

**The University of Jordan**

**Accreditation & Quality Assurance Center**

## **Course Syllabus**

**Course Name:**  
**Point Set Topology**

1	Course title	Point Set Topology
2	Course number	0301962
3	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	3
4	Prerequisites/corequisites	0301961
5	Program title	Ph.D.
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	Science
9	Department	Mathematics
10	Level of course	Elective
11	Year of study and semester (s)	Second year
12	Final Qualification	Ph.D. 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:****18. Course Description:**

[a, b]-compact spaces, spaces related to normal spaces: collectionwise normal spaces, expandable spaces, generalizations of paracompact spaces and related spaces, product theorems, metrization theorems.

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

This course aims at familiarizing the student with the some advanced concepts, principles and methods in point set 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 main results about  $[a, b]$ -compact spaces.
2. Understand some spaces related to normal space, collectionwise normal spaces and expandable spaces.
3. Study generalizations of paracompact spaces: weakly paracompact and subparacompact and spaces related to paracompact: strongly paracompact spaces.
4. Obtain product theorems concerning  $[a, b]$ -compact spaces and some types of paracompactness mentioned in (3).
5. Understand some meterization theorems.

**20. Topic Outline and Schedule:**

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
$[a, b]$ -compact	1+2+3		1	Home work 1	
Space related to normal space	4+5+6		2	Home work 2	
Paracompact spaces and related concepts.	7+8+9		3	Mid-term Exam	
Product Theorems	10+11+12+13		4	Presentation	
Meterization theorems	14+15		5	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. R. Engelking, General Topology, Berlin: Heldermann, 1989.
2. I.S. Gaal, On the theory of  $(m, n)$ -compact spaces pacific J. Math., Volume 8, 1958, pp. (721-734).
3. P.S. Alexandroff, On some results in the theory of topological spaces obtained within the last twenty-five years, Russian Math. Surv. Volume 15, 1960, pp. (28-83).

**26. Additional information:**

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

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

Head of Department : Dr. Morad Ahmad      Signature : -----

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

Dean : Prof. Mahmoud Al Jaghoub      Signature : -----

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Assistant Dean for Quality Assurance  
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