

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Topology
Course number	MATH4327
Faculty	
Department	
Course type	Major Needs
Course level	4
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Studying topological spaces
2 - Studying the Euclidean Topology
3 - Studying the limit points
4 - Have the knowledge of continuous mappings
5 - Have the knowledge of homeomorphisms
6 - Studying separation axioms
7 - Have the knowledge of connected spaces
8 - Have the knowledge of compact spaces

Intended Learning Outcomes

Knowledge and Understanding	<ul style="list-style-type: none"> * Recognize the basic concepts of topological spaces, such as subspace, connectedness and compactness, homeomorphism * Derive the properties of connectedness and compactness * Prove elementary theorems involving the concepts of topological space, separation axioms, homeomorphism, compactness and connectedness
Intellectual Skills	<ul style="list-style-type: none"> * Review, assess, and draw conclusions about hypotheses and theories * Analyze arguments, in relation to their premises, assumptions, contexts, and conclusions
General Skill	<ul style="list-style-type: none"> * Analyze similarities and differences in human experiences

Course Contents

- 1 - Topological Spaces
- 2 - The Euclidean Topology
- 3 - Limit Points
- 4 - Continuous Mappings
- 5 - Homeomorphisms
- 6 - Separation Axioms
- 7 - Connectedness
- 8 - Compactness

Teaching and Learning Methods

- 1 - Lectures
- 2 - Discussions
- 3 - Assignments
- 4 - Additional Readings

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
First Hour Exam	Fifth Week	20
Second Hour Exam	Ninth Week	20
Attendance and Discussion		5
Homework		5
Final Exam		50

Books and References

Essential books	Sidney A. Morris, Topology Without Tears, 2007
Recommended books	J. Kelley, General Topology, Van Nostrand Company, 1955
	S. Lipschutz, Theory and Problems of General Topology, Schaums Outline Series, McGraw-Hill, 1965