

MAE 447 Course Outline Spring 2003

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Office Hours: Wednesdays 2:00--4:00 p.m.; Thursdays 2:00--4:00 p.m.; or by appointment: Tuesdays 11:30 a.m. -- 4:00 p.m.; Wednesdays 5:00--6:00 p.m.; Thursdays 5:00--6:30 p.m.

MAE 447 is a one credit required writing course.

Requirements:

1. You **must set up a weekly meeting time with the instructor, and meet with him regularly**. Possible times for this meeting are listed above.
 - Select a topic for your paper. A list of possible topics is appended, but you may choose any reasonable topic concerned with mathematics education. Your topic must be approved by the instructor. This should be done by the middle of February, and **must be done before the end of February**.
 - (You can do 3, 4 and 5 in any order) After your topic has been approved, locate at least two web sites concerned with mathematics education, and write a 1- 2 page paper, with references to the websites, describing what information relevant to your topic you have found on these web sites, and what other information and/or misinformation you found. One of these web sites should be the NCTM (National Council of Teachers of Mathematics) website. The first draft of this paper must be submitted electronically, **by the end of February**, to the above e-mail address.
 - (You can do 3, 4 and 5 in any order) Find at least two books or journal articles in the library that are relevant to your topic, and write a 1 - 2 page article, with references, describing what you found and how you will use it. You might also mention other potentially useful sources of information that you uncovered. The first draft of this paper must be submitted electronically to the above e-mail address **by the end of February**.
 - (You can do 3, 4 and 5 in any order) Find at least one article in a current newspaper or general news magazine relevant to mathematics education. Clip it, and bring it to your weekly meeting.
 - Write an eight to ten page research paper, using standard margins and double spaced, on your topic. The first draft of this paper can be submitted either in hard copy or electronically, and **must be submitted by the end of April**. The submission can be either electronic or hard copy. **The final draft must be submitted no later than May 9**, which is the last day of class.

You should try to get things done before the deadlines; MISSED DEADLINES WILL RESULT IN LOWER GRADES.

Suggested reference for the writing of your paper:

MLA Handbook for Writers of Research Papers by

Joseph Gibaldi.

Your references for the paper can include primary and secondary research. Examples of secondary research would include printed books, educational publications, articles in newspapers or articles from periodicals and recent journals. The MLA Handbook will be an excellent source for developing your

research paper, its footnotes, and its bibliography. The World Wide Web electronic publications need to be cited in your footnotes as per the MLA Handbook. You must use at least two library sources; that is sources other than the web, TV, newspapers, or non-professional periodicals.

Some Possible Topics

Alternative Education: Helping the low achiever succeed in mathematics.

Assessing mathematics achievement

Managing the mathematics classroom

Maintaining discipline in an unpopular subject

How to teach problem solving

Working in groups; homogeneous vs. heterogeneous groupings

Do uniform exams stifle creativity

Teaching styles vs. learning styles: does everyone learn the same way?

Implementing State Standards in the Math Curriculum

Coping with the low achiever - identifying the problem(s)

Math anxiety

Coping with the high achiever - enrichment

At what point should students be permitted to use calculators?

At what point should students be encouraged to use calculators?

The use and misuse of graphing calculators

Regents exams vs. Math A , B

Student attitudes towards Mathematics and Mathematicians

Study Skills for Mathematics Students

Mathematics Education in other cultures

Women in Mathematics

NOTE: If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I would urge that you contact the staff in the Disabled Student Services office (DSS), Room 133 Humanities, 632-6748/TDD. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. Note that we cannot make special arrangements for students with disabilities except for those determined by DSS.