

<b>Math 2103</b> <b>Section 003</b>	<b>Elementary Calculus</b> (Business Calculus)	<b>Oklahoma State</b> <b>Summer 2011</b>
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**Office Hours:** TWR 10:30-11:30 am. or by appointment

The OSU syllabus attachment for 2011 Summer is available at :  
<http://osu.okstate.edu/acadaffr/aa/syllabusattachment-Summer.htm>

**Textbook/Graphing Calculator**

- **APPLIED CALCULUS** (Second Edition) by Hughes-Hallett, et al.
- A graphing calculator is required for this course. A **TI83 Plus** (or higher) is recommended.

**MLRC: Mathematics Learning Resource Center**

- **Location:** 4<sup>th</sup> Floor of the Classroom Building
- **Learning aids/Services:** Tutoring, videotaped lectures and computers with mathematics software

**Course Website:** We will use OSU system Desire2learn (D2L) at <https://oc.okstate.edu> for the course website. Lecture notes will be posted on the course website. I would suggest that before coming to class, you print off lecture notes and bring them with you to help with taking notes and following along with the lecture.

The course website is completely optional feature of the course. Technical problems with the site or your inability to access it should not be used as the excuse for not fulfilling the course requirements. Furthermore, reviewing the lecture notes online is not a sufficient substitute for actually attending the lecture.

**Examinations:** There will be three seventy-five minutes examinations with a maximum possible score of 100 points each. There will not be any comprehensive final examination. Make-up examinations will be given only for very serious and unavoidable conflicts and only if your request to present a make-up examination is approved by your instructor **in advance**. If this condition is not satisfied, it is understood that the opportunity to present a make-up examination is voided. Bring your student ID to each examination.

**Class Attendance Score:** Class attendance involving active participation is a very important element in your success in learning mathematics. You are expected to actively participate in each class session. You will obtain 15 points bonus at most for the attendance. Your attendance score will be added to your grade at the end of the semester. Attendance will be taken during each class session; you must be present for the entire class session in order to be counted as present. For each absence, 3 points will be deducted from the maximum of 15 points. Note. Signing the class attendance sheet for another student is not permitted; if it is determined that a student signed for another student, this unethical conduct will be regarded as a violation of Academic integrity. You will receive an F in the course and will be reported to the University academic integrity office.

**Homework and Quizzes**

Six (6) times during the semester, you will have the opportunity to earn up to twenty (20) quiz points. Your scores on the best five (5) of these will be counted, i.e., you drop your lowest score. You will be able to use your calculator, but the quizzes will closed-book with no notes or note cards allowed. **Absolutely no makeup quizzes will be given.** If you miss a quiz for any reason, you will receive a score of zero and that quiz will be the one score you drop. A schedule of quiz dates is given in the attached section outline.

Most of the quiz questions will be very similar to, if not the same as, homework problems you have been assigned. Your success or failure on these quizzes will be a direct reflection of how much time and effort you are spending on the homework problems. In general, the material tested on each quiz will be the material covered since the last quiz. However, since much of mathematics is cumulative, there is always the possibility that some questions will rely on earlier concepts. Homework will be assigned, but it will not be collected or graded. Nevertheless, **it is extremely important that you work on the homework problems.**

**Course Grading**

1. Quizzes	100 points
2. Exam 1	100 points
3. Exam 2	100 points
4. Exam 3	100 points
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Total	400 points

Letter grades will be assigned according to the following scale.

A	360 - 400	points	90%
B	320 - 359	points	80%
C	280 - 319	points	70%
D	240 - 279	points	60%
F	240 - 0	points	< 60%

**Graphing Calculator**

A graphing calculator is required for this course. A TI83 Plus (or higher) is recommended. Use of the calculator will be encouraged and allowed for all homework, quizzes and exams. Always bring your calculator to class. Also,

- It is your responsibility to learn how to operate the calculator properly
- Dead batteries, calculator failure or user errors are your responsibility
- If you forget your calculator or it malfunctions, you cannot borrow one from a neighbor during an exam or quiz

**Partial Credit**

On quizzes there will be very little, if any, partial credit. On exams the amount of partial credit will depend primarily on how much of a problem you do correctly. On both quizzes and exams it is extremely important that you write down all of the steps involved in getting your final answer, not just the final answer by itself, in order to get credit.

### **Incomplete Grade**

The grade of "I" is very rare. An "I" is only considered for students who satisfactorily completed the majority of the course work and whose work averages "D" or better, but who have been unavoidably prevented from completing the remaining course work. The conditions, including appropriate time limits, for the removal of the "I" are indicated on the official class roll by the instructor. A condition that the students must repeat the course in order to remove the "I" is not permitted. The maximum time allowed for a student to remove an "I" is one calendar year.

### **Drop and Withdrawal Policy**

**(General University Policy 2-0206)** "Dropping" means withdrawing from a specific course while "withdrawal" means withdrawing from all courses and leaving the University for the balance of the term. **IT IS YOUR RESPONSIBILITY TO KNOW AND COMPLY WITH ALL DEADLINES AND UNIVERSITY POLICIES.**

### **Academic Dishonesty/Misconduct**

Plagiarism, cheating on exams or quizzes, and other such actions constitute academic misconduct and/or dishonesty. In this course students are expected to demonstrate complete integrity at all times. The minimum penalty for an act of academic misconduct will be failure of the exam or quiz involved. In cases of academic dishonesty, penalties may include a grade of "F" for the entire semester and a recommendation for additional action by University officials. This statement is in keeping with University policies on academic misconduct and dishonesty. Read these policies at the OSU website [http://www.okstate.edu/osu\\_policies](http://www.okstate.edu/osu_policies).

