Courses published Online in Canvas & MOODLE By Dept. of Electrical & Electronics Engineering

Dashboard

Published Courses (5)

ANALOG ELECTRONICS
A2EEI302

ARTIFICIAL INTELLIGENCE TOOL...
AITTA-3RD SEM EEE

MATLAB
A1EET403

Restructured Power Systems
A2PST208

Course description

MATLAB® is a software package which is being used by the scientific and engineering community all over the world. This is one of the most versatile and user-friendly software useful for solving large and complex problems.

This course, gives a comprehensive account of MATLAB basics and its implementation in design and analysis of systems in engineering.

Also provides a detailed insight of MATLAB environment, illustrating its different features, elaborates the basic features of programming language, relates to the basic program control structures, i.e., loops and branches and their implementation, describes operations on vectors and matrices, relates to handling of polynomials, illustrates the different methods of data input and output, and describes two-dimensional and three-dimensional graphics commands available.

Course objectives

1. To give an understanding of the basic environment in MATLAB and different data types
2. To enable students to learn how to use functions and structures
3. To empower the students with knowledge of vectors and matrices
4. To impart the skill of solving equations and plotting using graphics in MATLAB

Course outcomes

Upon successful completion of this course, a student will be able to:

1. Understand the main features of the MATLAB development environment
2. Learn the MATLAB programming fundamentals
3. Gain ability to write programs using input, output functions
4. Gain ability to write programs for matrix manipulations
5. Handle polynomials
6. Use 2D and 3D Graphic commands

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Course Instructors :

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ANALOG ELECTRONICS

Edit

Preamble:

This course is considered as foundation course for electrical and electronics engineers. This courses introduces basic electronic devices such as PN Junction diode, Zener diode, BJT and JFET. It also deals with application of these components as amplifiers. Besides, integrated analog circuits such as Operational Amplifiers, Timers, VCOs, Voltage regulators, Wave form generators and applications of these analog circuits are dealt .

Course Objectives:

The course enables the students to:

a. Learn the working of diodes and transistors and their applications .

b. Understand the working of Operational Amplifiers

c. Know the non linear applications of Op-Amps, 555 Timers, VCOs

d. Identify various wave form generators and voltage regulators

e. Design Analog electronic circuits for specific applications.

Course Outcomes (COs)

At the end of course, students shall be able to:

CO 1	KO#1	To recall fundamental concepts of electronic devices such as diodes and transistors
CO 2	KO#2	Describe the principle of operation of JFET, Operational amplifier.
CO 3	KO#3	Outline the working operation of 555 timer and voltage regulators.
CO 4	UO#1	Explain the procedure for clipping and clamping circuits using diodes.
CO 5	UO#2	Summarize the applications of operational amplifiers.
CO 6	UO#3	Explain about different waveform generators.
CO 7	AO#1	Apply the insight fundamentals of electronic components to solve real world problems in the field of Engineering

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Module 0: Review of Semiconductor Physics   (Complete One Item)

📄 Video Lecture 1 : Review of Semiconductor Physics ✅

📄 PPT on Review of Semi Conductor Physics ✅

📄 Notes: Review of Semiconductor Physics ✅

📄 Quiz1- Review of Semiconductor Physics ✅
Oct 25, 2020 | 10 pts | Score at least 8.0

Module1 : Unit1 P N Junction Devices   (Complete All Items)

📄 Video Lecture 2 : Introduction to PN Junction ✅
Mark done

📄 PPT on "Introduction to PN Junction" ✅
Mark done

📄 Notes : Introduction to P N Junction ✅
Mark done

📄 Interactive Blanks ✅
Mark done

📄 Quiz 2- Introduction to PN Junction ✅
Oct 25, 2020 | 5 pts | Score at least 2.5

📄 Energy Band Structure of Open Circuited PN junction ppt ✅
Mark done

📄 Derivation of Eo from Energy band diagram ✅
Mark done

📄 Diode Current Equation and VI characteristics curve ✅
Mark done

📄 VI Characteristics of Diode, Resistance & Capacitance of Diode ✅
Mark done

📄 Breakdown Mechanisms ✅
Mark done

📄 Diode as Switch ✅
Mark done

📄 Half wave Rectifier : Simulation Circuit ✅
Mark done

📄 Half wave Rectifier : Notes ✅
Mark done

📄 Half Wave Rectifier : Numerical Problems ✅
Mark done

📄 Quiz 3 : Diode VI Characteristics & Properties ✅
10 pts | Score at least 5.0

📄 Full Wave Bridge Rectifier : Simulation Circuit ✅
Mark done

📄 Full Wave Bridge Rectifier : Notes ✅