

SYLLABUS – GRADUATE ALGEBRA I
MATH 516, FALL 2016 (13724)
MWF 9:00AM - 10:00AM, TH 312

COURSE DESCRIPTION: This is the first semester graduate algebra course intended to introduce basics of categories, groups, rings, and modules. We will cover basic theorems such as the Sylow Theorems, the classification of finitely generated modules over PIDs and some basic linear and homological algebra. This course will prepare you for Math 517 and other courses in the department that use algebra heavily.

CONTACT & OFFICE HOURS:

- **Instructor:** Kevin Tucker, kftucker@uic.edu, M 10-11, W 3-4 in SEO 417

IMPORTANT DATES:

- **Midterm:** Due Friday, October 28
- **Final:** Due Monday, December 5
- **Add/Drop Deadline:** September 2
- **Withdraw Deadline:** October 28
- **Last Day of Classes:** December 2

WEBSITES:

- **Course:** <http://kftucker.people.uic.edu/math516>
- **Lectures:** <https://www.overleaf.com/5869543krpjzx>
- **Homework:** <https://www.overleaf.com/5870246cczgyqy>

TEXT: *Algebra: Chapter 0* by Paolo Aluffi (GSM 104, American Mathematical Society, 2009)

WEEKLY SCHEDULE: We'll cover approximately the first seven chapters of the text, as detailed below in the *tentative* schedule of the sections to be covered for each lecture. To be prepared for each class, make sure to read the appropriate section of the text before coming to lecture.

Week	Sections	Week	Sections
1	M I.1-2, W I.3-4, F I.5	9	M IV, W V.1 & HW 8, F V.2
2	M II.1-2, W II.2-3 & HW 1, F II.4-5	10	M V.3, W V.4, F V.5 & Midterm
3	Labor Day , W II.6-7 & HW 2, F II.7-8	11	M V.6, W V & HW 9, F VI.1
4	M II.9-10, W II & HW 3, F III.1-2	12	M VI.2, W VI.3 & HW 10, F VI.4
5	M III.2-3, W III.4 & HW 4, F III.5	13	M VI.5, W VI.5 & HW 11, F VI.6
6	M III.6, W III.7 & HW 5, F IV.1	14	M VI.7, W VI, F Thanksgiving
7	M IV.2, W IV.2 & HW 6, F IV.3	15	M & HW 12, W, F (Rep Thy)
8	M IV.4, W IV.5 & HW 7, F IV.6	Finals	M Final

REQUIREMENTS: Students are expected to make a serious commitment to prepare for and attend each and every lecture. There will be weekly homework. Homework is a very important component of this course, and will count for 50% of your final grade. You may (and are encouraged to) collaborate on the homework problems, but you must write your own solutions and properly acknowledge any help you receive from others. There will be a take home midterm counting for 20% of your final grade, due in class on Friday, October 28. There will be a take home final exam counting for 30% of your final grade, due by noon on Monday, December 5.

ACADEMIC INTEGRITY: <http://www.uic.edu/ucatalog/GR.shtml#qa>

Instances of academic misconduct (including cheating, fabrication, plagiarism, threats, examination by proxy) shall be handled pursuant to the Student Disciplinary Policy.

DISABILITY ACCOMODATIONS: <http://drc.uic.edu/>

Students with disabilities who require accommodations must be registered with the Disability Resource Center (DRC).