluniversity.ac.in Amar.chandra30046@paruluniversity.ac.in	33488 30046	
303105309	Enterprise Programming	EP	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248	
303105310	Enterprise Programming Laboratory	EP-L	Maksud Vhora	MKV	maksud.vahora72@gmail.com	26248	
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@paruluniversity.ac.in	26794	
303105314	Data Analytics and Data visualization	DADV	Mr Sachin Kumar	SK	sachin.jaiswal33410@paruluniversity.ac.in	33410	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr Sachin Kumar Mr. Ajaykumar Harishbhai Salanki	SK AHS	sachin.jaiswal33410@paruluniversity.ac.in Ajaykumar.salanki31522@paruluniversity.ac.in	33410 31533	
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458	
CLASSROOM NO:	325, 326, 327, 328				FACULTY REPRESENTATIVE / MFT	Ms Kiran Sharma	
LAB/ TUTORIAL LOCATION:	325, 326					8959675064	
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal		

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A6_CSE_2024-25					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	5A6-1:SE:NSS:328 5A6-2:SE:AHP:328	DADV:SK:328	DAA::(MEG)::328	DAA::(MEG)::328	LIBRARY / SELF STUDY	AF:RI:328
08:30 - 09:30		AF:RI:328	EP::(SOM)::328	DADV:SK:328	LIBRARY / SELF STUDY	TOC:ARP:328
09:30 - 09:45			RECESS			
09:45 - 10:45	SE:AKD:327	SE:AKD:327	LIBRARY / SELF STUDY	TOC:ARP:327	LIBRARY / SELF STUDY	5A6-1:DADV:SK:327 5A6-2:DADV:AHS:327
10:45 - 11:45	DADV:SK:327	DAA::(MEG)::327	LIBRARY / SELF STUDY	EP::(SOM)::327	LIBRARY / SELF STUDY	
11:45 - 12:45			LUNCH BREAK			
12:45 - 01:35	5A6-1::DAA::(MEG)::327 5A6-2::DAA::(MEG)::327	5A6-1::DAA::(MEG)::327 5A6-2::DAA::(MEG)::327	(PCE) 327 SG	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5A6-1::EP::(SOM)::327 5A6-2::EP::(SOM)::327
01:35 - 02:25			SE:AKD:327	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Dr Meghana	MEG	mehanaghogare@gmail.com	29390
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Dr Meghana	MEG	mehanaghogare@gmail.com	29390
303105306	Theory of Computation	TOC	Arnika Patel	ARP		
303105253	Software Engineering	SE	Mr. Asheesh Kumar Dwivedi	AKD	asheesh.dwivedi3172@gmail.com	33172
303105254	Software Engineering Laboratory	SE-L	Mr. Abhinandan H. Patil Dr. Nandkishor Shripad Sirdeshpandey	AHP NSS	abhinandan.patil33488@paruluniversity.ac.in nandkishor.sirdeshpande33385@paruluniversity.ac.in	33488 33385
303105309	Enterprise Programming	EP	Soumen Mukherjee	SOM		
303105310	Enterprise Programming Laboratory	EP-L	Soumen Mukherjee	SOM		
303193304	Professionalism & Corporate Ethics	PCE	Sanket Gandhi	SG	sanket.gandhi14473@paruluniversity.ac.in	14473
303105314	Data Analytics and Data visualization	DADV	Mr Sachin Kumar	SK	sachin.jaiswal33410@paruluniversity.ac.in	33410
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr Sachin Kumar Mr. Ajaykumar Harishbhai Solanki	SK AHS	sachin.jaiswal33410@paruluniversity.ac.in ajaykumar.solanki21522@paruluniversity.ac.in	33410 31533
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458
CLASSROOM NO:	328, 327				FACULTY	Riddhi A Mehta
LAB/ TUTORIAL LOCATION:	328,327				REPRESENTATIVE / MFT	97122 69946
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A7_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	EP::(SOM)::329	5A7-1::DAA::(MEG)::329 5A7-2::DAA::(MEG)::329	SE:NSS:329	5A7-1::EP::(SOM)::329 5A7-2::EP::(SOM)::329	DADV:SK:329	LIBRARY / SELF STUDY	
08:30 - 09:30	DAA::(MEG)::329		DAA::(MEG)::329		DAA::(MEG)::329	LIBRARY / SELF STUDY	
09:30 - 09:45	RECESS						
09:45 - 10:45	AF:RI:328	EP::(SOM)::328	5A7-1:SE:NSS:328 5A7-2:SE:AHP:328	LIBRARY / SELF STUDY	SE:NSS:324	LIBRARY / SELF STUDY	
10:45 - 11:45	AF:RI:328	TOC:PSB:328		LIBRARY / SELF STUDY	(PCE) 324 JM	LIBRARY / SELF STUDY	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	DADV:SK:328	5A7-1:DADV:SK:328 5A7-2:DADV:AHS:328	TOC:PSB:328	5A7-1::DAA::(MEG)::328 5A7-2::DAA::(MEG)::328	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	
01:35 - 02:25	SE:NSS:328		DADV:SK:328		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Dr Meghana	MEG	meghanaghogare@gmail.com	29390	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Dr Meghana	MEG	meghanaghogare@gmail.com	29390	
303105306	Theory of Computation	TOC	Mr. Prolay Biswas	PSB	prolay.biswas28854@paruluni versity.ac.in	28854	
303105253	Software Engineering	SE	Dr. Nandkishor Shridhar Sirdeshpande	NSS	nandkishor.sirdeshpande33385 @paruluniversity.ac.in	33385	
303105254	Software Engineering Laboratory	SE-L	Dr. Nandkishor Shridhar Sirdeshpande Mr. Abhinandan H. Patil	NSS AHP	nandkishor.sirdeshpande33385 @paruluniversity.ac.in abhinandan.patil33488@parul university.ac.in	33385 33488	
303105309	Enterprise Programming	EP	Soumen Mukherjee	SOM			
303105310	Enterprise Programming Laboratory	EP-L	Soumen Mukherjee	SOM			
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@par uluniversity.ac.in	26794	
303105314	Data Analytics and Data visualization	DADV	Mr Sachin Kumar	SK	sachin.jaiswal33410@paruluni versity.ac.in	33410	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr Sachin Kumar Mr. Ajaykumar Harishbhai Salasali	SK AHS	sachin.jaiswal33410@paruluni versity.ac.in ajaykumar.salasali21522@par uluniversity.ac.in	33410 31533	
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluni versity.ac.in	34458	
CLASSROOM NO:		324,328,329				FACULTY	
LAB/ TUTORIAL LOCATION:		328,329				REPRESENTATIVE / MFT	
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal		Ms SUMITRA MENARIA			Dr. Swapnil M Parikh		
Time Table Coordinator		Head of Department			Principal		

PARUL UNIVERSITY						 <p>Parul® University NAAC GRADE A++</p>	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A8_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	LIBRARY / SELF STUDY	SE:NSS:130	TOC:ARP:130	5A8-1:SE:NSS:130 5A8-2:SE:KR:130	5A8-1::EP::(SOM):130 5A8-2:EP:(SOM):130	DADV:BD:329	
08:30 - 09:30	LIBRARY / SELF STUDY	SE:NSS:130	DADV:BD:130			SE:NSS:329	
09:30 - 09:45	RECESS						
09:45 - 10:45	LIBRARY / SELF STUDY	DAA::(MEG)::329	DAA::(MEG)::329	5A8-1::DAA::(MEG)::328 5A8-2::DAA::(MEG)::328	LIBRARY / SELF STUDY	EP::(SOM)::324	
10:45 - 11:45	LIBRARY / SELF STUDY	EP::(SOM)::329	DAA::(MEG)::329		LIBRARY / SELF STUDY	TOC:ARP:324	
11:45 - 12:45	\						
12:45 - 01:35	LIBRARY / SELF STUDY	(PCE) 329 JM	AF:RI:329	5A8-1:DADV:BD:329 5A8-2:DADV:SK:329	5A8-1::DAA::(MEG)::328 5A8-2::DAA::(MEG)::328	LIBRARY / SELF STUDY	
01:35 - 02:25	LIBRARY / SELF STUDY	DADV:BD:329	AF:RI:329			LIBRARY / SELF STUDY	
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Dr Meghana	MEG	meghanaghogare@gmail.com	29390	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Dr Meghana	MEG	meghanaghogare@gmail.com	29390	
303105306	Theory of Computation	TOC	Arnika Patel	ARP			
303105253	Software Engineering	SE	Dr. Nandkishor Shripad Sirdeshpandey	NSS	nandkishor.sirdeshpande33385 @paruluniversity.ac.in	33385	
303105254	Software Engineering Laboratory	SE-L	Dr. Nandkishor Shripad Sirdeshpandey Keshav Kumar	NSS KR	nandkishor.sirdeshpande33385 @paruluniversity.ac.in keshavkumar.34839@paruluni versity.ac.in	33385 34839	
303105309	Enterprise Programming	EP	Soumen Mukherjee	SOM			
303105310	Enterprise Programming Laboratory	EP-L	Soumen Mukherjee	SOM			
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@par uluniversity.ac.in	26794	
303105314	Data Analytics and Data visualization	DADV	Mrs. BHARTI DUBEY	BD	bharti.dubey34662@paruluniv ersity.ac.in	34662	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mrs. BHARTI DUBEY Mr Sachin Kumar	BD SK	bharti.dubey34662@paruluniv ersity.ac.in sachin.kumar122410@paruluni	34662 33410	
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluni versity.ac.in	34458	
CLASSROOM NO:	130,329,328,324				FACULTY	Shweta Gupta	
LAB/ TUTORIAL LOCATION:	130,329,328				REPRESENTATIVE / MFT	9409289590	
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal		

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A9_CSE_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	DADV:NB:130	LIBRARY / SELF STUDY	SE:AHP:131	5A9-1:SE:AHP:131 5A9-2:SE:MDP:131	AF:RI:131	5A9-1::EP::(MNY)::130 5A9-2::EP::(MNY)::130
08:30 - 09:30	EP::(MNY)::130	LIBRARY / SELF STUDY	EP::(MNY)::131		AF:RI:131	
09:30 - 09:45	RECESS					
09:45 - 10:45	TOC:ARP:362	LIBRARY / SELF STUDY	TOC:ARP:130	PCE:329 DB	DAA::(MEG)::329	LIBRARY / SELF STUDY
10:45 - 11:45	DAA::(MEG)::362	LIBRARY / SELF STUDY	DADV:NB:130	SE:AHP:329	DAA::(MEG)::329	LIBRARY / SELF STUDY
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5A9-1::DAA::(AMJ)::130 5A9-2::DAA::(AMJ)::130	DADV:NB:130	5A9-1:DADV:NB:130 5A9-2:DADV:AHS:130	5A9-1::DAA::(AMJ)::328 5A9-2::DAA::(AMJ)::328
01:35 - 02:25	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		SE:AHP:130		

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Dr Meghana	MEG	mehanaghogare@gmail.com	29390
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717
303105306	Theory of Computation	TOC	Arnika Patel	ARP		
303105253	Software Engineering	SE	Mr. Abhinandan H. Patil	AHP	abhinandan.patil33488@paruluniversity.ac.in	33488
303105254	Software Engineering Laboratory	SE-L	Mr. Abhinandan H. Patil Mr. MAHENDRA DEORAOJI PATIL	AHP MDP	abhinandan.patil33488@paruluniversity.ac.in mahendra.patil33755@paruluniversity.ac.in	33488 33755
303105309	Enterprise Programming	EP	Mahendra Nath Yadav	MNY		
303105310	Enterprise Programming Laboratory	EP-L	Mahendra Nath Yadav	MNY		
303193304	Professionalism & Corporate Ethics	PCE	Dharna Bhatt	DB	dharna.bhatt20069@paruluniversity.ac.in	20069
303105314	Data Analytics and Data visualization	DADV	Dr. Nagnath	NB	nagnath.biradar33950@paruluniversity.ac.in	33950
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Nagnath Mr. Ajaykumar Harishbhai	NB AHS	nagnath.biradar33950@paruluniversity.ac.in Ajaykumarharishbhai21522@paruluniversity.ac.in	33950 31533
303105302	Azure Fundamentals	AF	RAJESH ISHWAR	RI	rajesh.ishwar34458@paruluniversity.ac.in	34458
CLASSROOM NO:	130,131,329,328				FACULTY	Aditi Jayswal
LAB/ TUTORIAL LOCATION:	130,131,328				REPRESENTATIVE / MFT	8485805417
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A10_CSE_2024-25					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	AF:AKG:132	5A10-1:SE:AHP:131 5A10-2:SE:F10:131	LIBRARY / SELF STUDY	DADV:NB:132	SE:AHP:132	5A10-1:DADV:NB:131 5A10-2:DADV:AHS:131
08:30 - 09:30	AF:AKG:132		LIBRARY / SELF STUDY	DADV:NB:132	SE:AHP:132	
09:30 - 09:45	RECESS					
09:45 - 10:45	LIBRARY / SELF STUDY	DAA::(NRP)::326	LIBRARY / SELF STUDY	DAA::(NRP)::130	DAA::(NRP)::130	DADV:NB:329
10:45 - 11:45	LIBRARY / SELF STUDY	TOC:SB:326	LIBRARY / SELF STUDY	(PCE) 130 FM	EP::(MNY)::130	EP::(MNY)::329
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	5A10-1:DAA(NRP)::130 5A10-2:DAA(NRP)::130	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5A10-1:EP::(MNY)::131 5A10-2:EP::(MNY)::131	SE:AHP:131	5A10-1:DAA::(NRP)::130 5A10-2:DAA::(NRP)::130
01:35 - 02:25		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		TOC:SB:131	

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Narasimha Pilla	NRP	narasimhaethics@gmail.com	27092
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Narasimha Pilla	NRP	narasimhaethics@gmail.com	27092
303105306	Theory of Computation	TOC	Mrs. SUJAYA BHATTACHARJEE	SB	Sujaya.bhattacharjee29571@paruluniversity.ac.in	29571
303105253	Software Engineering	SE	Mr. Abhinandan H. Patil	AHP	abhinandan.patil33488@paruluniversity.ac.in	33488
303105254	Software Engineering Laboratory	SE-L	Mr. Abhinandan H. Patil Keshav Kumar	AHP KR	abhinandan.patil33488@paruluniversity.ac.in keshavkumar.34839@paruluniversity.ac.in	33488 34839
303105309	Enterprise Programming	EP	Mahendra Nath Yadav	MNY		
303105310	Enterprise Programming Laboratory	EP-L	Mahendra Nath Yadav	MNY		
303193304	Professionalism & Corporate Ethics	PCE	Fedrick Mecwan	FM	fedrick.mecwan20035@paruluniversity.ac.in	20035
303105314	Data Analytics and Data visualization	DADV	Dr. Nagnath	NB	nagnath.biradar33950@paruluniversity.ac.in	33950
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Nagnath Mr. Ajaykumar Harishbhai	NB AHS	nagnath.biradar33950@paruluniversity.ac.in Ajaykumar.harishbhai.31532@paruluniversity.ac.in	33950 31533
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628
CLASSROOM NO:	130,131,132,326				FACULTY	Mr Ashish Dubey
LAB/ TUTORIAL LOCATION:	130,131				REPRESENTATIVE / MFT	7222989825
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A11_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	5A11-1:SE:MDP:131 5A11-2:SE:F9:131	TOC:AK:132	DADV:NB:132	LIBRARY / SELF STUDY	SE:MDP:133	AF:AKG:132	
08:30 - 09:30		EP::(MNY)::132	DADV:NB:132	LIBRARY / SELF STUDY	SE:MDP:133	AF:AKG:132	
09:30 - 09:45	RECESS						
09:45 - 10:45	(PCE) 329 SG	LIBRARY / SELF STUDY	DAA::(NRP):308	LIBRARY / SELF STUDY	5A11-1:DADV:NB:328 5A11-2:DADV:F2:328	EP::(MNY)::328	
10:45 - 11:45	DAA::(NRP)::329	LIBRARY / SELF STUDY	TOC:AK::308	LIBRARY / SELF STUDY		DAA::(NRP)::328	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	5A11-1::EP::(MNY)::329 5A11-2::EP::(MNY)::329	5A11-1::DAA::(NRP)::130 5A11-2::DAA::(NRP)::130	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5A11-1::DAA::(NRP)::329 5A11-2::DAA::(NRP)::329	DADV:NB:329	
01:35 - 02:25			LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		SE:MDP:329	
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Narasimha Pilla	NRP	narasimhaethics@gmail.com	27092	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Narasimha Pilla	NRP	narasimhaethics@gmail.com	27092	
303105306	Theory of Computation	TOC	Anurag Kewat	AK	anurag.kewat34668@paruluni versity.ac.in	34668	
303105253	Software Engineering	SE	Mr. MAHENDRA DEORAOJI PATIL	MDP	mahendra.patil33755@parulun iversity.ac.in	33755	
303105254	Software Engineering Laboratory	SE-L	Mr. MAHENDRA DEORAOJI PATIL Mr. Gyanendra Kumar Hansh	MDP GKH	mahendra.patil33755@parulun iversity.ac.in Gyanendra.singh33168@parul university.ac.in	33755 33168	
303105309	Enterprise Programming	EP	Mahendra Nath Yadav	MNY			
303105310	Enterprise Programming Laboratory	EP-L	Mahendra Nath Yadav	MNY			
303193304	Professionalism & Corporate Ethics	PCE	Sanket Gandhi	SG	sanket.gandhi14473@paruluni versity.ac.in	14473	
303105314	Data Analytics and Data visualization	DADV	Dr. Nagnath	NB	nagnath.biradar33950@parulu niversity.ac.in	33950	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Nagnath	NB AS	nagnath.biradar33950@parulu niversity.ac.in	33950	
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paru luniversity.ac.in	34628	
CLASSROOM NO:	130,132,328,329				FACULTY	Hetal Shah	
LAB/ TUTORIAL LOCATION:	130,328,329				REPRESENTATIVE / MFT	9624152545	
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal		

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A12_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	5A12-1:EP:JDD:133 5A12-2:EP:SS:133	5A12-1:DADV:BD:133 5A12-2:DADV:NB:133	5A12-1:DAA:MJR:133 5A12-2:DAA:CPP:133	EP:JDD:133	LIBRARY / SELF STUDY	5A12-1:DAA:MJR:133 5A12-2:DAA:CPP:133	
08:30 - 09:30				EP:JDD:133	LIBRARY / SELF STUDY		
09:30 - 09:45	RECESS						
09:45 - 10:45	SE:MDP:130	(PCE) 130 FM	LIBRARY / SELF STUDY	SE:MDP:201	LIBRARY / SELF STUDY	TOC:SB:130	
10:45 - 11:45	DADV:BD:130	SE:MDP:130	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	DAA:MJR:130	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	5A12-1:SE:MDP:131 5A12-2:SE:SS:131	DADV:BD:131	DADV:BD:131	TOC:SB:304	LIBRARY / SELF STUDY	AF:AKG:131	
01:35 - 02:25		DAA:MJR:131	DAA:MJR:131	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:AKG:131	
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Mr. Mohit Jagdishchandra Rathod	MJR	mohitkumar.rathod20807@paruluniversity.ac.in	20807	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Mr. Mohit Jagdishchandra Rathod Chandrasekar P	MJR CPP	mohitkumar.rathod20807@paruluniversity.ac.in chandrasekar.palanisamy34820@paruluniversity.ac.in	20807 34820	
303105306	Theory of Computation	TOC	Mrs. SUJAYA BHATTACHARJEE	SB	Sujaya.bhattacharjee29571@paruluniversity.ac.in	29571	
303105253	Software Engineering	SE	Mr. MAHENDRA DEORAOJI PATIL	MDP	mahendra.patil33755@paruluniversity.ac.in	33755	
303105254	Software Engineering Laboratory	SE-L	Mr. MAHENDRA DEORAOJI PATIL Suraj Singh	MDP SS	mahendra.patil33755@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	33755 34612	
303105309	Enterprise Programming	EP	Mrs. JANHVI DHAVALKUMAR DAVE	JDD	janhvi.dave33940@paruluniversity.ac.in	33940	
303105310	Enterprise Programming Laboratory	EP-L	Mrs. JANHVI DHAVALKUMAR DAVE Suraj Singh	JDD SS	janhvi.dave33940@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	33940 34612	
303193304	Professionalism & Corporate Ethics	PCE	Fedrick Mecwan	FM	fedrick.mecwan20035@paruluniversity.ac.in	20035	
303105314	Data Analytics and Data visualization	DADV	Mrs. BHARTI DUBEY	BD	bharti.dubey34662@paruluniversity.ac.in	34662	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Dr. Nagnath Mrs. BHARTI DUBEY	NB BD	nagnath.biradar33950@paruluniversity.ac.in bharti.dubey34662@paruluniversity.ac.in	33950 34662	
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628	
CLASSROOM NO:		133,131,130				FACULTY REPRESENTATIVE / MFT	
LAB/ TUTORIAL LOCATION:		131,133					
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A13_CSE_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	DADV:NP:134	5A13-1:EP:JDD:134 5A13-2:EP:MHJ:134	5A13-1:SE:GDN:134	5A13-1:DADV:NP:134	AF:AKG:134	LIBRARY / SELF STUDY
08:30 - 09:30	DADV:NP:134		5A13-2:SE:MDP:134	5A13-2:DADV:AHS:134	AF:AKG:134	LIBRARY / SELF STUDY
09:30 - 09:45	RECESS					
09:45 - 10:45	DAA:MRJ:131	DAA:MRJ:131	DADV:NP:131	LIBRARY / SELF STUDY	SE:F9:131	LIBRARY / SELF STUDY
10:45 - 11:45	PCE:131 SG	EP:JDD:131	DAA:MRJ:131	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	5A13-1:DAA:MRJ:132 5A13-2:DAA:CPP:132	SE:F9:132	SE:F9:132	5A13-1:DAA:MRJ:132 5A13-2:DAA:CPP:132	TOC:SB:358	LIBRARY / SELF STUDY
01:35 - 02:25		TOC:SB:132	EP:JDD:132		LIBRARY / SELF STUDY	LIBRARY / SELF STUDY

