Tamkang University Academic Year 113, 2nd Semester Course Syllabus

Course Title	TOPOLOGY	Instructor	PAK-TUNG HO
Course Class	TSNXB3A DEPARTMENT OF APPLIED MATHEMATICS AND DATA SCIENCE, 3A	Details	◆ General Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	SDG4 Quality education		

Departmental Aim of Education

Ⅰ. To teach knowledge in mathematics.

Ⅱ. To train teaching professionals in mathematics.

Ⅲ. To develop independent and creative thinking.

Ⅳ. To establish ability to present oneself.

Ⅴ. To promote cooperative working spirit.

Ⅵ. To prepare self learning ability in multiple areas.

Subject Departmental core competences

A. To learn the fundamentals of mathematics.(ratio:30.00)

B. To develop independent and logical thinking ability.(ratio:30.00)

C. To learn basics of probability and statistic.(ratio:10.00)

D. To use the aid of computer in solving mathematical and statistical problems.(ratio:10.00)

E. To obtain the ability to collect and analyze data.(ratio:10.00)

F. To establish ability to pursue knowledge in advanced mathematics.(ratio:10.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:5.00)

2. Information literacy. (ratio:20.00)

3. A vision for the future. (ratio:15.00)

4. Moral integrity. (ratio:5.00)

5. Independent thinking. (ratio:30.00)

6. A cheerful attitude and healthy lifestyle. (ratio:5.00)

7. A spirit of teamwork and dedication. (ratio:15.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	By enrolling in this course, students will have an opportunity to learn the basic concepts in Topology.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	Learn the basic concepts in Topology including compactness, connectness, etc.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEF	12345678	Lecture	Study Assignments

Course Schedule

Week	Date	Course Contents	Note
1	114/02/17 ~ 114/02/23	Topological space	
2	114/02/24 ~ 114/03/02	Examples of topological space	
3	114/03/03 ~ 114/03/09	Metric space	
4	114/03/10 ~ 114/03/16	Induced topology	

5	114/03/17 ~ 114/03/23	interior and closure	
6	114/03/24 ~ 114/03/30	Continuous map	
7	114/03/31 ~ 114/04/06	product space	
8	114/04/07 ~ 114/04/13	product topology	
9	114/04/14 ~ 114/04/20	Midterm Exam/Midterm Assessment Week (teachers can adjust the week as needed)	
10	114/04/21 ~ 114/04/27	topological bases	
11	114/04/28 ~ 114/05/04	separation axioms	
12	114/05/05 ~ 114/05/11	separation axioms	
13	114/05/12 ~ 114/05/18	countability axioms	
14	114/05/19 ~ 114/05/25	countability axioms	
15	114/05/26 ~ 114/06/01	compactness	
16	114/06/02 ~ 114/06/08	connectness	
17	114/06/09 ~ 114/06/15	Final Exam/Final Assessment Week (teachers can adjust the week as needed)	
18	114/06/16 ~ 114/06/22	Flexible Teaching Week: Generally, no in-person classes; teachers may arrange teaching activities or final assessments, among other options.	

Key capabilities	Problem solving
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)
Distinctive teaching	Special/Problem-Based(PBL) Courses
Course Content	Logical Thinking

Requirement	
Textbooks and Teaching Materials	Using teaching materials from other writers:Textbooks Name of teaching materials: Topology, James Munkres, second edition
References	
Grading Policy	◆ Attendance： 5.0 % ◆ Mark of Usual：15.0 % ◆ Midterm Exam： 40.0 % ◆ Final Exam： 40.0 % ◆ Other〈 〉： %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . **※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**