MAT 401 Undergraduate Seminar FALL 2015
Topic: algebraic geometry
Textbook:
Undergraduate Algebraic Geometry, by Miles Reid, London Mathematical Society Student Texts 12, 1989. Paperback.
Instructor: Mark Andrea De Cataldo

Algebraic geometry is a subject that draws inspiration and ideas from different fields such as geometry, algebra, topology and analysis. It aims at understanding what are the many properties of the solutions to polynomial equations: these solutions organize themselves into very special manifolds, or varieties and one then studies these varieties with a wide variety of methods.

The seminar will examine a series of topics: plane curves, affine varieties, applications: projective varieties, birational equivalence, tangent space and non-singularity, dimension, group law on cubic curves, twenty-seven lines on cubic surfaces.
The instructor will give introductory lectures on the topics which will then be explored by the participants, who will lecture on them in class.

Pre-requisites: permission of the instructor; some knowledge of abstract algebra and multivariate calculus is essential.

The University Senate Undergraduate and Graduate Councils have authorized that the following required statements appear in all teaching syllabi (graduate and undergraduate courses) on the Stony Brook Campus.

DISABILITY SUPPORT SERVICES (DSS) STATEMENT (must be the following language)
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.
Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities]

ACADEMIC INTEGRITY STATEMENT (must be the following language as approved by the undergrad council):
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/

academicjudiciary/

CRITICAL INCIDENT MANAGEMENT (must be the following language as approved by the undergrad council):
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.