

Math 4370 – Computational Algebra  
(Spring 2014)

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Office Hours: Thursdays 11:00AM – 12:00PM, and by appointment

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Office Hours: Tuesdays 12:55PM – 2:55PM

**Course Webpage:** [www.math.cornell.edu/farbod/teaching/math4370.html](http://www.math.cornell.edu/farbod/teaching/math4370.html)

**Textbook:**

David Cox, John Little, Donal O’Shea – Ideals, Varieties, and Algorithms, 3rd Edition.

The ebook is freely available to download on campus. I might also discuss some material not covered in this book, in which case I will provide references and/or handouts if needed.

**Course Description:**

The course is an introduction to computational methods of (classical) algebraic geometry. In brief, this means we will study systems of polynomial equations from a computational and algorithmic point of view.

**Prerequisite:**

In theory, a good understanding of linear algebra and familiarity with formal mathematical proofs should be sufficient for the course. Knowing more

algebra would be very helpful.

**Lecture time and place:**

Tuesdays and Thursdays 2:55PM - 4:10PM  
224 Malott Hall

**Homework:**

Homework will be assigned (approximately) once a week. Late homework will not be accepted.

**Collaboration:**

On the homework sets, collaboration is both allowed and encouraged. However, you must write up yourself and understand your own homework solutions. You should give credit to any outside sources or collaborations.

**Exams:**

There will be one in-class midterm exam plus a cumulative final exam. The (tentative) dates are:

*Midterm:* Thursday, March 20 (in class)

*Final Exam:* TBD (final exams will be scheduled May 12–20)

The use of calculators or notes is not permitted during the exams.

**Grading:**

Homework will make up 40% of your grade. The midterm exam and the final exam will each make up 30% of your class grade.

**Academic honesty:**

All students are expected to comply with the Code of Academic Integrity.

The institute honor code is available at:

[www.theuniversityfaculty.cornell.edu/AcadInteg/code.html](http://www.theuniversityfaculty.cornell.edu/AcadInteg/code.html)