



مركز الاعتماد
وإضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER



The University of Jordan

Accreditation & Quality Assurance Center

Course Syllabus

Course Name: Topology-1

1	Course title	Topology-1
2	Course number	0301761
3	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	3
4	Prerequisites/corequisites	None
5	Program title	M.Sc.
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	Science
9	Department	Mathematics
10	Level of course	Obligatory
11	Year of study and semester (s)	First year
12	Final Qualification	M.Sc. degree
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	April 5, 2017

16. Course Coordinator:

Dr. Hasan Z. Hdeib

17. Other instructors:

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18. Course Description:

Topological spaces, neighborhoods, bases and subbases, continuous functions, product spaces, weak topologies, quotient spaces, filters, separation axioms, regular and completely regular spaces, normal and perfectly normal spaces, Lindelof, separable spaces and second countable spaces, compact spaces, locally compact spaces, sequentially and countably compact spaces, one point compactification, paracompact spaces, connected spaces.

19. Course aims and outcomes:**A- Aims:**

This course aims at familiarizing the student with the main concepts, principles and methods of general topology.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

Upon successful completion of this course, students will be able to:

1. Know the fundamental results about neighbourhoods, bases and subbases, continuous functions, quotient spaces and filters.
2. Understand higher separation axioms: regular, completely regular, normal and perfectly normal and study several examples that explain the relations between them.
3. Prove different theorems concerning compact spaces, Lindelöf space, separable and second countable spaces, sequentially compact and countable compact spaces.
4. Construct the one point compactification of a locally compact none compact space.
5. Prove main theorems concerning paracompact spaces.
6. Prove main theorems concerning connected spaces.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Fundamental results	1+2+3		1	Home work 1	
Separation Axioms	4+5+6		2	First Exam	
Compactness and Axioms of countability	7+8+9		3	Home Work 2	
Point one compactification	10		4	Presentation	
Paracompact spaces	11+12+13		5	Second Exam	
Connected spaces	14+15		6	Home Work 3	

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

In order to succeed in this course, each student needs to be active participant in learning – both in class and out of the class.

- Class time will be spent on lecture, through discussion of material and homework problems with students.
- You should be prepared to discuss your homework through presenting your solution in the class.
- You are encouraged to work together with other students and to ask questions and seek help from the professor both in and out of class.

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

ILO/s	Learning Methods	Evaluation Methods	Related ILO/s to the program
	Lectures	Exams	
		Presentations	
		Homeworks	

23. Course Policies:

1. The student is not allowed to take the course and its pre-requisite in the same time.
2. Attendance is absolutely essential to succeed in this course. You are expected to attend every class; please notify your instructor if you know you are going to be absent. All exams must be taken at the scheduled time. Exceptions will be made only in extreme circumstances, by prior arrangement with the instructor.
3. If a student is absent for more than 10% of lectures without an excuse of sickness or due to other insurmountable difficulty, then he/she shall be barred from the final examination also he/she will get a failing grade in this course.
4. Medical certificates shall be given to the University Physician to be authorized by him. They should be presented to the Dean of the Faculty within two weeks of the student's ceasing to attend classes.
5. Test papers shall be returned to students after correction. His/her mark is considered final after a lapse of one week following their return.
6. Solutions for the exams questions and marks will be announced to the students.
7. Cheating is prohibited. The University of Jordan regulations on cheating will be applied to any student who cheats in exams or on homeworks.

24. Required equipment:**25. References:**

1. S. Willard, General Topology, Dover Publications, INC., 1970.
2. J. Dugurdji, Topology. Boston Allyn and Bacon 1966.
3. J.R. Munkres, Topology A first course, Prentic-Hall, Inc. Englewood cliffs, New Jersey, 1975

26. Additional information:

Name of Course Coordinator: Dr. Hasan Z. Hdeib Signature: ----- Date: 11/04/2017.

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

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Head of Department
Assistant Dean for Quality Assurance
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