QF01/0408-4.0E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Mathematics Department

Study plan No.	**2021/2022**		**University Specialization**	**Master of Math.**	
Course No.	**0101732**		**Course name**	**Topology (2)**	
Credit Hours	**3**		**Prerequisite/ Co-requisite**	**Topology (1)**	
Course type	☐ MANDATORY UNIVERSITY REQUIREMENT	☐ UNIVERSITY ELECTIVE REQUIREMENTS	☐ FACULTY MANDATORY REQUIREMENT	☐ Support course family requirements	✓ **Mandatory requirements** ☐ Elective requirements
Teaching style	☐ Full online learning		☐ Blended learning		✓ **Traditional learning**
Teaching model	☐ 1 Synchronous: 1 asynchronous		☐ 1 face to face : 1 asynchronous		✓ **2 Traditional**

Faculty member and study divisions' information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail	
Division number	**Time**	**Place**	**Number of students**	**Teaching style**	**Approved model**

Brief description

Locally compact and K-Spaces, Cech complete spaces, metric and metrizable spaces, complete metric spaces and the completion theorem, Baire spaces and Baire category theorem, uniform and proximity spaces.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc)	• T1: General Topology: Chapters 1–4, Springer-Verlag Berlin Heidelberg, Nicolas Bourbaki (auth.), 1995 • T2: A First course in Topology, James R. Munkres			
Supportive learning resources (Books, databases, periodicals, software, applications, others)	• General topology, John L. Kelley, Springer-Verlag, 1975 • Schaum's Outline of General Topology, Seymour Lipschutz, McGraw-Hill, 1968			
Supporting websites	• http://www.fsc.uaeu.ac.ae/math/topologyCenter.htm • http://ecaculus.org • http://library.atgti.az			
The physical environment for teaching	✓ Class room	☐ labs	☐ Virtual educational platform	☐ Others
Necessary equipment and software				
Supporting people with special needs				
For technical support				

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Course learning outcomes (S= *Skills, C= Competences K= Knowledge,)*

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	Knows advanced concepts in topology.	**MK1**
K2	Knows how to read and write proofs in topology. +	**MK1**
K3	Knows a variety of examples and counterexamples in topology.	**MK1**
K4		
	Skills	
S1	Employing topology in solving scientific problems.	**MS1**
S2	The ability to research and write scientific reports.	**MS2**
S3	Consolidating the scientific methodology as a way of thinking and a tool in facing public problems.	**MS3**
	Competences	
C1	Possess logical thinking and scientific research methods.	**MC2**
C2		

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
First/Second exam	30%	30%	**40%**	30%
Participation / practical applications	0	0	**10%**	30%
Asynchronous interactive activities	30%	30%	**0**	0
Final exam	40%	40%	**50%**	40%

Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	learning style*	Reference **
1	Locally compact and prove some important properties.	Lecture	T1: 83-90
2	K-Spaces and prove some important properties.	Lecture	T1: 90-94
3	The definition of a metric, metrizable spaces	Lecture	T2: 243 – 248
5	The definition of paracompactness and prove some important properties.	Lecture	T2: 248 – 263
5	The complete metric space and prove some important properties.	Lecture	T2: 263– 265
6	A space filling curve	Lecture	T2: 271– 275
7	The compactness in metric space and prove some important properties.	Lecture	T2: 275– 281

8	The definition of the Baire spaces	Lecture	T2: 294–281
9	Mid Exam 40%		
10	Introduction to Dimension Theory	Lecture	T2: 304-316
11	Uniform spaces and prove some important properties.	Lecture	T1: 169-174
12	Uniformly continuous functions		T1:174-179
13	Product of uniform spaces	Lecture	T1:179-181
14	Compactness of uniform spaces	Lecture	T1:198-203
15	Connected set in a compact space	Lecture	T1:203-204
16	Final Exam 50%		