AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER
DEPARTMENT OF ELECTRONICS ENGINEERING
COURSE OUTCOMES (CO)
TE 2012 Course

Electrical Machines and Power Devices (304201) , TE- Sem-V

After successfully completing the course students will be able to,

Co. No.	Description
1	Explain construction, switching characteristics and justify the selection of power devices and thyristors.
2	Explain operating principle and suggest protection circuit for power devices and thyristors.
3	Explain construction and operating principle of DC machines and AC machines (1φ and 3φ).
4	Students shall be able to identify the causes of bad commutation and suggest remedies.

Data Communication (304202), TE- Sem-V

After successfully completing the course students will be able to,

Co. No.	Description
1	Define and explain terminology of data communications.
2	Propose efficient, reliable and appropriate technology to establish communication link.
3	Understand the impact and limitations of various modulation techniques.
4	Get exposure to entropy and other coding techniques.
5	Identify and explain error detection and correction using appropriate techniques.
6	Understand the need and limitations of various multiplexing techniques.
7	To acknowledge the need of spread spectrum scheme.

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COURSE OUTCOMES (CO)
TE 2012 Course

Microcontroller and Applications (304203), TE- Sem-V

After successfully completing the course students will be able to,

Co. No.	Description
1	Learn importance of microcontroller in designing embedded application.
2	Learn use of hardware and software tools.
3	Develop interfacing to real world devices.

Electromagnetics and Wave Propagation (304204) , TE- Sem-V

After successfully completing the course students will be able to,

Co. No.	Description
1	Interpret the electromagnetic problem and solve using Maxwell's equations.
2	Apply boundary conditions to different media, and formulate uniform plane wave equation, which is the basic of Antenna and wave propagation.
3	Analyze the transmission line problem, use the Smith chart for impedance calculations.

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TE 2012 Course

Network Synthesis (304205) , TE- Sem-V

After successfully completing the course students will be able to,

Co. No.	Description
1	Understand how to test positive real function for synthesis. Realize given driving point function into number of canonical forms
2	Realize given transfer function into ladder and constant resistance networks with termination.
3	Design passive filters to meet desired specifications and to scale it into frequency and impedance.
4	Realize the Butterworth and Chebyshev filters using active elements.
5	Understand the variation of circuit performance with circuit elements and some of the parameters.
6	Understand and analyze effect of operational amplifier parameters on filer response.

Employability Skills in Electronics Design (304208) , TE- Sem-V

After successfully completing the course students will be able to,

Co. No.	Description
1	Shall be able to understand and interpret the specifications.
2	Shall be able to select optimal design topologies.
3	Shall be able to interpret datasheets and thus select appropriate components and devices.
4	Shall be able to use an EDA tool for circuit schematic and simulation.
5	Shall be able to design an electronic system/sub-system and validate its performance by simulating the same.

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TE 2012 Course

Instrumentation Systems (304209) , TE- Sem-VI

After successfully completing the course students will be able to,

Co. No.	Description
1	Applications and selection of sensors/transducers for particular application.
2	Describe the various types of sensors including thermal, mechanical, electrical, electromechanical and optical sensors.
3	Select appropriate transducers and instrumentation system components for a specific application.
4	Design and development of temperature/pressure/flow etc measurement systems.
5	Select appropriate Switches and final control elements for a specific application.
6	Selection of communication protocol and smart sensors for particular application.

Discrete Time Signal Processing (304210) , TE- Sem-VI

After successfully completing the course students will be able to,

Co. No.	Description
1	The student will be in position to understand use of different transforms and analyze the discrete time signals and systems.
2	The student will realize the use of LTI filters for filtering different real world signals.
3	The student will be capable of calibrating and resolving different frequencies existing in any signal.
4	The student will be in a position to design and implement multistage sampling rate converter.

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COURSE OUTCOMES (CO)
TE 2012 Course

Embedded Processors (304211) , TE- Sem-VI

After successfully completing the course students will be able to,

Co. No.	Description
1	Describe the ARM microprocessor architectures and its feature.
2	Interface the advanced peripherals to ARM based microcontroller .
3	Design embedded system with available resources.

Power Electronics and Applications (304212) , TE- Sem-VI

After successfully completing the course students will be able to,

Co. No.	Description
1	Design & implement a triggering / gate drive circuit for a power converters.
2	Design and analyze different line commutated converter circuits.
3	Design and analyze different inverter circuits.
4	Design a step down chopper.
5	Design a single phase AC voltage controller i.e. light dimmer / fan regulator.
6	Evaluate battery backup time & design a battery charger.
7	Understand various power quality issues and their remedies.
8	Understand various applications of power electronics like HVDC transmission, UPS, Electronic Ballasts etc.
9	Understand renewable energy systems like photovoltaic and wind.

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COURSE OUTCOMES (CO)

TE 2012 Course

Industrial Management(304213) , TE- Sem-VI

After successfully completing the course students will be able to,

Co. No.	Description
1	Get overview of Management Science aspects useful in Industry.
2	Get motivation for Entrepreneurship.

Mini project and Seminar(304216) , TE- Sem-VI

After successfully completing the course students will be able to,

Co. No.	Description
1	Understand, plan and execute a Mini Project with team.
2	Implement electronic hardware by learning PCB artwork design, soldering techniques, troubleshooting etc.
3	Prepare a technical report based on the Mini project.
4	Deliver technical seminar based on the Mini Project work carried out.