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Mr. Mohit Jagdishchandra Rathod	MJR	mohitkumar.rathod20807@paruluniversity.ac.in	20807
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Mr. Mohit Jagdishchandra Rathod Chandrasekar P	MJR CPP	mohitkumar.rathod20807@paruluniversity.ac.in chandrasekar.palanisamy34820@paruluniversity.ac.in	20807 34820
303105306	Theory of Computation	TOC	Mrs. SUJAYA BHATTACHARJEE	SB	Sujaya.bhattacharjee29571@paruluniversity.ac.in	29571
303105253	Software Engineering	SE	Mr. Gyanendra Kumar Hansh	GKH	Gyanendra.singh33168@paruluniversity.ac.in	33168
303105254	Software Engineering Laboratory	SE-L	Mr. MAHENDRA DEORAOJI PATIL Ms. Gayatri Devraj Naidu	MDP GDN	mahendra.pati33755@paruluniversity.ac.in gayathri.naidu26623@paruluniversity.ac.in	33755 26623
303105309	Enterprise Programming	EP	Mrs. JANHVI DHAVALKUMAR DAVE	JDD	janhvi.dave33940@paruluniversity.ac.in	33940
303105310	Enterprise Programming Laboratory	EP-L	Mrs. JANHVI DHAVALKUMAR DAVE Md. Jahangir Hussain	JDD MJH	janhvi.dave33940@paruluniversity.ac.in mdjahangir.hussain34954@paruluniversity.ac.in	33940 34954
303193304	Professionalism & Corporate Ethics	PCE	Sanket Gandhi	SG	sanket.gandhi14473@paruluniversity.ac.in	14473
303105314	Data Analytics and Data visualization	DADV	Mr. Nitin Pal	NP	nitin.pal34737@paruluniversity.ac.in	34737
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr. Nitin Pal Mr. Ajaykumar Harishbhai Solanki	NP AHS	nitin.pal34737@paruluniversity.ac.in Ajaykumar.solanki31522@paruluniversity.ac.in	34737 31533
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628
CLASSROOM NO:		134,132,131			FACULTY REPRESENTATIVE / MFT	Mr Pulkesh Roy
LAB/ TUTORIAL LOCATION:		134,132				6295283215
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A14_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	LIBRARY / SELF STUDY	5A14-1:SE:GKH:302 5A14-2:SE:MDP:302	5A14-1:EP:JDD:302 5A14-2:EP:SS:302	5A14-1:DAA:KPS:302 5A14-2:DAA:CPP:302	5A14-1:DAA:KPS:302 5A14-2:DAA:CPP:302	EP:JDD:134	
08:30 - 09:30	LIBRARY / SELF STUDY					EP:JDD:134	
09:30 - 09:45	RECESS						
09:45 - 10:45	LIBRARY / SELF STUDY	DADV:AS:132	5A14-1:DADV:AS:132 5A14-2:DADV:AHS:132	SE:SSD:131	LIBRARY / SELF STUDY	TOC:ARP:131	
10:45 - 11:45	LIBRARY / SELF STUDY	PCE:132 JM		DAA:MRJ:131	LIBRARY / SELF STUDY	SE:SSD:131	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	LIBRARY / SELF STUDY	DAA:MRJ:133	AF:AKG:133	DADV:AS:133	DADV:AS:132	LIBRARY / SELF STUDY	
01:35 - 02:25	LIBRARY / SELF STUDY	SE:SSD:133	AF:AKG:133	TOC:ARP:133	DAA:MRJ:132	LIBRARY / SELF STUDY	
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Mr. Mohit Jagdishchandra Rathod	MJR	mohitkumar.rathod20807@paruluniversity.ac.in	20807	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	KUWAR PANKAJ SIDDHARTH Chandrasekar P	KPS CPP	pankaj.kunwar34357@paruluniversity.ac.in chandrasekar.palanisamy34820 @paruluniversity.ac.in	34357 34820	
303105306	Theory of Computation	TOC	Arnika Patel	ARP			
303105253	Software Engineering	SE	Mrs. Shubhangi Sagarkumar Dhaygude	SSD	shubhangi.dhaygude25850@paruluniversity.ac.in	25850	
303105254	Software Engineering Laboratory	SE-L	Mr. Gyanendra Kumar Hansh Mr. MAHENDRA DEORAOJI PATIL	GKH MDP	Gyanendra.singh33168@parul university.ac.in mahendra.patil33755@paruluniversity.ac.in	33168 33755	
303105309	Enterprise Programming	EP	Mrs. JANHVI DHAVALKUMAR DAVE	JDD	janhvi.dave33940@paruluniversity.ac.in	33940	
303105310	Enterprise Programming Laboratory	EP-L	Mrs. JANHVI DHAVALKUMAR DAVE Suraj Singh	JDD SS	janhvi.dave33940@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	33940 34612	
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@paruluniversity.ac.in	26794	
303105314	Data Analytics and Data visualization	DADV	Aditya Kumar Singh	AS	aditya.singh34812@paruluniversity.ac.in	34812	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Aditya Kumar Singh Mr. Ajaykumar Harishbhai Solanki	AS AHS	Ajaykumar.solanki31533@paruluniversity.ac.in	31533	
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628	
CLASSROOM NO:		302,134,132				FACULTY REPRESENTATIVE / MFT	
LAB/ TUTORIAL LOCATION:		302,132					
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A15_CSE_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	5A15-1:DADV:AS:302 5A15-2:DADV:BD:302	LIBRARY / SELF STUDY	DADV:AS:372	DADV:AS:372	5A15-1:SE:KR:372 5A15-2:SE:GKH:372	EP:MJH:302
08:30 - 09:30		LIBRARY / SELF STUDY	SE:KR:372	DADV:AS:372		EP:MJH:302
09:30 - 09:45	RECESS					
09:45 - 10:45	DAA:CPP:132	LIBRARY / SELF STUDY	SE:KR:133	AF:AKG:132	SE:F10:133	LIBRARY / SELF STUDY
10:45 - 11:45	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	PCE:133 FM	AF:AKG:132	DAA:CPP:133	LIBRARY / SELF STUDY
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	TOC:ARP:309	LIBRARY / SELF STUDY	5A15-1:DAA:MMN:134 5A15-2:DAA:SS:134	5A15-1:DAA:MMN:134 5A15-2:DAA:SS:134	DAA:CPP:134	5A15-1:EP:MJH:132 5A15-2:EP:JDD:132
01:35 - 02:25	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY			TOC:ARP:134	

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Chandrasekar P	CPP	chandrasekar.palanisamy34820@paruluniversity.ac.in	34820
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Ms. Megha Mayavanshi Suraj Singh	MNM SS	Megha.mayavanshi32038@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	32038 34612
303105306	Theory of Computation	TOC	Arnika Patel	ARP		
303105253	Software Engineering	SE	Keshav Kumar	KR	keshavkumar.34839@paruluniversity.ac.in	34839
303105254	Software Engineering Laboratory	SE-L	Keshav Kumar Mr. Gyanendra Kumar Hansh	KR GKH	keshavkumar.34839@paruluniversity.ac.in Gyanendra.singh33168@paruluniversity.ac.in	34839
303105309	Enterprise Programming	EP	Md. Jahangir Hussain	MJH	mdjahangir.hussain34954@paruluniversity.ac.in	34954
303105310	Enterprise Programming Laboratory	EP-L	Md. Jahangir Hussain Mrs. JANHVI DHAVALKUMAR DAVE	MJH JDD	mdjahangir.hussain34954@paruluniversity.ac.in janhvi.dave33940@paruluniversity.ac.in	33940 34954
303193304	Professionalism & Corporate Ethics	PCE	Fedrick Mecwan	FM	fedrick.mecwan20035@paruluniversity.ac.in	20035
303105314	Data Analytics and Data visualization	DADV	Aditya Kumar Singh	AS	aditya.singh34812@paruluniversity.ac.in	34820
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Aditya Kumar Singh Mrs. BHARTI DUBEY	AS BD	aditya.singh34812@paruluniversity.ac.in bharti.dube24662@paruluniversity.ac.in	34820 34662
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628
CLASSROOM NO:		372, 132, 302, 134			FACULTY REPRESENTATIVE / MFT	Mr Vaibhav Shrivastav
LAB/ TUTORIAL LOCATION:		302, 134, 132, 372				9451302810
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A16_CSE_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	DAA:CPP:360	5A16-1:DADV:AS:372 5A16-2:DADV:AHS:372	LIBRARY / SELF STUDY	5A16-1:DAA:MNM:303 5A16-2:DAA:SS:303	5A16-1:EP:MHJ:303 5A16-2:EP:JDD:303	5A16-1:SE:KS:372 5A16-2:SE:GKH:372
08:30 - 09:30	SE:KR:360		LIBRARY / SELF STUDY			
09:30 - 09:45	RECESS					
09:45 - 10:45	DADV:AS:372	TOC:AK:133	LIBRARY / SELF STUDY	DADV:AS:133	AF:AKG:134	DAA:CPP:133
10:45 - 11:45	SE:KR:372	(PCE) 133 FM	LIBRARY / SELF STUDY	DAA:CPP:133	AF:AKG:134	DADV:AS:133
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	TOC:AK:302	EP:MHJ:302	5A16-1:DAA:MNM:134 5A16-2:DAA:SS:134
01:35 - 02:25	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	EP:MHJ:302	SE:KR:302	

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Chandrasekar P	CPP	chandrasekar.palanisamy34820@paruluniversity.ac.in	34820
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Ms. Megha Mayavanshi Suraj Singh	MNM SS	Megha.mayavanshi32038@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	32038 34612
303105306	Theory of Computation	TOC	Anurag Kewat	AK	anurag.kewat34668@paruluniversity.ac.in	34668
303105253	Software Engineering	SE	Keshav Kumar	KR	keshavkumar.34839@paruluniversity.ac.in	34839
303105254	Software Engineering Laboratory	SE-L	Keshav Kumar Mr. Gyanendra Kumar Hansh	KR GKH	keshavkumar.34839@paruluniversity.ac.in Gyanendra.singh33168@paruluniversity.ac.in	34839 33168
303105309	Enterprise Programming	EP	Md. Jahangir Hussain	MJH	mdjahangir.hussain34954@paruluniversity.ac.in	34954
303105310	Enterprise Programming Laboratory	EP-L	Md. Jahangir Hussain Mrs. JANHVI DHAVALKUMAR DAVE	MJH JDD	mdjahangir.hussain34954@paruluniversity.ac.in janhvi.dave33940@paruluniversity.ac.in	33940 34954
303193304	Professionalism & Corporate Ethics	PCE	Fedrick Mecwan	FM	fedrick.mecwan20035@paruluniversity.ac.in	20035
303105314	Data Analytics and Data visualization	DADV	Aditya Kumar Singh	AS	aditya.singh34812@paruluniversity.ac.in	34812
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Aditya Kumar Singh Mr. Ajaykumar Harishbhai Solanki	AS AHS	aditya.singh34812@paruluniversity.ac.in Ajaykumar.solanki31533@paruluniversity.ac.in	34812 31533
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628
CLASSROOM NO:		360,303,372, 133,134			FACULTY REPRESENTATIVE / MFT	Chirag Solanki
LAB/ TUTORIAL LOCATION:		303,372,134				8140490081
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A17_CSE_2024-25					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	EP:MHJ:372	AF:AKG:360	5A17-1:DAA:KPS:303 5A17-2:DAA:MNM:303	LIBRARY / SELF STUDY	5A17-1:DADV:NP:361 5A17-2:DADV:BD:361	DADV:NP:201
08:30 - 09:30	EP:MHJ:372	AF:AKG:360		LIBRARY / SELF STUDY		DADV:NP:201
09:30 - 09:45	RECESS					
09:45 - 10:45	DAA:KPS:133	LIBRARY / SELF STUDY	SE:GKH:134	LIBRARY / SELF STUDY	(PCE) 132 DB	5A17-1:DAA:KPS:132 5A17-2:DAA:MNM:132
10:45 - 11:45	SE:GKH:133	LIBRARY / SELF STUDY	TOC:PSB:134	LIBRARY / SELF STUDY	DADV:NP:132	
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	5A17-1:EP:MHJ:133 5A17-2:EP:JDD:133	5A17-1:SE:KR:134 5A17-2:SE:MDP:134	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	SE:GKH:133	TOC:PSB:133
01:35 - 02:25			LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	DAA:KPS:133	DAA:KPS:133

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	KUWAR PANKAJ SIDDHARTH	KPS	pankaj.kunwar34357@paruluniversity.ac.in	34357
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	KUWAR PANKAJ SIDDHARTH Ms. Megha Mayavanshi	KPS MNM	pankaj.kunwar34357@paruluniversity.ac.in Megha.mayavanshi32038@paruluniversity.ac.in	34357
303105306	Theory of Computation	TOC	Mr. Prolay Biswas	PSB	prolay.biswas28854@paruluniversity.ac.in	28854
303105253	Software Engineering	SE	Mr. Gyanendra Kumar Hansh	GKH	Gyanendra.singh33168@paruluniversity.ac.in	33168
303105254	Software Engineering Laboratory	SE-L	Keshav Kumar Mr. MAHENDRA DEORAOJI PATIL	KR MDP	keshavkumar.34839@paruluniversity.ac.in mahendra.pati33755@paruluniversity.ac.in	34839 33755
303105309	Enterprise Programming	EP	Md. Jahangir Hussain	MJH	mdjahangir.hussain34954@paruluniversity.ac.in	34954
303105310	Enterprise Programming Laboratory	EP-L	Md. Jahangir Hussain Mrs. JANHVI DHAVALKUMAR DAVE	MJH JDD	mdjahangir.hussain34954@paruluniversity.ac.in janhvi.dave33940@paruluniversity.ac.in	33940 34954
303193304	Professionalism & Corporate Ethics	PCE	Dharna Bhatt	DB	dharna.bhatt20069@paruluniversity.ac.in	20069
303105314	Data Analytics and Data visualization	DADV	Mr. Nitin Pal	NP	nitin.pal34737@paruluniversity.ac.in	34737
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr. Nitin Pal Mrs. BHARTI DUBEY	NP BD	nitin.pal34737@paruluniversity.ac.in bharti.dubey34662@paruluniversity.ac.in	34737 34662
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628

CLASSROOM NO:	372, 360, 361, 134 , 133, 303	FACULTY	Vaibhavi Parikh
LAB/ TUTORIAL LOCATION:	132, 133, 134, 303	REPRESENTATIVE / MFT	8849995938
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal	Ms SUMITRA MENARIA	Dr. Swapnil M Parikh	
Time Table Coordinator	Head of Department	Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5A18_CE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	DAA:KPS:362	DADV:NP:370	EP:MJH:361	SE:GKH:361	LIBRARY / SELF STUDY	5A18-1:DAA:KPS:202 5A18-2:DAA:SS:202	
08:30 - 09:30	DAA:KPS:362	DAA:KPS:370	SE:GKH:361	EP:MJH:361	LIBRARY / SELF STUDY		
09:30 - 09:45	RECESS						
09:45 - 10:45	SE:GKH:134	5A18-1:EP:MJH:134 5A18-2:EP:SS:134	TOC:AK:201	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:AKG:134	
10:45 - 11:45	DADV:NP:134		LIBRARY / SELF STUDY	PCE:134 JM	LIBRARY / SELF STUDY	DADV:NP:134	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	AF:AKG:134	5A18-1:DAA:KPS:302 5A18-2:DAA:SS:302	5A18-1:DADV:NP:302 5A18-2:DADV:AHS:302	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5A18-1:SE:GKH:302 5A18-2:SE:KR:302	
01:35 - 02:25	TOC:AK:134			LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	KUWAR PANKAJ SIDDHARTH	KPS	pankaj.kunwar34357@paruluniversity.ac.in	34357	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	KUWAR PANKAJ SIDDHARTH Suraj Singh	KPS SS	pankaj.kunwar34357@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	34357 34612	
303105306	Theory of Computation	TOC	Anurag Kewat	AK	anurag.kewat34668@paruluniversity.ac.in	34668	
303105253	Software Engineering	SE	Mr. Gyanendra Kumar Hansh	GKH	Gyanendra.singh33168@paruluniversity.ac.in	33168	
303105254	Software Engineering Laboratory	SE-L	Mr. Gyanendra Kumar Hansh Keshav Kumar	GKH KR	Gyanendra.singh33168@paruluniversity.ac.in keshavkumar.34839@paruluniversity.ac.in	33168 34839	
303105309	Enterprise Programming	EP	Md. Jahangir Hussain	MJH	mdjahangir.hussain34954@paruluniversity.ac.in	34954	
303105310	Enterprise Programming Laboratory	EP-L	Md. Jahangir Hussain Suraj Singh	MJH SS	mdjahangir.hussain34954@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	34954 34612	
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@paruluniversity.ac.in	26794	
303105314	Data Analytics and Data visualization	DADV	Mr. Nitin Pal	NP	nitin.pal34737@paruluniversity.ac.in	34737	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr. Nitin Pal Mr. Ajaykumar Harishbhai Solanki	NP AHS	nitin.pal34737@paruluniversity.ac.in Ajaykumar.solanki.21522@paruluniversity.ac.in	34737 31533	
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628	
CLASSROOM NO:		362,370, 361, 202, 134, 302				FACULTY REPRESENTATIVE / MFT	
LAB/ TUTORIAL LOCATION:		302, 202, 134					
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal		

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 5TH YEAR					
SEMESTER: 9TH		LEVEL: UG					
PROGRAM NAME: INT.B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 9A18_INT_CSE_2024-25					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
07:30 - 8:30	DAA:KPS:362	DADV:NP:370	EP:MJH:361	SE:GKH:361	LIBRARY / SELF STUDY	9A18-2:DAA:SS:202	
08:30 - 09:30	DAA:KPS:362	DAA:KPS:370	SE:GKH:361	EP:MJH:361	LIBRARY / SELF STUDY		
09:30 - 09:45	RECESS						
09:45 - 10:45	SE:GKH:134	9A18-2:EP:SS:134	TOC:AK:201	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	AF:AKG:134	
10:45 - 11:45	DADV:NP:134		LIBRARY / SELF STUDY	PCE:134 JM	LIBRARY / SELF STUDY	DADV:NP:134	
11:45 - 12:45	LUNCH BREAK						
12:45 - 01:35	AF:AKG:134	9A18-2:DAA:SS:302	9A18-2:DADV:AHS:302	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	9A18-2:SE:KR:302	
01:35 - 02:25	TOC:AK:134			LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		
SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	KUWAR PANKAJ SIDDHARTH	KPS	pankaj.kunwar34357@paruluniversity.ac.in	34357	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	KUWAR PANKAJ SIDDHARTH Suraj Singh	KPS SS	pankaj.kunwar34357@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	34357 34612	
303105306	Theory of Computation	TOC	Anurag Kewat	AK	anurag.kewat34668@paruluniversity.ac.in	34668	
303105253	Software Engineering	SE	Mr. Gyanendra Kumar Hansh	GKH	Gyanendra.singh33168@paruluniversity.ac.in	33168	
303105254	Software Engineering Laboratory	SE-L	Mr. Gyanendra Kumar Hansh Keshav Kumar	GKH KR	Gyanendra.singh33168@paruluniversity.ac.in keshavkumar.34839@paruluniversity.ac.in	33168 34839	
303105309	Enterprise Programming	EP	Md. Jahangir Hussain	MJH	mdjahangir.hussain34954@paruluniversity.ac.in	34954	
303105310	Enterprise Programming Laboratory	EP-L	Md. Jahangir Hussain Suraj Singh	MJH SS	mdjahangir.hussain34954@paruluniversity.ac.in suraj.singh34612@paruluniversity.ac.in	34954 34612	
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@paruluniversity.ac.in	26794	
303105314	Data Analytics and Data visualization	DADV	Mr. Nitin Pal	NP	nitin.pal34737@paruluniversity.ac.in	34737	
303105315	Data Analytics and Data visualization Laboratory	DADV-L	Mr. Nitin Pal Mr. Ajaykumar Harishbhai Solanki	NP AHS	nitin.pal34737@paruluniversity.ac.in Ajaykumar.solanki.21522@paruluniversity.ac.in	34737 31533	
303105302	Azure Fundamentals	AF	Dr. Abhigyan Ganguly	AKG	abhigyan.ganguly34628@paruluniversity.ac.in	34628	
CLASSROOM NO:		362,370, 361, 202, 134, 302				FACULTY	
LAB/ TUTORIAL LOCATION:		302, 202, 134				REPRESENTATIVE / MFT	
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5B1_AI_2024-25					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	AF:RI:370	5B1-1::EP::(SOM)::371 5B1-2::EP::(SOM)::371	AI:SKS:362	AI:SKS:362	DAA::(AMJ)::362	LIBRARY / SELF STUDY
08:30 - 09:30	AF:RI:370		AI:SKS:362	TOC:PSB:362	TOC:PSB:362	LIBRARY / SELF STUDY
09:30 - 09:45	RECESS					
09:45 - 10:45	EP::(SOM)::302	DAA::(AMJ)::302	DAA::(AMJ)::302	5B1-1::DAA::(AMJ)::303 5B1-2::DAA::(AMJ)::303	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY
10:45 - 11:45	302 QR-RL	302 QR-RL	302 QR-RL		EP::(SOM)::311	LIBRARY / SELF STUDY
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	5B1-1::DAA::(AMJ)::302 5B1-2::DAA::(AMJ)::302	5B1-1:AI:VK:372 5B1-2:AI:SKS:372	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY
01:35 - 02:25			LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	PCE-201 JM	LIBRARY / SELF STUDY

