

PARUL UNIVERSITY

R/Notification-1397/2024-25

Office of the Registrar
December 17, 2024

NOTIFICATION

Sub: Course Structure and Syllabus of Integrated B.Tech. Computer Science Engineering for 11th and 12th semesters for Academic Year 2024-25

Ref: (i) Proceedings of the Eighteenth Meeting of the Governing Body held on December 2, 2024

(ii) Orders of the Provost

PREAMBLE:

Dean, Faculty of Engineering & Technology proposed Course Structure and Syllabus of Integrated B.Tech. Computer Science Engineering for 11th and 12th semesters for Academic Year 2024-25 during the Eighteenth Meeting of the Governing Body held on December 2, 2024 which was approved by the Governing Body. Hence, the Order.

ORDER:

Course Structures of Integrated B.Tech. Computer Science Engineering for 11th and 12th semesters for Academic Year 2024-25 are enclosed in the Annexure.

Dean, FE & T is informed to arrange to upload syllabus of Integrated B.Tech. Computer Science Engineering for 11th and 12th semesters for Academic Year 2024-25 on MIS.

By Order


Registrar

To,

1. Dean, Faculty of Engineering & Technology and Principal, PIET
2. Principal, PIT

Copy to,

- 1) The Controller of Examinations
- 2) Director (IQAC)
- 3) PUMIS Coordinator

Submitted to,

- 1) The President
- 2) The Provost

ANNEXURE

Faculty of Engineering and Technology - PIET		
Integrated B.Tech in Computer Science Engineering		
Semester - 1		
S. No.	Name of Subject	Credits
1	Environment Conservation and Hazard Management	4
2	Computer Programming	7
3	Fundamental of Digital Electronics	5
4	Fundamental of Computer Application	4
5	Basic Mathematics	4
6	English	5
Total		29
Semester - 2		
S. No.	Name of Subject	Credits
7	Basic Physics	5
8	Basic Electronics	5
9	Advanced Computer Programming	7
10	Static Web Page Designing	6
11	Contributor Personality Development	4
12	Advance Mathematics (Group-1)	4
Total		31
Semester - 3		
S. No.	Name of Subject	Credits
13	Operating System	5
14	Programming in C++	7
15	Database Management System	7

16	Data Structure	7
17	Microprocessor and Assembly Language Programming	5
Total		31
Semester - 4		
S. No.	Name of Subject	Credits
18	Computer Networks	5
19	Fundamentals Of Software Development	5
20	.Net Programming	7
21	Computer Organization And Architecture	3
22	Web Development Tools	4
Total		24
Semester - 5		
S. No.	Name of Subject	Credits
23	Computer Maintenance and Troubleshooting	5
24	Dynamic Web Page Development	7
25	JAVA Programming	7
26	Computer Network and Security	7
27	Project -1	4
Total		30
Semester - 6		
S. No.	Name of Subject	Credits
28	Advance Java Programming	7
29	Professional Practices Using Database	4
30	Project 02	6
31	Elective- 02 Group -I Networking (Compulsory Subjects:1)	7

32	Elective-Iii Group -Ii Web Development (Compulsory Subjects:1)	7
Total		31
Semester - 6 (Elective 02 Group - 01 Networking)		
1	Network Management And Administration	7
2	Mobile Computing And Application Development	7
Semester - 6 (Elective 03 GROUP – 02)		
1	Advance Dynamic Web Page Development	7
2	Advanced Web Technology	7
Semester - 7		
S. No.	Name of Subject	Credits
33	Digital Electronics	3
34	Digital Electronics Laboratory	1
35	Data Structure and Algorithms	3
36	Data Structure and Algorithms Laboratory	1
37	Product Realization	1
38	Python Programming	2
39	Python Programming Laboratory	1
40	Database Management System	3
41	Database Management System Laboratory	1
42	Discrete Mathematics	4
43	Professional Communication Skills	2
Total		22
Semester - 8		
S. No.	Name of Subject	Credits
44	Operating System	3

