

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. Sc. (Electronic Science)

Choice Based Credit System (CBCS) Syllabus

Under National Education Policy (NEP)

To be implemented from Academic Year 2024-2025

Level:- 4.5 (First Year) Sem: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)	24ScEleU1101	Fundamentals of Analog and Digital Electronics	2		2		20	30	50
	24ScEleU1102	Lab Course on 24ScEleU1101		2		4	20	30	50
Subject 2 T(2)+ (T/P) (2) or T(4)	24ScEleU1201	<<Subject 2 Theory>>	2		2		20	30	50
	24ScEleU1202	<<Subject 2 Practical>>		2		4	20	30	50
Subject 3 T(2)+ (T/P) (2) or T(4)	24ScEleU1301	<<Subject 3 Theory>>	2		2		20	30	50
	24ScEleU1302	<<Subject 3 Practical>>		2		4	20	30	50
IKS T(2)	24CpCopU1901	Generic IKS	2		2		20	30	50
GE/OE (T/P) (2)	24ScEleU1401	Lab Course on Fundamentals of Computer Hardware and Software		2		4	20	30	50
SEC (P) (2)	24ScEleU1601	Lab Course on Basic Electronics	2			4	20	30	50
AEC T(2)	24CpCopU1701 / 24CpCopU1702	MIL-I (Hindi) / MIL-I (Marathi)	2		2		20	30	50
VEC T (2)	24CpCopU1801	Environmental Science	2		2		20	30	50
Total			14	08	14	16			550

Level:- 4.5 (First Year) Sem: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)	24ScEleU2101	Principles of Analog and Digital Circuits	2		2		20	30	50
	24ScEleU2102	Lab Course on 24ScEleU2101		2		4	20	30	50
Subject 2 T(2)+ P(2)	24ScEleU2201	<<Subject 2 Theory>>	2		2		20	30	50
	24ScEleU2202	<<Subject 2 Practical>>		2		4	20	30	50
Subject 3 T(2)+ P(2)	24ScEleU2301	<<Subject 3 Theory>>	2		2		20	30	50
	24ScEleU2302	<<Subject 3 Practical>>		2		4	20	30	50
GE/OE (T/P)(2)	24ScEleU2401	Lab Course on Use of Smart Phone		2		4	20	30	50
SEC P(2)	24ScEleU2601	Lab Course on PCB Design and Fabrication		2		4	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/	Physical Education /	2		2		20	30	50

	24CpCopU2011 / 24CpCopU2021 / 24CpCopU2031 / 24CpCopU2041 / 24CpCopU2051 / 24CpCopU2061 / 24CpCopU2071	Cultural Activities / NSS / NCC / Fine Arts / Applied Arts / Visual Arts / Performing Arts							
Total			12	10	12	20			550

Level:- 5.0 (Second Year) Sem: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)	24ScEleU3101	Linear Integrated Circuits	2		2		20	30	50
	24ScEleU3102	Digital Integrated Circuits	2		2		20	30	50
	24ScEleU3103	Lab Course on 24ScEleU3101 & 24ScEleU3102		2		4	20	30	50
VSC P(2)	24ScEleU3501	Lab Course on Simulation of Analog and Digital Circuits- I		2		4	20	30	50
IKS (T/P)(2)	24ScEleU3901	Development of Electronic Communication in India	2		2		20	30	50
FP P(2)	24ScEleU3002	Field Project I		2		4	20	30	50
Minor (T/P)(2+2 or 4)	24ScEleU3301	Instrumentation and Electronic Communication	2		2		20	30	50
	24ScEleU3302	Lab Course on 24ScEleU3301		2		4	20	30	50
GE/OE (T/P) (2)	24ScEleU3401	Lab Course on Electronic Fundamentals		2		4	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			12	10	12	20			550

Level:- 5.0 (Second Year) Sem: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)	24ScEleU4101	Fundamentals of Microcontroller	2		2		20	30	50
	24ScEleU4102	Interfacing to 8051	2		2		20	30	50
	24ScEleU4103	Lab Course on 24ScEleU4101 & 24ScEleU4102		2		4	20	30	50
VSC P(2)	24ScEleU4501	Lab Course on Simulation of Analog and Digital Circuits- II		2		4	20	30	50
CEP P(2)	24CpCopU4003	Community Engagement Project		2		4	20	30	50

Minor (T/P)(2+2 or 4)	24ScEleU4301	Sensors, Actuators and Data Convertors	2		2		20	30	50
	24ScEleU4302	Lab Course on 24ScEleU4301		2		4	20	30	50
GE/OE (T/P) (2)	24ScEleU4401	Lab Course on Fundamentals of Electronic Instruments		2		4	20	30	50
SEC T(2)	24ScEleU4601	Lab Course on Electronic Systems		2		4	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			10	12	10	24			550

Level:- 5.5 (Third Year) Sem:-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)	24ScEleU5101	Electronic Instrumentation	2		2		20	30	50
	24ScEleU5102	Process Control	2		2		20	30	50
	24ScEleU5103	Digital System Design	2		2		20	30	50
	24ScEleU5104	Realization of Digital System with Verilog	2		2		20	30	50
	24ScEleU5104	Lab Course on 24ScEleU5101 & 24ScEleU5102		2		4	20	30	50
	24ScEleU5105	Lab Course on 24ScEleU5103 & 24ScEleU5104		2		4	20	30	50
Major Elective (T/P) (2+2 or 4)	24ScEleU5201	C and MATLAB Programming	2		2		20	30	50
	24ScEleU5202	Lab Course on 24ScEleU5201		2		4	20	30	50
	24ScEleU5203	Power Electronics	2		2		20	30	50
	24ScEleU5204	Lab Course on 24ScEleU5203		2		4	20	30	50
VSC P(2)	24ScEleU5501	Lab Course on Analog Electronics		2		4	20	30	50
FP (2)	24ScEleU5001	Field Project II		2		4	20	30	50
Minor (T/P) (2)	24ScEleU5302	Lab Course on C Programming		2		4	20	30	50
Total			10	12	10	24			550

Level:- 5.5 (Third Year) Sem:-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+2+2 or 4)	24ScEleU6101	Electronics Communication	2		2		20	30	50
	24ScEleU6102	Fundamentals of Nano-electronics	2		2		20	30	50
	24ScEleU6103	PIC Microcontroller : Architecture and	2		2		20	30	50

4+4) P(2+2 or 4)		Programming							
	24ScEleU6104	Interfacing with PIC Microcontroller	2		2		20	30	50
	24ScEleU6105	Lab Course on 24ScEleU6101 & 24ScEleU6102		2		4	20	30	50
	24ScEleU6106	Lab Course on 24ScEleU6103& 24ScEleU6104		2		4	20	30	50
Major Elective (T/P) (2+2 or 4)	24ScEleU6201	Advanced Communication & IoT	2		2		20	30	50
	24ScEleU6202	Lab Course on 24ScEleU6201		2		4	20	30	50
	24ScEleU6203	Python programming for Raspberry Pi	2		2		20	30	50
	24ScEleU6204	Lab Course on 24ScEleU6203		2		4	20	30	50
VSC P(2)	24ScEleU6501	Lab Course on Embedded C Programming		2		4	20	30	50
OJT (2)	24ScEleU6004	On Job Training		4		8	40	60	100
Total			10	08	10	16			550