



COURSE SYLLABUS, MATH 996, SPECIAL TOPICS IN COMMUTATIVE ALGEBRA, SPRING 2024

THE INSTRUCTOR

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<u>Office</u>	527 Snow Hall
<u>Office Hours</u>	Consult the course website.

COURSE BASICS

<u>Time and location</u>	MW 11:00 - 12:15 Consult the course website for the link to our online lectures.
<u>Description</u>	Advanced courses on special topics; given as need arises.
<u>Course website</u>	https://hernandez.ku.edu/996.html
<u>Prerequisites</u>	MATH 790, MATH 791, MATH 830, and MATH 831, or a similar level of familiarity with the basics of commutative algebra, and a high level of mathematical maturity.
<u>Format</u>	This is an online course.
<u>Credits</u>	This is a 3-credit course.

ATTENDANCE AND PARTICIPATION

Students are expected to regularly attend, and actively participate in, lectures, and also to honor the [KU Excused Absences Policy](#).

REQUIRED TEXTS AND INSTRUCTIONAL MATERIALS

None.

COURSE REQUIREMENTS

Exercises will appear sporadically in lecture, and students are asked to attempt these soon after they are announced. Students may also be required to make presentations towards the end of the semester on research papers and topics adjacent to those discussed in lecture.

LEARNING OUTCOMES

We will study various invariants of singularities, especially in the case of hypersurfaces. We will emphasize explicit computations, and to keep our discussions concrete, we will often focus on plane algebroid curves. After completing this course, students will know the basics of the Minor number, the Bernstein-Sato polynomial, and Frobenius thresholds. Students will also learn how to compute each of these invariants in some important special cases.

EVALUATION CRITERIA AND GRADING SCALE

Grades will be determined by attendance records, and by the outcome of any student presentations. There is no formal grading scale.

CONCERNING CHANGES TO THIS SYLLABUS

The course policies described herein are subject to change. Any such changes will be made at the discretion of the instructor, though will always be informed by the best interests of the students, and will be announced during class, and also electronically, via email.

ADDITIONAL RESOURCES AND POLICY INFORMATION**Student Resources**

- [University Academic Support Centers!](#)
- [Counseling and Educational Support Services](#)
- [The KU Writing Center](#)
- [Religious Observances](#)

University Policies

- [Change of Grade](#)
- [Diversity and Inclusion](#)
- [Mandatory Reporting \(Title IX/Civil Rights\)](#)
- [Nondiscrimination, Equal Opportunity, and Affirmative Action](#)
- [Sexual Harassment](#)
- [Student Rights and Responsibilities](#)
- [Racial and Ethnic Harassment Policy](#)
- [Commitment to Integrity and Ethical Conduct](#)
- [KBOR Statement on Free Expression](#)
- [Weapons, Including Firearms!](#)

The [KU Student Affairs Student Resources website](#) provides links to KU Policies and Resources pertaining to academic misconduct, grading policies, harassment and discrimination, diversity and inclusion, mandatory reporting, equal opportunity and affirmative action, and student rights and responsibilities. Please visit the site to familiarize yourself with these policies and resources. Contact your instructor, or Student Affairs directly, if you have questions or concerns about any of these policies and resources.