

Code and Name of Course	MAT 644 Group Rings
Type of Course	Elective
Credit of Course	3 0 3
ECTS Credit	4
Course Lectures	Assoc. Prof. A. Çiğdem Özcan
Pre-requisites	---
Course Length	1 Semester , 3 hours per week
Course Content	<ul style="list-style-type: none"> • Informations on fundamental group and rings • Definition and properties of group rings • semisimple group rings • group characters • Ideals in group rings • Semiprime and semiprimary group rings • Units in group rings
Course Objectives:	<p>At the end of this course a student:</p> <ol style="list-style-type: none"> I. Defines and explains Abelian, solvable, nilpotent, free and Hamiltonian Groups II. Defines a ring, a module and an algebra, defines and classifies semisimple, algebraic integer rings III. Defines and classifies Jacobson Radical, tensor product, IV. Defines and classifies a group ring V. Defines and classifies semisimple and Abelian Group Rings VI. Defines group characters VII. Defines and classifies semiprime and semiprimary group rings VIII. Defines and classifies algebraic elements IX. Classifies units in some group rings.
References	<ol style="list-style-type: none"> I. C.P. Milies, S.K. Sehgal, An Introduction to Group Rings, Kluwer Academic Publisher, 2002. II. Other books on group rings.
Main Teaching Methods	Lecturing, Discussing, Recitation
Assessment Methods	Homework (10%), 1. midterm (25%), 2. midterm (25%), final (40%)
Language of Course	Turkish