45	Operating System Laboratory	1
46	Computer Networks	3
47	Computer Networks laboratory	1
48	Java Programming	3
49	Java Programming Laboratory	1
50	Computer Organization and Microprocessor Architecture	3
51	Computer Organization and Microprocessor Architecture Laboratory	1
52	Probability, Statistics and Numerical Methods	4
53	Professional Grooming and Personality Development	1
Total		21
Semester - 9		
S. No.	Name of Subject	Credits
54	Software Engineering	3
55	Software Engineering Laboratory	1
56	Formal Language and Automata Theory	3
57	Quant, and Reasoning	3
58	Enterprise Programming	2
59	Enterprise Programming Laboratory	1
60	Design and Analysis of Algorithms	3
61	Design and Analysis of Algorithms Laboratory	1
62	Professionalism and Corporate Ethics	1
63	Open Elective-I (Compulsory Subjects :1)	2
Total		20
Semester - 9 (Open Elective 01)		
1	Basic Aircraft Science	2

2	Disaster Preparedness and Planning	2
3	Cyber Security	2
4	Azure Fundamentals	2
5	Fundamentals of Communication Engineering	2
6	Internet of Things	2
7	Renewable Energy Sources	2
Semester - 10		
S. No.	Name of Subject	Credits
64	Data visualization and Data Analytics	3
65	Data visualization and Data Analytics laboratory	1
66	Compiler Design	3
67	Compiler Design Laboratory	1
68	MEA(R)N Stack Web Development	3
69	MEA(R)N Stack Web Development Laboratory	1
70	Project - 1	3
71	Employability Skills	1
72	PEC 01 Lab (Int. BTech) (Compulsory Subjects :1)	1
73	PEC 01(Int. BTech) (Compulsory Subjects :1)	3
74	PEC 02 Lab (Int. BTech) (Compulsory Subjects :1)	1
75	PEC 02(Int. BTech) (Compulsory Subjects :1)	3
Total		24
Semester - 10 (PEC 01 Int. B.Tech)		
1	Artificial Intelligence	3
2	Cyber Security	3
3	Cloud Computing	3
Semester - 10 (PEC 01 LAB Int. B.Tech)		

1	Artificial Intelligence Laboratory	1
2	Cyber Security Laboratory	1
3	Cloud Computing Laboratory	1
Semester - 10 (PEC 02 Int. B.Tech)		
1	.NET Programming	3
2	Mobile Application Development	3
3	Devops	3
Semester - 10 (PEC 02 LAB Int. B.Tech)		
1	.NET Programming Laboratory	1
2	Mobile Application Development Laboratory	1
3	Devops Laboratory	1
Semester - 11		
S. No.	Name of Subject	Credits
76	Information and Network security	3
77	Information and Network security Laboratory	1
78	Project – 2	6
79	Summer Internship	2
80	Software Testing and Quality Assurance	3
81	Software Testing and Quality Assurance Laboratory	1
82	PEC 03 (Compulsory Subjects :1)	3
83	PEC 03 LAB (Compulsory Subjects :1)	1
84	PEC 04 (Compulsory Subjects :1)	3
85	PEC 04 LAB (Compulsory Subjects :1)	1
86	Open Elective 02 (Compulsory Subjects :1)	3
Total		27
Semester - 11 (Open Elective 02)		

1	Remote Sensing and Geo Informatics	3
2	Real Time Systems	3
3	Cyber Physical Systems	3
4	Computational Number Theory	3
5	VLSI System Design	3
Semester - 11 (PEC 03)		
1	Augmented and Virtual Reality	3
2	Blockchain Technologies	3
3	Machine Learning	3
Semester - 11 (PEC 03 LAB)		
1	Augmented and Virtual Reality Laboratory	1
2	Blockchain Technologies Laboratory	1
3	Machine Learning Laboratory	1
Semester - 11 (PEC 04)		
1	Modern Networks	3
2	Big Data Analytics	3
3	High performance computing	3
Semester - 11 (PEC 04 LAB)		
1	Modern Networks Laboratory	1
2	Big Data Analytics Laboratory	1
3	High performance computing Laboratory	1
Semester - 12		
S. No.	Name of Subject	Credits
87	Internship	14
Total		14
Grand Total		304