

MAE 447/530 DIRECTED READINGS IN MATH EDUCATION

SPRING 2008

0.1. Instructor Information.

Instructor: Lisa Berger

Office: Math 4-105

Phone: 632-8278

Email: lbrgr@math.sunysb.edu

Current Office Hours:

Mondays: 2:30-3:30

Tuesdays: 1:15-2:15

Wednesdays: 1:15-2:15

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.

0.2. Course Description. In this course we will study current issues in mathematics education. In addition to learning about the various topics, students should become familiar with some of the research literature. The focus will be to understand the ideas addressed in class and also to understand the research itself. In particular, students should reflect on the implications of the research on their own classroom practices and also on the limitations of the research. In addition to research conclusions, students should consider the methodology, the data collection, and the theoretical perspectives of the researchers.

0.3. Class Participation. This course will be conducted as a discussion, and students are expected to attend class regularly and contribute their ideas. Students should complete assigned readings before class in order to contribute to class discussions. Active participation in class discussions makes up 15% of the student's final grade.

0.4. Tentative topics. A list of possible topics is:

- (1) Constructivism
- (2) Writing and discourse in the mathematics classroom
- (3) Assessment
- (4) Use and limitations of technology in the mathematics classroom.
- (5) Teaching mathematics in a heterogeneous classroom.
- (6) Equity in mathematics education
- (7) Curriculum—NCTM and New York State Standards

As the semester progresses students may suggest additional/alternative topics for reading and inclusion in class discussion. Any topic relevant to 7 – 12 grade mathematics teaching and learning will be considered.

0.5. Course Requirements. In addition to attending and participating in class regularly, each student is expected to write one 3 – 4 page paper and one 8 – 12 page paper on a topic of his or her choice. The topic must be approved by the instructor.

The first paper is a *research article summary* on the chosen topic. For this paper each student will summarize one research article from a primary source, such as the *Journal for Research in Mathematics Education*. Further guidelines for the paper will be given in class.

The final paper is an extension of the first, and should be a further investigation of the subject studied for the research summary. The student will find at least three additional sources on the same topic. It is acceptable to include assigned class reading among the sources. Students may draw freely on the ideas and the writing in the research summary for the final paper. Further guidelines for the paper will be given in class.

Each paper should be clear and grammatically correct, and APA style (fifth edition) is required for both papers. An excellent and inexpensive reference that should help with common errors in grammar and style is:

Strunk, W., & White, E.B., (2000). *The elements of style*. (4th ed.). Needham Heights, MA: Allyn & Bacon.

0.6. **Tentative Deadlines.**

- (1) Research Article Summary Due: Tuesday, March 4, 2008
- (2) Final Paper Due: Friday, May 9, 2008

0.7. **Final Grades.** Final grades will be assigned as follows:

- (1) Class Participation: 15%
- (2) Research Article Summary: 20%
- (3) Final Paper: 65%

0.8. **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/.

0.9. **Disability Support Services.** If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services (631) 632 – 6748 or <http://studentaffairs.stonybrook.edu/dss/>. They will determine with you what accommodations 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/asp>.

0.10. **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, and/or inhibits students' ability to learn.