



ELECTRONICS EQUIPMENT INTEGRATION AND PROTOTYPE BUILDING

PROF. N.V.CHALAPATHI RAO

Department of Geology
IISc Bangalore

PRE-REQUISITES : Basic electronics. Basic engineering drawing

INTENDED AUDIENCE : Students belonging to ECE, EE, Instrumentation

INDUSTRIES APPLICABLE TO : Industries should suggest suitability to their trainees

COURSE OUTLINE :

This course teaches registrants on how to make a working prototype of electronic equipment. Typically most courses have a project component. Beyond demonstrating functionality at a breadboard level, converting it to a viable physical model is not covered in Labs at UG level. Attempt will be made to layout a system and finally make Drawings that can be used for fabrication in a workshop. Component selection, layout and Assembly will be demonstrated. Finally to make a working physical prototype.

ABOUT INSTRUCTOR :

Prof. N.V.Chalapathi Rao has worked in Defense R & D for 8 years. Has been delivering lectures since 1984 on topics related to equipment design at CEDT, DESE and CPDM of IISc. Has guided and and built more than 100 projects at M. Tech level

COURSE PLAN :

Week 1 :Product Concepts and Prototyping

Week 2 :Sample product concept and project

Week 3 :Solid Modelling and 3D printing

Week 4 :Detailing and design for 3D printing

Week 5 :Components and hardware integration

Week 6 :Fabrication and fastenings

Week 7 :Creative design of products

Week 8 :Assembly, Integration and Finishing techniques