	Course name: MATH 315 General Topology	**Department:** Mathematics	Semester
			5
	Methods of Education		Credit (ECTS)

	Lecture	Recitation/ (Etud)	Lab	Exams	Homework/ Quiz	Other	Total	6
	56	0	0	36	32	56	180	

Language	English
Compulsory/Elective	Compulsory
Prerequisites	MATH 211 Advanced Calculus I

Course Contents	Week	Subjects
	1	▪ Cartesian products, uncountable sets, axiom of choice. ▪ Well-ordered sets, maximum principle.
	2	▪ Topological spaces. ▪ Basis for a topology.
	3	▪ The product topology on XxY. ▪ Subbasis.
	4	▪ Subspace topology. ▪ Closed sets, interior, boundary.
	5	▪ Limit points. ▪ Hausdorff Spaces.
	6	▪ Continuous functions, homeomorphisms.
	7	▪ Metric topology.
	8	▪ Quotient topology.
	9	▪ Connected spaces.
	10	▪ Components and local connectedness.
	11	▪ Compact spaces, local compactness ▪ Sequential compactness, compactness in metric spaces.
	12	▪ Countability axioms. ▪ Separation axioms.
	13	▪ Normal spaces. ▪ Urysohn's Lemma.
	14	▪ Tietze Extension Theorem.

Course Objectives	The purpose of this course is • to give the fundamental knowledge on point set topology, • to give an introduction on topological spaces.
Learning Outcomes and Competences	Upon completion of this course students will • learn basic concepts of point set topology, • understand notions of compactness and connectedness, • learn countability and separation axioms.
Textbook and /or References	1) Munkres, J. R., *Topology*, 2nd edition Prentice Hall. 2) Baum, J. D., *Elements of Point-Set Topology,* Dover Publications.

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			