

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
B. B. A. (Computer Application)
(Artificial Intelligence and Data Science)

Choice Based Credit System (CBCS) Syllabus Under National Education Policy (NEP)
To be implemented from Academic Year 2026-2027

Level 4.5 (First Year) Semester I

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	ESE	Total
Subject 1 T(2) + (T/P)(2) or T(4)	24BaBbcU1101	Procedure Oriented Programming Using C Language	2		2		20	30	50
	24BaBbcU1102	Lab Course on 24BaBbcU1101		2		4	20	30	50
Subject 2 T(2) + (T/P) (2) or T(4)	24BaBbcU1203	Database Management System	2		2		20	30	50
	24BaBbcU1204	Lab Course on 24BaBbcU1203		2		4	20	30	50
Subject 3 T(2) + (T/P) (2) or T(4)	24BaBbcU1301	Computer Technology - I (Web Design I)	2		2		20	30	50
	24BaBbcU1302	Lab Course on 24BaBbcU1301		2		4	20	30	50
IKS T(2)	24CpCopU1901	Generic IKS	2		2		20	30	50
GE/OE (T/P) (2)	24BaBbcU1401	Office Administration I (Microsoft Word)	2		2		20	30	50
SEC (T) (2)	24BaCopU1601	Business Mathematics	2		2		20	30	50
AEC T(2)	24CpCopU1701 / 24CpCopU1702	MIL-I (Hindi) / MIL-I (Marathi)	2		2		20	30	50
VEC T(2)	24CpCopU1801	EVS-I	2		2		20	30	50
Total			16	06	16	12			550

Level 4.5 (First Year) Semester II

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	ESE	Total
Subject 1 T(2) + T/P(2) or T(4)	24BaBbcU2101	Advanced 'C Programming	2		2		20	30	50
	24BaBbcU2102	Lab Course on 24BaBbcU2101		2		4	20	30	50
Subject 2 T(2) + T/P(2) or T(4)	24BaBbcU2203	Python Programming	2		2		20	30	50
	24BaBbcU2204	Lab Course on 24BaBbcU2203		2		4	20	30	50
Subject 3 T(2) + T/P(2) or T(4)	24BaBbcU2301	Computer Technology - II (Web Design II)	2		2		20	30	50
	24BaBbcU2302	Lab Course on 24BaBbcU2301		2		4	20	30	50
GE/OE (T/P)(2)	24BaBbcU2401	Office Administration II (MS Power Point)	2		2		20	30	50
SEC T(2)	24BaCopU2601	Discrete Mathematics and Graph Theory	2		2		20	30	50
AEC T(2)	24CpCopU2703	English Communication Skills I	2		2		20	30	50
VEC T(2)	24CpCopU2801	Democracy, Election and Governance	2		2		20	30	50
CC(2)	24CpCopU2001/24CpCopU2011 /24CpCopU2021 /24CpCopU2031 /24CpCopU2041 /24CpCopU2051 /24CpCopU2061 /24CpCopU2071	Physical Education / Cultural Activities / NSS /NCC /Fine Arts / Applied Arts /Visual Arts / Performing Arts	2		2		20	30	50
Total			16	06	16	12			550

Level 5.0 (Second Year) Semester III

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2 or 4), (T/P)(2)	24BaBbcU3104	Advanced Python	2		2		20	30	50
	24BaBbcU3102	Relational Database Management System	2		2		20	30	50
	24BaCopU3103	Lab Course on 24BaBbcU3104 &24BaBbcU3102		2		4	20	30	50
VSC T(2)	24BaCopU3501	Fundamentals of AI	2		2		20	30	50
IKS (T/P)(2)	24BaBbcU3901	Vedic Mathematics	2		2		20	30	50
FP P(2)	24BaBbcU3002	Field Project I		2		4	20	30	50
Minor (T/P) (2+2 or 4)	24BaCopU3301	Computer Technology - III (Computational Statistics)	4		4		40	60	100
GE/OE (T/P) (2)	24BaBbcU3401	Office Administration III (Basics Of MS Excel)	2		2		20	30	50
AEC T(2)	24CpCopU3703	English Communication Skills II	2		2		20	30	50
CC T(2)	24CpCopU3001	Online Course on Yoga	2		2		20	30	50
Total			18	04	18	08			550

