



Course Weekly Outline

Course Instructor	Sema Hassan aziz				
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Title	Number theory				
Course Coordinator					
Course Objective	ان الهدف من المادة هو اعطاء جميع المبرهنات و القوانين الرياضية وتطبيقها والتي لها علاقة وثيقة مع باقي المناهج وبالاخص مادة التشفير فهي تعتبر مادة مكملتها لها				
Course Description	Divisibility, Congruence, The Chinese Remainder Theorem, , Euler's Function, , Prime Numbers				
Textbook	1-Elementary Number Theory ,William Stein, 2004				
References					
Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%	-	As (10%)	----	As (40%)
General Notes	Type here general notes regarding the course				



Course weekly Outline

week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	23/9	Divisibility	-	
2	30/9	Prime Numbers	-	
3	7/10	Division	-	
4	14/10	Greatest Common Divisor	-	
5	21/10	The Euclidean Algorithm	-	
6	28/10	Examples of The Euclidean Algorithm	-	
7	4/11	congruence's	-	
8	11/11	congruence's	--	
9	18/11	Divisibility Tests	-	
10	25/11	,More Properties of congruence's,	-	
11	2/12	Residue Classes	-	
12	9/12	The group of unit	-	
13	16/12	The ring of unit	-	
14	23/12	The field of unit	-	
15	30/12	16 Z_m and Complete Residue Systems	-	
16	7/1	Addition and Multiplication in Z_m	-	
17	17/2	The Chinese Remainder Theorem	-	
18	24/2	Examples of the Chinese	-	

		Remainder		
19	3/3	, Fermat's Little Theorem	-	
20	10/3	• Euler's Function	-	
21	17/3	Euler's Function	-	
22	24/3	Prime Numbers, Prime	-	
23	31/3	exam	-	
24	7/4	Testing and Certification Strong Pseudo primes Industrial-Grade Primes	-	
25	14/4	Testing and Certification Strong Pseudo primes Industrial-Grade Primes	-	
26	21/4	Examples of testing &certification	-	
27	28/4	Prime Certification Via	-	
28	5/5	Primitive Roots An	-	
29	12/5	Improvement Pratt Certificates •	-	
30	19/5	Improvement Pratt Certificates	-	
31	26/5	Examples of improvement pratt certification	-	
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Instructor Signature:

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