**ELECTRONICS EQUIPMENT INTEGRATION AND PROTOTYPE BUILDING**

**PROF. N.V.CHALAPATHI RAO**
Department of Electrical and Electronics Engineering
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** :
N.V.Chalapathi Rao has worked in Defense R and D for 8 years. Has been delivering lectures since 1984 on topics related to equipment design at CEDT, DESE and CPDM of IISc. He has guided 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