Course Description Form

1. Course Name:
Topology2
2. Course Code:
MS 408
3. Semester / Year:
Second Semester/2024-2023
4. Description Preparation Date:
25-1-2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
60 hours/ 4 units
7. Course administrator's name (mention all, if more than one name)
Name: Reem Taha Abdulqader Email: Reemalhwez84@tu.edu.iq

8. Course Objectives

Course Objectives	1. Study of advanced topological concepts such as topological characters and genetic traits 2. To teach the student about separable spaces 3. To teach the student important special spaces, such as T3, T4, and others 4. That the student knows the first and second axioms of counting

9. Teaching and Learning Strategies

Strategy	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering the type of simple exercises involving how to solve some examples and prove theorems

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Compact and non-compact spaces (definition and examples)	Compact spaces	Lectures	Discussion and tests
2	4	The Heine-Borrell theorem and its weakness in topological spaces, the relationship of compact spaces to Hausdorff's rule	Compact spaces	Lectures	Discussion and tests
3	4	Locally compact spaces, finite intersection and its relationship to compact spaces	Compact spaces	Lectures	Discussion and tests
4	4	Connected spaces, communication in topological spaces	Connected spaces	Lectures	Discussion and tests
5	4	Discontinuous spaces, applications of continuous spaces (mean value theorem)	Spaces are not connected	Lectures	Discussion and tests
6	4	Discontinuous spaces, applications of continuous spaces (mean value theorem)	Spaces are not connected	Lectures	Discussion and tests
7	4	Compounds, locally connected spaces, pathally connected spaces	Connected spaces	Lectures	Discussion and tests
8	4	Introduction to homotopy theory	Homotopic theory	Lectures	Discussion and tests
9	4	Equivalent functions are utopia	Homotopic theory	Lectures	Discussion and tests
10	4	Equivalent spaces are utopias	Homotopic theory	Lectures	Discussion and tests
11	4	The pattern (type) homotopy	Homotopic theory	Lectures	Discussion and tests
12	4	The pattern (type) homotopy	Homotopic theory	Lectures	Discussion and tests
13	4	The basic group	Homotopic theory	Lectures	Discussion and tests
14	4	The basic group	Homotopic theory	Lectures	Discussion and tests
15	4	The basic group	Homotopic theory	Lectures	Discussion and tests