

MAT 541-001 TTh 9:30 – 10:50
Introduction to Number Theory
Spring 2017

Instructor: Professor Jeffrey Meyer, 206F Carnegie
443-1479 jlmeye01@syr.edu

Office Hours: W 10:00 – 11:30 am, TTh 11:30 am – 12:15 pm, and by
appointment.

Text: *Number Theory*, by George Andrews, Dover Publications;
Elementary and (Gentle) Analytic Number Theory, by J.L. Meyer,
unpublished, available at SU Bookstore.

Catalog Course Description: Prime numbers, greatest common divisors,
congruences. Euler's function, Fermat's theorem, primitive roots, indices,
quadratic residues, Legendre and Jacobi symbols, and the quadratic
reciprocity law.

PREREQ: (([MAT 375](#) OR [CIS 375](#)) AND [MAT 331](#)) OR GRADUATE
STANDING IN MATHEMATICAL SCIENCES

About This Course: This course is a first course in number theory. The
course roughly follows the Meyer text. The Andrews text serves primarily
as a back-up reference for the material in the course. The material presented
in class will not necessarily correspond to particular chapters of the book.
There will be additional topics presented by the instructor and other number
theoretic digressions. The work you do for the course will include solving
problems with applications from the material and writing proofs of claims
(lots of proofs).

Grading: Your grade will be based on the following.

| | |
|--------------------------|----------|
| Two mid-term exams | 25% each |
| Comprehensive final exam | 35% |
| Homework | 15% |

Exam Dates: Tentative schedule:
Exam 1 Thursday, February 23, 2017;
Exam 2 Thursday, April 20, 2017;
Final Exam Thursday, May 4, 2017, 12:45 – 2:24 pm.

Additional Calendar information: No class meeting on Tuesday, March 21, 2017 for this class only; other classes on campus are not affected by this.

Phone, Laptop, Tablet in class policy: Phones, laptops, and tablets are not allowed to be out during class. Students who repeatedly violate this policy will be asked to leave the room.

Academic Integrity: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. *The use of or availability of any electronic device during a midterm exam or final exam is a violation of the Academic Integrity Policy.* For more information about the policy, see <http://academicintegrity.syr.edu>.

Religious Observances Policy: Syracuse University's religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that maybe missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.

Students with Disabilities: If you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.