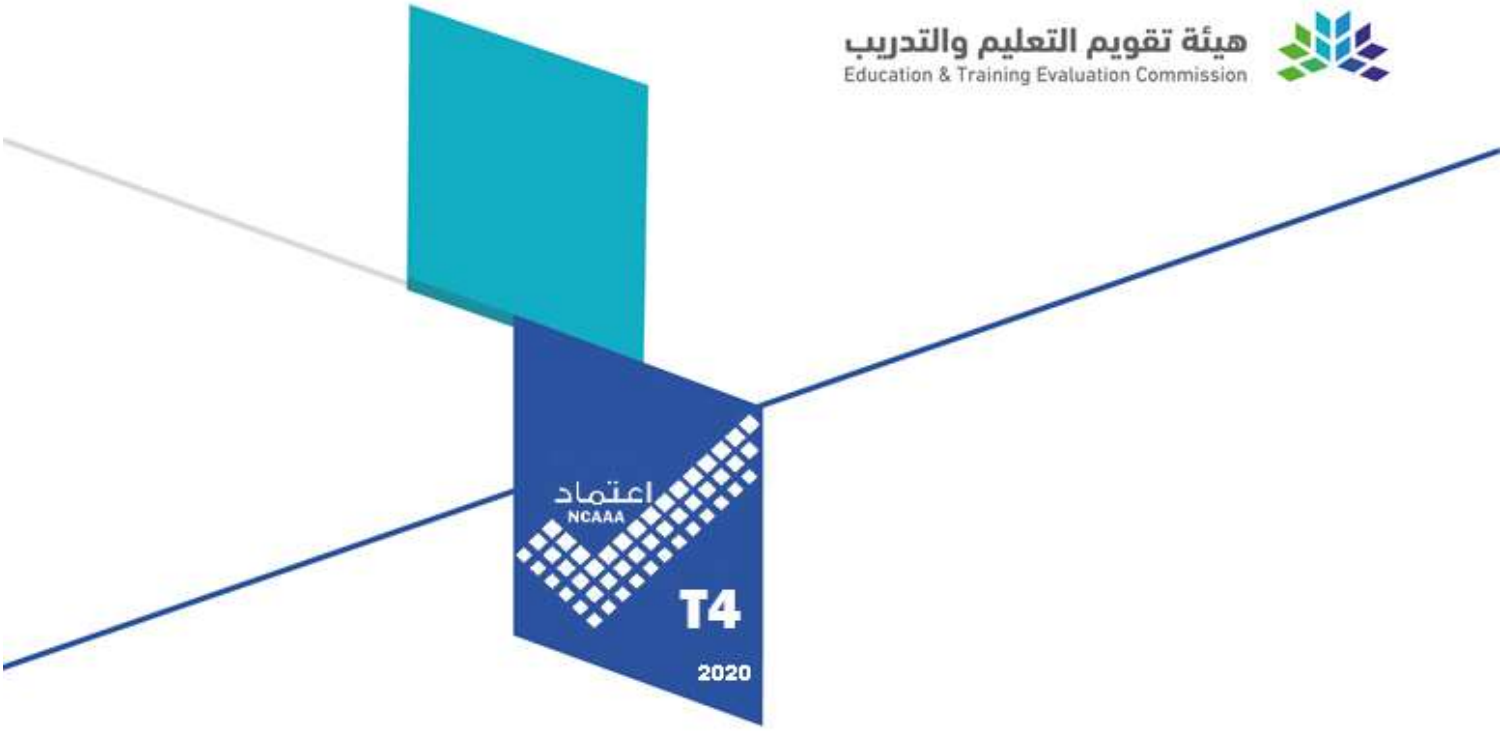
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	General Topology
Course Code:	Math 464
Program:	Bachelor of Science in Mathematics
Department:	Mathematics
College:	Science
Institution:	University of Tabuk

Table of Contents

A. Course Identification

1. Credit hours:	**03 Hours/Week**
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	**L7/Y4**
4. Pre-requisites for this course (if any)**:**	**MTH 311 , MATH 251**
5. Co-requisites for this course (if any)**:**	**None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	**45**	100%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	**45**
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description: The course is designed to study the basic concepts of the general topology such as closure of a set, interior, boundary, exterior and derived set, and generated topology on a set, Quotient space, topological invariant, homeomorphic spaces, separation axioms, compactness and connectedness.

2**. Course Main Objective:**

What is the main purpose for this course? The main purpose of this course is to provide students with a comprehensive applied understanding of the concepts of General Topology

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Student will be able to define new theories and concepts of general topology.	K1
1.2	Student will be able to demonstrate in-depth knowledge of procedures and processes used in general topology.	K2

CLOs		Aligned PLOs
2	**Skills :**	
2.1	Students will be able to solve problems using analytical techniques.	S1
2.2	Students will be able to prove theorems of Topology.	S2
2.3	Students will be able to communicate ideas of topology.	S4
3	**Values:**	
3.1	Students will be able to work in groups and observe ethics and values.	V1
3.2	Students will be able to manage duties and time.	V2

C. Course Content

No	List of Topics	Contact Hours
1	**Introduction of Sets** - Relations and Functions - Topology of line and plane.	3 Hrs
2,3	Introduction and review of Topological Spaces, Closure of a set, Interior , boundary, exterior and derived set	6 Hrs
4	Bases and Subbases of Topology , Quotient space	3 Hrs
5	Metric topology, Metrizabilty, Sequences in topological space	3 Hrs
6	Continuity and homeomorphism, homeomorphic spaces.	3 Hrs
6	**Mid-Exam 1**	
7,8,9	Countability, Separation Axioms.	9 Hrs
10,11	Compactness	6 Hrs
11	**Mid-Exam 2**	
12	Product Spaces	3Hrs
13	Connectedness.	3 Hrs
14,15	**Revision & Final Exam**	6 Hrs
Total		**45 Hrs**

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Student will be able to define new theories and concepts of general topology.	Introducing new ideas through case study Lectures Class Discussions	Quizzes I II Midterm Exams Final Exams homework assignments.
1.2	Student will be able to demonstrate in-depth knowledge of procedures and processes used in general topology.		
2.0	**Skills**		
2.1	Students will be able to solve problems using analytical techniques.	- Lectures Group work - Case Study - Brainstorming	- Quizzes -Assignments -Midterm exams - Final exam
2.2	Students will be able to prove theorems of Topology.		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.3	Students will be able to communicate ideas of topology.		
3.0	**Values**		
3.1	Students will be able to work in groups and observe ethics and values.	Cooperative learning and teamwork	- Quizzes -Assignments -Class participation
3.2	Students will be able to manage duties and time.		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Activities	Weekly basis	5%
2	Homework	Weekly basis	5%
3	Quizzes	Weekly basis	10%
4	Mid Exam1	6th week	20%
5	Mid Exam2	11th week	20%
6	Final Exam	At end of the Semester	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
Six office hours per week in the lecturer schedule.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	James Munkres, Topology a first course (1997), Prentice Hall, International, Englewood Cliffs, New York
Essential References Materials	Jacques Dixmier, General Topology (1998), Springer –Verlag.
Electronic Materials	None
Other Learning Materials	None

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	1.Lecture Room with max capacity of 30 students and equipped with White Board, Overhead projector and internet connection. 2.Library
Technology Resources (AV, data show, Smart Board, software, etc.)	Projectors
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or	None

Item	Resources
attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Direct and Indirect
Extent of achievement of course learning outcomes	Teachers	Direct
Quality of learning resources	Students	Indirect

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	The Curriculum committee
Reference No.	
Date	25/08/2021