

# University of Pune

## Faculty of Technology

### Board of Studies in Computer and Information Technology

#### Curriculum Structure

Sr. No	Course Title	Semester	Credits
1.	Core 1 – Parallel and Distributed Computing	I	5
2.	Core 2 – Statistics and Advanced Algorithms	I	5
3.	Core 3 – Advanced Database Systems	I	5
4.	Core 4 – Software Project Management	II	5
5.	Core 5 – Fundamentals of Computer Network and Security	II	5
6.	Elective I *	I	5
7.	Elective II *	II	5
8.	Elective III *	II	5
9.	Open Elective I **	I	5
10.	Open Elective II **	II	5
11.	Seminar 1 (Advanced Topic based on Sem I)	I	5
12.	Seminar 2 (Advanced Topic based on Sem II)	II	5
13.	Discrete Mathematics	III	5
14.	Advanced Topics ***	III	5
15.	Research Methodology	III	5
16.	Seminar III – Literature Review of Research Problem	III	5
17.	Research Progress Seminar I and Report	IV	20
18.	Research Progress Seminar II and Report	V	20
19.	Research Progress Seminar III and Report	VI	20
20.	Research Progress Seminar IV and Report	VII	20
21.	Thesis Submission	VIII	--

## Note

Candidates are expected to perform minimum four (4) assignments for every core and elective course, and submit report as a bona fide document to supervisor/course instructor. The assignment may be in the form of modeling/ simulation/ programming/ experimental investigation/ fieldwork

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The candidates should select three electives from the list provided in Table 1

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The candidates should select two open electives from the list provided in Table 2

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The candidates should select two open electives from the list provided in Table 3

**TABLE 1**

CIE1: Security and Privacy in the Cloud
CIE2: Soft Computing Techniques
CIE3: Network System Design
CIE4: Advanced Operating Systems
CIE5: Software Engineering for Embedded Systems
CIE6: Digital Communication and Computer Networks
CIE7: Machine Learning
CIE8: Client – Server Based IT Solutions
CIE9: Web Services
CIE10: Aspect Oriented Programming
CIE11: Software Product Assurance
CIE12: Software Metrics
CIE13: Real Time Software and Systems
CIE14: Image and Video Processing
CIE15: Grid Computing
CIE16: Computer Architecture
CIE17: Information Technology and Systems
CIE18: Engineering Entrepreneurship
CIE 19: Internet Applications
CIE 20: Web Systems Integration
CIE 21: Engineering Statistics and Quality

**TABLE 2**

CIO1: Mobile and Wireless Network Security
CIO2: Mashups

CIO3: Security Issues in Web-based systems
CIO4: Component Based Development

**TABLE 3**

CIA1: Advanced Computer Architecture
CIA2: Software Engineering Concepts and Methods
CIA3: Advanced Statistical Methods and Algorithms
CIA4: Advanced Data Structure