

**MATH 553, ALGEBRAIC GEOMETRY II
SPRING 2016 SYLLABUS**

COURSE DESCRIPTION: The general goal for this course is to cover the basics of the theory of schemes, roughly following Chapters II and III in Hartshorne's book.

MEETINGS: MWF, 2-3, Stevenson Hall 104

CONTACT INFO: Instructor: John Lesieutre
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TEXTBOOK(S): The main book for this course will be Hartshorne's *Algebraic Geometry*. This book is tough going, so you'll probably want to consult other sources as well. Most recommended is Ravi Vakil's notes, now titled "The Rising Sea: Foundations of Algebraic Geometry". I will always include a reference to the corresponding section in Vakil's book, and sometimes follow that book more closely than Hartshorne. There are many other good sources too, among them Görtz and Wedhorn, *Algebraic Geometry I, Schemes with Examples and Exercises*.

HOMEWORK: I will assign weekly homework, which will form the basis for 75% of your grade. I'll follow Izzet's scheme from last semester. At the end of the course, I'll ask you to write a 5-10 page paper on a topic relevant to your interests, which will account for the remaining 25%. We'll talk later in the semester about possible choices for the topic.