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Aamir Jarda	AMJ	aamir59.a@gmail.com	29717
303105306	Theory of Computation	TOC	Mr. Prolay Biswas	PSB	prolay.biswas28854@paruluni versity.ac.in	28854
303105307	Artificial Intelligence	AI	Ms. Surabhi Solanki	SKS	surabhi.solanki33423@parulu niversity.ac.in	33423
303105308	Artificial Intelligence Laboratory	AI-L	Ms. Surabhi Solanki Dr. Vikram Kumar	SKS VK	surabhi.solanki33423@parulu niversity.ac.in vikram.kumar34279@paruluni versity.ac.in	33423 34279
303105309	Enterprise Programming	EP	Soumen Mukherjee	SOM		
303105310	Enterprise Programming Laboratory	EP-L	Soumen Mukherjee	SOM		
303193304	Professionalism & Corporate Ethics	PCE	Jigeesha Mujumdar	JM	jigeesha.mujumdar26794@par uluniversity.ac.in	26794
303105311	Quant, and Reasoning	QR	RIDDHI LIMBACHIYA	RL	riddhiben.limbachiya31130@p aruluniversity.ac.in	31130
303105302	Azure Fundamentals	AF	F14	RI	rajesh.ishwar34458@paruluni versity.ac.in	34458
CLASSROOM NO:		362, 370, 372, 302			FACULTY	Mr Apoorva Gurjar
LAB/ TUTORIAL LOCATION:		372, 302, 371			REPRESENTATIVE / MFT	7987950970
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY					 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY						
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY						
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR				
SEMESTER: 5TH		LEVEL: UG				
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5B2_AI_2024-25				

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5B2-1::DAA::(NRP)::370 5B2-2::DAA::(NRP)::370	DAA::(NRP)370	EP::(MNY)::370	5B2-1::DAA::(NRP)::203-A 5B2-2::DAA::(NRP)::203-A
08:30 - 09:30	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		DAA::(NRP)::370	DAA::(NRP)::370	
09:30 - 09:45			RECESS			
09:45 - 10:45	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	5B2-1::EP::(MNY)::372 5B2-2::EP::(MNY)::372	AI:SKS:302	TOC:AK:372	AI:SKS:371
10:45 - 11:45	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY		EP::(MNY)::302	PCE:372 FM	AF:SKS:371
11:45 - 12:45			LUNCH BREAK			
12:45 - 01:35	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	372 QR-RL	372 QR-RL	303 QR-RL	5B2-1:AI:SKS:372 5B2-2:AI:VK:372
01:35 - 02:25	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	TOC:AK:372	AF:SKS:372	AI:SKS:303	

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID	
303105218	Design and Analysis of Algorithms	DAA	Narasimha Pilla	NRP	narasimhaethics@gmail.com	27092	
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Narasimha Pilla	NRP	narasimhaethics@gmail.com	27092	
303105306	Theory of Computation	TOC	Anurag Kewat	AK	anurag.kewat34668@paruluniversity.ac.in	34668	
303105307	Artificial Intelligence	AI	Ms. Surabhi Solanki	SKS	surabhi.solanki33423@paruluniversity.ac.in	33423	
303105308	Artificial Intelligence Laboratory	AI-L	Ms. Surabhi Solanki Dr. Vikram Kumar	SKS VK	surabhi.solanki33423@paruluniversity.ac.in vikram.kumar34279@paruluniversity.ac.in	33423 34279	
303105309	Enterprise Programming	EP	Mahendra Nath Yadav	MNY			
303105310	Enterprise Programming Laboratory	EP-L	Mahendra Nath Yadav	MNY			
303193304	Professionalism & Corporate Ethics	PCE	Fedrick Mecwan	FM	fedrick.mecwan20035@paruluniversity.ac.in	20035	
303105311	Quant, and Reasoning	QR	RIDDHI LIMBACHIYA	RL	riddhiben.limbachiya31130@paruluniversity.ac.in	31130	
303105302	Azure Fundamentals	AF	Ms. Surabhi Solanki	SKS	surabhi.solanki33423@paruluniversity.ac.in	33423	
CLASSROOM NO:		370, 372, 203-A			FACULTY REPRESENTATIVE / MFT	Mr Pankaj Kumar Nirala 9950689011	
LAB/ TUTORIAL LOCATION:		370, 372, 203-A					
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator			Ms SUMITRA MENARIA Head of Department		Dr. Swapnil M Parikh Principal		

PARUL UNIVERSITY						 Parul® University NAAC GRADE A++	
FACULTY NAME: FACULTY OF ENGINEERING & TECHNOLOGY							
INSTITUTE NAME: PARUL INSTITUTE OF TECHNOLOGY							
ACADEMIC YEAR: 2024-25		YEAR: 3RD YEAR					
SEMESTER: 5TH		LEVEL: UG					
PROGRAM NAME: B.TECH COMPUTER SCIENCE ENGINEERING		DIVISION: 5C1_CS_2024-25					

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
07:30 - 8:30	MFW Lab:UT:371	LIBRARY / SELF STUDY	DAA Lab:PK:371	DAA Lab:PK:371	GCF:AK:371	MAS Lab:RB:203-B
08:30 - 09:30		LIBRARY / SELF STUDY			GCF:AK:371	
09:30 - 09:45	RECESS					
09:45 - 10:45	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	MAS:RB:303	DAA:PK:372	DAA:PK:302	VQR:SG:302
10:45 - 11:45	MFW:UT:132	LIBRARY / SELF STUDY	VQR:SG:303	WAS:SG:372	MFW:UT:302	WAS:SG:302
11:45 - 12:45	LUNCH BREAK					
12:45 - 01:35	LIBRARY / SELF STUDY	LIBRARY / SELF STUDY	MAS:RB:303	MFW:UT:303	WAS Lab:SG:372	DAA:PK:313
01:35 - 02:25	WAS:SG:360	LIBRARY / SELF STUDY	303 PCE SG	VQR:SG:303		MAS:RB:313

SUBJECT_CODE	SUBJECT_NAME	SHORT_NAME	FACULTY_FULL_NAME	FACULTY_SHORT_NAME	EMAIL_ID	MIS_ID
303105218	Design and Analysis of Algorithms	DAA	Parmjeet Kaur	PK	parmjeet.kaur@techdefence.co m	31848
303105219	Design and Analysis of Algorithms Laboratory	DAA-L	Parmjeet Kaur	PK	parmjeet.kaur@techdefence.co m	31848
303105320	Web Application Security	WAS	Shakti Gaur	SG	shakti.gaur@techdefence.com	29796
303105321	Web Application Security Laboratory	WAS-L	Shakti Gaur	SG	shakti.gaur@techdefence.com	29796
303105322	Mobile Application security	MAS	Rakshit Bairi	RB	rakshit.bairi@techdefence.co m	27692
303105323	Mobile Application security Laboratory	MAS-L	Rakshit Bairi	RB	rakshit.bairi@techdefence.co m	27692
303105324	Metasploit-Frame work	MFW	Upasana Tripathi	UT	upasana.tripathi@techdefence. com	29795
303105325	Metasploit-Frame work Laboratory	MFW-L	Upasana Tripathi	UT	upasana.tripathi@techdefence. com	29795
303193304	Professionalism & Corporate Ethics	PCE	Sanket Gandhi	SG	sanket.gandhi14473@paruluni versity.ac.in	14473
303105311	Quant, and Reasoning	QR	Shakti Gaur	SG	shakti.gaur@techdefence.com	29796
303105302	Azure Fundamentals	AF	Amrish Khari	AK	amrish.khari@techdefence.co m	31851
CLASSROOM NO:	371, 302, 203-B 313, 372				FACULTY REPRESENTATIVE / MFT	Mr Asheesh Dwivedi
LAB/ TUTORIAL LOCATION:	371, 302, 203-B 313, 372					7355529462
Mr. Utpalkumar Bhupendrabhai Patel Mr. Meetkumar Manojkumar Patel Ms Aditi Jaiswal Time Table Coordinator		Ms SUMITRA MENARIA Head of Department			Dr. Swapnil M Parikh Principal	

PARUL UNIVERSITY

R/Circular-863/2023-24

Office of the Registrar
December 6, 2023

CIRCULAR

Sub: List of Holidays for the Calendar Year-2024

Ref: Orders of the President

The following is the list of General Holidays for the year 2024.

Sr.No.	Name of Public Holiday	Date	Day
1	Vaasi Uttarayan	January 15, 2024	Monday
2	Republic Day	January 26, 2024	Friday
3	Maha Shivratri (Maha Vad 13)	March 08, 2024	Friday
4	Holi 2 nd Day-Dhuleti	March 25, 2024	Monday
5	Ramjan-Eid (Eid-Ul-Fitra)	April 11, 2024	Thursday
6	Shree Ram Navmi	April 17, 2024	Wednesday
7	Independence Day / Parsi New Year Day-Pateti	August 15, 2024	Thursday
8	Raksha Bandhan	August 19, 2024	Monday
9	Janmashtami (Shravan Vad-28)	August 26, 2024	Monday
10	Samvatsari (Chaturthi Paksha)/ Ganesh Chaturthi	September 7, 2024	Saturday
11	Mahatma Gandhi's Birthday	October 2, 2024	Wednesday
12	Dusshera (Vijaya Dashmi)	October 12, 2024	Saturday
13	Diwali /Sardar Vallabhbhai Patel's Birthday	October 31, 2024	Thursday
14	Vikram Samvant New Year Day	November 2, 2024	Saturday
15	Christmas	December 25, 2024	Wednesday

Not Declared as Holiday due to Sunday

1	Makar Sankranti	January 14, 2024	Sunday
2	Dr. Baba Saheb Ambedkar's Birthday	April 14, 2024	Sunday
3	Mahavir Janma Kalyanak	April 21, 2024	Sunday
4	Bhai Bij	November 3, 2024	Sunday

Restricted Holidays

1	Vishvakarma Jayanti (Maha Sud-13)	February 22, 2024	Thursday
2	Good Friday	March 29, 2024	Friday
3	Gudi Padvo	April 9, 2024	Tuesday
4	Cheti Chand	April 10, 2024	Wednesday
5	Bhagvan Shree Parshuram Jayanti (Vaishakh Sud - 3)	May 10, 2024	Friday
6	Budhdha Purnima	May 23, 2024	Thursday
7	Bakri-Eid (Eid-Ul-Adha)	June 17, 2024	Monday
8	Muharram (Ashoora)	July 17, 2024	Wednesday
9	Shravan Vad-12 (Paryusan 1 st Day) (Chaturthi Paksha)	August 31, 2024	Saturday

10	Eid-e-Meeladunnabi (Prophet Mohammad's Birthday)	September 16, 2024	Monday
11	Guru Nanak's Birthday	November 15, 2024	Friday

Note:

- In addition to these holidays, staff members can utilize two days of Restricted Holidays from among the list given above.
- In cases of emergency, HOIs have the liberty to call for the duty the staff members who avail RHs
- Above holidays declared as Public Holidays may be cancelled/ adjusted by the University in case of unavoidable circumstances.
- Above holidays will not be applicable for staffs working in Medical/AYUSH hospitals in the university. The list of holidays for the year 2024 for the said staff will be notified separately by the Medical Director.



Registrar

To,

- 1) Deans of Faculties
- 2) Dean, Doctoral Studies & Research
- 3) Dean, Students' Welfare
- 4) HOIs of Colleges
- 5) Controller of Examinations
- 6) Chief Technology Officer
- 7) Chief Librarian
- 8) Dean, Students' Welfare
- 9) Director, IQAC/CDC / EDC / IRC / ISAC / AFMC / RDC/ Marketing / Continuing Education and Online Programmes Cell / EDP / CEC / Alumni Association / Events Cell / Centre for Human Resources Development/ Security/ Physical Education and Sports/ Internship Cell/ Visiting Parents Cell/ ICT Cell/ Learning and Academic Enrichment/ Faculty Updation (CSE/IT/CA)/ CMIE/ Partnership (with Institutes of National Importance)
- 10) Executive/ Academic Directors
- 11) Head, Central Administration / Accounts / Purchase/ Transport/ MIS / Students' Section

Submitted to,

- 1) The President
- 2) Dr.Parul Patel, Vice President (Student Affairs and General Administration) and Chairperson, Admissions Committee, Parul University
- 3) Dr.Geetika Madan Patel, Vice President (Quality, Research and Health Sciences), Parul University
- 4) Dr.Komal Patel, Vice President (Medical and Paramedical Sciences), Parul University
- 5) The Provost

Weekly / Mid Semester / Exam Schedule or Information

Max/Min External Exam	Marks: 60 Marks External Exam	
Max/Min Internal Exam	Marks: 40 Marks Internal Exam	
Particulars	Dates of Examination	Viva Exam
Mid Exam Dates	05/08/2024	21/10/2024 to 26/10/2024
CDC & Face Impact Training & Test Date inform later		
Weekly Exam Date	As per Academic Calendar & Starts from 29/06/2024	
End Semester Exam	11/11/2024 to 23/11/2024	

PARUL INSTITUTE OF TECHNOLOGY
FACULTY OF ENGINEERING AND TECHNOLOGY
PARUL INSTITUTE OF TECHNOLOGY
COMPUTER SCIENCE AND ENGINEERING DEPARTMENT

A.C.Y. : 2024-25 FR LIST WITH COORDINATORS

Sr. No	Semester	Division	Branch	Name	Contact Number	Mail Id	Co-Coordinator/ student feedback officer	Coordinator (main)	
1	5	5A1	CSE	Meenu Maam	9558473396	meenu.khan29326@paruluniversity.ac.in	Riddhi A Mehta 9712269946 riddhi. mehta17528@paruluniversity.ac.in	Dr Praveen Patidar 9893525748 pravin. patidar33727@paruluniversity.ac.in	
2		5A2	CSE	Yachna Modi	8866856585	yachana.modi21129@paruluniversity.ac.in			
3		5A3	CSE	Jigeesh Majumdar	7778038942	jigeesha.majumdar26794@paruluniversity.ac.in			
4		5A4	CSE	Jasmin Mansuri	9574023949	jasminbanu.mansuri17553@paruluniversity.ac.in			
5		5A5	CSE	Ms Kiran Sharma	8959675064	Kiran.sharma34092@paruluniversity.ac.in			
6		5A6	CSE	Riddhi A Mehta	9712269946	riddhi.mehta17528@paruluniversity.ac.in			
7		5A7	CSE	Arnika Patel	8160109354	Patel.arnika35058@paruluniversity.ac.in			
8		5A8	CSE	Shweta Gupta	9409289590	Shweta.gupta33402@paruluniversity.ac.in	Mohit Rathod 9978524578 mohitkumar. rathod20807@paruluniversity.ac.in		
9		5A9	CSE	Aditi Jayswal	8485805417	aditi.jaiswal31545@paruluniversity.ac.in			
10		5A10	CSE	Mr Ashish Dubey	7222989825	Ashish.dubey32524@paruluniversity.ac.in			
11		5A11	CSE	Hetal Shah	9624152545	hetal.shah21448@paruluniversity.ac.in			
12		5A12	CSE	Ms Jhanvi Dave	8320178350	jhanvi.dave33940@paruluniversity.ac.in			
13		5A13	CSE	Mr Pulkesh Roy	6295283215	Pulkesh.roy33834@paruluniversity.ac.in	Vaibhavi Parikh 8849995938 vaibhavi. parikh25851@paruluniversity.ac.in		
14		5A14	CSE	Ms Rashmi Pandey	7898328035	Rashmi.pandey33115@paruluniversity.ac.in			
15		5A15	CSE	Mr Vaibhav Srivastav	9451302810	Vaibhav.srivastava33874@paruluniversity.ac.in			
16		5A16	CSE	Chirag Solanki	8140490081	chirag.solanki20102@paruluniversity.ac.in			
17		5A17 d2d	CSE	Vaibhavi Parikh	8849995938	vaibhavi.parikh25851@paruluniversity.ac.in			
18		5A18 d2d	CSE	Ajay Solanki	8320531282	apoovr.gurjar33403@paruluniversity.ac.in			
19		5B1	AI	Mr Apoorva Gurjar	7987950970	Pankaj.kumar33709@paruluniversity.ac.in			
20		5B2	AI	Mr Pankaj Kumar Nirala	9950689011	asheesh.dwivedi33172@gmail.com			
21		5C1	CS	Mr Asheesh Dwivedi	7355529462				



Semester - 1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105102	Programming for Problem Solving	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107151	Basic Electronics	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107153	Electronic Workshop	1.00	0	2	0	-	50	-	-	50	-	50	100	
303191101	Mathematics-I	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193103	Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	23.00	15	12	2									900

Semester - 1 First Year Elective-1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303104105	Environmental Science	0.00	1	0	0	-	-	50	-	-	20	-	-	50
303105101	Computer Essentials	1.00	0	2	0	-	20	-	-	30	-	25	50	
303106101	Basic Electrical Engineering	4.00	3	2	0	20	20	20	60	30	40	25	150	
303191151	Mathematics-II	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193152	Advanced Communication & Technical Writing	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	19.00	13	10	2									750

Semester - 2 First Year Elective-2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 3

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105201	Design of Data Structures	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105202	Design of Data Structures Laboratory	2.00	0	4	0	-	20	-	-	30	-	25	50	
303105203	Database Management System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105204	Database Management System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105205	Object Oriented Programming with JAVA	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105206	Object Oriented Programming with JAVA Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105210	Computer Organization and Microprocessor	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105211	Computer Organization and Microprocessor Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303191202	Discrete Mathematics	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193203	Professional Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	-	100
	Total	22.00	15	10	2									800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 4

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105251	Operating System	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105252	Operating System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105253	Software Engineering	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105254	Software Engineering Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105255	Computer Network	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105256	Computer Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105257	Programming in Python with Full Stack Development	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105258	Programming in Python with Full Stack Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105259	Competitive Coding	2.00	-	4	-	-	20	-	-	30	-	25	50	
303191251	Probability, Statistics and Numerical Methods	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193252	Professional Grooming and Personality Development	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Total	23.00	16	12	1								850	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303101331	Basic Aircraft Science	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105302	Azure Fundamentals	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105303	Python Programming	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105304	Cyber Security	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105305	Internet of Things	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303107346	Fundamentals of Communication Engineering	2.00	2	0	0	20	-	20	60	-	40	-	-	100

Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105218	Design and Analysis of Algorithm	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105219	Design and Analysis of Algorithm Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105306	Theory of Computation	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105311	Quant and Reasoning	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105316	Distributed Computing	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105317	Distributed Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193304	Professionalism & Corporate Ethics	1.00	-	-	1	-	-	100	-	-	40	-	-	100



Semester - 5

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
	Open Elective 01 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100
	Total	20.00	16	6	1								850

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 6 PEC 02

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	100	
303105351	.NET Programming	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105379	Mobile App Development	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 6 PEC 02-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105352	.NET Programming Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105380	Mobile App Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6 PEC 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105341	Cybersecurity	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105361	Big Data Analytics	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105375	Information and Network Security	3.00	3	0	0	20	-	20	60	-	40	-	100	



Semester - 6 PEC 01-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105342	Cybersecurity Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105362	Big Data Analytics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105376	Information and Network Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105349	Compiler Design	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105350	Compiler Design Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105363	Cloud Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105364	Cloud Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105373	Virtualization	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105374	Virtualization Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193353	Employability Skills	1.00	-	-	1	-	-	100	-	-	40	-	100	
	PEC 01-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 01 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	



Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
	PEC 02-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	17	10	1								950	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 7 PEC 03

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105307	Artificial Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105341	Cybersecurity	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105377	Software Testing and Quality Assurance	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 7 PEC 03-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105308	Artificial Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105342	Cybersecurity Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105378	Software Testing and Quality Assurance Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7 PEC 04

