MATH 101, FALL 2017
TOPICS IN ALGEBRA:
GRADUATE LINEAR ALGEBRA

JOHN VOIGHT

Course Info

- **Lectures**: Monday, Wednesday, Friday, block 11 (11:30–12:35 p.m.)
- **x-hour**: Tuesday, block 11X (12:15–1:05 p.m.)
- **Dates**: 11 September 2017 – 14 November 2017
- **Room**: Kemeny 201
- **Instructor**: John Voight
- **Office**: 341 Kemeny Hall
- **E-mail**: jvoight@gmail.com
- **Instructor's Office Hours**: Thursdays, 1:15-2:15 p.m. or by appointment
- **Course Web Page**: http://www.math.dartmouth.edu/~m101f17/
- **Prerequisites**: A previous course in undergraduate algebra is strongly recommended
- **Required Text**: David S. Dummit and Richard M. Foote, *Abstract algebra*, 3rd. ed., Wiley, 2003.
- **Recommended Texts**:
  (1) Stephen Friedberg, Arnold Insel, and Lawrence Spence, *Linear algebra*, 4th. ed., Pearson, 2002.
  (2) Steven Roman, *Advanced linear algebra*, 3rd. ed., GTM vol. 135, 2007.
  (3) Serge Lang, *Algebra*, 3rd. ed., GTM vol. 211, Springer-Verlag, 2005.
  (4) Thomas Hungerford, *Algebra*, 8th. ed., GTM vol. 73, Springer-Verlag, 2003.
  (5) Paolo Aluffi, *Algebra: Chapter 0*, GSM, American Mathematical Society, 2009.
  (6) Michael Artin, *Algebra*, 2nd. ed., Pearson, 2010.
- **Grading**: Grade will be based on daily homework (25%), weekly homework (25%), a midterm (20%), and a final exam (25%).

Homework

The homework assignments will be assigned on a daily basis and weekly basis and will be posted above.

Daily homework is due the following class period: we will discuss the problem in class, and you will self-assess in red pen. At the end of the term, all daily homework will be collected, with a short concluding self-assessment.

Weekly homework is due as indicated, and will collected and graded in the usual manner.

Cooperation on homework is permitted (and encouraged), but if you work together, do not take any paper away with you–in other words, you can share your thoughts (say on a blackboard), but you have to walk away with only your understanding. In particular, you must write the solution up on your own. Please acknowledge any cooperative work at the end of each assignment.

Plagiarism, collusion, or other violations of the Academic Honor Principle, after consultation, will be referred to the The Committee on Standards.

OTHER CONSIDERATIONS

Some students may wish to take part in religious observances that occur during this academic term. If you have a religious observance that conflicts with your participation in the course, please meet with your instructor before the end of the second week of the term to discuss appropriate accommodations.

Students with disabilities who may need disability-related academic adjustments and services for this course are encouraged to see their instructor privately as early in the term as possible. Students requiring disability-related academic adjustments and services must consult the Student Accessibility Services office (205 Collis Student Center, 646-9900, `Student.Accessibility.Services@Dartmouth.edu`). Once SAS has authorized services, students must show the originally signed SAS Services and Consent Form and/or a letter on SAS letterhead to their professor. As a first step, if students have questions about whether they qualify to receive academic adjustments and services, they should contact the SAS office. All inquiries and discussions will remain confidential.

LIBRARY

A key to successful research is the use of reliable, high-quality information sources. While some information can be found on the open web, the best place to start your research is at the Librarys Mathematics Research Guide, `http://researchguides.dartmouth.edu/math/`. This research guide has the librarys key mathematics resources organized for easy use. The Kresge Physical Science Library website, `Dartmouth.edu/~library/Kresge/`, also has information on useful research tools and services. In addition to the online information, Katie Harding, the Mathematics Librarian, has been assigned to this class to answer research questions and to help you find appropriate resources. Katie can be reached at `katie.harding@dartmouth.edu`.

SYLLABUS

We will follow the official Math 101 syllabus
`https://math.dartmouth.edu/graduate-students/current/syllabi/core-course-syllabi/m101.pdf`
as closely as possible. A full schedule is available on the course webpage.