### Math 122: Calculus for Business Administration and Social Sciences

Section E01, Fall 2014

T/Th 6–7:15 pm, LeConte 101

Danny Rorabaugh		Websites:	http://blackboard.sc.edu
rorabaug@email.	.sc.edu		http://wileyplus.com
LeConte 105:	Wed 2–4 pm		
LeConte 123B:	Thu 1:30–2:30 pm	S.I. Leader:	Samantha Munker
LeConte 123B:	Fri 11 am–noon		smunker@email.sc.edu
	Danny Rorabaug rorabaug@email LeConte 105: LeConte 123B: LeConte 123B:	Danny Rorabaugh rorabaug@email.sc.edu LeConte 105: Wed 2–4 pm LeConte 123B: Thu 1:30–2:30 pm LeConte 123B: Fri 11 am–noon	Danny RorabaughWebsites:rorabaug@email.sc.eduLeConte 105:Wed 2–4 pmLeConte 123B:Thu 1:30–2:30 pmS.I. Leader:LeConte 123B:Fri 11 am–noonS.I. Leader:

# I. Prerequisites

Qualification through the Math Placement Test or through a grade of C or better in MATH 111 or 1111.

# II. Learning Outcomes

Upon successful completion of this course, students should be able to:

- Recall basic mathematical terms related to elementary algebraic, exponential, and logarithmic functions, and derivatives and integrals of such functions and express these terms in correct context.
- Apply the methods of calculus to solve applications involving maxima, minima, rates of change, motion, work, and area under a curve.
- Verbally interpret data given as graphs, tables, and equations and put into words the relationship between a function and its derivative or integral given in these forms as well.
- Utilize a graphing calculator to solve problems, locate maxima and minima of a function, and analyze change in a function.

# III. Textbook and Materials

The <u>textbook</u> for this course is *Applied Calculus* (5<sup>th</sup> Edition) by Hughes-Hallett, Gleason, Lock, Flath, et al. Students will also need a <u>graphing calculator</u> and <u>regular internet access</u>. Announcements are often sent out via Blackboard, so a regularly-accessed email address should be used with Blackboard. See also **Calculators** under **Course Policies** and **Homework** under **Assessment and Grading**.

# IV. Course Requirements

Students are expected to <u>read</u> assigned sections in the text, <u>complete</u> weekly homework assignments, and <u>participate</u> in lectures, quizzes, and activities each class. Students should check Blackboard frequently for announcements and course documents such as quiz solutions, exam reviews, and worksheets.

# V. Course Policies

# Attendance

Students are expected to attend every class, arriving on time and staying for the entirety, and to initial the attendance sheet each class. In the event of absence or tardiness, students are responsible for all missed material and announcements.

In accordance with university policy, grade penalties may be applied for students who miss over 10% of classes, *for any reason, excused or unexcused*. We have 28 classes, so the instructor will deduct 1 percentage point from the final grade for each absence in excess of 3.

The instructor may choose not to penalize for absences with official documentation of illness or emergency. It is the student's responsibility to provide said documentation within 1 week of the absence(s).

# Late work and make-up work

*Late work will not be accepted*. There are *no make-up assignments*. Each student may <u>retake 1 quiz</u>. The student must <u>notify the instructor of retake intent within 48 hours</u> (2 days) of when the graded quiz was returned to the class.

#### **Missed Exams**

Tentative exam dates are found below under **Assessment and Grading**. In general, *no make-up exams will be given*. Exceptions may be made for documented illness or emergency, provided <u>the instructor is notified via email as soon as</u> <u>the student knows they will be missing the exam</u>. *No accommodations will be made for travel plans*. If exam dates conflict with religious observances, the instructor is to be notified in the first week of classes.

### Disruptions

*Disruptive behavior will not be tolerated. Electronics* – except those used for mathematical or medical purposes – are *not permitted* during class.



Distracted kittens from http://www.lifewithcats.tv/wp-content/uploads/2013/04/aoowry.jpg

### Withdrawal

The last day to drop without a grade of W being assigned is Wednesday 27 August. The last date to withdraw without a grade of WF being assigned is Thursday 09 October.

