National Institute of Electronics & Information Technology Gorakhpur
(Under Ministry of Electronics and Information Technology, Govt. of India)
MMMUT Campus, Deoria Road, Gorakhpur-273010
https://www.nielit.gov.in/gorakhpur/

Internship on "Design of DC Power Supply"

Internship on "Design of DC Power Supply

4 Weeks Online Course

Duration: 4Weeks (2Hrs. per day)

Objective

To make the participants familiar with the design concept of linear and switching Power Supply.

Eligibility

Undergoing B.E/B.Tech/
Diploma (Electronics/Electrical/Instrumentation).

Prerequisite

- ✓ Candidate must have latest computer/laptop with preferably 4 GB RAM or higher and Graphics Card (2 GB) / Smartphone
- ✓ Earphone with Microphone
- ✓ Webcam
- ✓ Internet connection with good speed *(preferably Min Bandwidth 256kbps or higher)*

Course Fees

Rs. 2200/- incl. GST& all other charges.

Certificate

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

Methodology

- ✓ Instructor-led live classes.
- ✓ Instructor-led hands-on lab sessions.
- ✓ Content Access through e-Learning portal.
- ✓ Assessment and Certification

How to Apply?

Step-1: Read the course structure & course requirements carefully.

Step-2: Visit the Registration portal and click on apply button.

Step-3: Create your login credentials and fill up all the details, see the preview and submit the form.

Step-4: Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc.

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Course Content

Day	Topic	Day	Topic	Day	Topic
Day #01	Introduction to DC Power Supply, Unregulated and regulated DC Power supply, Linear and Switching Power Supply.	Day #02	Basic Electronic components; Active and passive components, Specification of resistor, capacitor and inductors.	Day #03	Tools and measuring instruments, Analog and Digital multimeter; their use in measurements of AC/DC voltage and currents. Component testing using multimeter.
Day #04	Transformer; its types, classification and specifications. Diode and transistors, their types, characteristics and applications.	Day #05	Operational amplifiers; characteristics of OP-Amp,	Day #06	Region of operation of Op-Amp, application of Op-Amp, Spec. and pin details of IC741.
Day #07	IC555; Its functional diagram, pin details and application as Monostable and Astable Multivibrator	Day #08	Basic building blocks of DC power Supply; Transformer, rectifier, Filter and regulator.	Day #09	Types of regulators; Series and shunt regulator. Design of linear power supply using discrete components;
Day #10	Three terminal linear regulators for fixed and variable o/p voltage,	Day #11	current limiting and current boosting regulators,	Day #12	Regulator circuit design using ICs 723
Day #13	Regulator design using 723 for 05V and 12V Concept of foldback current limiting	Day #14	Overview of SMPS, Basic building blocks of SMPS,	Day #15	Design of switch mode power supply, Concept of PWM.
Day #16	DC to DC converter, Buck converter, Boost converter, Buck-Boost and Cuk converter.	Day #17	Study of PWM controls ICs, Design of SMPS using ICs3524/ ICTL494	Day #18	PSpice Simulation of regulated power supply for +5V and +12V output using IC 7805 and 7812 respectively.
Day #19	PSpice simulation of linear regulator circuit using IC 723	Day #20	Review, summery, feedback and assessment of the course.		

Course Coordinator

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