

CURRICULUM PLAN 2025-2026 (Even Semester) Prof. Monika Bassi

DSC-6: ELECTRICAL CIRCUIT ANALYSIS

Unique Paper Code: 2222011203

B.Sc. (HONS.) PHYSICS PART I, Semester II

No. of Periods per week = 1

Name of Paper & Code	Allocation of Lectures	Month wise schedule followed by the Department	Tutorial/assignment/Presentation etc.
DSC-6, ELECTRICAL CIRCUIT ANALYSIS: 2222011203			
Unit 1: Circuit Analysis: Ideal voltage source, real voltage source, current source, Kirchhoff's current law, Kirchhoff's voltage law, node analysis, mesh analysis, Star and Delta conversion	5	January-February	<ul style="list-style-type: none">• Syllabus Overview• Reference Books• Derivations• Problem solving• Assignments• Revisions• Class Tests• Practice Examinations• Students' difficulties
Unit 3: Network Theorems Principle of duality, Superposition theorem, Thevenin theorem, Norton theorem, Their applications in DC and AC circuits with more than one source, Maximum Power Transfer theorem for AC circuits, Reciprocity Theorem, Millman's Theorem, Tellegen's theorem Two Port Networks: Impedance (Z) Parameters, Admittance (Y) Parameters, Transmission Parameters, Impedance matching	10	March-April	<ul style="list-style-type: none">• Derivations• Related problems• Problem solving• Revisions• Class Tests• Practice Examinations• Discussion of Practice Examinations• Tips for Final exams