Course Syllabus

Code - Course Title	**MAT323 - Abstract Algebra I**
Course Type	V. SEMESTER
Laboratory + Practice	2+2
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	DOÇ. DR. ŞENAY BULUT, DOÇ. DR. YUNUS ÖZDEMİR

Mode of Delivery	The mode of delivery of this course is Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	Abstract Mathematics I, II.
Recommended Resources	The instructor will provide a course pack(bulk pack) with all suggested readings
Work Placement	N/A

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Basics; Properties of the integers and rational numbers,	
Week - 2		Euclidean algorithm, fundamental theorem of arithmetic, Euler phi-function, Fermat theorem, Linear Congruence, modular arithmethic.	
Week - 3		Definitions and examples of groups.	
Week - 4		Direct Products.	
Week - 5		Subgroups, cyclic groups and subgroups of cyclic groups .	
Week - 6		Lagrange Theorem.	
Week - 7		Normal subgroups.	
Week - 8		The homomorphism and isomorphism theorems.	
Week - 9		Symmetric groups.	
Week - 10		Factor groups.	
Week - 11		Finite abelian groups.	
Week - 12		Classification of finite abelian groups.	
Week - 13		p-Sylow subgroups.	

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 14		Applications of the Sylow Theorems.	

Learning Outcomes

#	Learning Outcome
1	understand the structure of groups
2	give examples of nonabelian groups.
3	learn examples of groups for which the converse of the Lagrange theorem is true.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.

Assessment Method and Passing Requirements	Quamtity	Percentage (%)
1.Midterm Exam	1	25
Final Exam	1	50
2.Midterm Exam	1	25
	Sum (%)	**100**