

MAE 520
ADVANCED METHODS OF TEACHING SECONDARY SCHOOL MATHEMATICS

SPRING 2014

Instructor Information

Instructor: Lisa Berger

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Current Office Hours:

Mondays: 11:30-12:30 Room P-143, 5:30-6:30 Room 4-105

Wednesdays: 5:30-6:30, Room 4-105

Office hours may be adjusted to accommodate the instructor's schedule and/or student needs. Students unable to meet during scheduled office hours are encouraged to schedule an appointment with the instructor.

0.1. General Information.

This is a course in theory and practice of teaching mathematics in the secondary schools. Emphasis will be placed on constructivist teaching and learning, on the NCTM principals and standards, and on the New York Common Core State Standards for Mathematics. In addition to continued work in planning and presenting mathematics lessons, this second semester methodology course will develop student understanding of assessment, unit planning, and differentiated instruction. A main component of the course is experience planning lessons and teaching. Students will write formal lesson plans and teach mathematics—secondary or post-secondary level—to their peers.

All written work for the class must be clear and grammatically correct, in addition to meeting its particular assignment guidelines. Work with significant errors in grammar or usage will not be accepted for credit.

0.2. Required Resources. In addition to working with research articles from scholarly journals, we will be reading the book:

Sigler, J. and Hiebert, J. (1999) *The Teaching Gap*.

Students should also already be familiar with:

NCTM (2000) *NCTM Principals and standards of school mathematics*.

You will also need to access on-line materials and information. These will websites give you a start:

- <http://www.sunysb.edu/pep/assessment.shtml>
- http://www.p12.nysed.gov/ciai/common_core_standards/
- <http://illustrativemathematics.org/>
- <http://ime.math.arizona.edu/progressions/>
- <http://commoncoretools.wordpress.com/>

0.3. Attendance. Regular attendance and active class participation are essential components of the course, and students are expected to attend class regularly; a student should not miss more than one class during the semester.

0.4. Lesson Presentation and Unit Plan. Students will plan and present several lessons during the course of the semester. Some of these may be planned and presented collaboratively. In addition, each student will plan a unit of instruction on an appropriate secondary topic, to be determined in consultation with the course instructor. Students will present at least one lesson from this unit. Graduate students may be expected to plan and present more advanced lessons to a more diverse student body. Details will be given in class.

0.5. Homework/Class Work/Quizzes. Homework will be assigned and collected regularly, and late homework will not be accepted. Additional assignments may be completed and collected during class. Students are expected to complete assigned readings before class and to contribute to class discussions. Students are expected to be present for class, and missed quizzes or classwork may not be completed for credit. The lowest 2 scores in the homework/classwork/quiz category will be dropped.

Graduate students may be expected to complete additional assignments, including reading assignments. Also, a more mature level of writing is expected of students earning graduate credit for this course.

0.6. Final Grades.

Course grades will be based on the following breakdowns.

- (1) Lesson plans and presentations 30%
- (2) Unit plan and selected lesson presentation: 30%
- (3) Other written homework and classwork: 20%
- (4) Attendance and active class participation: 20%

Students are expected to attend class regularly; more than one absence or excessive late arrivals may result in a significantly reduced attendance and active participation score. Additionally, as stated in the PEP Guide for Teacher Education:

All teacher candidates are assessed at the end of each semester using the Teacher Candidate Professional Development Form (TCPDF). Teacher candidates must achieve a minimum average score on the TCPDF (2.5 for Pedagogy/Methods I, 4.5 for Pedagogy/Methods II, and 7 for student teaching) in order to progress to the next course in the professional education sequence and graduate from the program. Candidates may have no more than two unmet standards in Pedagogy/Methods II.

Students who do not meet this minimum scoring on the TCPDF will not receive a grade above C- for the course. For students meeting the minimum scoring standard on the TCPDF, final course grades will be no lower than as determined by the following:

MAE 311		MAE 510	
A	90%-100%	A	90%-100%
B	80%-89%	B	80%-89%
C	70%-79%	C	70%-79%
D	60%-69%		

0.7. 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 instance 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/uaa/academic_judiciary/.

If you do not understand the policy on academic integrity, please ask for clarification.

0.8. Americans with Disabilities Act: 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, Room 128, (631) 632 – 6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential. <https://web.stonybrook.edu/newfaculty/StudentResources/Pages/DisabilitySupportServices.aspx>.

0.9. 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.