

T6. Course Specification (CS)

Institution	Najran University.	Date	13-8-1439
College/Department	: College of Science and Arts / Mathematical Department		

A. Course Identification and General Information:

1. Course title and code :	Groups Theory 341 Math-3		
2. Credit hours :	Three hours.		
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)	Program of Mathematics		
4. Name of faculty member responsible for the course:	Dr. Mohammed Rashad Mohammed Department of Mathematics		
5. Level/year at which this course is offered :	4th level		
6. Pre-requisites for this course (if any) :	The principles of logic and modern algebra (145 Math.-3)		
7. Co-requisites for this course (if any)	None		
8. Location if not on main campus :	College of Arts and Sciences-Najran (Male and Female) · College of Arts and Sciences- Sharurah (Male and Female)		

9. Mode of Instruction (mark all that apply) (ضع علامة على كل ما ينطبق) نمط التدريس

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|--|----------------------|-------------------|----------------------|
| a. Traditional classroom الفصل الدراسي التقليدي | <input type="text"/> | What percentage ? | <input type="text"/> |
| b. Blended (traditional and online) التعليم المدمج (التقليدي + عبر الانترنت) | <input type="text"/> | What percentage | 100 |
| c. e-learning التعليم الالكتروني | <input type="text"/> | What percentage | <input type="text"/> |
| d. Correspondence التعليم بالمراسلة (عن بعد) | <input type="text"/> | What percentage | <input type="text"/> |
| f. Other طرق أخرى | <input type="text"/> | What percentage | <input type="text"/> |

Comments التعليق:

B. Objectives الأهداف

1. What is the main purpose for this course ما هو الهدف الأساسي من هذا المقرر

- Acquisition student background on the Groups Theory.
- Giving the capacity of the student in logical thinking.
- Giving the student's ability to deal with abstract proofs.

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

- Update the contents periodically.
- Using new references.
- Change in contents as a result of new according to the modern orientations.

C. Course Description (Note: General description in the form used in the Bulletin or handbook should be attached).

Course Description :

This course will cover the foundations of groups theory. The main focus of this course is on Basic concepts and properties of groups, Homomorphism of groups, Normal subgroups, and quotient groups.

1. Topics to be Covered:

List of Topics	No. of Weeks	Contact Hours
Definitions, examples , and basic properties of groups .	2	6
permutations groups, symmetry groups ,and direct product groups	2	6
Subgroups and shorthand conditions, and basic properties	2	6
Generators and cyclic groups and cyclic subgroups.	2	6
Group homomorphism's and Kelly's theorem.	2	6
cossets and Lagrange's theorem	1	3
Normal subgroups and quotient groups.	2	6
Groups homomorphism theorems.	2	6

1.Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory or studio	Practical	Other:	Total
Contact Hours الساعات الفعلية	45					45
Credit الوحدات المعتمدة	3					3

3-Additional private study/learning hours expected for students per week 6
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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy.

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table)

Second, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes.

Third, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain).

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge: By the end of the semester, the students will be able to		
1.1	Define the elementary concepts of Groups (group ,subgroup, normal subgroup ,homomorphism of groups,....)	At the beginning of each lecture, some examples will be presented and discussed with students to encourage them to discover related concepts and provide definitions	Exams, homework, and quizzes
2.0	Cognitive Skills: By the end of the semester, the students will be able to		
2.1	Solve various problems in groups	Discussion and exercises during lecture time	Exams and Homework.
2.2	Give different examples of groups		
3.0	Interpersonal Skills & Responsibility By the end of the semester, the students will be able to		
3.1	Work as part of a team and independently.	Group problems solving during tutorial.	Evaluate the student's works
4.0	Communication, Information Technology, Numerical		
4.1	Present the main concepts of groups to others, both in oral and written form clearly	Homework -Discussions in the classes.	Follow up the homework and discussing it with students.
5.0	Psychomotor		
5.1	Not applicable	Not applicable	Not applicable

5. Schedule of Assessment Tasks for Students During the Semester

Assessment task (e.g. essay, test, Quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
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1	First Exam	7	25 degrees
2	Second Exam	12	25 degrees
3	Final exam	After 16	50 degrees

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

The office hours for this course are 3 hours/ week.

E. Learning Resources مصادر التعلم

1. List Required Textbooks قائمة الكتب المقررة المطلوبة :

فالح الدوسري و عبد الحميد بيك,, المدخل إلى نظرية الزمر,, الطبعة الثانية 1422 هـ مكتبة الملك فهد الوطنية.

John B.Fraleigh,A frist Course in Abstract algebra , fourth edition . New York 1989

- W. K. Nicholson, Introduction to Abstract Algebra, PWS-Kent Publishing Boston, 1993

-I. N. Herstein, Topics in Algebra, John Wiley and Sons, 1975

3. List Electronic Materials Web Sites, Facebook, Twitter, etc.

Electronic materials available on the internet

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

None

F. Facilities Required المرافق اللازمة

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

Classroom with suitable seats

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

Classroom with Smart Board and Data Show.

2. Computing resources (AV, data show, Smart Board, software, etc.)

None

3.Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

None

G. Course Evaluation and Improvement Processes:

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching Course evaluation by the students at the end of the semester.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the department. • Qualitative analysis of students' results • Peer Evaluation
3. Processes for Improvement of Teaching: - Follow-up new teaching strategies and apply them for this course.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) • Measurement of the course learning outcomes • Course report at the end of semester .
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement : Periodic meetings with outstanding students to learn the positive and negative aspects in the decision.

Name of instructor : Dr. Mohammed Rashad Al-kouri _____

Signature : _____ Date Report Completed: 13-8-1439 _____

Name of field experience teaching staff: ____None _____

Program coordinator : Dr. Hamoud AL- Haddad _____

Signature: _____ Date received: __1439 H _____