هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	**Abstract Algebra (2)**
Course Code:	**365Math-3**
Program:	**B.Sc. of Mathematics**
Department:	**Mathematics**
College:	**Arts and Sciences**
Institution:	**Najran University**
Version:	**2022**
Last Revision Date:	**12-09-2023**

Table of Contents:

Content	Page
A. General Information about the course	3
1. Teaching mode (mark all that apply) 2. Contact Hours (based on the academic semester)	3
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	4
C. Course Content	4
D. Student Assessment Activities	5
E. Learning Resources and Facilities	5
1. References and Learning Resources	5
2. Required Facilities and Equipment	5
F. Assessment of Course Qualit	5
G. Specification Approval Data	6

A. General information about the course:

Course Identification					
1. Credit hours:	3				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered:	**6/3**				
4. Course general Description					
This course will cover the foundations of Rings theory. The main focus of this Course is on Basic concepts and properties of Rings, Homomorphism of Rings, Subrings and Ideals, and quotient rings.					
5. Pre-requirements for this course (if any):					
Abstract Algebra (1) (364Math-3)					
6. Co- requirements for this course (if any):					
7. Course Main Objective(s):					
This course aims to give the student the basic concepts and properties of Group theory.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	3	100
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	
	Total	45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define the basis terminology of rings theory.	K1	• Lecture • Cooperative learning • Problem solving	• Assignments • Quizzes • Midterm • Final Exam
1.2	State famous elementary results of rings theory.			
2.0	Skills			
2.1	Solve some problems using properties of rings	S1	• Lecture • Cooperative learning • Problem solving	• Assignments • Quizzes • Midterm • Final Exam
2.2	Distinguish the types of rings using rings isomorphism theorems	S2		
…2.3	Prove elementary theorems related to rings theory	S4		
3.0	Values, autonomy, and responsibility			
3.1	Work as part of a team and independently	V1	Homework and discussions in the classes	Oral Exam Rubrics

C. Course Content

No	List of Topics	Contact Hours
1.	Definitions, examples, and basic properties of rings	9
2.	Integral domains ,Fields ,and division rings	4
3	Subrings and the Characteristic of Rings	4
4	Ideals and Quotient Rings	6
5	Rings homomorphism and Isomorphism	4
6	Isomorphism theorem of rings	4
7	Polynomials Rings	9
8	Roots of polynomials rings over a field	5
	Total	45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm Exam(1)	6-8	20
2.	Midterm Exam(2)	13-15	20
3.	Assignments & Quizzes	During classes	10
4.	Final Exam	16-17	50

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	فالح عمران الدوسري,المدخل الى البنى الجبرية ، جامعة ام القرى , الطبعة الاولى 1999
Supportive References	John B. Fraleigh, A frist Course in Abstract algebra, fourth edition. New York 1989
Electronic Materials	- W. K. Nicholson, Introduction to Abstract Algebra, PWS-Kent Publishing. Boston 1993
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom with 30 seats.
Technology equipment (projector, smart board, software)	- Blackboard Platform - Projector
Other equipment (depending on the nature of the specialty)	**N/A**

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	Student Questionnaire (Indirect)
Effectiveness of students assessment	Peer Reviewer	Rubrics (Indirect)
Quality of learning resources		
The extent to which CLOs have been achieved	Faculty	Direct

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	