

Progressive Education Society's
Modern College of Arts, Science and Commerce (*Autonomous*),
Shivajinagar, Pune 5

(An Autonomous College Affiliated to Savitribai Phule Pune University)

Framework of Syllabus

For

M.Sc. (Computer Science)

(Based on NEP 2020 framework)
(To be implemented from the Academic Year 2026-27)

M. Sc. Part I Semester I

Course Type	Course Code	Course	Course / Paper Title	Hours / Week	Credit	CIA	ESE	Total
Major Mandatory (4 + 4+4+2)	26CsCmpP111	Major Paper 1 (Theory)	Design and Analysis of Algorithm	2	2	25	25	50
	26CsCmpP112	Major Paper 2 (Theory)	Artificial Intelligence	2	2	25	25	50
	26CsCmpP113	Major Paper 3 (Theory)	Advanced Database Concepts	2	2	25	25	50
	26CsCmpP114	Major Paper 4 (Theory)	Data Mining and Data Engineering	2	2	25	25	50
	26CsCmpP115	Major Paper 5 (Practical)	Lab Course on Advanced Database Concepts	4	2	25	25	50
	26CsCmpP116	Major Paper 6 (Practical)	Lab Course on Artificial Intelligence and Advanced Python	4	2	25	25	50
	26CsCmpP117	Major Paper 7 (Practical)	Project on Emerging Trends	4	2	25	25	50
Major Electives (4)	26CsCmpP121	Major Elective 1 (Theory)	Software Testing and Quality Assurance	4	4	50	50	100
	26CsCmpP122	Major Elective 2 (Theory)	DOT NET	2	2	25	25	50
	26CsCmpP123	Major Elective 2 (Practical)	Lab Course on DOT NET	4	2	25	25	50
RM (4)	26CsCopP131	RM Section 1	Research Methodology and Research Using Artificial Intelligence	2	4	50	50	100
		RM Section 2		2				
Total				30	22	275	275	550
Extra Credit Course	26CpHrtP201	Non-CGPA Course	Human Rights I	1	1	-	25	25

M. Sc. Part I Semester II

Course Type	Code	Course	Course / Paper Title	Hours / Week	Credit	CIA	ESE	Total
Major Mandatory (4 + 4+4+2)	26CsCmpP211	Major Paper 1 (Theory)	UNIX Internals	2	2	25	25	50
	26CsCmpP212	Major Paper 2 (Theory)	Machine Learning	2	2	25	25	50
	26CsCmpP213	Major Paper 3 (Theory)	Cloud Computing	2	2	25	25	50
	26CsCmpP214	Major Paper 4 (Theory)	Full Stack Development I (MERN/MEAN)	2	2	25	25	50
	26CsCmpP215	Major Paper 4 (Practical)	Lab Course on Machine Learning & Cloud Computing	4	2	25	25	50
	26CsCmpP216	Major Paper 4 (Practical)	Lab Course on Advanced JavaScript	4	2	25	25	50
	26CsCmpP217	Major Paper 4 (Practical)	Lab Course on Full Stack Development I (MERN/MEAN)	4	2	25	25	50
Major Electives (4)	26CsCmpP221	Major Elective 1 (Theory)	Information System Security	4	4	50	50	100
	26CsCmpP222	Major Elective 2 (Theory)	Agile Methodology and Design Thinking	2	2	25	25	50
	26CsCmpP223	Major Elective 2 (Practical)	Lab Course on Agile Methodology and Design Thinking	4	2	25	25	50
OJT(4)	26CsCmpP204	OJT	On Job Training	8	4	50	50	100
Total				34	22	275	275	550
Extra Credit Course	26CpHrtP201	Non-CGPA Course	Human Rights II	1	1	-	25	25

M. Sc. Part II Semester III

Course Type	Code	Course	Course / Paper Title	Hours / Week	Credit	CIA	ESE	Total
Major Mandatory (4 + 4+4+2)	26CsCmpP311	Major Paper 1 (Theory)	Business Intelligence	2	2	25	25	50
	26CsCmpP312	Major Paper 2(Theory)	Deep learning	2	2	25	25	50
	26CsCmpP313	Major Paper 3 (Theory)	Blockchain Technology	2	2	25	25	50
	26CsCmpP314	Major Paper 4 (Theory)	Full Stack Development II (MERN/MEAN)	2	2	25	25	50
	26CsCmpP315	Major Paper 5 (Practical)	Lab Course on Deep Learning	4	2	25	25	50
	26CsCmpP316	Major Paper 6 (Practical)	Lab Course on DevOps	4	2	25	25	50
	26CsCmpP317	Major Paper 7 (Practical)	Lab Course on Full Stack Development II (MERN/MEAN)	4	2	25	25	50
Major Electives (4)	26CsCmpP321	Major Elective 1 (Theory)	Natural Language Processing	4	4	50	50	100
	26CsCmpP322	Major Elective 2 (Theory)	Emerging Trends in Computer Science	4	4	50	50	100
RP (4)	26CsCmpP304	RP	Research Project I	8	4	50	50	100
Total				32	22	275	275	550
Extra Credit Course	26CpCysP301	Non-CGPA Course	Cyber Security I	2	2	-	50	50
	26CpSkdP302	Non-CGPA Course	Skill Development I	2	2	-	50	50
	26CpPolP303	Non-CGPA Course	Introduction to Indian Constitution	2	2	-	50	50

M. Sc. Part II Semester IV

Course Type	Code	Course	Course / Paper Title	Hours / Week	Credit	CIA	ESE	Total
Major Mandatory (4+4+4+4)	26CsCmpP411	Major Paper	Industrial / Institutional Training (Project)	32	16	200	200	400
RP (6)	26CsCmpP404	RP	Research Project II	12	6	75	75	150
Total				44	22	275	275	550
Extra Credit Course	26CpCysP401	Non-CGPA Course	Cyber Security II	2	2	-	50	50
	26CpSkdP402	Non-CGPA Course	Skill Development II	2	2	-	50	50

OJT: On Job Training: Internship/Apprenticeship **FP:** Field Project **RM:** Research Methodology **RP:** Research Project