

**MATH 495.595 SYLLABUS: WINTER 2012  
CALCULUS FOR MIDDLE SCHOOL TEACHERS**

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<b>Winter Term 2012 OFFICE HOURS &amp; SCHEDULE</b>					
<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
9 – 10		Office			Office
10 – 11	MTH 251	MTH 251	MTH 251		MTH 251
11 – 12	Office		Office		Office
12 – 1	MTH 396	Lunch	MTH 396		Lunch
1 – 2					
2 – 3	Lunch		Lunch		
3 – 4		Meetings			Meetings
4 – 5	Office		Office		
5 – 6	MTH 495		MTH 495		
6 - 7					

Please feel free to drop by my office during my office hours for help. You do not need to make an appointment to come to office hours. At times other than my listed office hours you are welcome and encouraged to call or email me with questions about the course. If you have direct scheduling conflicts with my office hours and would like further help, please let me know.

**COURSE PREREQUISITE**

- Math 111 or 392 (College Algebra for Teachers); with a grade of C- or better.

**REQUIRED COURSE MATERIALS**

- A scientific graphing calculator with at least the capabilities of a T. I. – 83. A T. I. – 83 or 84 is highly recommended.
- Graph paper
- Ruler
- 3 ring binder & dividers
- Quiz Blue Book (8 ½" × 11" required)

**COURSE OVERVIEW**

In this class we will explore the foundational calculus concepts of differentiation and integration, examples of their applications and the relationship between these two processes. Visual and hands-on methods will be emphasized throughout. Readings and exercises will be adapted from a variety of sources; see your course handouts.

## LEARNING OBJECTIVES AND GOALS

### *In this course you will*

- Build upon and expand your understanding of algebra and how it can be developed into higher mathematical analysis
- Contemplate and reflect on what middle-school learners need to understand in terms of pre-algebraic thinking, be able to do and believe about themselves in the areas of algebra and geometry to be prepared for high school and college level mathematics
- Explore the basic ideas of differential and integral calculus through a series of hands-on and visual explorations of functions and their behavior.
- Develop teaching and learning insights through weekly assignments and explorations

## COURSE WEB PAGE

There will be a link for the Math 495.595 webpage where most course items will be posted on my home page: <http://www.wou.edu/~burtonl>. In particular, the class homework page will be linked to your Math 495.595 webpage and will include the class schedule, homework assignments and due dates. This schedule may change throughout the term; it is recommended that you do not print this page, but that you check it regularly for assignments.

## COURSE REQUIREMENTS AND GRADING

### **Undergraduate Students (Math 495)**

1. Attendance and participation (5%)
2. Homework and completion of all class materials (45%)
3. Quizzes (5%)
4. Midterm Exam (20%)
5. Final Exam (25%)

### **Graduate Students (Math 595)**

1. Attendance and participation (3%)
2. Homework (37%)
3. Quizzes (5%)
4. Midterm Exam (20%)
5. Final Exam (25%)
6. Final Project (10%)

### **Attendance, Participation and Completion of Course Materials**

*Attendance & Participation in this course means*

- You must attend all classes
- You must be prepared for class by completing the previously assigned homework
- You must share your thoughts and strategies both in small groups and with the whole class
- You must work actively and effectively during all group and all class activities

- You must attentively listen and offer useful and constructive comments to other students in the class during group work and when other students present their ideas to the whole class
- If you miss a class, you are responsible for completely the materials on your own; please check the course web page to determine which material we covered in class.

*Completing Course Materials in this course means*

- You have carefully answered all questions and problems posed on all course materials
- You have organized all course materials carefully in your course notebook and are prepared to share your work at any time

### **Homework Assignments**

In this course, each homework question will be collected one class day after the question is assigned and will be carefully graded. Homework due dates will be posted on your course homework page. See the course Homework Policy handout in your course pack for further details. In general, this is a no work, no credit class. You will need time to think about the homework in this course; schedule your study and homework time accordingly.

