Syllabus for MA 125, Calculus I, Section 105

Class Times and Location

MWF 13:25 – 14:15 ILB 430, TR 14:00 – 14:50 ILB 430.

Course Webpage

The course webpage will contain a copy of this syllabus, a list of all assigned homework problems, and any important announcements. It may also contain useful handouts and resources for the coursework.

http://www.southalabama.edu/mathstat/personal_pages/pillen/Math_125/Sp_16/ma125.html

Staff

Instructor: Dr. Cornelius Pillen  
Office: ILB #314 (Enter through ILB #325)  
Phone: (251)-460-7293  
Email: pillen@southalabama.edu  
Office Hours: Monday, Wednesday, Friday 9:00 – 11:00, and by appointment.

Teaching Assistant: David Mullens  
Office: ILB 205  
Email: dmullens@southalabama.edu  
Office Hours: Tuesday, Thursday 10:00 – 11:00.

Text

Coverage: Sections 1.3, 1.5, 1.6, 2.2 – 2.6, 3.1 –3.3, 3.5 –3.11, 4.1 – 4.6, 4.8, 5.1 – 5.4.  
Online Component: Course ID pillen32222.  
Register at http://www.pearsonmylabandmastering.com

Course Description

This course provides an introduction to calculus with an emphasis on differential calculus. Topics include the limits of functions, derivatives of elementary functions, application of differentiation to curve sketching and optimization problems, and examples in the natural sciences and economics.
The course concludes with an introduction to definite integrals and the fundamental theorem of calculus. Credit for both MA 120 and MA 125 is not allowed.

**Prerequisites:** C or better in MA 113, MA 115, or a sufficient score on the Math Placement Test.  
**Core Course.** (Course Format: web-enhanced.)

## Learning Objectives

Upon the successful completion of the course a student will be able to
1. compute limits of functions graphically, numerically, and algebraically;
2. verify using the \( \epsilon-\delta \)-definition that a given real number is the limit of a function;
3. compute and interpret the derivative as a rate of change, as a slope, as a linear approximation, and as a tool for optimization problems;
4. analyze algebraic and transcendental functions with regard to their critical behavior, regions of increase and decrease, concavity properties and asymptotic behavior, and sketch a graph based on these observations;
5. compute simple anti-derivatives;
6. estimate an area under a curve and a definite integral using Riemann sums;
7. interpret a definite integral as a signed area;
8. state and use the fundamental theorem of calculus;
9. state and prove results about limits, derivatives, and mean values.

## Calculator

A calculator is not required for this course and calculators are **not** allowed on class tests and quizzes. A calculator is recommended for homework and independent study and there will be some instruction in class on how you may use software that you already have such as Excel and Google.

## Attendance

Regular attendance is important in this course. Attendance will be taken and each three unexcused lecture absences will lower your point total by 15 points. It is your responsibility to get any assignments or notes missed during an absence and notify your instructor of an excused absence. Students may find that lectures are most effective if the relevant book section is read in advance.

## Homework

Homework problems from the text will be assigned with each book section. Problems will be announced in class and the list of assigned problems can also be found on the course webpage. Work all assignments promptly and carefully: this is essential to learning the material and doing well on quizzes and exams. Quiz and exam questions will be similar to the homework questions. Group work on homework is encouraged and it is recommended that any questions on the homework be promptly addressed with other classmates, at the tutoring lab or during office hours.
Quizzes

There will be frequent 10 point quizzes each Tuesday and Thursday that are administered and graded by the graduate teaching assistant. The score for a missed quiz will be 0. There will be no make-up quizzes (not even for legitimate, excused absences) but your four lowest quiz grades (including missed quizzes) will be dropped.

Exams

Three mid-term exams will be given. The tentative exam dates are February 11, March 10, and April 14. Make-up Exams are given only with prior permission by the instructor. The comprehensive final exam is scheduled for Wednesday, May 4, 13:00 – 15:00.

The use of cell phones, smart phones or other electronic devices during a quiz or exam are strictly forbidden.

Grading Policy

Your grade will be based on the following.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Maximal Number of Points</th>
<th>Percentage of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>200</td>
<td>28.6</td>
</tr>
<tr>
<td>Exam I</td>
<td>100</td>
<td>14.3</td>
</tr>
<tr>
<td>Exam II</td>
<td>100</td>
<td>14.3</td>
</tr>
<tr>
<td>Exam III</td>
<td>100</td>
<td>14.3</td>
</tr>
<tr>
<td>Final</td>
<td>200</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>700</td>
<td></td>
</tr>
</tbody>
</table>

If you score 90% or higher, you will earn an A; between 80% and 90%, a B, and so forth.

Departmental Tutoring Lab

The Department offers free Calculus I Tutoring in ILB 205. In addition, the Tutoring Lab in room ILB 235 is open to all students taking Mathematics and Statistics classes. Please check the bulletin board in ILB 325 for details.

Withdrawal

The final drop date is April 1. It is our goal is for every student to complete the course successfully. Please, speak with me or the graduate assistant if you are getting behind! Also talk to us before making a final decision to drop – it is easier to pass the course, than you might think. We are here to help you!
Disabilities

In accordance with the Americans with Disabilities Act, students with bona fide disabilities will be afforded reasonable accommodations. The Office of Special Student Services (OSSS) will certify a disability and advise faculty members of reasonable accommodations. If you have a specific disability that qualifies you for academic accommodations, please notify the instructor/professor and provide certification from the Office of Special Student Services. OSSS is located at 5828 Old Shell Road at Jaguar Drive, (251-460-7212).

Distractions

Turn off cell phones while you are in class. Texting, surfing the internet or working on other coursework while in class is not allowed. This erodes the academic spirit of the class. Laptops for taking notes may be used only with prior permission. Leaving briefly or early during class is left at the discretion of the student, as long as such events are occasional and discrete. It is expected that students will be cordial, courteous and respectful of faculty members and fellow students.

Academic Disruption

The University of South Alabama’s policy regarding Academic Disruption is found in The Lowdown, the student handbook. [http://www.southalabama.edu/lowdown/academicdisruption.shtml](http://www.southalabama.edu/lowdown/academicdisruption.shtml)

Disruptive academic behavior is defined as individual or group conduct that interrupts or interferes with any educational activity or environment, infringes upon the rights and privileges of others, results in or threatens the destruction of property and/or is otherwise prejudicial to the maintenance of order in an academic environment. Students are expected to be cordial, courteous and respectful of faculty members and fellow students.

Academic Conduct

The University of South Alabama’s policy regarding Student Academic Conduct Policy is found in The Lowdown. [http://www.southalabama.edu/lowdown/academicconductpolicy.shtml](http://www.southalabama.edu/lowdown/academicconductpolicy.shtml)

The University of South Alabama is a community of scholars in which the ideals of freedom of inquiry, freedom of thought, freedom of expression, and freedom of the individual are sustained. The University is committed to supporting the exercise of any right guaranteed to individuals by the Constitution and the Code of Alabama and to educating students relative to their responsibilities.

The requirements and policies above may be modified as circumstances dictate. Such changes will be provided to the students in class and in writing. You will often first be notified of changes by e-mail, so please check your jaguar1 e-mail accounts regularly.