Schedule: (Section 106) MWF 2:30–3:20 in ILB 430; TR 12:30–1:20 in ILB 370
(Section 107) MWF 3:35–4:25 in ILB 430; TR 2–2:50 in ILB 370

Instructor: Professor Dan Silver • Office: ILB 303 • Phone: 460-6264 ext. 6757
E-mail: silver@southalabama.edu • www.southalabama.edu/mathstat/personal_pages/silver/

Graduate TA: Ms. Kalyn Lamey • Office: ILB 205

Office hours: MWF 1–2:20 in ILB 325; T 11–12, 3–4, W 12–1, R 11–12 in ILB 205, or by appointment

Course objectives: This is the first of a 3-course sequence intended to provide a good foundation for various areas of elementary calculus and its applications for students of mathematics, science and engineering.

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

Course Prerequisites: C or better in MA 113 or MA 115, or sufficient mathematics placement test score, or a sufficient ACT Mathematics subscore.

Course Structure: The instructor will lecture on Mondays, Wednesdays and Fridays. Homework will be assigned in class. Questions about homework will be answered by the TA on Tuesdays and Thursdays. (You may also ask questions during office hours of the instructor or the TA.) Quizzes and 50-minute exams will be given on Tuesdays and Thursdays. The TA will grade quizzes. The instructor will grade exams.

Course Format: No web structure. However, homework assignments and solutions to 50-minute exams will be found on the instructor’s webpage.


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 \( \varepsilon-\delta \)-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.

Attendance: Attendance will be taken. It is your responsibility to sign in. Each three unexcused absences will lower your final grade by 15 points. You are strongly advised to attend all classes. Late arrivals (more than 10 minutes after the start of class) are counted as absences. Any excuse for absence must be explained to the instructor no later than after the next class.

Important Dates: The last day to add/change to audit is January 14. The last day to drop a course is April 3. There will be no class on January 19, February 17, March 2 – 8. Last day of classes is April 30.

Homework: Homework will be assigned but not collected.
Quizzes: A 10-point quiz will be given each Tuesday and Thursday unless an exam is scheduled for that day. The score for any missed quiz is zero. There will be no make-up quizzes. However, your two lowest quiz grades will be dropped.

Exams: There will be three 50-minute exams, tentatively scheduled for February 12, March 26 and April 23. The final exam for Section 106 is on Monday, May 4, 3:30–5:30; the final exam for Section 107 is on Wednesday, May 6, 3:30–5:30. If you are unable to attend an exam you should contact me promptly: before the exam if possible, and otherwise, before the next class. A compelling reason for absence will entitle you to a make-up exam.

Calculators: Calculators and computers are not allowed on any test or quiz unless otherwise stated.

Final Grade: Your grade will be based upon the following.

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<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>200 total</td>
</tr>
<tr>
<td>Exams</td>
<td>300 total</td>
</tr>
<tr>
<td>Final exam</td>
<td>200 points</td>
</tr>
<tr>
<td>Total</td>
<td>700 points</td>
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If you score 90% or higher, you will earn an A; between 80% and 90%, at least a B, and so forth.

Changes: Not all classes progress at the same rate. Thus course requirements might have to be modified as circumstances dictate. You will be given written notice if the course requirements need to be changed.

Academic Disruption Policy: The University of South Alabama’s policy regarding Academic Disruption is found in The Lowdown, the student handbook:

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.

Cell phones, laptops and other electronic devices: No electronic device may be used in class without the prior permission of the instructor. **Students who are texting or browsing the internet will be asked to stop immediately; if they do not comply, then they will be asked to leave the classroom.** Such behavior is a distraction to others and a sign of disrespect to the instructor.

Student Academic Conduct Policy: The University’s Student Academic Conduct Policy is found in The Lowdown:

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.

Tutoring lab: The department offers a tutoring lab to all students taking mathematics and statistics classes. There is no lab fee. Tutoring takes place in ILB 235, beginning in the second week of class. Please check the bulletin board outside ILB 325 for details.


JagAlert: This is an academic program intended to help students be successful in 100-200 level courses. If you are not doing well, you will receive an email instructing you to see your professor and academic advisor. Watch for the JagAlert email around week 6 of this semester.

Students with Disabilities: 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 and provide certification from the Office of Special Student Services. OSSS is located at 5828 Old Shell Road at Jaguar Drive, (251-460-7212).