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105355	GPU Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105381	Image Processing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105489	Internet of Things	3.00	3	0	0	20	-	20	60	-	40	-	100	



Semester - 7 PEC 04-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105356	GPU Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105382	Image Processing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105490	Internet of Things laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105419	Cloud Application Development	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105420	Cloud Application Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105421	cloud storage management	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105422	cloud storage management Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105423	Major Project - I	5.00	0	2	0	-	100	-	-	100	-	100	200	
303105424	Summer Internship	2.00	0	0	0	-	100	-	-	-	-	50	100	
	PEC 03 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 03-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 04 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 04-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	12	10	0									900

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 8

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105499	Major Project - II	10.00	0	0	0	100	150	-	100	150	80	150	500	
	Total	10.00	0	0	0								500	

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105102	Programming for Problem Solving	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107151	Basic Electronics	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107153	Electronic Workshop	1.00	0	2	0	-	50	-	-	50	-	50	100	
303191101	Mathematics-I	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193103	Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	23.00	15	12	2									900

Semester - 1 First Year Elective-1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303104105	Environmental Science	0.00	1	0	0	-	-	50	-	-	20	-	-	50
303105101	Computer Essentials	1.00	0	2	0	-	20	-	-	30	-	25	50	
303106101	Basic Electrical Engineering	4.00	3	2	0	20	20	20	60	30	40	25	150	
303191151	Mathematics-II	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193152	Advanced Communication & Technical Writing	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	19.00	13	10	2									750

Semester - 2 First Year Elective-2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 3

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105201	Design of Data Structures	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105202	Design of Data Structures Laboratory	2.00	0	4	0	-	20	-	-	30	-	25	50	
303105203	Database Management System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105204	Database Management System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105205	Object Oriented Programming with JAVA	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105206	Object Oriented Programming with JAVA Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105210	Computer Organization and Microprocessor	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105211	Computer Organization and Microprocessor Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303191202	Discrete Mathematics	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193203	Professional Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	-	100
	Total	22.00	15	10	2									800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 4

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105251	Operating System	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105252	Operating System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105253	Software Engineering	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105254	Software Engineering Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105255	Computer Network	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105256	Computer Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105257	Programming in Python with Full Stack Development	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105258	Programming in Python with Full Stack Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105259	Competitive Coding	2.00	-	4	-	-	20	-	-	30	-	25	50	
303191251	Probability, Statistics and Numerical Methods	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193252	Professional Grooming and Personality Development	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Total	23.00	16	12	1								850	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303101331	Basic Aircraft Science	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105302	Azure Fundamentals	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105303	Python Programming	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105304	Cyber Security	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105305	Internet of Things	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303107346	Fundamentals of Communication Engineering	2.00	2	0	0	20	-	20	60	-	40	-	-	100

Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105218	Design and Analysis of Algorithm	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105219	Design and Analysis of Algorithm Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105306	Theory of Computation	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105311	Quant and Reasoning	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105314	Data Analytics and Data visualization	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105315	Data Analytics And Data visualization laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193304	Professionalism & Corporate Ethics	1.00	-	-	1	-	-	100	-	-	40	-	-	100



Semester - 5

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
	Open Elective 01 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100
	Total	20.00	16	6	1								850

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 6 PEC 02

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	100	
303105351	.NET Programming	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105379	Mobile App Development	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 6 PEC 02-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105352	.NET Programming Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105380	Mobile App Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6 PEC 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105316	Distributed Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105320	Web Application Security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105375	Information and Network Security	3.00	3	0	0	20	-	20	60	-	40	-	100	



Semester - 6 PEC 01-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105317	Distributed Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105321	Web Application Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105376	Information and Network Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105349	Compiler Design	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105350	Compiler Design Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105361	Big Data Analytics	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105362	Big Data Analytics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105363	Cloud Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105364	Cloud Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193353	Employability Skills	1.00	-	-	1	-	-	100	-	-	40	-	100	
	PEC 01-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 01 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	



Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
	PEC 02-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	17	10	1								950	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105287	Data Visualization and Wrangling	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105288	Data Visualization and Wrangling Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105289	Big Data On Cloud	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105290	Big Data On Cloud Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105423	Major Project - I	5.00	0	2	0	-	100	-	-	100	-	100	200	
303105424	Summer Internship	2.00	0	0	0	-	100	-	-	-	-	50	100	
	PEC 03 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	-	100
	PEC 03-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	-	50
	PEC 04 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	-	100
	PEC 04-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	-	50
	Total	23.00	12	10	0									900

Semester - 7 PEC 04

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105307	Artificial Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105355	GPU Computing	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105489	Internet of Things	3.00	3	0	0	20	-	20	60	-	40	-	-	100



Semester - 7 PEC 04-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105308	Artificial Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105356	GPU Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105490	Internet of Things laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7 PEC 03

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105405	Block Chain Technology	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105407	Big Data Security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105485	Augmented and Virtual Reality	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 7 PEC 03-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105406	Block Chain Technology Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105408	Big Data Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105486	Augmented and Virtual Reality Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 8

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105499	Major Project - II	10.00	0	0	0	100	150	-	100	150	80	150	500	
	Total	10.00	0	0	0								500	

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 **Practical Passing % : 50**



Semester - 1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303104105	Environmental Science	0.00	1	0	0	-	-	50	-	-	20	-	-	50
303105101	Computer Essentials	1.00	0	2	0	-	20	-	-	30	-	25	50	
303106101	Basic Electrical Engineering	4.00	3	2	0	20	20	20	60	30	40	25	150	
303191101	Mathematics-I	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193103	Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	19.00	13	10	2									750

Semester - 1 First Year Elective-1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105102	Programming for Problem Solving	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107151	Basic Electronics	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107153	Electronic Workshop	1.00	0	2	0	-	50	-	-	50	-	50	100	
303191151	Mathematics-II	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193152	Advanced Communication & Technical Writing	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	23.00	15	12	2									900

Semester - 2 First Year Elective-2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 3

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105201	Design of Data Structures	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105202	Design of Data Structures Laboratory	2.00	0	4	0	-	20	-	-	30	-	25	50	
303105203	Database Management System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105204	Database Management System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105205	Object Oriented Programming with JAVA	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105206	Object Oriented Programming with JAVA Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105210	Computer Organization and Microprocessor	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105211	Computer Organization and Microprocessor Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303191202	Discrete Mathematics	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193203	Professional Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	-	100
	Total	22.00	15	10	2									800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 4

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105251	Operating System	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105252	Operating System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105253	Software Engineering	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105254	Software Engineering Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105255	Computer Network	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105256	Computer Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105257	Programming in Python with Full Stack Development	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105258	Programming in Python with Full Stack Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105259	Competitive Coding	2.00	-	4	-	-	20	-	-	30	-	25	50	
303191251	Probability, Statistics and Numerical Methods	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193252	Professional Grooming and Personality Development	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Total	23.00	16	12	1								850	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303101331	Basic Aircraft Science	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105302	Azure Fundamentals	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105303	Python Programming	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105304	Cyber Security	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105305	Internet of Things	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303107346	Fundamentals of Communication Engineering	2.00	2	0	0	20	-	20	60	-	40	-	-	100

Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105218	Design and Analysis of Algorithm	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105219	Design and Analysis of Algorithm Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105306	Theory of Computation	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105307	Artificial Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105308	Artificial Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105311	Quant and Reasoning	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303193304	Professionalism & Corporate Ethics	1.00	-	-	1	-	-	100	-	-	40	-	-	100



Semester - 5

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
	Open Elective 01 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100
	Total	20.00	16	6	1								850

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 6 PEC 02

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105351	.NET Programming	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105379	Mobile App Development	3.00	3	0	0	20	-	20	60	-	40	-	-	100

Semester - 6 PEC 02-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105352	.NET Programming Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105380	Mobile App Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6 PEC 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105320	Web Application Security	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105341	Cybersecurity	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105363	Cloud Computing	3.00	3	0	0	20	-	20	60	-	40	-	-	100



Semester - 6 PEC 01-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105321	Web Application Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105342	Cybersecurity Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105364	Cloud Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105349	Compiler Design	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105350	Compiler Design Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105353	Machine Learning	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105354	Machine Learning Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105355	GPU Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105356	GPU Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193353	Employability Skills	1.00	-	-	1	-	-	100	-	-	40	-	100	
	PEC 01-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 01 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	



Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
	PEC 02-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	17	10	1								950	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 7 PEC 03

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105381	Image Processing	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105383	Blockchain	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105485	Augmented and Virtual Reality	3.00	3	0	0	20	-	20	60	-	40	-	-	100

Semester - 7 PEC 03-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105382	Image Processing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105384	Blockchain Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105486	Augmented and Virtual Reality Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105423	Major Project - I	5.00	0	2	0	-	100	-	-	100	-	100	200	
303105424	Summer Internship	2.00	0	0	0	-	100	-	-	-	-	-	50	100
303105479	Deep Learning with NLP	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105480	Deep Learning with NLP Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	



Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105481	Pattern Recognition	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105482	Pattern Recognition Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
	PEC 03 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 03-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 04 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 04-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	12	10	0								900	

Semester - 7 PEC 04

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105483	Business Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105487	Wireless Sensor Network	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105489	Internet of Things	3.00	3	0	0	20	-	20	60	-	40	-	100	



Semester - 7 PEC 04-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105484	Business Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105488	Wireless Sensor Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105490	Internet of Things laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 8

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105499	Major Project - II	10.00	0	0	0	100	150	-	100	150	80	150	500	
	Total	10.00	0	0	0								500	

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105102	Programming for Problem Solving	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107151	Basic Electronics	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107153	Electronic Workshop	1.00	0	2	0	-	50	-	-	50	-	50	100	
303191101	Mathematics-I	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193103	Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	23.00	15	12	2									900

Semester - 1 First Year Elective-1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303104105	Environmental Science	0.00	1	0	0	-	-	50	-	-	20	-	-	50
303105101	Computer Essentials	1.00	0	2	0	-	20	-	-	30	-	25	50	
303106101	Basic Electrical Engineering	4.00	3	2	0	20	20	20	60	30	40	25	150	
303191151	Mathematics-II	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193152	Advanced Communication & Technical Writing	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	19.00	13	10	2									750

Semester - 2 First Year Elective-2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 3

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105201	Design of Data Structures	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105202	Design of Data Structures Laboratory	2.00	0	4	0	-	20	-	-	30	-	25	50	
303105203	Database Management System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105204	Database Management System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105205	Object Oriented Programming with JAVA	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105206	Object Oriented Programming with JAVA Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105220	Digital Electronics	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105221	Digital Electronics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303191202	Discrete Mathematics	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193203	Professional Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	-	100
	Total	22.00	15	10	2									800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 4

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105210	Computer Organization and Microprocessor	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105211	Computer Organization and Microprocessor Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105251	Operating System	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105252	Operating System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105255	Computer Network	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105256	Computer Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105257	Programming in Python with Full Stack Development	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105258	Programming in Python with Full Stack Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105259	Competitive Coding	2.00	-	4	-	-	20	-	-	30	-	25	50	
303191251	Probability, Statistics and Numerical Methods	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193252	Professional Grooming and Personality Development	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Total	23.00	16	12	1								850	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303101331	Basic Aircraft Science	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105302	Azure Fundamentals	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105303	Python Programming	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105304	Cyber Security	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105305	Internet of Things	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303107346	Fundamentals of Communication Engineering	2.00	2	0	0	20	-	20	60	-	40	-	-	100

Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105218	Design and Analysis of Algorithm	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105219	Design and Analysis of Algorithm Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105253	Software Engineering	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105254	Software Engineering Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105306	Theory of Computation	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105314	Data Analytics and Data visualization	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105315	Data Analytics And Data visualization laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	



Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303193304	Professionalism & Corporate Ethics	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Open Elective 01 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	Total	21.00	16	8	1								900	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 6 PEC 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105307	Artificial Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105341	Cybersecurity	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105363	Cloud Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 6 PEC 01-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105308	Artificial Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105342	Cybersecurity Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105364	Cloud Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105322	Mobile Application security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105323	Mobile Application security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105349	Compiler Design	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105350	Compiler Design Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	



Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105351	.NET Programming	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105352	.NET Programming Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193353	Employability Skills	1.00	-	-	1	-	-	100	-	-	40	-	-	100
	PEC 01-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	-	50
	PEC 01 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	-	100
	PEC 02 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	-	100
	PEC 02-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	-	50
	Total	21.00	15	10	1									850

Semester - 6 PEC 02

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105377	Software Testing and Quality Assurance	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105379	Mobile App Development	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105381	Image Processing	3.00	3	0	0	20	-	20	60	-	40	-	-	100



Semester - 6 PEC 02-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105378	Software Testing and Quality Assurance Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105380	Mobile App Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105382	Image Processing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 7 PEC 03

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105355	GPU Computing	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105383	Blockchain	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105485	Augmented and Virtual Reality	3.00	3	0	0	20	-	20	60	-	40	-	-	100

Semester - 7 PEC 03-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105356	GPU Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105384	Blockchain Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105486	Augmented and Virtual Reality Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7 PEC 04

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105361	Big Data Analytics	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105487	Wireless Sensor Network	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105489	Internet of Things	3.00	3	0	0	20	-	20	60	-	40	-	-	100



Semester - 7 PEC 04-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105362	Big Data Analytics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105488	Wireless Sensor Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105490	Internet of Things laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105375	Information and Network Security	3.00	3	0	0	20	-	20	-	60	-	40	-	100
303105376	Information and Network Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105423	Major Project - I	5.00	0	2	0	-	100	-	-	100	-	100	200	
303105424	Summer Internship	2.00	0	0	0	-	100	-	-	-	-	50	100	
303105477	Data Science for Engineers	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105478	Data Science for Engineers Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
	PEC 03 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 03-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 04 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 04-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	12	10	0									900

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 8

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105499	Major Project - II	10.00	0	0	0	100	150	-	100	150	80	150	500	
	Total	10.00	0	0	0								500	

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105102	Programming for Problem Solving	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107151	Basic Electronics	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107153	Electronic Workshop	1.00	0	2	0	-	50	-	-	50	-	50	100	
303191101	Mathematics-I	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193103	Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	23.00	15	12	2									900

Semester - 1 First Year Elective-1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303104105	Environmental Science	0.00	1	0	0	-	-	50	-	-	20	-	-	50
303105101	Computer Essentials	1.00	0	2	0	-	20	-	-	30	-	25	50	
303106101	Basic Electrical Engineering	4.00	3	2	0	20	20	20	60	30	40	25	150	
303191151	Mathematics-II	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193152	Advanced Communication & Technical Writing	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	19.00	13	10	2									750

Semester - 2 First Year Elective-2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 3

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105201	Design of Data Structures	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105202	Design of Data Structures Laboratory	2.00	0	4	0	-	20	-	-	30	-	25	50	
303105203	Database Management System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105204	Database Management System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105205	Object Oriented Programming with JAVA	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105206	Object Oriented Programming with JAVA Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105222	Mastering Kali Linux and OSINT	3.00	3	-	-	20	-	20	60	-	40	-	-	100
303105223	Mastering Kali Linux and OSINT Laboratory	1.00	-	2	-	-	20	-	-	30	-	25	50	
303191202	Discrete Mathematics	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193203	Professional Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	-	100
	Total	22.00	15	10	2									800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 4

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105251	Operating System	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105252	Operating System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105253	Software Engineering	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105254	Software Engineering Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105257	Programming in Python with Full Stack Development	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105258	Programming in Python with Full Stack Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105260	Networking Concepts and Security	3.00	3	-	-	20	-	20	60	-	40	-	100	
303105261	Networking Concepts and Security Laboratory	1.00	-	2	-	-	20	-	-	30	-	25	50	
303105262	Basics of MSF and Cryptography	3.00	3	-	-	20	-	20	60	-	40	-	100	
303105263	Basics of MSF and Cryptography Laboratory	1.00	-	2	-	-	20	-	-	30	-	25	50	
303193252	Professional Grooming and Personality Development	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Total	21.00	15	10	1								850	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303101331	Basic Aircraft Science	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105302	Azure Fundamentals	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105303	Python Programming	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105304	Cyber Security	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105305	Internet of Things	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303107346	Fundamentals of Communication Engineering	2.00	2	0	0	20	-	20	60	-	40	-	-	100

Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105218	Design and Analysis of Algorithm	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105219	Design and Analysis of Algorithm Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105311	Quant and Reasoning	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105320	Web Application Security	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105321	Web Application Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105322	Mobile Application security	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105323	Mobile Application security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105324	Metasploit Frame work	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105325	Metasploit Frame work Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	



Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303193304	Professionalism & Corporate Ethics	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Open Elective 01 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	Total	22.00	17	8	1								900	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 6 PEC 02

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	100	
303105351	.NET Programming	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105379	Mobile App Development	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 6 PEC 02-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105352	.NET Programming Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105380	Mobile App Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6 PEC 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105320	Web Application Security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105322	Mobile Application security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105363	Cloud Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	



Semester - 6 PEC 01-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105321	Web Application Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105323	Mobile Application security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105364	Cloud Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105349	Compiler Design	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105350	Compiler Design Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105365	CyberLaws and Ethics	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105366	CyberLaws and Ethics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105367	Network Security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105368	Network Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193353	Employability Skills	1.00	-	-	1	-	-	100	-	-	40	-	100	
	PEC 01-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 01 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	PEC 02 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	



Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
	PEC 02-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	17	10	1								950	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 7 PEC 04

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105307	Artificial Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105355	GPU Computing	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105489	Internet of Things	3.00	3	0	0	20	-	20	60	-	40	-	-	100

Semester - 7 PEC 04-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105308	Artificial Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105356	GPU Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105490	Internet of Things laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7 PEC 03

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105361	Big Data Analytics	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105383	Blockchain	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105417	Cloud Security	3.00	3	0	0	20	-	20	60	-	40	-	-	100



Semester - 7 PEC 03-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105362	Big Data Analytics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105384	Blockchain Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105418	Cloud Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105413	Digital Forensics	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105414	Digital Forensics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105415	Ethical Hacking	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105416	Ethical Hacking Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105423	Major Project - I	5.00	0	2	0	-	100	-	-	100	-	100	200	
303105424	Summer Internship	2.00	0	0	0	-	100	-	-	-	-	50	100	
	PEC 03 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 03-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 04 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 04-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	12	10	0									900

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 8

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105499	Major Project - II	10.00	0	0	0	100	150	-	100	150	80	150	500	
	Total	10.00	0	0	0								500	

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105102	Programming for Problem Solving	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107151	Basic Electronics	4.00	3	2	0	20	20	20	60	30	40	25	150	
303107153	Electronic Workshop	1.00	0	2	0	-	50	-	-	50	-	50	100	
303191101	Mathematics-I	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193103	Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-1 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	23.00	15	12	2									900

Semester - 1 First Year Elective-1

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303104105	Environmental Science	0.00	1	0	0	-	-	50	-	-	20	-	-	50
303105101	Computer Essentials	1.00	0	2	0	-	20	-	-	30	-	25	50	
303106101	Basic Electrical Engineering	4.00	3	2	0	20	20	20	60	30	40	25	150	
303191151	Mathematics-II	4.00	4	-	-	20	-	20	60	-	40	-	100	
303193152	Advanced Communication & Technical Writing	2.00	-	-	2	-	-	100	-	-	40	-	100	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	2	4	0	40	20	-	60	30	-	-	150	
	First Year Elective-2 (Complimentary Subjects :1)	4.00	3	2	0	40	20	-	60	30	-	-	150	
	Total	19.00	13	10	2									750

Semester - 2 First Year Elective-2

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303109101	Engineering Graphics	4.00	2	4	0	20	20	20	60	30	40	25	150	
303192102	Engineering Physics-II	4.00	3	2	0	20	20	20	60	30	40	25	150	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 3

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105201	Design of Data Structures	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105202	Design of Data Structures Laboratory	2.00	0	4	0	-	20	-	-	30	-	25	50	
303105203	Database Management System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105204	Database Management System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105205	Object Oriented Programming with JAVA	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105206	Object Oriented Programming with JAVA Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105220	Digital Electronics	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105221	Digital Electronics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303191202	Discrete Mathematics	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193203	Professional Communication Skills	2.00	-	-	2	-	-	100	-	-	40	-	-	100
	Total	22.00	15	10	2									800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical

Theory Passing % : 40 Practical Passing % : 50



Semester - 4

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105210	Computer Organization and Microprocessor	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105211	Computer Organization and Microprocessor Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105251	Operating System	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105252	Operating System Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105255	Computer Network	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105256	Computer Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105257	Programming in Python with Full Stack Development	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105258	Programming in Python with Full Stack Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105259	Competitive Coding	2.00	-	4	-	-	20	-	-	30	-	25	50	
303191251	Probability, Statistics and Numerical Methods	4.00	4	-	-	20	-	20	60	-	40	-	-	100
303193252	Professional Grooming and Personality Development	1.00	-	-	1	-	-	100	-	-	40	-	-	100
	Total	23.00	16	12	1									850

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303101331	Basic Aircraft Science	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105302	Azure Fundamentals	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105303	Python Programming	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105304	Cyber Security	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105305	Internet of Things	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303107346	Fundamentals of Communication Engineering	2.00	2	0	0	20	-	20	60	-	40	-	-	100

Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105218	Design and Analysis of Algorithm	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105219	Design and Analysis of Algorithm Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105253	Software Engineering	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105254	Software Engineering Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105306	Theory of Computation	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105309	Enterprise Programming using Java	2.00	2	0	0	20	-	20	60	-	40	-	-	100
303105310	Enterprise Programming Using Java Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105314	Data Analytics and Data visualization	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105315	Data Analytics And Data visualization laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	



Semester - 5

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303193304	Professionalism & Corporate Ethics	1.00	-	-	1	-	-	100	-	-	40	-	100	
	Open Elective 01 (Complimentary Subjects :1)	2.00	2	0	0	40	-	-	60	-	-	-	100	
	Total	21.00	16	8	1								900	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 6 PEC 01

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105307	Artificial Intelligence	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105341	Cybersecurity	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105363	Cloud Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 6 PEC 01-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105308	Artificial Intelligence Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105342	Cybersecurity Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105364	Cloud Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105322	Mobile Application security	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105323	Mobile Application security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105349	Compiler Design	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105350	Compiler Design Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	



Semester - 6

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105351	.NET Programming	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105352	.NET Programming Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303193353	Employability Skills	1.00	-	-	1	-	-	100	-	-	40	-	-	100
	PEC 01-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	-	50
	PEC 01 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	-	100
	PEC 02 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	-	100
	PEC 02-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	-	50
	Total	21.00	15	10	1									850

Semester - 6 PEC 02

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105377	Software Testing and Quality Assurance	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105379	Mobile App Development	3.00	3	0	0	20	-	20	60	-	40	-	-	100
303105381	Image Processing	3.00	3	0	0	20	-	20	60	-	40	-	-	100



Semester - 6 PEC 02-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105378	Software Testing and Quality Assurance Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105380	Mobile App Development Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105382	Image Processing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 7 PEC 03

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105355	GPU Computing	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105383	Blockchain	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105485	Augmented and Virtual Reality	3.00	3	0	0	20	-	20	60	-	40	-	100	

Semester - 7 PEC 03-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105356	GPU Computing Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105384	Blockchain Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105486	Augmented and Virtual Reality Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7 PEC 04

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105361	Big Data Analytics	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105487	Wireless Sensor Network	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105489	Internet of Things	3.00	3	0	0	20	-	20	60	-	40	-	100	



Semester - 7 PEC 04-LAB

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105362	Big Data Analytics Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105488	Wireless Sensor Network Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105490	Internet of Things laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	

Semester - 7

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut		T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
303105375	Information and Network Security	3.00	3	0	0	20	-	20	-	60	-	40	-	100
303105376	Information and Network Security Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
303105423	Major Project - I	5.00	0	2	0	-	100	-	-	100	-	100	200	
303105424	Summer Internship	2.00	0	0	0	-	100	-	-	-	-	50	100	
303105477	Data Science for Engineers	3.00	3	0	0	20	-	20	60	-	40	-	100	
303105478	Data Science for Engineers Laboratory	1.00	0	2	0	-	20	-	-	30	-	25	50	
	PEC 03 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 03-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	PEC 04 (Complimentary Subjects :1)	3.00	3	0	0	40	-	-	60	-	-	-	100	
	PEC 04-LAB (Complimentary Subjects :1)	1.00	0	2	0	-	20	-	-	30	-	-	50	
	Total	23.00	12	10	0									900

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 8

							Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.		
303105499	Major Project - II	10.00	0	0	0	100	150	-	100	150	80	150	500	
	Total	10.00	0	0	0								500	

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 Practical Passing % : 50



Course: BTech

Semester: 5

Prerequisite: Data structures, Fundamental of programming

Rationale: Analyze the asymptotic performance of algorithms. Write rigorous correctness proofs for algorithms. Demonstrate a familiarity with major algorithms and data structures. Apply important algorithmic design paradigms and methods of analysis. Synthesize efficient algorithms in common engineering design situations.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction and Analysis of Algorithms: Algorithm: Definition, Properties, Types of Algorithms, Writing an Algorithm Analysis: Parameters, Design Techniques of Algorithms Asymptotic Analysis: Big Oh, Big Omega & Big Theta Notations, Lower Bound, Upper Bound and Tight Bound, Best Case, Worst Case, Average Case Analyzing control statement, Loop invariant and the correctness of the algorithm, Recurrences- substitution method, recursion tree method, master method. Sorting Techniques with analysis: Bubble Sort, Selection Sort, Insertion sort.	20	10
2	Divide & Conquer Algorithms: Structure of divide-and-conquer algorithms, examples: Binary search, quick sort, Merge sort, Strassen Multiplication; Max-Min problem	20	6
3	Greedy Algorithms: Introduction, Elements of Greedy Strategy - Minimum Spanning Tree: Kruskal's & Prim's Algorithm, Dijkstra's Algorithm, Knapsack Problem, Activity Selection Problem, Huffman Codes	20	8
4	Dynamic Programming: Principal of Optimality, 0/1 Knapsack Problem, Making Change problem, Chain matrix multiplication, Longest Common Subsequence, All pair shortest paths: Warshall's and Floyd's algorithms	20	8
5	Exploring Graphs: An introduction using graphs and games, Undirected Graph, Directed Graph, Traversing Graphs, Depth First Search, Breath First Search, Topological sort	5	3
6	Backtracking and Branch & Bound: Introduction to Backtracking, Introduction to Branch & Bound, 0/1 Knapsack Problem, N-Queens Problem, Travelling Salesman Problem	5	4
7	String Matching & NP Completeness: String Matching: - Introduction to String Matching, Naive String Matching, Rabin-Karp Algorithm, Kruth-Morris-Pratt Algorithm, String Matching using Finite Automata NP Completeness: - Introduction to NP Completeness, P class Problems, NP Class Problems, Hamiltonian Cycle	10	6



Reference Books

1.	Introduction to Algorithms, 4TH Edition, Thomas H Cormen, Charles E Leiserson, Ronald L Rivest and Clifford Stein, MIT Press/McGraw-Hill. (TextBook)
2.	Fundamentals of Algorithms – E. Horowitz et al. (TextBook)
3.	Algorithm Design, 1ST Edition, Jon Kleinberg and Éva Tardos, Pearson
4.	Algorithm Design: Foundations, Analysis, and Internet Examples, Second Edition, Michael T Goodrich and Roberto Tamassia, Wiley.
5.	Algorithms—A Creative Approach, 3RD Edition, Udi Manber, Addison-Wesley, Reading, MA

Course Outcome

After Learning the Course the students shall be able to:

Course Outcome: After learning the course the students will be able to:

1. Develop the ability to analyze the running time of any given algorithm using asymptotic analysis and prove the correctness of basic algorithms.
2. Design efficient algorithms for computational problems, using various algorithm design techniques taught in the course.
3. Explain the major graph algorithms and their analyses. Employ graphs to model engineering problems, when appropriate.
4. Analyze String matching algorithms.
5. Explain the complexity classes P, NP, and NP-Complete, and demonstrate the NP-Completeness of a specific problem.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Strong programming skills and a solid understanding of algorithms and their analysis are prerequisites for learning and applying Design and Analysis of Algorithms | 203105101 - Fundamentals of Programming

Rationale: Design and Analysis of Algorithms (DAA) is crucial for efficient problem-solving and algorithm development. It provides tools to measure algorithm performance and make informed decisions on choosing the best algorithms for specific tasks. DAA helps optimize time and space complexities, leading to improved computational efficiency.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

1. Develop the ability to design and implement efficient algorithms for fundamental problems.
2. Cultivate critical thinking skills to analyze problem requirements and constraints, allowing for the selection and modification of appropriate algorithms to solve specific computational problems.
3. Master the use of essential data structures such as arrays, matrices, graphs, and trees to efficiently store, manage, and manipulate data within algorithm implementations.
4. Learn techniques for optimizing algorithms to improve their efficiency and scalability, focusing on aspects such as time complexity, and space complexity,



List of Practical

1.	write a program to determine whether the given number is Prime or not.
2.	Given a sorted array and a target value, return the index if the target is found. If not, return the index where it would be if it were inserted in order.
3.	There are N children standing in a line with some rating value. You want to distribute a minimum number of candies to these children such that: Each child must have at least one candy. The children with higher ratings will have more candies than their neighbours. You need to write a program to calculate the minimum candies you must give.
4.	There is a new barn with N stalls and C cows. The stalls are located on a straight line at positions x_1, x_N ($0 \leq x_i \leq 1,000,000,000$). We want to assign the cows to the stalls, such that the minimum distance between any two of them is as large as possible. What is the largest minimum distance?
5.	Given an undirected graph with V vertices and E edges, check whether it contains any cycle or not
6.	There are n servers numbered from 0 to n – 1 connected by undirected server-to-server connections forming a network where connections[i] = [ai, bi] represents a connection between servers ai and bi. Any server can reach other servers directly or indirectly through the network. A critical connection is a connection that, if removed, will make some servers unable to reach some other servers. Return all critical connections in the network in any order.
7.	Given a grid of size NxM (N is the number of rows and M is the number of columns in the grid) consisting of '0's (Water) and '1's(Land). Find the number of islands.
8.	Given a grid of dimension N x M where each cell in the grid can have values 0, 1, or 2 which has e following meaning: 0: Empty cell 1: Cells have fresh oranges 2: Cells have rotten oranges We have to determine what is the minimum time required to rot all oranges. A rotten orange at index [i,j] can rot other fresh oranges at indexes [i-1,j], [i+1,j], [i,j-1], [i,j+1] (up, down, left and right) in unit time'
9.	Given two strings str1 and str2 and below operations that can be performed on str1. Find minimum number of edits (operations) required to convert 'str1' into 'str2'. Insert Remove Replace, All of the above operations are of equal cost.
10.	Minimum Path Sum" says that given a n x m grid consisting of non-negative integers and we need to find a path from top-left to bottom right, which minimizes the sum of all numbers along the path.
11.	Given string num representing a non-negative integer num, and an integer k, return the smallest possible integer after removing k digits from num.
12.	There is a robot on an m x n grid. The robot is initially located at the top-left corner (i.e., grid[0][0]). The robot tries to move to the bottom-right corner (i.e., grid[m - 1][n - 1]). The robot can only move either down or right at any point in time. Given the two integers m and n, return the number of possible unique paths that the robot can take to reach the bottom-right corner.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Calculus, Data Structures, and Algorithms

Rationale: Formal Language & Automata Theory helps in natural language processing to solve a problem on a model of computation, using an algorithm. It enables to learn in which machine can be made to think.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction: Alphabet, languages and grammars, productions and derivation, Chomsky hierarchy of languages	5	2
2	Regular languages and finite automata: Regular expressions and languages, deterministic finite automata -(DFA) and equivalence with regular expressions, Moore machines and mealy machines, Conversion from Mealy to Moore and vice versa, nondeterministic finite automata (NFA) and equivalence with DFA, regular grammars and equivalence with finite automata, properties of regular languages, pumping lemma for regular languages, minimization of finite automata.	30	12
3	Grammars: Context-free grammars (CFG) and languages (CFL), Chomsky normal forms, nondeterministic pushdown automata (PDA) and equivalence with CFG, parse trees, ambiguity in CFG, pumping lemma for context-free languages, deterministic pushdown automata, closure properties of CFLs. , Context-sensitive languages: Context-sensitive grammars (CSG) and languages.	35	15
4	Turing machines: The basic model for Turing machines (TM), Turing-recognizable (recursively enumerable) and Turing- decidable (recursive) languages and their closure properties, variants of Turing machines, nondeterministic TMs and equivalence with deterministic TMs, unrestricted grammars and equivalence with Turing machines, TMs as enumerators.	25	10
5	Undecidability: Church Turing thesis, universal Turing machine, the universal and diagonalization languages	5	6

Reference Books

1.	Introduction to Automata theory, languages and Computation (TextBook) By John E. Hopcroft, Rajiv Motwani and Jeffery D. Ullman Pearson
2.	Elements of the Theory of Computation By Harry R.Lewis and Christos H. Papadimitriou Pearson Education Asia
3.	Introduction to the Theory of Computation By Michael Sipser PWS Publishing
4.	Introduction to Languages and the Theory of Computation By John C. Martin McGraw Hill
5.	Automata and Computability By Dexter C. Kozen Undergraduate Texts in Computer Science, Springer



Course Outcome

After Learning the Course the students shall be able to:

After Learning the course, the students shall be able to:

1. Recognize the basic concepts and applications of theory of Computation.
2. Solve Computational Problems using Regular Languages and Finite Automata.
3. Solve Computational Problems using Context free Grammar and Push Down Automata.
4. Design Turing Machine for simple computational Problems.
5. Analyze various concepts of undecidability and Computable Function.



Course: BTech

Semester: 4

Prerequisite: Basic knowledge of software applications

Rationale: This course provides a broad introduction to software engineering. The various process models required to develop software is also being described. Moreover the functional and non-functional requirements are also described

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction: Study of Different Models, Software Characteristics, Components, Applications, Layered Technologies, Processes, Methods and Tools, Generic View Of Software Engineering, Process Models- Waterfall model, Incremental, Evolutionary process models- Prototype, Spiral And Concurrent Development Model Agile Development : Agility and Agile Process model, Extreme Programming, Other process models of Agile Development and Tools.	10	6
2	Software Project Management: Management Spectrum, People 'Product 'Process- Project, W5HH Principle, Importance of Team Management Planning a Software Project : Scope and Feasibility, Effort Estimation, Schedule and staffing, Quality Planning, Risk management- identification, assessment, control, project monitoring plan, Detailed Scheduling	10	5
3	Requirements Engineering: Problem Recognition, Requirement Engineering tasks, Processes, Requirements Specification, Use cases and Functional specification, Requirements validation, Requirements Analysis	10	5
4	Structured System Design: Design Concepts, Design Model, Software Architecture, Data Design, Architectural Styles and Patterns, Architectural Design, Alternative architectural designs, Modeling Component level design and its modeling, Procedural Design, Object Oriented Design. Data Oriented Analysis & Design : Difference between Data and Information, E-R Diagram, Dataflow Model, Control Flow Model, Control and Process Specification, Data Dictionary	15	5
5	Coding and Unit Testing: Programming principles and guidelines, Programming practices, Coding standards, Incremental development of code, Management of code evaluation, Unit testing- procedural units, classes, Code Inspection, Metrics- size measure, complexity metrics, Cyclomatic Complexity, Halstead measure,Knot Count, Comparison Of Different Metrics	10	4
6	Software Testing and Quality Assurance: Concepts, Psychology of testing, Levels of testing, Testing Process- test plan, test case design, Execution, Black-Box testing 'Boundary value analysis 'Pair wise testing- state based testing, White-Box testing criteria and test case generation and tool support Quality Assurance : Quality Control, Assurance, Cost, Reviews, Software Quality Assurance, Approaches to SQA, Reliability, Quality Standards- ISO9000 And 9001	15	7
7	CASE Tools and Advance Practices of System Dependability and Security: Computer Aided Software Engineering Tools, SCRUM Developments, Dependable System, Reliability Engineering, Safety Engineering, Security Engineering, Resilience Engineeirng	15	5



8	Advance Software Engineering: Software Reuse, Component Based Software Engineering, Distributed Software Engineering, Service-Oriented Software Engineering, Real-Time Software Engineering, Systems Engineering, Systems of System.	15	5
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Reference Books

1.	Software Engineering (TextBook) R.Pressmen; 6th (TextBook)
2.	Software Engineering By Sommerville
3.	Fundamentals of Software Engineering By Rajib Mall PHI
4.	Software Engineering By Pankaj Jalote Wiley India

Course Outcome

After Learning the Course the students shall be able to:

After learning this course students will be able to :

1. Prepare and perform Software Requirement Specification and Software Project Management Plan.
2. Ensure the quality of software product, different quality standards and software review techniques
3. Apply the concept of Functional Oriented and Object Oriented Approach for Software Design.
4. Understand modern Agile Development and Service Oriented Architecture Concept of Industry
5. Analyze, design, verify, validate, implement and maintain software systems.
6. Execute a Project Management Plan, tabulate Testing Plans and Reproduce effective procedures.



Course: BTech

Semester: 4

Prerequisite: Basic knowledge of software applications.

Rationale: This course provides a broad introduction to software engineering. The various process models required to develop software is also being described. Moreover the functional and non-functional requirements are also described.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

After learning this course students will be able to :

1. Prepare and perform Software Requirement Specification and Software Project Management Plan.
2. Ensure the quality of software product, different quality standards and software review techniques
3. Apply the concept of Functional Oriented and Object Oriented Approach for Software Design.
4. Understand modern Agile Development and Service Oriented Architecture Concept of Industry
5. Analyze, design, verify, validate, implement and maintain software systems.
6. Execute a Project Management Plan, tabulate Testing Plans and Reproduce effective procedures.

List of Practical

1.	Project Definition and objective of the specified module and Perform Requirement Engineering Process.
2.	Identify Suitable Design and Implementation model from the different software engineering models.
3.	Prepare Software Requirement Specification (SRS) for the selected module.
4.	Develop Software project management planning (SPMP) for the specified module.
5.	Do Cost and Effort Estimation using different Software Cost Estimation models.
6.	Prepare System Analysis and System Design of identified Requirement specification using structure design as DFD with data dictionary and Structure chart for the specific module.
7.	Designing the module using Object Oriented approach including Use case Diagram with scenarios, Class Diagram and State Diagram, Collaboration Diagram, Sequence Diagram and Activity Diagram.
8.	Defining Coding Standards and walk through.
9.	Write the test cases for the identified module.
10.	Demonstrate the use of different Testing Tools with comparison.
11.	Define security and quality aspects of the identified module.



Course: BTech

Semester: 5

Prerequisite: Basic knowledge of software applications.

Rationale: This course provides a broad introduction to software engineering. The various process models required to develop software is also being described. Moreover the functional and non-functional requirements are also described.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
2	0	0	0	2	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Foundation of Enterprise Programming: JDBC, JDBC architecture, JDBC with Oracle, MySQL, Maven: integration with eclipse, POM.xml	10	3
2	Servlets: Basics of Web, Servlet Lifecycle, Servlets API, HTTP Servlets with XML and annotation, Servlets Configuration, Servlets Context, Servlets Collaboration, Session Tracking, CRUD operations	15	4
3	JSP: Java Server Programming: Scripting elements, Directive elements, CRUD operations.	15	4
4	Hibernate (ORM): Architecture, JPA, Generator class, Dialects, Mapping, Annotations, Transaction Management, HQL, HCQL, CRUD operations.	20	6
5	Spring: Architecture, Modules, Dependency Injection, Autowire, Application Context, annotation-based configuration, MVC CRUD operations	20	7
6	Spring Boot: Dependency Injection, Web App using spring boot, Spring boot AOP, spring boot Database, Spring Rest	20	6

Reference Books

1.	Reference Books: Java Enterprise in a Nutshell" by Jim Farley, William Crawford, and David Flanagan (TextBook)
2.	Java EE 8 Design Patterns and Best Practices" by Rhuan Rocha
3.	Java EE and HTML5 Enterprise Application Development" by John Brock, Arun Gupta, and Geertjan Wielenga
4.	Java 8 Programming Black Book

Course Outcome

After Learning the Course the students shall be able to:

- Analyze the structure and operations of JDBC, and apply this knowledge to connect and interact with Oracle and MySQL databases.
- Perform the concepts of Servlet Configuration and Context, and apply these in practical scenarios.
- Apply their knowledge to perform CRUD operations using JSP and Hibernate and evaluate the results for correctness and efficiency.
- Design and create a web application using Spring Boot.



Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.



Course: BTech

Semester: 5

Prerequisite: Basic knowledge of software applications | 203105101 - Fundamentals of Programming

Rationale: This course provides a broad introduction to software engineering. The various process models required to develop software is also being described. Moreover the functional and non-functional requirements are also described.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

1. Prepare and do Software Requirement Specification and Software Project Management Plan by ensuring the quality of software product, different quality standards and software review techniques.
2. Apply the concept of Functional Oriented and Object Oriented Approach for Software Design.
3. Understand modern Agile Development and Service Oriented Architecture Concept of Industry
4. Analyze, design, verify, validate, implement and maintain software systems.
5. Execute a Project Management Plan, tabulate Testing Plans and Reproduce effective procedures.