### Calculators

Calculators may be used on quizzes and exams, except as otherwise instructed in class. The <u>TI-83</u> or <u>TI-84</u> is <u>highly</u> <u>recommended</u>. Use of the *TI-89*, *TI-Nspire CAS*, or any *calculator with built-in CAS (computer algebra system)* is *prohibited*. You may be asked to clear the memory in your calculator prior to each exam. The instructor will not have a calculator for students to use, so it is recommended that each student bring <u>back-up batteries</u> to exams.

# **Honor Code**

The Honor Code applies to all work for this course. Students should <u>review the Honor Code</u> at http://www.sc.edu/academicintegrity. Students found violating the Honor Code will be subject to discipline.

# VI. Assessment and Grading

#### Homework

There will be regular assignments online at WileyPlus.com. Instructions for creating an account can be found under Course Documents in Blackboard. Use your USC email credentials to login at http://blackboard.sc.edu.

Assignments from a given week will generally be due an hour before class on Tuesday the next week. However, it is the student's responsibility to <u>regularly check WileyPlus</u> and to <u>begin working on homework in a timely fashion</u>.

# Quizzes

There will be a written quiz each non-exam week. Students will complete quizzes individually. The lowest quiz score will be dropped.

#### Exams

There will be three exams throughout the semester and a final exam. The final exam date and time is fixed by the university. Exams are tentatively scheduled as follows:

Exam 1	Tuesday 23 September
Exam 2	Tuesday 21 October (two days before Fall Break)
Exam 3	Tuesday 25 November (the day before Thanksgiving Recess)
Final	Tuesday 09 December, 7:30–10 PM

See the policy for missed assignments, quizzes, and exams under **Course Policies** above.

### Grades

Grades will be weighted as follows:

9% Homework15% Quizzes51% Exams (three, 17% each)25% Final Exam

Letter grades will be assigned based on overall percentage – not rounded – using the following scale:

$90 \leq \text{grade} < \infty^2$	А	Astounding Job!!!
$85 \le \text{grade} \le 90$	B+	Bravisimo!!
$80 \le \text{grade} < 85$	В	Bravo!!
$75 \le \text{grade} \le 80$	C+	Congrats!
$70 \le \text{grade} < 75$	С	Cool beans!
$65 \le \text{grade} < 70$	D+	Didn't quite meet expectations.
$60 \le \text{grade} < 65$	D	Did not meet expectation.
$-\pi \leq \text{grade} < 60$	F	Fell through this time around

VII. Additional Help

Tutors are available Monday through Thursday from 11 am to 4 pm in the **Math Tutoring Center** in LeConte 105 (www.math.sc.edu/math-tutoring-center).

Turots are also available through the **Student Success Center**, both **online** (sa.sc.edu/ssc/virtual) and at their **satellite locations** in the dorms (sa.sc.edu/ssc/peertutoring): 7:30–10 pm in Sims Hall, Columbia Hall, and Bates House.

Help is available through **supplemental instruction** (sa.sc.edu/ssc/supplementalinstruction). Our S.I. Leader's contact information is listed at the top of the syllabus.

Students are encouraged to come see me during **office hours** (see top of syllabus) which requires no appointment. Students may also email me to schedule an appointment outside of my posted times.

Dates	Sections	Rough Topic Summary		
08/21-09/09	1.1-1.9	Functions, Rate of Change, Transformations		
09/11 - 09/18	2.1-2.3	Instantaneous Rate of Change, Derivatives, Exam Review		
09/23	Exam 1			
09/25 - 10/07	2.4-2.5, 3.1-3.4	Second Derivatives, Derivative Rules		
10/09 - 10/16	4.1-4.4	Maxima, Minima, Inflection Points, Exam Review		
10/21	Exam 2			
10/28 - 11/06	5.1-5.5	Areas, Definite Integrals, Fundamental Theorem of Calculus		
11/11 - 11/20	6.1-6.3, 6.6	Antiderivatives, Indefinite Integrals, Substitution, Exam Review		
11/25	Exam 3			
12/02 - 12/04	T.B.D.	Extra topics, Final Review		
12/09	Final Exam			

### VIII. Tentative Course Outline