Level 5.0 (Second Year) Semester IV

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2 or 4), (T/P)(2)	24BaBbcU4101	Object Oriented Programming concepts using Java	2		2		20	30	50
	24BaBbcU4104	Data Structure Using C	2		2		20	30	50
	24BaCopU4103	Lab Course on 24BaBbcU4101 & 24BaBbcU4104		2		4	20	30	50
VSC T(2)	24BaAidU4501	Fundamentals of Data Science	2		2		20	30	50
CEP P(2)	24CpCopU4003	Community Engagement Project		2		4	20	30	50
Minor (T/P)(2+2 or 4)	24BaCopU4301	Computer Technology - IV (Lab Course on R Programming)		2		4	20	30	50
	24BaCopU4302	Computer Technology - V (Lab Course on Power BI)		2		4	20	30	50
GE/OE (T/P) (2)	24BaBbcU4401	Office Administration IV (Advanced Excel)	2		2		20	30	50
SEC T(2)	24BaBbcU4601	Basics of Management	2		2		20	30	50
AEC T(2)	24CpCopU4701 / 24CpCopU4702	MIL-II (Hindi) / MIL-II (Marathi)	2		2		20	30	50
CC T(2)	24CpCopU4001	Health and Wellness	2		2		20	30	50
Total			14	08	14	16			550

Level 5.5 (Third Year) Semester V

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2+2+2 or 4 + 2+2 or 4 + 4) P(2+2 or 4)	24BaAidU5101	Optimization Techniques	2		2		20	30	50
	24BaAidU5102	Foundations of Machine Learning	2		2		20	30	50
	24BaAidU5103	Lab Course on 24BaAidU5102		2		4	20	30	50
	24BaAidU5104	AI in Data Science	2		2		20	30	50
	24BaAidU5105	Lab Course on 24BaAidU5104		2		4	20	30	50
	24BaCopU5106	Data Visualization and Modeling	2		2		20	30	50
Major Elective (T/P) (2+2 or 4)	24BaBbcU5201 Or 24BaBbcU5202 Or 24BaCopU5203	Operating System Concepts OR Information Security Systems OR Data Analytics	4		4		40	60	100
			4		4		40	60	100
			4		4		40	60	100
VSC T(2)	24BaCopU5501	AI for Developers (NLP)	2		2		20	30	50
FP (2)	24BaBbcU5001	Field Project II		2		4	20	30	50
Minor (T/P) (2)	24BaBbcU5301	Computer Technology - VI (Cloud Computing)	2		2		20	30	50
Total			16	06	16	12			550

Level 5.5 (Third Year) Semester VI

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2+2+2 or 4+2+2 or 4+4) P(2+2 or 4)	24BaAidU6101	NOSQL Database	2		2		20	30	50
	24BaAidU6102	Lab Course on 24BaAidU6101		2		4	20	30	50
	24BaAidU6103	Deep Learning	2		2		20	30	50
	24BaAidU6104	Lab Course on 24BaAidU6103		2		4	20	30	50
	24BaCopU6105	Data Security & Privacy	2		2		20	30	50
	24BaCopU6106	AI Ethics & responsible AI	2		2		20	30	50
Major Elective (T/P) (2+2 or 4)	24BaBbcU6201 Or 24BaBbcU6202 Or 24BaCopU6203	Recent Trends in Information Technology Or Software Project Management Or Big Data	4		4		40	60	100
			4		4		40	60	100
			4		4		40	60	100
VSC T(2)	24BaCopU6501	AI for Developers (LLM)	2		2		20	30	50
OJT (2)	24BaBbcU6004	On Job Training		4		8	40	60	100
Total			14	08	14	16			550