Course Syllabus

Code - Course Title	**MAT808 - Informatics and Mathematics**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	PROF. DR. MURAT KOPARAN

Mode of Delivery	Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended course.
Work Placement	Not applicable

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Propositions and logic	
Week - 2		Sets	
Week - 3		Relation and function	
Week - 4		Relation and function	
Week - 5		Boolean algebra and modern logic	
Week - 6		Fuzzy logic	
Week - 7		Number theory	
Week - 8		Probability theory	
Week - 9		Trees and hierarchy	
Week - 10		Trees and hierarchy	
Week - 11		Matrices	
Week - 12		Graph theory and applications	
Week - 13		Graph theory and applications	
Week - 14		Algorithm analysis	

Learning Outcomes

#	Learning Outcome
1	Explain proposition.
2	Express the structures of proposition.
3	Explain the basic concepts of logic.
4	Explain rules of logic.
5	Apply the rules of logic.
6	Explain sets.
7	Explain the concepts of relation and function.
8	Express the functions by algebra, relation and geometric representations.
9	Explain the proporties of functions.
10	Define Boolean algebra.
11	Make applications about Boolean algebra.
12	Explain basic concepts of modern logic.
13	Explain basic rules of modern logic.
14	Apply rules of modern logic.
15	Explain basic concepts of fuzzy logic.
16	Explain basic rules of fuzzy logic.
17	Apply rules of fuzzy logic.
18	Explain number theory.
19	Explain theory of probability.
20	Explain rules of trees.
21	Apply rules of trees.
22	Explain methods of hierarchy.
23	Apply methods of hierarchy.
24	Define matrix.
25	Explain the properties of matrix.
26	Make applications related to matrices.
27	Explain graph theory.
28	Use graph theory in problems.
29	Define algorithm.
30	Give algorithm examples.
31	Analyze written algorithm.

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	40
Final Exam	1	60
	Sum (%)	**100**