OAKLAND UNIVERSITY, DEPARTMENT OF MATHEMATICS AND STATISTICS

STUDENT INFORMATION SHEET AND SYLLABUS

Instructor	CRN	Class Time	Office Hour	Phone	Email
Li Li	10170	TR 3:30-5:17pm at 274 SFH	MW 9:30-10:30am, Tu 2:20-3:20pm, at 350 MSC	(248)-370-3447	li2345@oakland.edu

COURSE: MTH 4775, **Abstract Algebra**, Winter 2018

TEXT: *A First Course in Abstract Algebra with Applications, Third Edition,* by Joseph J. Rotman

PREREQUISITES: MTH 275 and MTH 302 with a grade of 2.0 or higher or permission of department.

COURSE CONTENT: This course serves as an introduction to abstract algebra. Topics to be covered include:

Chapter 2: Groups (Functions and Equivalence Relations, Permutations, Groups, Subgroups and Lagrange's Theorem, Group homomorphisms, Quotient Groups)

Chapter 3: Commutative rings (Basic properties, Fields, Polynomials, Ring homomorphisms, Euclidean Rings, Quotient Rings and Finite Fields)

Chapter 4: Linear algebra (Vector spaces, Gaussian Elimination, Euclidean Constructions)

HOMEWORK: Homework will be assigned weekly and will be collected every Thursday. The amount of time needed to spend on these is approximately 8 hours per week. We will spend some class time discussing the homework.

EXAMS AND FINAL: There will be two closed-book in-class exams and a closed-book comprehensive final exam.

	Time and Date	Percentage
Exam 1	In class, Feb 13, Tue	20%
Exam 2	In class, Mar 20, Tue	20%
Final	3:30-6:30pm, Apr 19, Thur	30%
Homework		30%

GRADING POLICY: The following list shows the lowest possible grade that a given percentage score will earn (the grade may be higher than this): 95%--> 4.0, 80%--> 3.0, 65%.-->2.0, 50%--> 1.0, less than 50%--> 0.0.

MAKE-UP POLICY: No make-up exams or will be given. If you miss one exam and have a valid excuse, your final exam score will replace the missing one; otherwise the missed exam will be counted as a 0. In case the University is officially closed on a scheduled exam date the exam will be held on the next class date that the University is officially open. Closures during the final exam period require rescheduling by the Registrar.

Tentative Schedule (MTH4775, Winter 2018)

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Jan 1			2.1 Function & Equivalence Relations	
2		2.2 Permutations		2.2	
3	Jan 15 **MLKD**	2.2 2.3 Groups		2.3	
4	Jan 22	2.4 Subgroups		2.4 2.5 Homomorphisms	
5	Jan 29	2.6 Quotient Groups		2.6	
6	Feb 5	2.6 3.1, Commutative Rings		3.1	
7	Feb 12	**Exam 1**		3.2 Fields 3.3 Polynomial rings	
8	Feb 19 **Winter recess**				
9	Feb 26	3.4 Ring Homomorphisms		3.4	
10	Mar 5	3.5 Polynomials		3.5	
11	Mar 12	3.8 Quotient rings and finite fields		3.8	
12	Mar 19	**Exam 2**		4.1 Vector spaces	
13	Mar 26	4.1		*4.1*	
14	Apr 2	4.2 Euclidean constructions		4.2	
15	Apr 9	Applications		Applications	
16	Apr 16	Review (Winter classes end 10pm)	Study day	**Apr 19 3:30-6:30pm Final Exam**	