Late Homework is marked off 30% per class day (MW). See the course Homework Policy handout for further details. No notification is required to turn work in late.

Excused late homework will only be accepted in the case of documented emergency or a documented university sanctioned absence from class (examples: student teaching in the education program, university representation in a music presentation, etc.). Prior notification and my agreement are required. Ordinary illness of one or two class days does not count as a documented emergency, even if you have a note from a doctor.

### **Quizzes**

Starting the second day of class there will be a quiz at the very beginning of each class. If you are late, you will miss the quiz. All quiz work must be done in your **Quiz Bluebook**. Quiz questions will cover material from the previous class (or classes). Quiz questions will be projected up and then, after time to answer the questions, we will trade blue books and grade each other's quizzes. The grader must write their name by the quiz questions they have graded. Blue books will be turned in at the end of class. Please label your Quiz Bluebook with your name and Math 495 (or Math 595 if you are a graduate student).

Makeup quizzes will only be available in the case of documented emergency or a documented university sanctioned absence from class (examples: student teaching in the education program, university representation in a music presentation, etc.). Prior notification and my agreement are required. My voice mail and email are always on; there is no excuse for not contacting me prior to missing a quiz.

### Midterm and Final Exam

There will be an in-class midterm exam and an in-class final exam in this course. Graduate students will be assigned additional problems on both exams. See your course schedule for exam dates.

Makeup exams will only be available in the case of documented emergency or a documented university sanctioned absence from class (examples: student teaching in the education program, university representation in a music presentation, etc.). Prior notification and my agreement are required. My voice mail and email are always on; there is no excuse for not contacting me prior to missing an exam.

### Final Project (Graduate only, Math 595)

The graduate student final project will be assigned towards the end of the term and will consist of creating lesson plans and activities using the ideas from this term and presenting these ideas on the last day of class.

### STANDARD GRADING SCALE FOR THIS COURSE

(total % for the course, usual rounding rules apply)

% Range	Grade	% Range	Grade	% Range	Grade
93 – 100	A	80 – 82	B-	60 – 69	D
90 – 92	A-	77 – 79	C+	Below 60	F
87 – 89	B+	73 – 76	C		
83 – 86	B	70 – 72	C-		

### CELL PHONE POLICY<sup>1</sup>

- Turn them off (not even on vibrate) during class
- Put them away—cell phones found out in class will be placed on the front table for the rest of the class.
- No texting during class
- Electronic item use during exams or quizzes will be treated as cheating and you will receive a zero score on that exam or quiz.

### YOUR STUDENT WOU EMAIL ACCOUNT

All official university and class business and announcements will be directed to your WOU student email account. If you do not regularly check this account, please log in to this account and FORWARD your WOU email to an account that you do regularly access.

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<sup>1</sup> If you are in an emergency situation in which you need to have your cell phone on quiet; please speak to me about it before class.

### **APPROPRIATE CLASSROOM BEHAVIOR**

You are ultimately responsible for your own attendance and performance. Disruptive classroom behavior of any kind, such as talking during lecture or consistently coming to class late etc., is not appropriate. Proscribed Conduct for all students is described in the University Catalog.

In particular for this course any student found cheating on an exam or copying from another student's exam paper will receive a zero score on that exam and a report of this activity will be sent to the Student Affairs office.

**VETERANS AND ACTIVE MILITARY PERSONNEL** with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor.

### **LEARNING DISABILITIES**

If you have a documented learning disability, please talk to me during the first few days of class, I will be more than happy to accommodate you in any way that I can. If you have a documented disability which requires any academic accommodations, you must go to the Office of Disability Services (ODS) for appropriate coordination of your accommodations. You can drop by APSC 405 or contact ODS at (503) 838-8250 (V,TTY) to schedule an appointment.

### **INCOMPLETE POLICY**

An Incomplete can only be granted for a student who is passing a class and has a documented emergency that prevents them from completing the course.