

	Course name: MATH 315 General Topology		Department: Mathematics				Semester
							5
	Methods of Education						Credit (ECTS)
	Lecture	Recitation/ (Etud)	Lab	Project/Field Study	Homework	Other	Total
60	0	0	0	60	60	180	6
Language	English						
Compulsory/Elective	Compulsory						
Prerequisites	None						
Course Contents	Week	Subjects					
	1	<ul style="list-style-type: none"> ▪ Cartesian products, uncountable sets, axiom of choice. ▪ Well-ordered sets, maximum principle. 					
	2	<ul style="list-style-type: none"> ▪ Topological spaces. ▪ Basis for a topology. 					
	3	<ul style="list-style-type: none"> ▪ The product topology on $X \times Y$. ▪ Subbasis. 					
	4	<ul style="list-style-type: none"> ▪ Subspace topology. ▪ Closed sets, interior, boundary. 					
	5	<ul style="list-style-type: none"> ▪ Limit points. ▪ Hausdorff Spaces. 					
	6	<ul style="list-style-type: none"> ▪ Continuous functions, homeomorphisms. 					
	7	<ul style="list-style-type: none"> ▪ Metric topology. 					
	8	<ul style="list-style-type: none"> ▪ Quotient topology. 					
	9	<ul style="list-style-type: none"> ▪ Connected spaces. 					
	10	<ul style="list-style-type: none"> ▪ Components and local connectedness. 					
	11	<ul style="list-style-type: none"> ▪ Compact spaces, local compactness. ▪ Sequential compactness, compactness in metric spaces. 					
	12	<ul style="list-style-type: none"> ▪ Countability axioms. ▪ Separation axioms. 					
	13	<ul style="list-style-type: none"> ▪ Normal spaces. ▪ Urysohn's Lemma. 					
	14	<ul style="list-style-type: none"> ▪ Tietze Extension Theorem. 					
Course Objectives	<p>The purpose of this course is</p> <ul style="list-style-type: none"> • to give the fundamental knowledge on point set topology, • to give an introduction on topological spaces. 						
Learning Outcomes and Competences	<p>Upon completion of this course students will</p> <ul style="list-style-type: none"> • learn basic concepts of point set topology, • understand notions of compactness and connectedness, • learn countability and separation axioms. 						
Textbook and /or References	<p>1) Munkres, J. R., <i>Topology</i>, 2nd edition Prentice Hall. 2) Baum, J. D., <i>Elements of Point-Set Topology</i>, Dover Publications.</p>						
Assessment Criteria				If any, mark as (X)	Percentage (%)		
	Midterm Exams			X	40		
	Quizzes						
Homework							

	Projects		
	Term Paper		
	Laboratory work		
	Other		
	Final Exam	X	60
Instructors			