Math 4281 (Introduction to Modern Algebra). Spring 2018.

Instructor:	Dr. Michael Chmutov	**Class:**	MWF 9:05am - 9:55am
Email:	mchmutov@umn.edu		Vincent Hall 113.
Office:	Vincent Hall 203B	**Office Hours:**	M 10:00am - 11:00am,
Phone:	(612) 625-7860		W 10:00am - 12:00pm,
			By appointment.

Course Web Site: `http://math.umn.edu/~mchmutov/teaching/teaching.html`

Text: *A Book of Abstract Algebra* by Charles Pinter.

Grading Policy:

- Exams $1 - 3$ (20% each)

- Homework (40%)

Homework: Homework will be assigned (almost) every week. You are encouraged to collaborate on homework provided:

- you understand your solutions,

- you write up your solutions in your own words,

- you write down with whom you collaborated.

Lowest homework grade will be dropped.

Exams:

- Friday, Feb. 23, 2018, in class.

- Friday, Mar. 30, 2018, in class.

- Friday, May. 4, 2018, in class.

 The exams are closed book, notes, calculator, etc.
 Missing an exam is permitted only for very serious and unavoidable extenuating circumstances, and only if you notify the lecturer *in advance*.

Other good books:

- *Abstract Algebra: A Geometric Approach* by T. Shifrin.

- *Abstract Algebra: Theory & Applications* by T. Judson (`http://abstract.ups.edu/index.html`).

Prerequisites: Math 2283, 3283 or their equivalent. In particular, students will be expected to know some calculus and linear algebra, and have familiarity with proof techniques, such as mathematical induction.

Material: The course will be a basic introduction to fundamental algebraic structures known as groups, rings, and fields. We will establish a few of the fundamental properties satisfied by these algebraic objects and illustrate their importance by looking at applications that follow from their properties. Algebra has a very different feel from calculus and geometry. One starts with a list of allowable axioms that define the

algebraic structures and all properties and results flow from these axioms. The material often comes off as abstract; be prepared to put in extra time if this is not your natural inclination. After working with these structures for a while, things become more familiar and natural.

Academic dishonesty: See the Student Conduct Code, a link to which is posted on the course website, for general information. Academic dishonesty, including use of an unapproved electronic device, will result in a report to the Office for Student Conduct and Academic Integrity, and penalties can include a grade of zero on the task in question and/or a failing grade in the course.

Other policies: A link to other policy statements - including statements about equal opportunity, disability accommodations, and mental health resources - appears on the course website above. If you have a letter detailing accommodations, notify the instructor as soon as possible.