

Syllabus for Ph.D. Course Work in Computer Science& Engineering

Effective from Academic Year 2025-2026



Department of Computer Science & Engineering

Central University of Rajasthan

NH-8 Jaipur-

Ajmer Highway, Bandarsindri Kishangarh-

305817, District-

Ajmer, Rajasthan Website: www.curaj.ac.in

PhD Course Structure as per NEP 2020

Semester-I:

S.No.	Title of Courses	Course Code	Type of Course	Credits
1	Research Methodology	8.0CSE01	COMPULSORY	4
2	Topics in Computer Science	8.0CSE02	COMPULSORY	4
3.	Program Elective	8.0CSE03	ELECTIVE	4
4.	Pedagogy for Higher Education (MOOC)	8.0CSE04	COMPULSORY	3
Total Credits				15

Semester-II:

1	Practice Based Teaching Skills (non-graded course)	8.0CSE05	COMPULSORY	3
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S.No.	Title of Courses	Course Code	Credits
1	Quantum Cryptography	8.0CSE06	4
2	Information Security Audit and Assurance	8.0CSE07	4
3	Security Analysis of Protocols	8.0CSE08	4
4	Cyber Crime, Forensics and Information Warfare	8.0CSE09	4
5	Public Key Infrastructure and Trust Management	8.0CSE10	4
6	Digital Watermarking and Steganalysis	8.0CSE11	4
7	Data Mining and Machine Learning	8.0CSE12	4
8	Simulation and Modeling	8.0CSE13	4
9	Optimization Techniques	8.0CSE14	4
10	Topics in Operating Systems	8.0CSE11	4
11	Topics in Computer Architecture	8.0CSE12	4
12	Advanced Compiler Design	8.0CSE13	4
13	Advanced Topics in Databases	8.0CSE14	4
14	Mobile Computing	8.0CSE15	4
15	Advanced Software Engineering	8.0CSE16	4
16	Multimedia System and Security	8.0CSE17	4
17	Secure Programming Techniques	8.0CSE18	4
18	Network Protocols	8.0CSE19	4
19	Cloud Computing	8.0CSE20	4
20	Parallel Processing	8.0CSE21	4
21	Digital Image Processing	8.0CSE22	4
22	Biometrics and Security	8.0CSE23	4
23	Information Theory and Coding	8.0CSE24	4
24	Computer Vision	8.0CSE25	4
25	Natural Language processing	8.0CSE26	4
26	Large language models	8.0CSE27	4
27	Advanced Algorithms	8.0CSE28	4