

UNIVERSITY OF MADRAS
B.Sc. DEGREE PROGRAMME IN PHYSICS
 SYLLABUS WITH EFFECT FROM 2023-2024

237C31

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| COURSE | THIRD SEMESTER – CORE COURSE PRACTICAL-III |
| COURSE TITLE | ELECTRICITY EXPERIMENTS |
| CREDITS | 5 |
| COURSE OBJECTIVES | Construct circuits to learn about the concept of electricity, current, resistance in the path of current, different parameters that affect a circuit. Set up experiments, observe, analyse and assimilate the concept |
| (Any EIGHT Experiments) | |
| <ol style="list-style-type: none"> 1. Calibration of low range and high range voltmeter using potentiometer 2. Calibration of ammeter using potentiometer. 3. Measurement of low resistances using potentiometer. 4. Determination of field along the axis of a current carrying circular coil. 5. Determination of earth's magnetic field using field along axis of current carrying coil. 6. Determination of specific resistance of the material of the wire using PO box. 7. Determination of resistance and specific resistance using Carey Foster's bridge. 8. Determination of internal resistance of a cell using potentiometer. 9. Determination of specific conductance of an electrolyte. 10. Determination of e.m.f of thermo couple using potentiometer 11. Determination of capacitance using Desauty's bridge and B.G./Spot galvanometer/head phone. 12. Determination of figure of merit of BG or spot galvanometer. 13. Comparison of EMF of two cells using BG. 14. Comparison of capacitance using BG. | |