

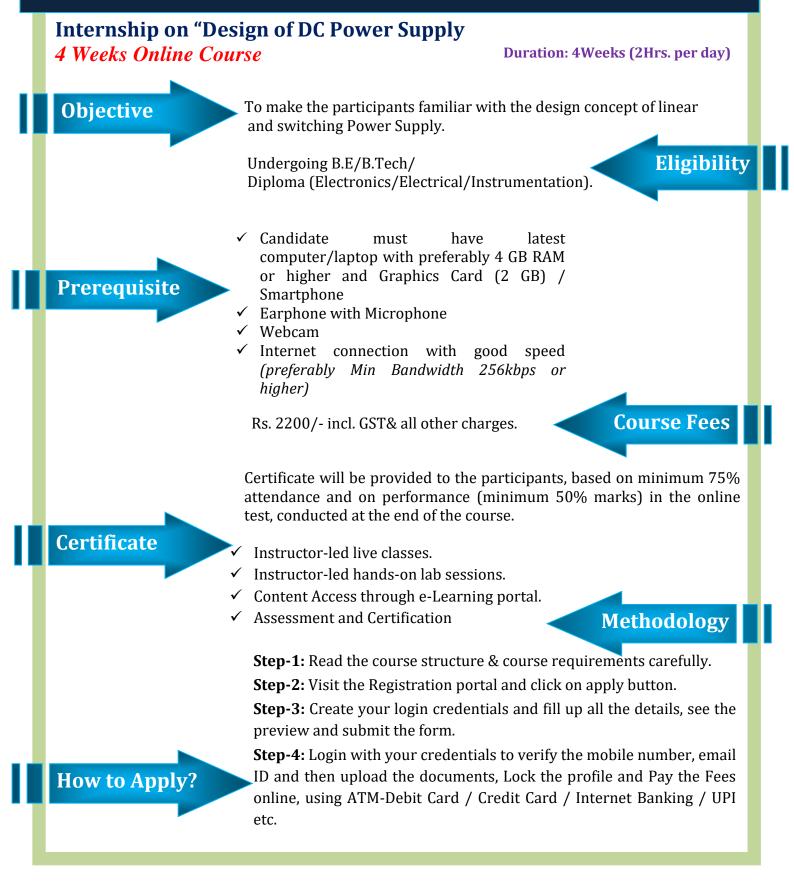
National Institute of Electronics & Information Technology

(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"





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Course Content

Day	Торіс	Day	Торіс	Day	Торіс
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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