### **Special Accommodations for Students**

If any member of this class feels that he/she has a disability and needs special accommodations of any nature whatsoever, I will work with you and the Office of Disabled Student Services, 326 Student Union, to provide reasonable accommodations to ensure that you have a fair opportunity to perform in the class. Please advise me of such disability and the desired accommodations at some point before, during, or immediately after the first scheduled class period.

### **How to be Successful in This Class**

One of the important concepts of Calculus is the notion of maximizing and minimizing processes. In business applications an ideal goal might be to maximize profit while minimizing cost. However, in this class, if your goal is to try to maximize your grade while minimizing your effort, you will probably fail the course. To be successful in this class you should:

#### **1. Abide by All Course Policies and Procedures**

- Understand the policies for no makeup exams and quizzes
- Don't ask for or expect any exceptions to the course policies

#### **2. Attend All Lectures**

- Arrive on time and don't leave early
- Pay attention
- Take good notes

#### **3. Work and Understand All the Homework**

- Study (not just read) the textbook section before you start the problems
- Work the problems every day
- Don't get behind or wait until the night before a quiz or exam

#### **4. Use the Course Resources**

- Start a routine early in the semester of going to the MLRC regularly for help
- Use your instructors' office hours for help

#### **5. Take the Responsibility for Your Own Success**

- The wrong attitude, absences and laziness are usually the main causes for failing this course
- Put out the appropriate time and effort to learn the material
- Don't waste time making up excuses for not doing the required work

**Any changes in this syllabus or outline will be communicated to you in class by the instructor.**

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<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>HW Pages</b>	<b>Suggested Homework (odd problems only)</b>
<b>1</b>	Jun 06 Mon	Course Overview 1.1 What is a Function?	P 4	1-19
	Jun 07 Tue	1.2 Linear Functions	p 11	1-17
	Jun 08 Wed	1.3 Rates of Change	p 19	1,3,9,13,19,24,27
	Jun 09 Thu	1.4 App of Functions to Economics <b>Q 1</b>	p 29	1-9, 19-27
<b>2</b>	Jun 13 Mon	1.5 Exponential Functions 1.6 The natural Logarithm	p 37 p 42	1-15 1-19, 27-35
	Jun 14 Tue	1.7 Exponential Growth & Decay	p 48	1,7,9,12,15,19,23,28,35,37
	Jun 15 Wed	1.8 New Functions from Old	p 54	1-19,33
	Jun 16 Thu	1.9 Prop,Power Functions,Poly. <b>Q 2</b>	p 60	1,5,9,13,17,21,25,35
<b>3</b>	Jun 20 Mon	Catch up and Review		
	Jun 21 Tue	<b>Exam 1- Chapter 1</b>		
	Jun 22 Wed	2.1 Instantaneous Rate of Change	p 99	1,3,7,11,15,17,21
	Jun 23 Thu	2.2 The Derivative Function	p 104	1-15,19-27
<b>4</b>	Jun 27 Mon	2.3 Interpretations of the Derivative	p 111	1-11,14
	Jun 28 Tue	2.4 The Second Derivative	p 115	1-17
	Jun 29 Wed	2.5 Marginal Cost and Revenue <b>Q 3</b>	p 122	1-11
	Jun 30 Thu	3.1 Deriv of Powers and Poly	p 141	1-31,41,45
<b>5</b>	Jul 04 Mon	University Holiday		
	Jul 05 Tue	3.2 Exponential and Log Functions	p 145	1-29,33
	Jul 06 Wed	3.3 The Chain Rule	p 149	1-35
	Jul 07 Thu	3.4 The Product & Quotient Rule <b>Q 4</b>	p 152	1-35
<b>6</b>	Jul 11 Mon	Catch up and Review		
	Jul 12 Tue	<b>Exam 2 Chapter 2 and 3</b>		
	Jul 13 Wed	4.1 Local Maxima & Minima	p 170	1-23
	Jul 14 Thu	4.2 Inflection Points 4.3 Global maxima and minima	p 175 p 179	1-15,27 1-17
<b>7</b>	Jul 18 Mon	4.4 Profit, Cost and Revenue	p 187	1-13
	Jul 19 Tue	4.5 Average Cost <b>Q 5</b>	p 192	1-11
	Jul 20 Wed	4.6 Elasticity of Demand	p 196	1-17
	Jul 21 Thu	9.1 Functions of Two Variables	p 324	7-21
<b>8</b>	Jul 25 Mon	9.3 Partial Derivatives	p 342	1-9, 17,19,21
	Jul 26 Tue	9.4 Computing Partial Derivatives <b>Q 6</b>	p 350	1-19, 25-39
	Jul 27 Wed	Catch up and Review		
	Jul 28 Thu	<b>Exam 3 Chapters 4 and 9</b>		