List of Practical

1.	Write a program to insert and retrieve the data from database using JDBC.
2.	Write a program to demonstrate the use of Prepared Statement and Result Set interface.
3.	Servlet Programming Servlet Execution on tomcat A servlet program to print hello world A servlet program to display request details A servlet program to handle user form A servlet program to create a cookie A servlet program to display cookie A servlet program to do session tracking Write a program to implement chat Server using Server Socket and Socket class. Write a Servlet program to send username and password using HTML forms and authenticate the user
4.	JSP Programming JSP program to display hello world. JSP program to demonstrate arithmetic operations JSP program to demonstrate jsp: forward action tag JSP program to request implicit object Developing a web application to insert record into Oracle Database using JSP and JDBC
5.	Create application to store the data in database to perform Hibernate CRUD operations.
6.	Create a application store the data in database to perform Spring CRUD operations.
7.	Create a web application to store the data in database with spring boot.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite:

Rationale: -

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
-	1	-	-	1	100	100	-	-	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%), **T** - Teaching hours

Sr.	Topics	W	T
1	Ethics in Engineering Scope of engineering ethics Accepting & sharing responsibility Responsible professionals and ethical corporations Resolving ethical dilemmas Case studies	20	5
2	Group Discussion Communication core Definition, types, process, guidelines Mock round -1	10	3
3	Introduction to B-School Tests Students will be able to solve verbal questions from the following exams. In these sessions students will learn to distinguish between national & international level of Management exam. GMAT CAT	15	2
4	Listening Skills- Advanced Level Demonstrate ability to listen more than two minutes of audio clips & solve questions based on it.	10	1
5	Preparing Brochures Students will learn how to establish the purpose of writing & determine audience they are writing for.	15	2
6	Agenda & Minutes of Meeting Students will be able to explain what an agenda & minutes of meeting are and why they are useful.	10	1
7	Reading Comprehension; Intermediate level Students will develop their ability to skim for main idea(s). They will be able to make use of contextual clues to infer meaning of unfamiliar words from context and will be able to solve questions based on it.	10	1



Course: BTech

Semester: 5

Prerequisite: Data analytics and Data analysis, Data visualization techniques and Statistical measures, Basics of Programming Languages, Understanding of Python.

Rationale: Data Analytics helps small and large organizations maximize the value of their data, unearth insights, build plans and respond in real-time to customer demand.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	-	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction to Data Analytics: Introduction, Data and its importance, Data analytics and its types, Why data analytics is important, Data analysis Vs Data analytics, Classification of data analytics, Elements of Data analytics, Data analyst Vs. Data scientist	25	9
2	Introduction to Python Fundamentals and Statistics: Introduction, Importance of Python, Levels of Data measurement, Central tendency and Dispersion, Distribution of Sample Means, Population and Variance, Confidence interval estimation	15	8
3	Probability and Types of Testing: Probability and Probability distribution, Sampling and Sampling distribution, Hypothesis testing, Anova test, Chi-square test	20	9
4	Regression, Classification and Clustering: Linear and Logistic regression, Clustering: K-Means clustering and Hierarchical clustering, Classification: Decision tree, Confusion matrix	25	10
5	Data Visualization Using PowerBI: Introduction to visualization and analytic tool: Power BI, Getting Data from different sources, data transformations, introduction to data modeling, types of data visualizations in PowerBI, Publishing and sharing reports, Use cases of Dashboard and Analytical Reports Creation.	15	9

Reference Books

1.	Data Analytics using Python By Bharati Motwani, Wiley Publications. (TextBook)
2.	Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data.(TextBook) Wiley Publications
3.	Statistics 101: From Data Analysis and Predictive Modeling to Measuring Distribution and Determining Probability, Your Essential Guide to Statistics By David Borman, Adams Media
4.	Machine Learning, A Probabilistic Approach. By Kevin P. Murphy



Course Outcome

After Learning the Course the students shall be able to:

1. Explain basics of data analytics lifecycle and visualization.
2. Compare different analytics techniques and visualization using Python.
3. Apply various testing methods and techniques using probability
4. Apply different regression, classification, clustering techniques.
5. Create an interactive data visualization using PowerBI.



Course: BTech

Semester: 5

Prerequisite: Data analytics tools like PowerBI, Different techniques of visualization and data analytics | 203105251 - Database Management System

Rationale: Data Analytics helps small and large organizations to maximize the value of their data, unearth insights, build plans and respond in real-time to customer demand.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	-	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

1. Apply statistical measures to calculate mean, median and mode.
2. Compare and apply different regression, classification algorithm on the given dataset .
3. Perform clustering and detect outliers
4. Create an interactive data visualization dashboard using PowerBI.

List of Practical

1.	Perform Exploratory Data Analysis on the given dataset using Python.
2.	Calculate mean, median and mode of the first 50 records in the given dataset using python.
3.	Perform Multiple Linear Regression on data.
4.	Perform the Logistic Regression on a dataset.
5.	Use a dataset & apply K means clustering to get insights from data.
6.	Perform the Decision tree classification algorithm using a dataset.
7.	Study and installation of the tools like PowerBI tool for data Visualization.
8.	Load a dataset from different sources in PowerBI and apply transformations to it.
9.	Study and Plot various graphs for Data Visualization on PowerBI.
10.	Given a case study: Interactive Data Analytics with Power BI Dashboard.



Course: BTech

Semester: 5

Prerequisite: Basic understanding of computer concepts and basic programming

Rationale: This course provides a broad introduction to Azure cloud , infrastructure , services, security and compliance ,also billing , pricing and support plans.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
2	0	0	0	2	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Cloud Concepts: Understanding cloud computing principles, such as the different types of cloud models (public, private, hybrid), infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS).	15	6
2	Azure Services: Familiarity with the various Azure services and their common use cases. This includes services like Azure Virtual Machines, Azure App Services, Azure Storage, Azure Functions, Azure SQL Database, and more	20	7
3	Security, Privacy, Compliance, and Trust: Knowledge of Azure security features, identity and access management, Azure Active Directory, data protection, compliance frameworks, and Azure governance methodologies.	25	5
4	Azure Pricing and Support: Understanding Azure subscription options, cost management, pricing models, and the different support options available to Azure customers	15	5
5	Azure SLA and Service Lifecycles: Familiarity with Azure Service Level Agreements (SLAs) and the Azure service lifecycle, including planned maintenance, updates, and deprecation policies.	25	7

Reference Books

1.	Microsoft Azure Fundamentals: Understanding Azure by Michael Collier and Robin Shahan - 3rd Edition (TextBook)
2.	Azure for Architects: Implementing cloud design, DevOps, containers, IoT, and serverless solutions on your public cloud by Ritesh Modi - 2nd Edition
3.	Exam Ref AZ-900 Microsoft Azure Fundamentals by Jim Cheshire - 2nd Edition



Course Outcome

After Learning the Course the students shall be able to:

1. Describe cloud computing fundamentals, including different cloud models and service types, and become familiar with key Azure services and their typical uses.
2. Apply Azure security, privacy, compliance, and trust measures, covering identity management, data protection, compliance frameworks, and governance.
3. Apply Azure subscription management, cost optimization, pricing models, and support options for efficient utilization of Azure resources.
4. Explain Azure SLAs and service life cycles, including maintenance, updates, and deprecation policies, ensuring reliability and availability of Azure services.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Data structure, Formal Languages and automata Theory, Mathematics

Rationale: This course provides a broad introduction to Artificial Intelligence. AI techniques for search and knowledge representation also Apply knowledge of AI planning and machine learning techniques to real-world problems.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction: Definition of an AI, Major Areas of Artificial Intelligence, AI Techniques, History, AI problems, Production Systems, Problem characteristics, Intelligent Agents, Agent Architecture, AI Application (E-Commerce, & Medicine), AI Representation, Properties of internal representation, Future scope of AI, Issues in the design of search algorithms. Introduction to AI Problems and Applications, Defining Problems as a State Space Search, Problem Characteristics, Production Systems.	15	7
2	Search techniques: Generate-And-Test, Hill Climbing, Best-First Search, Problem Reduction, Constraint Satisfaction, Means-Ends Analysis. Heuristic search, Hill Climbing, Best first search, mean and end analysis, Constraint Satisfaction, A* and AO* Algorithm, Knowledge Representation: Basic concepts, Knowledge representation Paradigms, Propositional Logic, Inference Rules in Propositional Logic, Knowledge representation using Predicate logic, Predicate Calculus, Predicate and arguments, ISA hierarchy, Frame notation, Resolution, Natural Deduction	20	8
3	Knowledge Representation: Knowledge Representation – Representation and Mappings, Different Approaches, Issues in knowledge representation. Predicate Logic - Representation Simple Facts in Logic, Representing Instance and Isa Relationships, Computable Functions and Predicates, Resolution. Propositional Logic: Representation, Inference, Reasoning Patterns, Resolution, First-order Logic: Representation, Inference, Reasoning Patterns, Resolution	15	8
4	Uncertainty: Non-Monotonic Reasoning, Logics for Non-Monotonic Reasoning, Forward rules, and Backward rules, Justification based Truth Maintenance Systems, Semantic Nets Statistical Reasoning, Probability and Bayes' theorem, Bayesian Network, Markov Networks, Hidden Markov Model, Basis of Utility Theory, Utility Functions.	15	4
5	Fuzzy Sets and Fuzzy Logic: Fuzzy Set Operations, Membership Functions, Fuzzy Logic, Hedges, Fuzzy Proposition and Inference Rules, Fuzzy Systems.	10	5
6	Natural Language Processing: Introduction, Syntactic Processing, Semantic Analysis, Discourse and Pragmatic Processing, Spell Checking.	10	5
7	Neural Networks and Expert systems: Introduction to neural networks and perception-qualitative Analysis, Neural net architecture and applications, Utilization and functionality, the architecture of the expert system, knowledge representation, two case studies on expert systems	15	8



Reference Books

1.	Artificial Intelligence: A New Synthesis, Harcourt Publishers (TextBook) By N. J. Nilsson Harcourt Publishers
2.	Artificial Intelligence (TextBook) By Elaine Rich and Kevin Knight TMH
3.	Artificial Intelligence-Structures and Strategies For Complex Problem Solving By George F. Luger Pearson Education / PHI
4.	Artificial Intelligence-A Modern Approach By Stewart Russell and Peter Norvig Pearson Education/ Prentice Hall of India 2
5.	Artificial Intelligence – A Practical Approach By Patterson Tata McGraw Hill 3

Course Outcome

After Learning the Course the students shall be able to:

1. Discuss AI fundamentals, history, and future trends to develop solutions for problem-solving, inference, perception, knowledge representation, and learning tasks.
2. Utilize knowledge representation methods like propositional logic, predicate logic, and frame notation to effectively represent knowledge within AI systems.
3. Discover methods for solving AI problems, including diverse search algorithms and techniques like non-monotonic reasoning, probability theory, Bayesian networks, and fuzzy logic for effective decision-making in uncertain scenarios.
4. Apply Natural Language Processing (NLP), Neural Networks and Expert Systems technologies effectively in real-world scenarios.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.



Course: BTech

Semester: 5

Prerequisite: Data structure, automata, and languages, Mathematics

Rationale: This course provides a broad introduction to Artificial Intelligence. AI techniques for search and knowledge representation also Apply knowledge of AI planning and machine learning techniques to real-world problems.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

- Analyze real-world problems and apply appropriate AI techniques to solve them.
- Create AI systems using heuristic search and knowledge representation techniques.
- Implement core AI algorithms to solve problems and understand their functionalities.
- Apply programming skills to build functional AI applications.
- Analyze complex data and design neural network architectures for pattern recognition and problem-solving.

List of Practical

1.	Develop an AI-based medical diagnosis system using expert systems architecture and knowledge representation techniques.
2.	Build an intelligent agent for optimizing e-commerce inventory management using search algorithms like hill climbing and best-first search.
3.	Implement a constraint satisfaction algorithm to solve scheduling problems in healthcare facilities
4.	Create a recommendation system for personalized learning using means-end analysis and heuristic search techniques.
5.	Develop a problem-solving agent for optimizing resource allocation in logistics using A* and AO* algorithms.
6.	Develop a fuzzy logic-based system for predicting stock market trends considering uncertain market conditions.
7.	Write a program to implement BFS (Water Jug problem or any AI search problem). Write a program to implement DFS (Water Jug problem or any AI search problem).
8.	Define a predicate brother(X,Y) which holds iff X and Y are brothers. Define a predicate cousin(X,Y) which holds iff X and Y are cousins.



Define a predicate grandson(X,Y) which holds iff X is a grandson of Y.

Define a predicate descendent(X,Y) which holds iff X is a descendent of Y.

Consider the following genealogical tree:

father(a,b).

father(a,c).

father(b,d).

father(b,e).

father(c,f).

Say which answers, and in which order, are generated by your definitions for the following queries in Prolog:

?- brother(X,Y).

?- cousin(X,Y).

?- grandson(X,Y).

?- descendent(X,Y).

9.

Write a program to implement Tic-Tac-Toe game using python.

10.

Create a spell-checking application utilizing natural language processing (NLP) techniques, including syntactic and semantic analysis.

11.

Design a neural network architecture for pattern recognition in medical imaging for disease diagnosis.



Course: BTech

Semester: 5

Prerequisite: Good fundamentals in calculations and ability to think logically

Rationale: The course aims on exploring the fundamentals of Aptitude & reasoning, which involves the ability to analyze and evaluate information logically. Students will learn essential skills such as critical thinking, problem-solving, and decision-making. These skills are vital for software engineers as they navigate complex problems and make sound judgments throughout the development process.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, **CIA** - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	UNIT-1 Number system , LCM & HCF simplifications and approximations	9	4
2	UNIT-2 Averages , progressions,	9	4
3	UNIT-3 Ratio and proportion,Problems on Ages, Percentages	12	5
4	UNIT-4 Profit & loss, partnerships, S.I & C.I	12	5
5	UNIT-5 Time & work , pipes and Cisterns, Time speed and distance , Problems on train crossings, Boats & streams ,	18	8
6	UNIT-6 Permutations & combinations, probability	11	5
7	UNIT-7 Directions, seating arrangements	4	2
8	UNIT-8 Clocks, calenders	6	3
9	UNIT-9 Cubes & Dice, syllogisms	9	4
10	UNIT-10 Blood Relations	5	2
11	UNIT-11 Series ,Analogy, odd man out, coding and Decoding	5	3

Reference Books

1.	Quantitative Aptitude for CAT by Arun Sharma (TextBook)
2.	Logical reasoning for CAT by Arun Sharma
3.	Quantitative Aptitude by Abhijit Guha

Course Outcome

After Learning the Course the students shall be able to:

- 1.Apply Logic & critical thinking skills to analyze information and draw logical conclusions.
- 2.Solve complex problems by breaking them down into manageable parts & develop effective solutions.
3. Demonstrate the ability to approach problem-solving from various perspectives.



Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Fundamentals of web applications, Understanding of PHP

Rationale: Web application security is the practice of protecting websites, applications, and APIs from attacks. It is a broad discipline, but its ultimate aims are keeping web applications functioning smoothly and protecting business from cyber vandalism, data theft, unethical competition, and other negative consequences.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	-	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Basics HTTP & HTTPS: HTTP Request, Response - Header Fields and HTTPS - Understanding Same Origin – Cookies – Sessions - Web Application Proxies, Understanding Burp-Suite.	20	6
2	Information Gathering: whois, nsLookup, netcraft - web server fingerprinting - subdomain enumeration - fingerprinting frameworks - hidden resource enumeration - security misconfigurations - google hacking database - Shodan HQ. OSINT Framework, NMAP: Scanning.	20	9
3	SQL Injections & Authentication Vulnerabilities: SQL Statements, Finding SQL Injections, Exploiting SQL Injections, Bypass Authentication, Xpath Injection, Error Based Injection, Double Query Injection, Time Based injections, Union Based Injections, SQL Map, Mitigation plans.	20	10
4	Advance Web Application Attacks: Anatomy of an XSS Exploitation, Reflected XSS, Persistent XSS, DOM based XSS, Browsers and XSS, Blocking malicious request, user enumeration, random password guessing, remember me functionality, no limit attempts, password reset feature, logout flaws, CAPTCHA.	20	10
5	Advance Web Application Attacks-2: Security Misconfiguration, Sensitive data exposure, Insecure direct object reference and security, CSRF (Cross Site Request Forgery), HTTP Response Splitting, Using Components With Known Vulnerabilities, Unvalidated Redirects and Forwards	20	10

Reference Books

1.	The Web Application Hacker's Handbook: Finding and Exploiting Security Flaws Dafydd Stuttard, Marcus Pinto (TextBook)
2.	The Tangled Web: A Guide to Securing Modern Web Applications" by Michal Zalewski
3.	Web Application Security, A Beginner's Guide" by Bryan Sullivan and Vincent Liu
4.	OWASP Testing Guide" by The Open Web Application Security Project (OWASP)
5.	Web Hacking 101" by Peter Yaworski



Course Outcome

After Learning the Course the students shall be able to:

1. Describe the potential security implications of decentralized technologies in Web application.
2. Identify potential attack vectors through information gathering methods.
3. Differentiate between white-box, grey-box, and black-box penetration testing methodologies.
4. Evaluate the effectiveness of identified vulnerabilities based on the OWASP Top 10 web application security risks.
5. Demonstrate the key phases of a Secure Development Life Cycle (SDLC) and their role in security.



Course: BTech

Semester: 5

Prerequisite: Basic knowledge of operating systems, Social Networking platforms, Types of web application functionality | 203105215 - Computer Networks

Rationale: Learning web application security will give insights into the various types of cyber threats, compliance requirements, career options in like security analyst, penetration tester, security consultant, and security engineer.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

After Learning the course, the students shall be able to:

- Identify common web application vulnerabilities like SQL injection, XSS, and CSRF and also learn to utilize security testing tools and manual testing methods.
- Implement secure coding principles in their code to prevent vulnerabilities.
- Create a threat model for a web application, identifying potential threats and attack vectors and analyze case studies of web application security breaches along with its legal implications
- Develop mitigation strategies to address identified security risks and propose solutions to improve overall web application security.

List of Practical

1.	Cross-site scripting (XSS) attacks: This practical could involve testing a web application for XSS vulnerabilities and demonstrating how an attacker can exploit them.
2.	SQL injection attacks: Students can be given hands-on experience in exploiting SQL injection vulnerabilities to access or modify sensitive data in a web application.
3.	CSRF (Cross-Site Request Forgery) attacks: This practical could involve demonstrating how an attacker can use CSRF vulnerabilities to trick a user into performing an unwanted action on a web application.
4.	Broken authentication and session management: Students can be trained to identify and exploit vulnerabilities in authentication and session management mechanisms in a web application.
5.	Web application firewall (WAF) evasion techniques: This practical could involve testing a web application firewall and demonstrating how an attacker can bypass it using different techniques.
6.	Information leakage and sensitive data exposure: Students can be given hands-on experience in identifying and exploiting vulnerabilities that expose sensitive data or information.
7.	File inclusion attacks: This practical could involve demonstrating how an attacker can exploit file inclusion vulnerabilities to execute arbitrary code on a web server.
8.	Clickjacking attacks: Students can be trained to identify and exploit clickjacking vulnerabilities in a web application to trick users into clicking on malicious links.
9.	Security configuration issues: This practical could involve identifying and exploiting vulnerabilities resulting from insecure web application configurations.
10.	Input validation and sanitization: Students can be given hands-on experience in testing the input validation and sanitization mechanisms of a web application and identifying vulnerabilities.



Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Fundamentals of Android and iOS architecture Mobile rooting and Jailbreaking, Understanding of IPA and APK

Rationale: The objective of this subject is to train the students about various types of pen testing methodology for mobile devices, basic concepts of penetration testing of mobile applications.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Fundamentals of Android OS and Applications: History of Android, Understanding Android Hardware and Software Architecture, Understanding Android Security Model	20	6
2	iOS & IPA Architecture: History of iOS, Understanding iOS Hardware and Software Architecture, Understanding iOS Security Model, Understanding iOS Permission Model for Application Security, Sandboxing, Jailbreaking Devices, Understanding IPA	20	9
3	Mobile App Security: Understanding Android Permission Model for Application Security, Sandboxing, Codesigning, Encryption, rooting Devices, Understanding APK Understanding Directories and Files on an APK	20	10
4	Setting up Mobile Vulnerabilities System and Devices: Setting up Mobile App Pen testing Environment, interact with the Devices, Starting with Drozer, Understanding AndroidManifest.xml, Configuring, Burp and Traffic Interception, Traffic Interception Bypass	20	10
5	Mobile Application Attacks: Weak Server-Side Controls (M1), Insecure Data Storage (M2), Insufficient Transport Layer Protection (M3), Unintended Data Leakage (M4), Poor Authentication & Authorization (M5), Broken Cryptography (M6), Client-Side Injections (M7), Security Decisions via Untrusted Input (M8), Improper Session Handling (M9), Lack of Binary Protection (M10)	20	10

Reference Books

1.	"iOS Application Security: The Definitive Guide for Hackers and Developers" by David Thiel (TextBook)
2.	"Android Security Internals: An In-Depth Guide to Android's Security Architecture" by Nikolay
3.	"The Mobile Application Hacker's Handbook" by Dominic Chell, Tyrone Erasmus, Shaun Colley, Ollie Whitehouse, and Georg Wicherski
4.	"Mobile Application Security: Protecting Mobile Devices and Their Applications" by Manoranjan (Mano) Paul



Course Outcome

After Learning the Course the students shall be able to:

1. Describe the core components of the Android hardware and software architecture.
2. Evaluate the security mechanisms of iOS, including its data protection model, sandboxing's impact on app security, and the potential risks of device jailbreaking.
3. Apply the Android permission model to configure app access and identify security risks, code-signing verifies app authenticity and origin.
4. Evaluate mobile vulnerability assessment tools and preparing secure testing environments, automate repetitive tasks and streamline the mobile security testing process.
5. Analyze the common vulnerabilities exploited in mobile application attacks, identify different attack types and implement effective mitigation strategies to protect your devices.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.



