

COEP Technological University Pune

(A Unitary Public University of Govt. of Maharashtra)

NEP 2020 Compliant

Proposed Curriculum Structure

M. Tech.

Electronics – AI in Signal Processing

(Effective from: A.Y. 2026-27)

PG Program [M. Tech. Electronics – AI in Signal Processing]

Proposed Curriculum Structure

w. e. f AY 2026-27

List of Abbreviations

Abbreviation	Title	No. of Courses	Credits	% of Credits
PSMC	Program Specific Mathematics Course	1	4	5.00
PSBC	Program Specific Bridge Course	1	3	3.75
PCC	Program Core Course	6	24	30.0
PEC	Program Specific Elective Course	3	9	11.25
OE	Open Elective	1	3	3.75
SLC	Self-Learning Course	2	6	7.50
AEC	Ability Enhancement Course	1	2	2.50
RM	Research Methodology	1	3	3.75
CCA	Co-curricular & Extracurricular Activities	1	1	1.25
OJT	Internship	1	3	3.75
Project	Project	2	22	27.50
Total		20	80	100%

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Semester - I

Sr. No.	Course Category	Course Code	Course Name	Teaching Scheme				Credits
				L	T	P	S	
1	PSM	PSMC-01	Applied Mathematics	3	1	--	1	4
2	PSBC	PSBC-01	DSP Algorithms	2	--	2	1	3
3	PCC	PCC-01	Machine Learning for signal processing	3	--	2	1	4
4	PCC	PCC-02	Audio Signal Processing	3	--	2	1	4
5	PCC	PCC-03	Digital Image and Video Processing	3	-	2	1	4
6	PEC	PEC-01	Program Specific Elective –I	3	--	--	1	3
			a) Embedded System Design					
			b) Signal Security					
			c) Optimization techniques for Signal Processing					
7	MLC	MLC-02	Technical Communication Skills	1	--	2	1	2
Total				18	1	10	7	24

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Semester - II

Sr. No.	Course Category	Course Code	Course Name	Teaching Scheme				Credits
				L	T	P	S	
1	OE	OE-01	Open Elective (Networked Embedded System Design (to be offered to other dept)	3	--	--	1	3
2	PCC	PCC-04	AI for Signal Processing	3	--	2	1	4
3	PCC	PCC-05	Natural Language Processing	3	--	2	1	4
4	PCC	PCC-06	Biomedical Signal Processing	3		2	1	4
5	PEC	PEC-02	Program Specific Elective –II	3	--	--	1	3
			a) Computational Intelligence					
			b) Cloud Computing					
			c) Edge Computing					
6	PEC	PEC-03	Program Specific Elective –III	3	--	--	1	3
			a) AI in Connected devices					
			b) Smart Biosensors and Healthcare system					
			c) Blockchain in AI					
7	MLC	MLC-01	Research Methodology	3	--	--	1	3
8	LLC		Liberal Learning Course	--	2	2	1	1
Total				21	2	8	8	25

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Semester - III

Sr. No.	Course Category	Course Code	Course Name	Teaching Scheme				Credits
				L	T	P	S	
1	VSEC	VSEC-01	Dissertation Phase – I	--	--	22	12	11
2	SLC	SLC-01	Massive Open Online Course –I	3	--	--	1	3
3	SLC	SLC-02	Massive Open Online Course –II	3	--	--	1	3
4	OJT		Internship	--	--	--	--	3
Total				3	--	18	14	20

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Semester – IV

Sr. No.	Course Category	Course Code	Course Name	Teaching Scheme				Credits
				L	T	P	S	
1	VSEC	VSEC-02	Dissertation Phase – II	--	--	22	12	11
Total				--	--	22	12	11