	Course name: PHYS 102 Physics II			Department: Mechanical Engineering				Semester
								2
	Methods of Education							Credit (ECTS)
	Lecture	Recitation/ (Etud)	Lab	Project/Field Study	Homework	Other	Total	6
	70	65	28	17			180	
Language	English							
Compulsory/Elective	Compulsory							
Prerequisites	None							
Course Contents	Coulomb laws and electrical field. Gauss law. Electrical potential. Capacitance. Electrostatic energy and properties of insulators. Current and resistance. DC circuits. The magnetic field. Sources of magnetic field. Faraday's law. Inductance. Magnetic field in the matter. Electro magnetic oscillations and AC circuits. Maxwell equations and electromagnetic waves.							
Course Objectives	1 .Within the frame of electrostatic to relate electromagnetic field to its sources 2.Maxwell's equations in the vacuum 3.Introduction to electromagnetic waves							
Learning Outcomes and Competences	Student, who passed the course satisfactorily can: 1. To relate static electrical field to a continuous or discreet charge distribution (Coulomb law) 2. Computation of electrical field using symmetries of charge distribution 3. Energy of static electrical field. Electrical potential 4. Electrical current and application of Ohm law 5. The effect of magnetic field on moving charge and to relate static magnetic field to its sources 6. Maxwell's laws in the vacuum and alternative current 7. Electromagnetic waves							
Textbook and /or References	YOUNG,H.D.,FREEDMAN,RA, 2008, SEAR'S AND ZEMANSKY UNIVERSITY PHYSICS, Pearson Addison Wesley, ISBN:0-321-50130-. Getty, W.E. Keller, M.J, Stove, 1993.							
Assessment Criteria			If any, mark as (X)			Percentage (%)		
	Midterm Exams		X			60		
	Quizzes							
	Homeworks							
	Projects							
	Term Paper							
	Laboratory work							
	Other							
	Final Exam		X			40		
Instructors								