Course: BTech

Semester: 5

Prerequisite: Fundamentals of Android and iOS architecture Mobile rooting and Jailbreaking Understanding of IPA and APK. | 203105251 - Database Management System

Rationale: The objective of this subject is to train the students about various types of pen testing methodology for mobile devices, basic concepts of penetration testing of mobile applications.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

1. Debug and troubleshoot common issues encountered during mobile app development.
2. Implement user authentication and authorization mechanisms securely.
3. Analyze the security vulnerabilities specific to each type of mobile application
4. Conduct penetration testing exercises to exploit identified vulnerabilities and assess their impact.
5. Develop a mobile application security policy based on the OWASP Mobile Top 10 guidelines.

List of Practical

1.	Study the architecture of Android and APK using dex2jar command line.
2.	Perform APK reversing using JADX.
3.	Perform IPA reversing.
4.	Setting up burp suite to intercept mobile application traffic.
5.	Setting up MobSF and extract the source code of the apk.
6.	Install Genymotion/NOX player and configure it with the ADB to analyze the apk.
7.	Installing DIVA on the virtual platform to perform OWASP TOP 10 mobile vulnerabilities.
8.	Perform Client-side injection on the apk.
9.	Demonstrate the Hard-coded issue in the apk file.
10.	Demonstrate improper session handling in apk.



Course: BTech

Semester: 5

Prerequisite: Basic knowledge of system and mobile devices, Social Networking platforms, Types of web application functionality, Operating System, Computer Ports and services, Solid understanding of networking fundamentals, Familiarity with operating systems (Linux and Windows)

Rationale: The objective of this subject is to train the students about various types of pentesting methodology, basic concepts of red teaming and use of Metasploit for penetration testing.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction to Metasploit: Importance of Penetration Testing, Vulnerability Assessment vs Penetration Testing, the need for a penetration testing framework, Installing Metasploit on Windows, Installing Metasploit on Linux	20	9
2	Metasploit Components: History and evolution, Anatomy and Structure of Metasploit, Metasploit Components (Overview of modules, exploits, payloads, and auxiliary modules), Understanding the MS console, Variables in Metasploit	30	12
3	Information Gathering with Metasploit: Enumerating protocols, Password sniffing, Advanced recon with Shodan, Passive Info. Gathering, Active info. Gathering, Port scanning- The Nmap way, Host discovery with ARP Sweep, UDP Service, Sweeper, SMB scanning and enumeration, Detecting SSH versions, FTP scanning, SMTP enumeration, SNMP Enumeration, HTTP Scanning, WinRE scanning and brute forcing	20	12
4	Meterpreter and Exploitation: Meterpreter core commands, meterpreter file system commands, meterpreter networking commands, meterpreter system commands, Dumping the Hashes and cracking with JTR (John the ripper), Shell command, Privilege escalation, need of client-side attacks, the msfvenom utility, Metasploit macro-Exploits, exploiting a Windows, machine, social engineering with Metasploit, Browser Autopwn, Pivoting and Lateral Movement, Credential Harvesting and Pass-the-Hash Attacks, Exploiting cloud vulnerabilities with Metasploit	30	12

Reference Books

1.	Metasploit: The Penetration Tester's Guide David Kennedy, Jim O'Gorman, Devon Kearns, Mati Aharoni (TextBook)
2.	Hacking: The Art of Exploitation Jon Erickson
3.	Network Security Essentials William Stallings
4.	Metasploit Penetration Testing Cookbook Packt Publishing
5.	Metasploit Revealed - Secrets of the Expert Pentester - Build your Defense against Complex Attacks Packt Publishing



Course Outcome

After Learning the Course the students shall be able to:

1. Explain the difference between penetration testing and vulnerability assessments.
2. Analyzing the structure and anatomy of Metasploit, including an in-depth exploration of its core components.
3. Utilize Metasploit to conduct client-side attacks, generate payloads with msfvenom, and exploit Windows machines using social engineering techniques.
4. Assess the effectiveness of various post-exploitation modules in Linux environments to gather comprehensive system information.
5. Apply post-exploitation modules for Windows, including capture, gather, and manage functionalities. In addition, gain a foundational understanding of cryptography and its various types.



Course: BTech

Semester: 5

Prerequisite: Understanding the basic concepts of the Linux operating system, Navigating the Linux file system and directory structure, File and directory permissions in Linux, Operating System, Experience using the Linux terminal for executing commands, Critical thinking and problem-solving skills for addressing practical challenges

Rationale: The objective of this subject is to train the students about various types of pentesting methodology, basic concepts of red teaming and use of Metasploit for penetration testing.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	0	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

At the end of the course, you will be able to:

1. List the different types of manual penetration testing methodologies.
2. Compare and contrast Red Teaming with other penetration testing methodologies.
3. Apply Identify vulnerabilities in a real-world environment using manual testing techniques.
4. Differentiate between symmetric and asymmetric encryption techniques.
5. Develop custom malicious files to exploit specific vulnerabilities in a target system.

List of Practical

1.	Installing Metasploit on Windows and Linux
2.	1. Study the architecture of Metasploit using command line. 2. Explore the MSFconsole interface, introduce basic commands, and navigate through Metasploit components.
3.	1. Setting up the database and workspace in Metasploit and setting up the database. 2. Use auxiliary to scan the network using db_nmap inside Metasploit.
4.	1. Perform SMB scanning using msfconsole. 2. Perform SSH version detection using msfconsole.
5.	Use msfvenom to exploit windows system and get the meterpreter session.
6.	Use already created meterpreter session to perform post exploitation.
7.	Perform windows hash dump using mimikatz module in metasploit.
8.	1. Create a malicious .docx/.xlsx using Metasploit. 2. Use malicious .docx/.xlsx file to exploit windows system and gain the meterpreter session.
9.	Explore and practice techniques for pivoting and lateral movement within a network
10.	Use Metasploit to exploit identified vulnerabilities in the cloud environment.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Basic concepts of Software Flaws, Data Structures, and Mathematics including Random numbers, Number theory, and finite fields.

Rationale: This course provides an introduction to the fundamental principles of cryptography and its applications on the network security domain as well as software development domain. This subject covers various important topics concern to information security like symmetric and asymmetric cryptography, hashing, message and user authentication, digital signatures, key distribution and overview of the malware technologies. The subject also covers the applications of all of these in real life situations

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	0	3	20	20	-	60	-	100	

SEE - Semester End Examination, **CIA** - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction: Computer Security Concept, The OSI Security Architecture, Security Attacks, Security Services, Security Mechanism, A Model for Network Security.	5	2
2	Classical Encryption Techniques: Symmetric Cipher Model, Cryptanalysis, Cryptanalysis Attacks, Substitution Techniques: Caesar Cipher, Monoalphabetic Cipher, Hill Cipher, Playfair Cipher, Polyalphabetic Cipher, OTP, Transposition Techniques, Steganography	10	6
3	Block Ciphers and the Data Encryption Standard: Stream ciphers and block ciphers, Block Cipher Principles, Data Stream ciphers and block ciphers, Confusion & Diffusion, Block Cipher Principles, Data Encryption Standard (DES), Differential and Linear Cryptanalysis, Avalanche Effect, strength of DES, Design principles of block cipher.	15	8
4	Multiple Encryption and Triple DES: Multiple encryption and triple DES, Electronic Code Book, Cipher Block Chaining Mode, Cipher Feedback mode, Output Feedback mode, Counter mode	10	4
5	Number theory and Advance Encryption Standard: The Euclidean Algorithm, Modular Arithmetic, Finite Fields of the Form GF(p), Polynomial Arithmetic, Advance Encryption Standard(AES): structure, key expansion	15	6
6	Asymmetric Ciphers: Prime Numbers, Principles of Public-Key Cryptosystems, The RSA Algorithm, Diffie Hellman Key Exchange, Man in the Middle attack	15	4
7	Cryptographic Data Integrity Algorithms: Hash Function: Hash Function and its Application, Security Requirements for Cryptographic Hash Functions, Hash Functions Based on Cipher BlockChaining, Secure Hash Algorithm (SHA). MAC: Message Authentication Requirements, Message Authentication Functions, Requirements for Message Authentication Codes, Security of MACs, HMAC Digital Signature: Introduction to Digital Signatures, Digital Signature standard.	20	9
8	Key Management and Distribution: Symmetric Key Distribution: Symmetric Key Distribution Using Symmetric Encryption, Symmetric Key Distribution Using Asymmetric Encryption, Asymmetric Key Distribution: Distribution of Public Keys, X.509 certificates Advanced Topics: Firewall, Intruders, Virus, Trojans, Malware, and Ransomware.	10	6



Reference Books

1.	Cryptography and Network Security By William Stallings Pearson Education (TextBook)
2.	Cryptography & Network Security By Behrouz A. Forouzan Tata McGraw-Hill (TextBook)
3.	Information Security Principles and Practice By Deven Shah, Wiley-India
4.	Information Security Principles and Practice By Mark Stamp, Wiley India Edition
5.	Information systems security By Nina Godbole Wiley Publications, 2008

Course Outcome

After Learning the Course the students shall be able to:

1. Explain the basic concepts of information security.
2. Compare and apply various cipher and data encryption techniques.
3. Explain the fundamental principles of AES and public key cryptosystems.
4. Illustrate use of data integrity algorithms, key management and distribution.



Course: BTech

Semester: 5

Prerequisite: Basic concepts of Software Flaws, Data Structures, and Mathematics including Random numbers, Number theory, and finite fields

Rationale: This course introduces the fundamental principles of cryptography and its applications in the network security domain as well as the software development domain. This subject covers various important topics concerned with information security like symmetric and asymmetric cryptography, hashing, message and user authentication, digital signatures, key distribution, and an overview of the malware technologies. The subject also covers the applications of all of these in real-lifesituations.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	-	1	-	-	20	-	30	50	

SEE - Semester End Examination, **CIA** - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

- Analyze the trade-offs between security and complexity in the context of classical ciphers.
- Apply the principles behind symmetric and asymmetric cryptography.
- Demonstrate proficiency in hashing algorithms.
- Apply message authentication techniques and their principles of digital signature and digital certificates.
- Implement the various key management and remote authentication mechanisms.

List of Practical

1.	Implement Caesar cipher encryption-decryption.
2.	Implement Monoalphabetic cipher encryption-decryption.
3.	Implement Playfair cipher encryption-decryption.
4.	Implement Polyalphabetic cipher encryption-decryption.
5.	Implement Hill cipher encryption-decryption.
6.	Implement Simple Transposition encryption-decryption.
7.	Implement One time pad encryption-decryption.
8.	Implement Diffi-Hellmen Key exchange Method.
9.	Implement RSA encryption-decryption algorithm.
10.	Demonstrate working of Digital Signature using Cryptool.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc



Course: BTech

Semester: 5

Prerequisite: Basic knowledge of Operating systems

Rationale: This course provides a broad introduction to distributed computing

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	-	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%), **T** - Teaching hours

Sr.	Topics	W	T
1	Introduction & Model of Distributed Computations: What is distributed operating system, Background, need, features, Introduction to Distributed Computing	5	2
2	Characteristics of Distributed Systems & system models: Examples of distributed systems, Resource sharing and the web, Architectural models, fundamental model	10	4
3	Networking and Internetworking: Types of Networks, Network principles, Internet protocols	10	4
4	Inter-process communication: Introduction, External data representation and marshalling, client- server communication, group communication	10	4
5	Distributed Objects: Introduction, Communication between objects, Remote procedure call, events and notification	10	4
6	Operating System support: Introduction, OS layer, Protection, Processes and threads, communication and invocation, OS architecture	15	7
7	Security: Introduction, Overview of security techniques, cryptographic algorithms, digital signatures	5	3
8	Distributed file system: Introduction, File Service architecture, Case study: Sun network file system	10	5
9	Transactions and Concurrency control, Distributed Transactions: Transactions, nested transactions, Locks, Optimistic concurrency control, Flat and nested distributed transactions, atomic commit protocols, concurrency control in distributed transactions, distributed deadlocks, Transaction recovery	15	7
10	Authentication in Distributed Systems: Introduction, Protocols based on Symmetric cryptosystems, protocols based on asymmetric cryptosystems, Password based authentication, Authentication Protocol failures, Self-stabilization.	10	5

Reference Books

1.	Distributed Systems concepts and Design by George coulouris, Jean Dollimore and Tim Kindberg (TextBook)
2.	Distributed Systems Paperback – 31 March 2017 by Coulouris George (Author), Dollimore Jean (Author), Kindberg Tim (Author), Blair Gordon (Author)
3.	Distributed Computing by Ajay Kshemkalyani and Mukesh Singhal



Course Outcome

After Learning the Course the students shall be able to:

1. Explain the design principles in distributed systems and the architectures for distributed systems.
2. Apply various distributed algorithms related to clock synchronization, concurrency control, deadlock detection, load balancing, voting etc.
3. Analyze fault tolerance and recovery in distributed systems and algorithms for the same.
4. Analyze the design and functioning of existing distributed systems and file systems.
5. Implement different distributed algorithms over current distributed platforms.



Course: BTech

Semester: 5

Prerequisite: Basic knowledge operating system

Rationale: This course provides a broad introduction distributed computing.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	-	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

1. Explain the design principles in distributed systems and the architectures for distributed systems.
2. Apply various distributed algorithms related to clock synchronization, concurrency control, deadlock detection, load balancing, voting etc.
3. Analyze fault tolerance and recovery in distributed systems and algorithms for the same.
4. Analyze the design and functioning of existing distributed systems and file systems.
5. Implement different distributed algorithms over current distributed platforms.

List of Practical

1.	Implement concurrent echo client-server application.
2.	Implement concurrent day-time client-server application.
3.	Incrementing a counter in shared memory.
4.	Create CORBA based server-client application.
5.	Configure reliability and security options.
6.	Program to implement Chat Server.
7.	Program to implement locking algorithm.
8.	Program to implement Remote Procedure Call.
9.	Program to implement edge chasing distributed deadlock detection algorithm.
10.	Case Study: CORBA.



Course: BTech

Semester: 5

Prerequisite: Basic Electronics and Circuits, Basic Programming Language. | 203105102 - Programming for Problem Solving

Rationale: This course provides a broad introduction to IoT and its applications. It emphasizes to practically visualizing real-world problems, analyzing them, and then designing the solution for that problem using smart components.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
3	0	0	-	3	20	20	-	60	-	100	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	Basics of Networking & Basics of Network Security: Network Types, Layered Network Models, Addressing , Internet of Things TCP/IP Transport layer, Security ,Network Confidentiality, Cryptography, Message Integrity and Authenticity, Digital signatures, Key Management, Internet, Security& Firewall.	5	3
2	Introduction to IoT: Genesis of IoT, IoT and Digitization, Evolutionary Phases of the Internet, IoT Impact, IoT Applications and examples: Connected Roadways, Connected Factory, Smart Connected Buildings, Smart Creatures, Convergence of IT and OT, IoT Challenges	15	4
3	IoT Architecture -State of the Art: Introduction, State of the art, Architecture Reference Model- Introduction, Reference Model, and architecture, IoT reference Model, IoT Reference Architecture- Introduction, Functional View, Information View, Deployment and Operational View, Other Relevant architectural views.	15	6
4	IoT Sensing and Actuation & IoT Processing Topologies and Types: Introduction, Sensors, Sensor Characteristics, SensorDeviations, SensingTypes, Sensing Considerations, Actuators, Actuators Types, Actuator Characteristics, Data Formats, Processing in IoT, Processing Topologies, IoT Device Design and Selection Considerations, Processing Offloading, Offload location, Offload decision making, Offloading considerations.	20	7
5	IoT Connectivity Technologies: RFID , NFC, Wi-Fi, Bluetooth low energy, IEEE 802.15.4, Zigbee, Thread, Wireless HART, Z-Wave, LoRa, NB-IoT.	15	8
6	IoT Communication Technologies: Introduction, Constrained nodes, Constrained networks, Types of constrained devices, Low power and lossy networks, Infrastructure protocols, Internet protocol version 6 (IPv6), RPL,6LoWPAN, Content-centric networking (CCN), Discovery Protocols, Physical web, Multicast DNS (mDNS), Universal plug and play (UPnP), Data Protocols, MQTT, CoAP, AMQP, XMPP, REST, WebSocket, Identification Protocols, EPC, URIs, Device Management, Semantic Protocols, JSON-LD, Web thing model.	20	10
7	IoT Case Studies: Agricultural IoT, Components of an agricultural IoT, Advantages of IoT in agriculture, Case Studies, Vehicular IoT, Components of vehicular IoT, Advantages of vehicular IoT, Healthcare IoT, Components of healthcare IoT, Advantages and risk of healthcare IoT, Case Studies, Evolution of New IoT Paradigms, Challenges Associated with IoT, Emerging Pillars of IoT.	10	7



Reference Books

1.	Introduction to IOT (TextBook) By Sudip Mishra, Anandarup Mukherjee, Arijit Roy Cambridge University Press (TextBook)
2.	IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things By David Hanes Cisco Press
3.	Building the Internet of Things with IPv6 and MIPv6 The Evolving World of M2M Communications By Daniel Minoli Wiley Publications
4.	A Practical Guidebook to Learn and Implement IoT using Machine Learning By Purnendu Shekhar Pandey Perception Publications
5.	The Internet of Things: Connecting Objects to the Web By Hakima Chaouchi Wiley Publications

Course Outcome

After Learning the Course the students shall be able to:

After Learning the course the students shall be able to:

1. Understand the basics of Networking and Security..
2. Understand architecture for Internet of Things.
3. Recognize various devices, sensors, actuators, and various processing paradigms for IoT.
4. Design a simple IoT system comprising sensors, wireless network connection, data analytics and display/actuators, and write the necessary control software.
5. Learn working of IoT Connectivity/Medium access protocols



Course: BTech

Semester: 5

Prerequisite: Basic Electronics and Circuits, Basic Programming Language. | 203105101 - Fundamentals of Programming

Rationale: This course provides a broad introduction to IoT and its applications. It emphasizes to practically visualizing real-world problems, analyzing them, and then designing the solution for that problem using smart components.

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total	
Lecture Hrs/Week	Tutorial Hrs/Week	Lab Hrs/Week	Hrs/Week	Credit	Internal Marks			External Marks			
					T	CE	P	T	P		
0	0	2	-	1	-	-	20	-	30	50	

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Outcome

After Learning the Course the students shall be able to:

After Learning the course the students shall be able to:

1. Understand the basics of Networking and Security..
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3. Recognize various devices, sensors, actuators, and various processing paradigms for IoT.
4. Design a simple IoT system comprising sensors, wireless network connection, data analytics and display/actuators, and write the necessary control software.
5. Learn working of IoT Connectivity/Medium access protocols

List of Practical

1.	Introduction to Arduino programming.
2.	Introduction to Arduino Uno R3
3.	To blink the LED with Arduino.
4.	To interface push button with Arduino.
5.	To interface LCD with Arduino.
6.	To read the analog voltage using ADC on Arduino.
7.	To detect occupancy of an area using PIR sensors
8.	To interface real time clock IC DS1307 with Arduino.
9.	To measure the distance of an object using ultrasonic sensor
10.	To display temperature and humidity data.

Miscellaneous

Exam Requirement

It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc.



Date: 06-06-2024

NOTICE

A Massive Open Online Course (MOOC), is a type of online learning program designed to provide widespread access to education. The aim is to provide high-quality education and learning opportunities to a global audience. The University Grants Commission (UGC) is the primary government agency that has been actively promoting the introduction of MOOCs in educational institutions. Additionally, the Ministry of Education (formerly the Ministry of Human Resource Development) and the All India Council for Technical Education (AICTE) also play a significant role in advocating for and supporting the implementation of MOOCs in the education system. MOOCs offered by NPTEL (National Programme on Technology Enhanced Learning) presents several advantages for students like:

- 1) Flexibility: Students can learn at their own pace and convenience, balancing their studies with other commitments.
- 2) Earning valuable certification: NPTEL courses are designed by faculty from prestigious institutions like IITs and IISc, ensuring high-quality content and teaching. Upon successful completion of a course, students can earn certificates from NPTEL, which can add value to their resumes and enhance their job prospects.

