








- Make certain to use correct APA format!!

 **Design** of a research study in some area of interest in mathematics education. This paper, which we have been calling a Research Proposal, is **NOT** necessarily the real proposal which you will submit to the Graduate School before you begin your work on either a thesis or project. Now, it **MAY** be the basis of such proposal. What you are writing in this class is assessed for MATH 598. What you will write for the Graduate School starts the ball rolling for either MATH 590 or MATH 599.

 In a class of this type good attendance is a must.

 NOTE ON WRITING: We want you to become a good writer using the format generally used by researchers. Therefore, when you write we want you to use the American Psychological Association (APA) style manual. When you write the three **critical** reviews of research you will cite other research which supports **your** criticism. When you do this, we want you to use the APA Manual. We will know that you did this because you will use square brackets [ ] and put within those brackets the page number in the APA Style Manual where you found out how to write your citation.

 When you write your **Research Proposal for Math 598**, you will use the square brackets [ ] each time you create a citation within the body of the proposal, and also for each citation in the Reference section of the proposal. We will show you copies of proposals that have been submitted to the Graduate School. Also pay attention to how the various researchers, that you have read, write. They rarely use the first person. They often refer to themselves as “this researcher”, or they write in such a way as to avoid the whole thing. Try to pay attention to this. Professional language tends to prefer the word *adolescent* rather than *teenager*, *mathematics* rather than *math*, *subjects* as opposed to *students*. Try to be sensitive to your choice of professional vocabulary.

 You will each make a presentation of your proposed research.

Text: NCTM. *Lessons Learned from Research*.  
American Psychological Association. *Publication Manual of the American Psychological Association*.

Reference Text  
Grouws, D.A. (Ed) (1992). *Handbook of Research on Mathematics Teaching and Learning*. New York: Macmillan Publishing Company

Second handbook of research on mathematics teaching and learning : a project of the National Council of Teachers of Mathematics Extensive use of the *Journal for Research in Mathematics Education* will be made in this class. The journal can be found in the Elihu Burrett Library and on the internet at the NCTM web site NCTM.org

Other journals that you may find useful in this course are:

*American Educational Research Journal*  
*Educational Psychologist*

*Educational Researcher*  
*Educational Studies in Mathematics*  
*Journal of Educational Psychology*  
*Journal of Mathematical Behavior*  
*Journal of Psychology*  
*Mathematical Cognition*  
*Mathematical Thinking and Learning*  
*Mathematics Teacher*  
*Psychological Bulletin*  
*Psychological Reports*  
*Teaching Children Mathematics*

**Other useful bits of information.**

**University Policies:**

1. If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My telephone numbers and office hours are given above.
2. In the event of a weather emergency which requires curtailment or cancellation of classes, listen to WTIC (1080 AM) or call (860) 832-3333 for the “general snow message.”
3. Last day to drop a course is September 18 is last day to withdraw with 60% refund. Forms are available in the Enrollment Center, Willard Hall. Cessation of attendance, notice to the instructor, or telephone calls to the Enrollment Center are not considered official notice of a student’s intention to drop the course.
4. Undergraduate full time students for whom dropping a course would reduce their credit load to fewer than 12 credits MUST apply for withdrawal.

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**Resources Available:**

1. If you need help, take advantage of your instructor's office hours.
2. Share your writing with at least one other student in the class. Reading other’s papers will sharpen your own editing skills.

Preliminary Class schedule. This outline may be adjusted due to unforeseen circumstances.

Date	Topic	Assignment
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Sept 1	<p>House keeping, APA and developing a list of references, Think about your proposal.</p> <p>Research on Teaching, (develop concept of critique).</p>	<p>Write up (about one page) some questions about teaching and learning math that you might like to explore? Due Sep 15.</p> <p>Print out Thesis Handbook from Grad Studies. Bring in on Sept 8, and every week thereafter. We seem to reference it a lot.</p>
Sept 8	<p>Research on Learning and curriculum, think about your proposal.</p> <p>Identify the person who will be your capstone advisor. You have to speak with that person.</p>	
Sept 15	<p>Visit Barbara Meagher at 7:00 p.m. to 8:30 in Elihu Burritt Library. We will meet in classroom and go over together.</p>	<p>Find research on Teaching and write a critique of the research. Due October 13.</p> <p>Find research on Learning and write a critique of the research. Due Oct 6.</p> <p>Begin Library reference search for Proposal. Due Oct 6.</p>
Sept 22	<p>ANOVA, Multiple Regression, other Tools, think about proposals. Look at some real proposals. Plan what your proposal will look like and what it will include.</p>	<p>Find research on Curriculum or Assessment. Due October 13.</p>
Sept 29	<p>Models of Research (Donoghue), think about proposal. We will exam real proposals.</p>	<p>Submit today your "Work in Progress" draft of <i>your</i> proposal.</p>
Oct 6	<p>Conversations on Teaching and Learning Research Articles. Think about <i>your</i> proposal. You will have met with your capstone advisor by this time having discussed initial topic ideas.</p>	
Oct 13	<p>Continued Conversations on Research Articles. Think about <i>your</i> proposal. Begin writing Draft of Proposal to this point. Talk about updated Literature Review from September 15.</p>	<p>Reminder: Reference list due to Dr. Halloran.</p> <p>Turn in paper on Curriculum or Assessment</p>
Oct 20	<p>Discussion of problems students may have encountered to this point.</p>	

Oct 27	Preparing for a successful presentation. Overhead, PowerPoint, other appropriate strategies. Be succinct. Be creative.	Rubric creation in class.
Nov 3	Recent research by CCSU mathematics Education Professors or recent graduates. Share a draft copy of your proposal with your capstone advisor no later than this date.	
Nov 10	Presentation. Submit a hard copy of a <i>second</i> draft of your proposal in order to receive a grade for the course. Due by December 9. Be prepared to make a presentation of your proposal at the Graduate School Research Night in April of 2011.	
Nov 17	Presentation	
Dec 1	Presentation	
Dec 8	Presentation	
Dec 15	Presentation	