PSN College of Engineering and Technology
An Autonomous Institution, Affiliated to Anna University
Approved by AICTE, Accredited by NAAC with A+ Grade

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CURRICULUM AND SYLLABUS

Regulation - 2022

M.E – EMBEDDED SYSTEM TECHNOLOGIES

Institute Vision and Mission

INSTITUTE VISION
• To emerge as a pioneer institute inculcating engineering education, skills, research, values and ethics.
INSTITUTE MISSION
• To achieve greater heights of excellence in technical knowledge and skill development through innovative teaching and learning practices. • To develop the state of art infrastructure to meet the demands of technological revolution. • To improve and foster research in all dimensions for betterment of society. • To develop individual competencies to enhance innovation, employability and entrepreneurship among students. • To instill higher standards of discipline among students, inculcating ethical and moral values for societal harmony and peace.

Department Vision and Mission

DEPARTMENT VISION
To emerge as pre-eminence program for quality Electrical and Electronics Engineering Graduates.
DEPARTMENT MISSION
• To enable quality infrastructure for advanced knowledge and skills towards learning under congenial environment for global placement, higher studies, research and entrepreneurship. • To stimulate the process of critical thinking and problem solving with special focus on research capabilities. • To enhance professional ethics, values and standards to meet the demands of society

Program Educational Objectives (PEOs):

The program will prepare its graduates to,

PEO 1: Identify problems in major issues of electrical systems, analyze problems, coordinate through all options in design & developments and solve them using the knowledge base of embedded technology.

PEO 2: Develop System On Chip, optimize its performance and excel in industry sectors related to Embedded domain

PEO 3: Apply creative thinking skills in collaborative research and contribute to the economic growth of the country by creating job opportunities through entrepreneurship.

Program Outcomes:

POs	Graduate Attributes	Programme Outcome
PO1	Knowledge - Basics	An ability to apply concepts in engineering analysis and design.
PO2	Critical - Thinking	An ability to apply knowledge of electronics in a creative and innovative way to design, develop and produce useful products.
PO3	Problem - Solving	An ability to understand the impact of the engineering problems in global and societal context and provide solutions.
PO4	Research - Skill	To effectively write and present the research output in global scientific forums.
PO5	Usage of Modern tools	An ability to analyze systems with ICT.
PO6	Multidisciplinary	An ability to apply knowledge of real time systems in the diversified fields of engineering.
PO7	Project management	To demonstrate effective communication, leadership, and teamwork skills that contributes to the success of their organizations.
PO8	Continuous Learning	To exhibit a professional commitment, with continuous improvement and lifelong learning.
PO9	Ethical Practices and social responsibility	To develop solutions and make professional and ethical decisions with an understanding of the impact on societal, economic, global, and environmental issues.

PO10	Independent reflective learning	An ability to effectively communicate the analysis and design ideas to peers, clients and customers.
PO11	Collaborative work	An ability to converge technologies in an integrated manner to design and develop products.
PO12	Leadership Quality	An ability to acquire leadership qualities.

CURRICULUM - M.E. / EST - I TO IV SEMESTER

(Applicable to students those who are admitted from AY 2022-23)

SEMESTER I

S. No	Course Code	Course Title	L	T	P	No. of Contact Hours	C
THEORY							
1	MA620001	Applied Mathematics for Engineers	3	1	0	4	4
2	ES625001	Real Time Operating Systems	3	0	0	3	3
3	ES625002	Embedded Processors	3	0	0	3	3
4	ES625003	Microcontroller Based System Design	3	0	0	3	3
5	AP620004	Research Methodology	3	0	0	3	3
6		Program Elective - I	3	0	0	3	3
PRACTICAL							
7	ES625101	Embedded System Lab - I	0	0	4	4	2
8	ES625501	Technical Seminar - I	0	0	3	3	1
MANDATORY COURSE							
9		English for Manuscript Writing	2	0	0	2	0
		TOTAL	**20**	**1**	**7**	**28**	**22**

SEMESTER II

S. No	Course Code	Course Title	L	T	P	No. of Contact Hours	C
THEORY							
1	ES625005	Software for Embedded Systems	3	0	0	3	3
2	ES625006	Pervasive Devices and Technology	3	0	0	3	3
3	ES625007	RISC Processor Architecture and Programming	3	0	0	3	3
4	CS624206	Internet of things	3	0	0	3	3
5		Program Elective - II	3	0	0	3	3
6		Program Elective - III	3	0	0	3	3

PRACTICAL							
7	ES625102	Embedded System Lab - II	0	0	4	4	2
MANDATORY COURSE							
8		Literature Reading Skills	2	0	0	2	0
		TOTAL	**20**	**0**	**4**	**24**	**20**

SEMESTER III

S. No	Course Code	Course Title	L	T	P	No. of Contact Hours	C
THEORY							
1		Program Elective – IV	3	0	0	3	3
2		Program Elective - V	3	0	0	3	3
3		Institute Elective - I	3	0	0	3	3
EMPLOYABILITY ENHANCEMENT COURSE							
9	ES625301	Project Work – Phase - I	2	0	0	2	8
		TOTAL	**11**	**1**	**0**	**12**	**17**

SEMESTER IV

S. No	Course Code	Course Title	L	T	P	No. of Contact Hours	C
EMPLOYABILITY ENHANCEMENT COURSE							
1	ES625302	Project Work – Phase – II & Journal Publication	0	0	12	12	12
2	ES625502	Technical Seminar - II	0	0	3	3	1
		TOTAL	**0**	**0**	**15**	**15**	**13**

TOTAL CREDITS: 72