MEENAKSHI COLLEGE OF ENGINEERING
No 12, Vembuli Amman Kovil Street, West K.K Nagar,
Chennai – 78

Department of ME APPLIED ELECTRONICS
Regulation 2017

Course Outcomes

SEMESTER 1

COURSE NAME: MA5152 APPLIED MATHEMATICS FOR ELECTRONICS ENGINEERS

CO1	Concepts of fuzzy sets, knowledge representation using fuzzy rules, fuzzy logic, fuzzy prepositions and fuzzy quantifiers and applications of fuzzy logic.
CO2	Concepts of fuzzy sets, knowledge representation using fuzzy rules, fuzzy logic, fuzzy prepositions and fuzzy quantifiers and applications of fuzzy logic.
CO3	Concepts of fuzzy sets, knowledge representation using fuzzy rules, fuzzy logic, fuzzy prepositions and fuzzy quantifiers and applications of fuzzy logic.
CO4	Conceptualize the principle of optimality and sub-optimization, formulation and Computational procedure of dynamic programming
CO5	Exposing the basic characteristic features of a queuing system and acquire skills in Analyzing queuing models.
CO6	Using discrete time Markov chains to model computer systems

COURSE NAME: AP5151 ADVANCED DIGITAL SYSTEM DESIGN

CO1	Analyze and design sequential digital circuits
CO2	Identify the requirements and specifications of the system required for a given application
CO3	Design and use programming tools for implementing digital circuits of industry standards

COURSE NAME: AP5152 ADVANCED DIGITAL SIGNAL PROCESSING

CO1	Formulate time domain and frequency domain description of Wide Sense Stationary processing terms of matrix algebra and relate to linear algebra concepts.
CO2	State W-K theorem, spectral factorization theorem, spectrum estimation, bias and consistency of estimators
CO3	Wiener filtering, LMS algorithms, Levinson recursion algorithm, applications of adaptive filters
CO4	Decimation, interpolation, Sampling rate conversion, Applications of multirate signal processing

COURSE NAME: AP5191 EMBEDDED SYSTEM DESIGN

CO1	Explain different protocols
CO2	Discuss state machine and design process models
CO3	Outline embedded software development tools and RT

COURSE NAME: AP5251SOFT COMPUTING AND OPTIMIZATION TECHNIQUES

CO1	Implement machine learning through Neural networks.
CO2	Develop a Fuzzy expert system.
CO3	Model Neuro Fuzzy system for clustering and classification.
CO4	Able to use the optimization techniques to solve the real world problems

COURSE NAME: AP5111 ELECTRONICS SYSTEM DESIGN LABORATORY I

CO1	Apply PIC, MSP430, '51 Microcontroller and 8086 for system design
CO2	Simulate QMF
CO3	Design sensor using simulation tools
CO4	Design and analyze of real time signal processing system

COURSE NAME: AP5002 CAD FOR VLSI CIRCUITS

CO1	To use the simulation techniques at various levels in VLSI design flow
CO2	Discuss the concepts of floor planning and routing
CO3	Outline high level synthesis

SEMESTER II

COURSE NAME: AP5251 SOFT COMPUTING AND OPTIMIZATION TECHNIQUES

CO1	Implement machine learning through Neural networks.
CO2	Develop a Fuzzy expert system.
CO3	Model Neuro Fuzzy system for clustering and classification
CO4	Able to use the optimization techniques to solve the real world problem

COURSE NAME: AP5252 ASIC AND FPGA DESIGN

CO1	To analyze the synthesis, Simulation and testing of systems.
CO2	To apply different high performance algorithms in ASICs.
CO3	To discuss the design issues of SOC.

COURSE NAME: AP5291 HARDWARE - SOFTWARE CO-DESIGN

CO1	To assess prototyping and emulation techniques
CO2	To compare hardware / software co-synthesis.
CO3	To formulate the design specification and validate its functionality by simulation

COURSE NAME: AP529 DIGITAL IMAGE PROCESSING

CO1	Discuss image enhancement techniques
CO2	Explain color image processing
CO3	Compare image compression schemes

COURSE NAME: AP5004 HIGH PERFORMANCE NETWORKS

CO1	Discuss advanced networks concepts
CO2	Outline traffic modeling
CO3	Evaluate network security

COURSE NAME: AP5073 RF SYSTEM DESIGN

CO1	The student after completing this course must be able to translate the top level Wireless communications system specifications into block level specifications of the RFE
CO2	The student should be also able to carry out transistor level design of the entire RFE.

COURSE NAME: AP5211 ELECTRONICS SYSTEM DESIGN LABORATORY II

CO1	Utilize ARM with FPGA
CO2	Demonstrate design of ALU in FPGA using VHDL and Verilog
CO3	Assess flash controller programming - data flash with erase, verify and fusing
CO4	Explain design, simulation and analysis of signal integrity

SEMESTER III

COURSE NAME: AP5301 ADVANCED MICROPROCESSORS AND
MICROCONTROLLERS ARCHITECTURES

CO1	To explain the features and important specifications of modern microprocessors
CO2	To explain the salient features CISC microprocessors based on IA-32 bit and IA- 64 bit architectures
CO3	To explain the salient features RISC processors based on ARM architecture and different application profiles of ARM core
CO4	To explain the features and important specifications of modern microcontrollers
CO5	To explain about ARM – M3 architecture and its salient features

COURSE NAME: CP5292 INTERNET OF THINGS

CO1	Analyze various protocols for IoT
CO2	Develop web services to access/control IoT devices.
CO3	Design a portable IoT using Rasperry Pi
CO4	Deploy an IoT application and connect to the cloud.
CO5	Analyze applications of IoT in real time scenario

COURSE NAME: AP5008 PATTERN RECOGNITION

CO1	Differentiate between supervised and unsupervised classifiers
CO2	Classify the data and identify the patterns
CO3	Extract feature set and select the features from given data set
CO4	Apply fuzzy logic and genetic algorithms for classification problems

COURSE NAME: AP5311 Project Work Phase I

CO1	At the end of the course the students will have a clear idea of their area of work and they will be in a position to carry out the remaining phase II work in a systematic way

SEMESTER IV

COURSE NAME: AP5411 Project Work Phase II

CO1	On Completion of the project work students will be in a position to take up any challenging practical problems and find solution by formulating proper methodology