19PC009 INTRA-DISCIPLINARY PROJECTS-II

Hours Per Week :

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0	0	2	1

COURSE DESCRIPTION AND OBJECTIVES:

These projects arise from a combination of courses. The major objective of these projects is to enable students understand the relationship between the courses.

COURSE OUTCOMES:

Upon completion of the course, the student will be able to achieve the following outcomes.

COs	Course Outcomes
1	Map different courses to gain the knowledge of intra-disciplinary Engineering.
2	Function effectively as an individual and as a member or leader in diverse teams.
3	Comprehend and write effective reports and make effective presentations.

LIST OF INTRA - DISCIPLINARY PROJECTS

- Simple Tachometer.
  (Combination of courses: Analog Circuits, Digital System Design).
- Automatic plant watering system using AVR(Atmega16) Microcontroller.
  (Combination of courses: Microcontroller, Analog Circuits).
- Solar Inverter Circuit.
  (Combination of courses: Microcontroller, Analog Circuits).
- Wireless Mobile Battery Charger Circuit.
  (Combination of courses: Electronic Devices and Circuits, Digital System Design).
- Electronic Letter Box Project Circuit.
  (Combination of courses: Electronic Devices and Circuits, Digital System Design).
- 8 Channel Quiz Buzzer Circuit using Microcontroller.
  (Combination of courses: Microcontroller, Analog Circuits).
- FM Remote Encoder/Decoder Circuit.
  (Combination of courses: Analog Circuits, Analog Communication).
- RFID Based Door Access Control.
  (Combination of courses: Microcontroller, Analog Circuits).
- GAS LEAKAGE SYSTEM.
  (Combination of courses: Microcontroller, Analog Circuits).

- Simple Time Delay Circuit using 555 Timer.
  (Combination of courses: Microcontroller, Analog Circuits).
- Air Flow Detector.
  (Combination of courses: Microcontroller, Analog Circuits).
- Automatic car head lights turn OFF Circuit.
  (Combination of courses: Microcontroller, Analog Circuits).
- Automatic Door Security Alarm System.
  (Combination of courses: Microcontroller, Analog Circuits).
- Bike Turning Signal Circuit.
  (Combination of courses: Microcontroller, Analog Circuits).
- Frequency Counter.
  (Combination of courses: Analog Circuits, Analog Communication, Microcontroller).
- Two-Channel Wireless Audio Amplifier Using Bluetooth and TA8210AH.
  (Combination of courses: Analog Circuits, Analog Communication).
- Line Follower robot using L293D and IR sensors.
  (Combination of courses: Microcontroller, Analog Circuits).
- Low-Noise 5V DC Converter Using LM2574.
  (Combination of courses: Analog Circuits).
- Numerical Water Level Indicator Using priority encoder.
  (Combination of courses: Analog Circuits, Digital System Design).
- Voltage Regulator as an Audio Amplifier.
  (Combination of courses: Analog Circuits).
- RF-Based 12-Bit Signal Transmitter And Receiver.
  (Combination of courses: Microcontroller, Analog Circuits).
- 5-Watt Audio Amplifier Using TA7222.
  (Combination of courses: Analog Circuits, Analog Communication).
- Understanding Spectrogram of Speech Signal Using MATLAB Program.
  (Combination of courses: Analog Circuits, Analog Communication).
- Temperature based Fan Speed Controller and SMS alerts using GSM mode.
  (Combination of courses: Microcontroller, Analog Circuits).
- SMS based home Automation system.
  (Combination of courses: Microcontroller, Analog Circuits).
- GSM based Vehicle Location Identifier.
  (Combination of courses: Microcontroller, Analog Circuits).
- GSM based wireless Electronic Notice Board.
  (Combination of courses: Microcontroller, Analog Circuits).
- LiFi communication.
  (Combination of courses: Analog Circuits, Analog Communication).
- Air Flow Detector Circuit.
  (Combination of courses: Analog Circuit, Digital System Design).

NOTE: The afore - mentioned list is not exhaustive and the objective is to provide an idea of some of the projects that can be executed by students arising from a combination of courses. Students are given full flexibility to choose any projects of their choice under the supervision of faculty Mentors.