

## SYLLABUS – MATH 6140

### ALGEBRAIC GEOMETRY II

**Description:** This is the second course in a two course sequence on the topic of Algebraic Geometry. We will cover topics including algebraic varieties (projective and affine), blowups, normalization, singularities, Zariski's main theorem, sheaves, divisors, differential forms, and more!

- **Time:** Monday, Wednesday, Friday 11:50 AM – 12:40 PM.
- **Location:** JWB 208
- **Instructor:** Karl Schwede
- **Contact information:**
  - email: [schwede@math.utah.edu](mailto:schwede@math.utah.edu)
  - office: JWB 323
  - website: <http://www.math.utah.edu/~schwede/math6140>
- **Office hours:** TBD
- **Textbooks:**

*Algebraic Geometry* by Robin Hartshorne

*Introduction to Algebraic Geometry* by Steven Dale Cutkosky

*The Rising Sea: Foundations of Algebraic Geometry* by Ravi Vakil

**Grade:** Your grade will be determined by the following formula.

100% Homework, typically in the form of group worksheets.

Students are allowed, and even encouraged to work together when solving homework problems.

**Prerequisites:** Have familiarity with fields, polynomial rings, ideals, and point set topology. Also have familiarity with the material in Math 6130 (at the level of the first chapter of Hartshorne).

**Academic Integrity:** All University of Utah policies regarding ethics and honorable behavior apply to this course.

**Disabilities:** The Americans with Disabilities Act requires that reasonable accommodations be provided to qualified individuals. To discuss any such accommodations, please contact me as well as the Center for Disability Services, (801) 581-5020, at the beginning of the semester.