Looking to all above aspects Faculty of Engineering & Technology, Parul University has decided to offer one MOOC per semester. All the students are hereby informed to enroll for MOOC suggested by their department. Students are requested to note following important points:

- 1) Registration will be done through SWAYAM/NPTEL platform through university mail ID only.
- 2) The same university mail ID shall be used while submitting assignment as well as appearing in examination.
- 3) At the time of enrollment/exam registration choose below mentioned details carefully:
 - Part of a SWAYAM local chapter? Yes
 - Local Chapter State: Gujarat
 - College Name: Choose your respective institute carefully from given combo box
 - 1) Parul Institute of Engineering & Technology, Vadodara, Gujarat(856)
 - 2) Parul Institute of Technology, Vadodara, Gujarat (1295)
 - Are you taking this exam for credit transfer: Yes
 - Can we share scores with your college: Yes
- 4) It is compulsory to upload all required documents like photographs, sign, caste certificate (if applicable), PwD certificate (if applicable) etc. on time, failure of which may results in holding the score card from NPTEL. All images to be uploaded must be as per specified size and form only.
- 5) Please note down time line for odd sem 2024-25 and strictly follow them
 - a. Open enrollment to the course: May 22, 2024
 - b. Close enrollment to the course: July 29, 2024, 5pm
 - c. Open exam registration form: June 20, 2024 - 10am
 - d. Close exam registration form: Aug 12, 2024 5pm

Parul Institute of Engineering & Technology
Faculty of Engineering & Technology

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- 6) Mentors from the institute will be assigned to offer guidance throughout the semester for the specified course. Students will have at least one hour of interaction with their mentor each week.
- 7) For the subject offered through NPTEL, assignment carries 25 marks weightage. It is compulsory for students to submit all assignment on time on NPTEL portal.
- 8) Proctored exam conducted by NPTEL carries 75 marks weightage.
- 9) Final score = Assignment score + Proctored exam score
- 10) Student will be eligible for a certificate only if average assignment score $\geq 10/25$ and exam score $\geq 30/75$. If one of the 2 criteria is not met, he/she will not get the certificate.
- 11) Students opted MOOC need not to appear for university examination. In the exam hall ticket (admit card), against the said subject "Exempted due to registration of MOOCs" will be mentioned.
- 12) Marks secured in NPTEL/SWAYAM courses are mapped to Parul University's grading system to determine grades and grade points for credit transfer purposes.

Marks Secured in NPTEL course	Type of Certificate (As per NPTEL)	PU Grade	Grade Point	Remarks
90-100	Elite + Gold Medal	O	10	Outstanding
80-89	Elite + Silver	A+	09	Excellent
70-79	Elite	A	08	Very Good
60-69	Elite	B+	07	Good
50-59	Successfully completed	B	06	Above Average
40-49	Successfully completed	P	05	Pass
<40	No certificate	F2 or F3		Fail due to not earning certificate

- 13) If a student appears in the qualifying exam conducted by NPTEL and earns the certificate, the equivalent grade(as shown in above table) will be reflected in the mark sheet with the note that "credit transferred from MOOCs"
- 14) If a student appears in the qualifying exam conducted by NPTEL, but fails to earn a certificate, he/she will have the opportunity to appear in the university exam of the corresponding course. The grade secured in this exam will be considered as per university norms. However, this score will not be included as part of credit transfer through MOOCs in the marksheet/transcript and they are not reflected in the marksheet/transcript as "credit transferred from MOOCs"
- 15) If a student remains absent in the qualifying exam conducted by NPTEL, the student must appear for the same subject as a backlog university exam in the next semester. The grade secured in this exam will be considered as per university norms.

Dr. Vipul Vekariya
Dean - FET

Encl: List of courses offered under MOOC - Odd sem 2024-25

Parul Institute of Engineering & Technology
Faculty of Engineering & Technology

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Faculty of Technology and Engineering									
Academic Year: 2024-2025									
List of Courses offered under MOOC courses in July -2024									
College	Branch	Sem.	Subject Name	Subject Code	Credit	Mooc Course Name	Course ID	Course Link	Course Condeucted by
PIET	EC	5	Computer Architecture	303107303	3	Computer Architecture	noc24_cs83	https://onlinecourses.nptel.ac.in/noc24_cs83/preview	Prof. Smruti Ranjan Sarangi IIT Delhi
PIET	EC	7	Radar & Navigation Systems	203107445	3	Principles And Techniques Of Modern Radar Systems	noc24_ee104	https://onlinecourses.nptel.ac.in/noc24_ee104/preview	Prof. Amitabha Bhattacharya IIT Kharagpur
PIET	Aero	5	Internet of Things	303105305	2	Introduction To Internet Of Things	noc24_cs115	https://onlinecourses.nptel.ac.in/noc24_cs115/preview	Prof. Sudip Misra IIT Kharagpur
PIET	EE	5	Internet of Things	303105305	2	Introduction To Internet Of Things	noc24_cs115	https://onlinecourses.nptel.ac.in/noc24_cs115/preview	Prof. Smruti Ranjan Sarangi IIT Delhi
PIET	CSE	5	Theory of Computation	303105306	3	Theory of Computation	noc24_cs71	https://onlinecourses.nptel.ac.in/noc24_cs71/preview	Prof. Raghunath Tewari IIT Kanpur
PIET	CSE	7	Cyber Physical Systems	203105425	3	Introduction To Internet Of Things	noc24_ee104	https://onlinecourses.nptel.ac.in/noc24_ee104/preview	Prof. Sudip Misra IIT Kharagpur
PIET	IT	5	Theory of Computation	30310306	3	Theory of Computation	noc24_cs71	https://onlinecourses.nptel.ac.in/noc24_cs71/preview	Prof. Raghunath Tewari IIT Kanpur
PIET	IT	7	Cyber Physical Systems	203105425	3	Introduction To Internet Of Things	noc24_cs115	https://onlinecourses.nptel.ac.in/noc24_cs115/preview	Prof. Sudip Misra IIT Kharagpur
PIET	CV	5	Internet of Things	303105305	2	Introduction To Internet Of Things	noc24_cs115	https://onlinecourses.nptel.ac.in/noc24_cs115/preview	Prof. Sudip Misra IIT Kharagpur
PIET	ME	5	Internet of Things	303105305	2	Introduction To Internet Of Things	noc24_cs115	https://onlinecourses.nptel.ac.in/noc24_cs115/preview	Prof. Sudip Misra IIT Kharagpur
PIT	Biomedical	7	Internet of Things	203111433	3	Introduction To Internet Of Things	noc24_ee104	https://onlinecourses.nptel.ac.in/noc24_ee104/preview	Prof. Sudip Misra IIT Kharagpur
PIT	Biomedical	5	Cyber Security	303105304	2	Cyber Security and Privacy	noc24_cs121	https://onlinecourses.nptel.ac.in/noc24_cs121/preview	Prof. Saji K Mathew
PIT	Fire & Safety	7	Fire Propagation Techniques	203142435	3	Theory of Fire Propagation (Fire Dynamics)	noc24_me147	https://onlinecourses.nptel.ac.in/noc24_me147/preview	Prof. V. Raghavan
PIT	Chemical Engg.	5	Renewable Energy Sources	303109346	2	Technologies For Clean And Renewable Energy Production	noc24_ch43	https://onlinecourses.nptel.ac.in/noc24_ch43/preview	Prof. P. Mondal, IIT Roorkee
PIT	Chemical Engg.	7	Environmental Engineering and Pollution Control	203103437	3	Basic Environmental Engineering and Pollution Abatement	noc24_ch53	https://onlinecourses.nptel.ac.in/noc24_ch53/preview	Prof. P. Mondal, IIT Roorkee
PIT	Petroleum Engg	5	Renewable Energy Sources	303109346	2	Technologies For Clean And Renewable Energy Production	noc24_ch43	https://onlinecourses.nptel.ac.in/noc24_ch43/preview	Prof. P. Mondal, IIT Roorkee
PIT	Biotechnology	5	Genetic Engineering	303144305	3	Genetic Engineering: Theory and Application	noc24_bt57	https://onlinecourses.nptel.ac.in/noc24_bt57/preview	Prof. Vishal Trivedi
PIT	Biotechnology	7	Environmental Biotechnology	203144401	3	Basic Environmental Engineering and Pollution Abatement	noc24_ch53	https://onlinecourses.nptel.ac.in/noc24_ch53/preview	Prof. P. Mondal, IIT Roorkee
PIT	CSE	5	Theory of Computation	303105306	3	Theory of Computation	noc24_cs71	https://onlinecourses.nptel.ac.in/noc24_cs71/preview	Prof. Raghunath Tewari IIT Kanpur
PIT	CSE	7	Cyber Physical Systems	203105425	3	Introduction To Internet Of Things	noc24_ee104	https://onlinecourses.nptel.ac.in/noc24_ee104/preview	Prof. Sudip Misra IIT Kharagpur
PIT	MT	5	Cyber Security	303105304	2	Cyber Security and Privacy	noc24_cs121	https://onlinecourses.nptel.ac.in/noc24_cs121/preview	Prof. Saji K Mathew
PIT	Ra	5	Cyber Security	303105304	2	Cyber Security and Privacy	noc24_cs121	https://onlinecourses.nptel.ac.in/noc24_cs121/preview	Prof. Saji K Mathew
PIT	CSE(Int. Btech)	11	Cyber Physical Systems	203105425	3	Introduction To Internet Of Things	noc24_ee104	https://onlinecourses.nptel.ac.in/noc24_ee104/preview	Prof. Sudip Misra IIT Kharagpur
PIT	CSE(Int. Btech)	9	Theory of Computation	303105306	3	Theory of Computation	noc24_cs71	https://onlinecourses.nptel.ac.in/noc24_cs71/preview	Prof. Raghunath Tewari IIT Kanpur
PIT	Automobile	3	Product Realization	303102202	1	Innovation by Design	noc24_de12	https://onlinecourses.nptel.ac.in/noc24_de12/preview	Prof. B.K. Chakravarthy
PIT	Automobile	5	Renewable Energy Sources	303109346	5	Technologies For Clean And Renewable Energy Production	noc24_ch43	https://onlinecourses.nptel.ac.in/noc24_ch43/preview	Prof. P. Mondal

Details of Value-added courses and Professional courses					
Sr. No.	Name of the Department	Name of the Programme (Diploma, B.Tech., M.Tech.)	Name of the Value Added Course to be offered (except CEP programmes offered by CCEOL)	Course code	Expected Duration (in Hours)
1	Computer Science and Engineering	B.Tech.	AWS in Cloud Computing	024-25/PIT/CSE/VAC/AW	30

Co-curricular and extra-curricular events during the semester					
Sr. No.	Name of the Department	Type of the activity planned	Details of the Company / Institute / experts to	Plan date of the Activity	Proposed number of the students
1	Computer Science and Engineering	Industrial Visit	ISRO	August, 2024	180
		Industrial Visit	BISAG	September, 2024	120
		Industrial Visit	Virtue InfoTech	July 2024	120
		Industrial Visit	Adani Port	July 2024	180
		Skill Development Program	Mr. Henil Gandhi,	Oct 2024	90
		Understanding Functional	Mr. Pravin Jain	Mar 2025	115
		Hands-On Machine Learning	Mr. Mohammed Husain Bohara	April 2025	120

Details of expert talk during the semester					
Sr. No.	Name of the Department	Name of the Event/Activity	Details of the expert/ delivering person/s (if applicable)	Planned Date/s	Targeted Semester, Course and programme (if applicable)
1	Computer Science and Engineering	OptiCode: The Ultimate Code	NA	July 2024	All Semester
		Mine Mind Data	NA	August 2024	All Semester
		World Computer Literacy Day	NA	2nd Dec 2024	All Semester
		Udaan 4.0	NA	December 2024	All Semester
		Cybersecurity Awareness	NA	8th Jan 2025	
		CineClick ,2025	NA	23rd march 2025	All Semester
		Innovate-a-Thon: Igniting	NA	Apr 2025	All Semester
		International Data Privacy	NA	28 January, 2025	All Semester
		Teachers' Day_2025	NA	July 2024	All Semester
		Engineers Day_2025	NA	15 September 2024	All Semester
		Gate Awareness	NA	Entire Year	All Semester
		(Coding Bootcamps)	NA	Nov 2024	All Semester
		Data Visualization with	Dr Shyam Chawda, CEO, Aspiration Institute	July 2024	All Semester
		Artificial Intelligence and	Mr M H Vora, Thinkbiz Technology Pvt Ltd	June, 2024	3rd Year
		Cybersecurity and Data	Ms. Riddhi Patel, Sr Security Engineer, Deloitte	July 2024	3rd Year
		Software Development and	Mr Henil Gandhi, Analyst, Valuelabs	August, 2024	3rd Year
		Cloud Computing and	Mr Mohit Dala, Cloud Engineer, Krish Compusoft	September,2024	3rd Year
		Real-world applications of	Mr Jitendra Zala, COO CoreFragment Technologies	December,2024	3rd Year
		Block chain technology, its	Mr Hiren Kavad, Tech lead, Simform	January, 2025	3rd Year
		AR, VR and their potential	Mr Harsh Salvi, Technical Manager, InfinityX	February, 2025	3rd Year
		Career Guidance and Industry	Mr Jaydeep Viradiya, Technical Lead, Infogen Labs Inc.	March 2025	3rd Year
		Open Source Cloud	Ms Rituja Ambekar, Self employed	August, 2024	3rd Year
		Block Chain Technologies	Mr Priyank Jani, I Certis solution	August, 2024	3rd Year
		SSL Security	Mr. Rahul Yadav , Umabrella InfoTech	February, 2025	3rd Year
		Web Designing	Ms. Nisha Patel, Netecx	February, 2025	3rd Year
		Mobile Application	Mr. Avinash, AJIO	March 2025	3rd Year
		Software Testing Techniques	Mr. Faisal Khatri, Freelancer	July 2024	4th Year
		Data Science	Dr. Ankit Desai , Locus SH	July 2024	4th Year
		Ethical Hacking	Mr Sunny Waghela, Techdefence	August, 2024	4th Year
		MEA(R)N Stack Web	Mr Prince Bodar, CEO, Maruti InfoSoft	August, 2024	4th Year
		High performance computing	Dr Vibha Patel, Professor, VGEC, Ahmadabad	September,2024	4th Year
		Computational Number	Dr D C Jinvala, Professor, SVNIT Surat	January, 2025	4th Year

		Reverse Engineering and Cyber Law and Cyber Ethics	Mr Rahil Shah, Malware Analyst ,Sophos Labs Ms. Riddhi Patel, Sr Security Engineer, Deloitte	February, 2025 July 2024	4th Year 2nd Year
		Query Optimization	Mr Anup Shah, Programmer, Cygnet Infotech	September,2024	2nd Year
		Memory Management: A task	Mr Mayur Dubey, Oracle DBA, Accenture	July 2024	2nd Year
		Navigating the Digital Microsoft Azure, Computer	Dr Ritesh Patel , CHARUSAT Mr Jigar Patel , Cerberus Networks	March 2025 January, 2025	2nd Year 2nd Year
		Node JS	Akash Padhiyar, Akash Technolabs	February, 2025	2nd Year
		Agile in Software Engineering	Mr Raja Kumar, CIVICA	August, 2024	2nd Year

Planning about professional development activity					
Sr. No.	Name of the Department	Name of programmes to be organized*	Proposed number of teachers to be participated	Proposed details of Collaborating agency/experts (if any)	Plan Date
1	Computer Science and Engineering	FDP on "Fulstack Development"	50	Training on MS Excel	July 2024
2	Computer Science and Engineering	FDP on "Devops"	50	MIS training	October 2024
3	Computer Science and Engineering	Two Day Industry Oriented Workshop on Oracle APEX	35	External Expert	Aug-Sept 2024
4	Computer Science and Engineering	FDP On recent trends in Artificial intelligence and machine learning	50	GUJCOST	April -May 2025
5	Computer Science and Engineering	Faculty Induction Program for newly joined Faculty	40	Internal Experts	June 2024
6	Computer Science and Engineering	STTP on Data Science	50	External Expert	December 2024
7	Computer Science and Engineering	Java Hands-On Workshop from 8 to 21	43	External Expert	December 2024

Planning of Industry Exposure faculty					
Sr. No.	Name of the Department	Name of the teacher	Name of the company for training	Location	Area in which company undertake
1	CSE	Mr Giriraj Puwar	Rishabh Software	Atladara, Vadodara	Data Science, Cloud Computing,
2	CSE	Mr Kapil Dev Raghuvanshi	One Web Technology	Vadodara	Web Development, Mobile
3	CSE	Mr Meet Patel	Zen softech Private Limited	Nizampura	Java Development
4	CSE	Mr Rahul Sharma	Way to Web	Ahmedabad	Cloud Computing
5	CSE	Ms Sweety Patel	Atyantik Technologies Pvt. Ltd.	Vadodara	Web technologies
6	CSE	M Keya Patel	Atyantik Technologies Pvt. Ltd.	Vadodara	Web technologies
7	CSE	Mr Utpal Patel	Way to Web	Ahmedabad	Cloud Computing

STUDENTS AWARENESS ACTIVITIES				
Sr. No.	Name of the Department	Details about the activities to organize	Proposed number of participants	Plan date
1	CSE	Impact training (Technical)	1350	Entire Year
2	CSE	Awareness about Certification Course	1500	Every Month
3	CSE	ASMP Project Participation	1000	July-August 2024
4	CSE	Participation in National And International Hackathons	ALL	All Events
5	CSE	Participation in Code unnati by SAP, Intel Unnati Training	500	July-August 2024

6	CSE	Awareness about various government exams (GPSC, UPSC etc) by Competitive Examination Cell	600	July 2024
7	Computer Science and Engineering	Gate Awareness and Preparation	All	July, 2024-January, 2025
8	Computer Science and Engineering	Promotion of Pathway program Esigelec , France	1200 Students	6th Jun 2024
9	Computer Science and Engineering	IELTS and GRE Awareness and Preparation	Final Year Students	July 2024
10	Computer Science and Engineering	Awareness About Study Abroad Programs	Final Year Students	July 2024

DETAILS OF MOU WITH COMPANY

Sr. No.	Name of the Department	Name of the Company with which the MOU will be signed	Plan date of the MoU [From-to]	Duration of the MoU [In months / years]	Activities to be done under MoU
1	Computer Science and Engineering	Haptix	July 2024	One Year	Expert Talk and Internship
2	Computer Science and Engineering	Jagruti Infosoft	August 2024	Two Year	Expert Talk and Internship, industrial Vis
3	Computer Science and Engineering	Infibusiness Solutions	October 2024		Preparation for Placement, Internship
4	Computer Science and Engineering	Alite Projects	December 2024		Preparation for Placement, Internship

Department work portfolio
Department of Computer Science and Engineering
Parul Institute of Technology
FET, Parul University

Sr. No.	Portfolio	Name of Coordinators
1	MIS Coordinator	Mr Rahul Sharma
		Ms Hina Dudrejiya
		Ms Megha Mayavanshi
		Mr Amar Chandra
		Mr Ajay Solanki
		Mr Suraj Singh
2	Time Table coordinator	Mr. Utpalkumar Bhupendrabhai Patel
		Mr. Meetkumar Manojkumar Patel
		Ms Aditi Jaiswal
		Ms. Surabhi Solanki
		Mr. Apoorv Gurjar
3	Exam. Coordinator	Mr Devendra Parmar
		Ms Gayathri Naidu
		Ms Kusumlata Dhiman
		Ms Jhanvi Dave
		Mr Giriraj Puwar
		Mr Ashish Dubey
4	Alumni Coordinator	Ms Riddhi A Mehta
		Mr. Kapildev Raghuvanshi
5	Project Coordinator, ASMP coordinators	Mr. Mohitkumar Jagdishchandra Rathod
		,Mrs. Monika Ankit Nayak
		Mr. Kapildev Raghuvanshi
		Mr Keshav Kumar
6	EDC Coordinator	Miss. Nirali Nitinbhai Bhaliya
		Mr Prolay Biswas
		Ms Sujaya Bhattacharge
7	ISAC	Mr Akash Patil
		Ms Rashmi Pandey
8	Scholarship Coordinator	Mrs. Bhasha Anjariya
		Mr Raviranjan Kumar Pandey
9	Placement	Mr Umang Panchal
		Keya Patel
		Dr Abhigyan Ganguly
		Gyanendra Hans
10	Cultural Coordinator	Mrs. Arpita Vaidya
		Mr Akash Patil
11	NPTEL, MOOCs, Virtual Lab, Value Added Course	Mr Ajay Kumar Solanki
		Twara Parikh
		Kunwar Pankaj Siddharth
12	CEP/ CCOEL	Ms Bhasha Anjariya
		Mr Pankaj Kumar Nirala

Department work portfolio
Department of Computer Science and Engineering
Parul Institute of Technology
FET, Parul University

Sr. No.	Portfolio	Name of Coordinators
13	Student chapters (CSE, IEEE, CSI student chapter)	Dr Vikram Kumar
		Dr Nandkishor sirdeshpandey
14	TechExpo	Mr. Mohitkumar Jagdishchandra Rathod
		Ms Kiran Sharma
15	Sport Coordinator	Mr Amar Chandra
16	GATE Coordinator, Competitive Exam	Ms Ayushi Desai
		Ms Shubangi Dhaygude
17	SRC Activities	Ms. Bhumi Shah
		Arnika Patel
18	Tinkering hub Coordinator, Technical Event Coordinator	Mr. Mohitkumar Jagdishchandra Rathod
		Mrs. Monika Ankit Nayak
19	Lab manual Committee	Ms Shivangi Patel
		Mr Ashish Patel
20	WDC	Ms Vaibhavi Parikh
21	Mentoring	Mr Giriraj Puwar
		Ms Khusboo Trivedi
		Mr Sachin Kumar
		Mr Vaibhav Shrivastav
22	Subject Mapping (Transfer Students)	Ms Vaibhavi Parikh (2nd Year)
		Ms Sweety Madam (3rd Year)
23	Armed Forces	Mr Pulkesh Roy
24	Foreign Student Coordinator(IRC, IEP)	Ashish Patel
		EPHIN MUTHAIYAN CHINNAPILLAI