

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري لمادة : مجالات كهرومغناطيسية ثابتة

	Material Covered
Week 1	Vector algebra, position and distance vector, unit vector, fields, scalar and vectors.
Week 2	Addition, subtraction, and products of vectors
Week 3	Coordinate systems Cartesian, cylindrical, and spherical.
Week 4	Vector transformation,
Week 5	Vector calculus, differential lengths, surfaces, and volumes. Integral of contours, surfaces, and volumes, flux and circulation.
Week 6	Del operator, gradient, divergence, and curl. Laplacian, stocks and divergence theories. Open and closed surfaces.
Week 7	Reviewing the materials and Med-term Exam
Week 8	Electrostatic, charges at rest, columbo's force, electrical field intensity, and charge density distribution types
Week 9	Electrical flux and flus density, gauss's law, first maxwell equations
Week 10	Electrical potential, second Maxwell equation, dipoles, monopoles, and power and energy
Week 11	Electrostatic in material, dielectric, polarization, current density, conductors, continuity equation, boundary conditions
Week 12	Magnetostatic, Biot-Savart law, ampere's law, amperes contours,
Week 13	Second and third maxwell equations
Week 14	Permanent magnet, inductances, ferromagnet, electrical magnet, transformers
Week 15	Reviewing the materials
Week 16	Preparatory week before the final Exam