The Hashemite University		Abstract Algebra (2((110101441) 3 Credit Hours
Faculty of Science	**Course Syllabus**	**Pre-requisite:** 110101341
Department of Mathematics		**Second Semester 2020/2021**

Course Information	
Lecture's Time	9:30-11:00, Monday, Wednesday
Lecture Room	MS teams
Instructor	Dr. *Ameer Jaber*
Office Location	ر 210
Office Hours	ساعتان في الأسبوع

Text Book : A first course in Abstract Algebra, edition: *7th*

References(s)	(1) Contemporary Abstract Algebra, *Joseph A. Galian*. (2) Elements of Abstract Algebra, *Hasten*. (3) Elements of Abstract Algebra, *Dean*. (4) Algebra, *Thomas W. Hungerford*

Grading Policy:

Theory
Mid. Exam   40%
Others   10%
Final Exam   50%

Course Objectives

This course is a second course to Abstract Algebra. Through out this course we teach students about rings, fields, integral domains, rings and factorization of polynomials, prime and maximal ideals, introduction of extension fields, algebraic extensions, unique factorization domains, Euclidean domains.

Teaching and Learning Methods

1. Introducing new definitions and using examples to illustrate new concepts.

2. Introducing theorems, and their applications.

3. Discussing some of the students'   solutions of some sample assignment.

Course Contents		
Topics	**Sections**	**Week**
Rings and Fields		1,2
Rings and Fields	18	
Integral Domains	19	3
Rings of Polynomials	22	4,5
Factorization of Polynomials over a Field	23	6
Ideals and Factor Rings		7
Homomorphisms and Factor Rings	26	
Prime and Maximal Ideals	27	8
Extension Fields		9,10
Introduction to Extension Fields	29	
Algebraic Extensions	31	11,12
Factorizations		13
Unique Factorization Domains	45	
Euclidean Domains	46	14

4. Making a discussion of the problems of each exam.

5. Making a discussion of the problems of each exam.

Attendance is absolutely mandatory. Students who miss a 15% class sessions

without a compelling excuse will qualifies the student to be dismissal.