

# MAE 301/501: FOUNDATIONS OF THE SECONDARY SCHOOL MATHEMATICS CURRICULUM

SPRING 2017

## BASIC INFORMATION

**Instructor:** Christian Schnell

**Office:** Math Tower 3-117

**Email:** christian.schnell@stonybrook.edu

**Course website:** <http://www.math.stonybrook.edu/~cschnell/mae501>

**Office hours:** Tuesday 9am to 11am; Thursday 9am to 10am; and by appointment

## COURSE DESCRIPTION

**Course information.** “A re-examination of the current middle school and high school mathematics curriculum. A review of the techniques and discussion of the ideas from a more advanced point of view, including topics in algebra, geometry, elementary functions, and probability and statistics. Competence in basic secondary school mathematical ideas and techniques is tested.” (From the course bulletin.)

**Exams.** There will be three exams. Exam 1 consists of problems from the New York State Regents Exam, and is tentatively scheduled for the second week of classes. Students who do not achieve a score of at least 85% on Exam 1 will have two opportunities to pass a make-up exam. Exam 2 is a midterm exam, and will most likely be in early March. Exam 3 is the final exam; this has already been scheduled by the University for **Tuesday, May 9**, from 5:30pm to 8:00pm.

**Homework and classwork.** Homework is an essential component of the course. Homework will be assigned and collected regularly, and selected problems will be graded. Late homework will not be accepted. Certain assignments may also be completed and collected during class. Students are expected to be present for class, and missed classwork may not be completed for credit. The lowest two scores in the homework/classwork category will be dropped.

**Course notes.** There is no required textbook for this course. Course notes will be prepared and distributed by the students throughout the semester, with guidance from the instructor. Each student will be assigned several dates where they are responsible for taking good notes on the class discussion and writing them up for distribution. Prior to class distribution, the notes will be edited by the student in order to earn a grade. Each version of the notes will be considered in assigning grades, and late submissions will not receive full credit. Contribution to the course notes represents 10% of the final course grade. In case of an unavoidable absence from class, it is the student’s responsibility to exchange dates with another student.

**Final grades.** In order to earn a grade above C- in this course, a student must achieve a minimum score of 85% on Exam 1 (or on a subsequent make-up exam). For students passing Exam 1 with a minimum score of 85%, the grade will be determined as follows:

- (1) Exam 1: 10%
- (2) Homework/Classwork: 20%
- (3) Course Notes: 10%
- (4) Midterm Exam: 30%

(5) Final Exam: 30%

A student not passing Exam 1 (or a subsequent make-up exam) with a minimum score of 85% will not receive above a C- for the course.

#### GUIDELINES FOR WRITING COURSE NOTES

**Purpose.** First and foremost, this is an exercise in writing mathematics. The final product should be clear and grammatically correct, in addition to being mathematically accurate. The course notes are also meant to serve the role of a textbook. They must be accurate and complete, so that all students can refer to them for future study.

**Due dates.** Course notes for an assigned class are due at the next class meeting for which no exam is scheduled. If editing is necessary then a revised version will be submitted to the instructor at a time determined by the instructor. The student is responsible for distributing the final version of the notes – which may be in electronic form.

**Format.** The course notes should be a complete and organized account of the mathematics discussed in class, but you are not required to present things in the order in which they were covered in class. Indeed, part of the work is in determining the structure of the presentation. Your notes should include any new theorems, definitions, ideas, and examples studied that day. Include also at least one new example and one new question for your classmates. You may choose to answer an open question that came up during class. If some ideas are not yet clear, you may also include questions for the instructor. The instructor may either address these questions directly or suggest sources for further study. We will discuss the use of L<sup>A</sup>T<sub>E</sub>X, a software for typesetting mathematical documents, during the first week of class.

#### POLICY STATEMENTS

**Disability Support Services.** If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, Educational Communications Center Building, room 128, at (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.** 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. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at [http://www.stonybrook.edu/commcms/academic\\_integrity/index.html](http://www.stonybrook.edu/commcms/academic_integrity/index.html).

**Critical Incident Management.** 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.