



RCC Institute of Information Technology, Kolkata
(Autonomous from Academic Session: 2024 – 2025)

Syllabus: B. Tech. in Computer Science and Engineering

Third Semester							
Sl. No.	Category	Course Code	Course Name	Contact Hours			Credits
				L	T	P	
1	Professional Core	RCC-PCC-CSE-301	Data Structure & Algorithms	3	0	0	3
2	Professional Core	RCC-PCC-CSE-302	Digital Systems & comp organization	3	0	0	3
3	Professional Core	RCC-PCC-CSE-303	Object Oriented Programming	3	0	0	3
4	Professional Core	RCC-PCC-CSE-304	Discrete Mathematics	3	1	0	4
5	Humanities & Social Science	RCC-HSMC-CSE-301	Industrial Management	3	1	0	4
6	Audit/Mandatory	RCC-AU-CSE-381	Soft skill & Ethics	2	0	0	0
7	Professional Core	RCC-PCC-CSE-391	Data Structure & Algorithms Lab	0	0	4	2
8	Professional Core	RCC-PCC-CSE-392	Digital Systems & Computer Organization Lab	0	0	4	2
9	Professional Core	RCC-PCC-CSE-393	Object-Oriented Programming Lab	0	0	4	2
Total							23
Fourth Semester							
Sl. No.	Category	Course Code	Course Name	Contact Hours			Credits
				L	T	P	
1	Professional Core	RCC-PCC-CSE-401	Operating System	3	0	0	3
2	Professional Core	RCC-PCC-CSE-402	Computer Architecture & VHDL	3	0	0	3
3	Professional Core	RCC-PCC-CSE-403	Database Management Systems	3	0	0	3
4	Humanities & Social Science	RCC-HSMC-CSE-401	Human Resource Development	3	1	0	4
5	Audit/Mandatory	RCC-AU-CSE-481	Environmental Sciences	2	0	0	0
6	Audit/Mandatory	RCC-PCC-CSE-491	Operating System Lab	0	0	4	2
7	Professional Core	RCC-PCC-CSE-492	Computer Architecture & VHDL Lab	0	0	4	2
8	Professional Core	RCC-PCC-CSE-493	Database Management Systems Lab	0	0	4	2
9	Professional Core	RCC-PCC-CSE-494	Small-Scale Software Development Using Python	0	0	4	2
10	Professional Core	RCC-PCC-CSE-495	C++ Programming Practices Lab	0	0	4	2
Total							23



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Fifth Semester							
Sl. No.	Category	Course Code	Course Name	Contact Hours			Credits
				L	T	P	
1	Professional Core	RCC-PCC-CSE-501	Software Engineering	3	0	0	3
2	Professional Core	RCC-PCC-CSE-502	Design & Analysis of Algorithms	3	0	0	3
3	Professional Core	RCC-PCC-CSE-503	Computer Network	3	0	0	3
4	Professional Core	RCC-PCC-CSE-504	Artificial Intelligence	3	0	0	3
5	Professional Core	RCC-PCC-CSE-505	Formal Language & Automata Theory (FLAT)	3	0	0	3
6	Professional Core	RCC-PCC-CSE-591	Software Engineering Lab	0	0	4	2
7	Professional Core	RCC-PCC-CSE-592	Design & Analysis of Algorithms Lab	0	0	4	2
8	Professional Core	RCC-PCC-CSE-593	Computer Networks Lab	0	0	4	2
9	Professional Core	RCC-PCC-CSE-594	Artificial Intelligence Lab	0	0	4	2
10	Project	RCC-PROJ-CSE-581	Seminar Leading to Project	0	0	2	1
Total							24
Sixth Semester							
Sl. No.	Category	Course Code	Course Name	Contact Hours			Credits
				L	T	P	
1	Professional Core	RCC-PCC-CSE-601	Compiler Design	3	0	0	3
2	Professional Core	RCC-PCC-CSE-602	Machine Learning	3	0	0	3
3	Professional Elective Core	RCC-PEC-CSE-601 (A/B/C)	Professional Elective – I A. Distributed Database Management System B. Image Processing C. Pattern Recognition	3	0	0	3
4	Open Elective Core	RCC-OEC-CSE-601 (A/B/C)	Open Elective – I A. Operations Research B. Digital Signal Processing C. Control Systems	3	0	0	3
5	Humanities & Social Science	RCC-HSMC-CSE-681	Organizational Behavior	2	0	0	2
6	Project	RCC-PROJ-CSE-681	Research Methodology	2	0	0	2
7	Professional Elective Core	RCC-PEC-CSE-691 (A/B/C)	Professional Elective-II A. Distributed Database Management System Lab B. Image Processing Lab C. Pattern Recognition Lab	0	0	4	2
8	Professional Core	RCC-PCC-CSE-692	Machine Learning Lab	0	0	4	2
9	Engineering Science	RCC-ESC-CSE-681	Design & Thinking Lab	0	0	2	1
10	Project	RCC-PROJ-CSE-682	Project I (Mini.)	0	0	2	1
Total							22



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Seventh Semester							
Sl. No.	Category	Course Code	Course Name	Contact Hours			Credits
				L	T	P	
1	Professional Elective Core	RCC-PEC-CSE-701 (A/B/C/D)	Professional Elective-III A. Quantum Computing B. Cloud Computing C. Multi-agent Intelligent Systems D. Statistical Machine Learning	3	0	0	3
2	Professional Elective Core	RCC-PEC-CSE-702 (A/B/C/D)	Professional Elective-IV A. Deep Learning B. Soft Computing C. Ad-Hoc and Sensor Networks D. Cyber Security	3	0	0	3
3	Open Elective Core	RCC-OEC-CSE-701 (A/B/C/D)	Open Elective-II A. Multimedia Systems B. Introduction to Philosophical Thoughts C. Digital Marketing D. Numerical Methods for Engineers	3	0	0	3
4	Project	RCC-PROJ-CSE-781	Project-II	0	0	12	6
5	Project	RCC-PROJ-CSE-782	Industrial Project/Training/Internship (Min 4 weeks total duration 24 hrs.)	0	0	4	2
Total							17
Eighth Semester							
Sl. No.	Category	Course Code	Course Name	Contact Hours			Credits
				L	T	P	
1	Professional Elective Core	RCC-PEC-CSE-801 (A/B/C/D/E)	Professional Elective-V A. Signals and Networks B. Cryptography & Network Security C. Speech and Natural Language Processing D. Web and Internet Technology E. Internet of Things	3	0	0	3
2	Open Elective Core	RCC-OEC-CSE-801 (A/B/C/D/E)	Open Elective-III A. Big Data Analysis B. Cyber Law and Ethics C. Mobile Computing D. Robotics E. Soft Skill & Interpersonal Communication	3	0	0	3
3	Open Elective Core	RCC-OEC-CSE-802 (A/B/C/D)	Open Elective-IV A. E-Commerce and ERP B. Micro-electronics and VLSI Design C. Data Analysis with R D. Data Science	3	0	0	3
4	Project	RCC-PROJ-CSE-881	Project-III	0	0	12	6
Total							15