

Math 4340/7340: Introduction to algebraic
geometry
Winter 2017

Course location and time: TR 1-2:25, Machray 418

Instructor: Siddarth Sankaran

Office: Machray 424

Office Hours: MW 12:00PM-1:00PM or by appointment

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Course Webpage: <http://home.cc.umanitoba.ca/~sankaras/math4340>

This course is an introduction to algebraic geometry, with an emphasis on projective curves. We will mostly follow the classic book (now available freely online):

Fulton, W. *Algebraic curves: an introduction to algebraic geometry*.
<http://www.math.lsa.umich.edu/~wfulton/CurveBook.pdf>

Some topics that we will cover: affine and projective varieties and their morphisms, local rings, Bezout's theorem, classification of projective curves, Riemann-Roch for curves, introduction to schemes, and possibly other topics as time permits.

Grading: 50 % assignments, 30 % participation, 20 % take-home final

About participation: Over the course of the semester, you will periodically be called on to prepare and present some of the course material to the of the class. You should have plenty of time to prepare, and I will be on hand to assist you with any doubts or concerns. These presentations are intended to be informal, and are a great opportunity to digest and internalize the material, as well as hone your presentation skills. See the attached rubric for an idea of expectations.

You will also have periodic assignments which account for the remainder of your grade. Assignments are due in class on the indicated date, and no late assignments will be accepted, outside of exceptional circumstances up to the discretion of the instructor.

Assignment due dates (subject to change): February 2, February 16, March 14, March 30, April 18

Math 4340/7340 Presentation rubric

Name: _____ Date: _____

Organization: /5 pts	<ul style="list-style-type: none">• Clear evidence of preparation• Well-organized and coherent presentation• Demonstrates good judgement in terms of level of detail and choice of examples, relative to the goals of the talk• Demonstrates relevance of material in the context of the course
Content: /10 pts	<ul style="list-style-type: none">• Demonstrates more than a superficial understanding of material• Mathematical content is presented accurately and with sufficient precision.• Able to respond effectively to questions and comments from audience.
Delivery: /5 pts	<ul style="list-style-type: none">• Clear and articulate speaking style• Effective use of boardwork (as appropriate)• Conveys enthusiasm and induces audience engagement

Comments:

Further information:

Writing and Learning Support: The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at: <http://umanitoba.ca/student/academiclearning/> You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 205 Tier Building.

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