Analytic Geometry and Calculus I  
MA 170, Fall 2005

General Information
Instructor: Dr. Lee Chasen  
Office: PPHAC 219
Phone: 610-861-1373  
e-mail: lchasen@moravian.edu
Class Schedule: MWF 11:25 to 12:30 PM
Office Hours: Monday 1:20 – 2:20 p.m., Tuesday 11:20 – 12:20 p.m.,  
Wednesday 1:20 – 2:20 p.m., Friday 9:10 – 10:10 a.m., and by appointment.
Textbook: Single Variable Calculus, Early Transcendentals, 5th edition by James Stewart

Course Goals
There are two primary branches of calculus, differential calculus and integral calculus. After completing this course, successful students will:

- Be able to apply the tools of differential calculus to study and solve problems involving tangent lines and rates of change. These core concepts are used in virtually every area of science.
- Be able to work with functions verbally, algebraically, graphically, or numerically. Be able to model real life scenarios with functions and draw conclusions regarding those real life scenarios by leveraging their understanding of calculus and functions in general.
- Be able to apply the tools of differential calculus to develop a working understanding of the behavior of new and complicated functions (especially from a graphical point of view).
- Have an understanding of the way in which integral calculus is used to study and solve problems involving area. In subsequent courses, those techniques will be used to find the volume of a solid, the force of water against a dam, the work done in pumping water out of a tank, and many other related problems.
- Gain a sense of both the advantages and disadvantages of using technology to study the behavior of functions.

The Importance of Reading and Learning on Your Own
While I do not expect the average first or second year college student to be able to teach themselves calculus from a textbook, I do hope that you will recognize the very high value placed upon this skill by your future employers. With that in mind, I accept the responsibility of providing extra feedback in the form of reading quizzes. These will be short quizzes designed to test whether or not you were able to discern the key points in the reading material and begin, on your own, the process of understanding the topic.

Attendance, Participation, and Organization
Your attendance and active participation in class is required. You will be

- asked to work either on your own or within a group to complete classroom activities.
- asked to transcribe completed homework problems from your notes. (Homework spot-checks)
quizzed on the previous night’s reading assignment. (Unannounced Reading Quizzes)

expected to arrive in class ready to ask or answer questions with regularity.

In short, you must come to class fully prepared to participate. You will be responsible for knowing which reading assignments are due and which homework problems might be collected. Since I will be providing quite a few handouts (including ones with the assignments listed), I suggest that you purchase a three ring binder.

Also, while the class will be notified at least one week in advance of any exam, (non-reading) quizzes will not be given without notice. Make up exams will only be provided in the case of a documented illness. Students will be excused from, or allowed to reschedule, a quiz, class work, or homework assignment at my discretion only. As a general guideline, you may assume that if the need is not due to a conference or some other school sponsored activity, and if we have not agreed upon rescheduling in advance, rescheduling will not be allowed. I tend to frown very heavily on rescheduling for an event if the student’s grades are not up to par.

Calculators and Technology

Graphing calculators will only be permitted during exams at my discretion. However, labs, homework, and classroom activities will, from time to time, require a graphing calculator. You should bring one to class regularly. That calculator must be comparable to a TI-83. Students using a different calculator will bear the responsibility for making it emulate the TI-83. (Note that I will only provide instructions for using the TI-83.)

Grading

In addition to the mandatory final exam, there will be four exams (two proficiency exams), a number of announced quizzes, regular (near daily) reading quizzes, homework spot-checks, and at least three labs (to be completed outside of class). There will also be periodic homework spot-checks in which you will be asked to close your book and transcribe your solution to a particular homework problem.

Your course grade will be computed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage of Your Grade</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>5% of your grade</td>
</tr>
<tr>
<td>Reading-Quizzes</td>
<td>5% of your grade</td>
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<tr>
<td>Labs</td>
<td>15% of your grade</td>
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<tr>
<td>Homework Spot-Checks (transcribed from your notes)</td>
<td>5% of your grade</td>
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<tr>
<td>Proficiency Exam for Limits</td>
<td>5% of your grade</td>
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<tr>
<td>Proficiency Exam for Derivatives</td>
<td>10% of your grade</td>
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<tr>
<td>Two Exams (Each worth 15%)</td>
<td>30% of your grade</td>
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<tr>
<td>Cumulative Final Exam</td>
<td>25% of your grade</td>
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I reserve the right to make qualitative judgments in determining grades for all graded work and or the course. Also, while this syllabus is subject to change, in the event of a change, students will be notified via an addendum to the syllabus which would be distributed during a regular class period.
Proficiency Exams
There will be two proficiency exams: Limit Proficiency and Derivative Proficiency. You must pass both of these exams with a score of 80% or better to pass this class. If you fail to achieve an 80% the first time that you take the exam, you will have an opportunity to take a make-up exam. Note that the score on make-up exams will be rounded down to an 80% if the actual score is above an 80%.

Lab Projects
The class will be divided up into small groups. Each group will be required to complete a sequence of labs.

Tentative Exam Dates

<table>
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<tr>
<th>Exam</th>
<th>Date</th>
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<tr>
<td>Limit Proficiency Exam</td>
<td>Monday, September 26</td>
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<tr>
<td>Derivative Proficiency Exam</td>
<td>Monday, October 21</td>
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<td>Exam 1</td>
<td>Wednesday, October 5</td>
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<td>Exam 2</td>
<td>Friday, November 18</td>
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Extra Help
You are strongly encouraged to ask questions in class and to see either myself or the mathematics tutors for help outside of class as much as necessary. You will be informed soon about the tutor center hours.

Special Accommodations
Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the Learning Services Office as soon as possible to enhance the likelihood that such accommodations are implemented in a timely fashion.

Academic Honesty
For graded homework assignments and projects, you may use your class notes and any books or library sources, except a solutions manual. You may not use the help, orally or in written form, of any individual other than your instructors unless it is specifically a group assignment and you may not copy someone else’s work or let someone else copy your work. If an assignment is completed by a group of two or more people, each person who contributed to the work must put his or her name on the work. All in-class daily problems, quizzes and tests are to be done by you individually unless specifically stated by your instructor for a particular event.

The College academic honesty policy appears in your Student handbook; you are expected to be familiar with it. The Academic Honesty Policy Guidelines specific to mathematics classes are reiterated at the end of this syllabus. They apply to work done outside of the class as well as to in-class quizzes and tests. Please read them carefully. If you are unsure about the propriety of a particular procedure or approach, please consult with your instructor before continuing with the assignment.
Academic Honesty Policy Guidelines

MATHEMATICS COURSES

The Department of Mathematics and Computer Science supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Student Handbook. The following statements will help clarify the policies of the members of the Mathematics faculty.

In all homework assignments which are to be graded, you may use your class notes and any books or library sources. When you use the ideas or thoughts of others, however, you must acknowledge the source. For graded homework assignments, you may not use a solution manual or the help, orally or in written form, of an individual other than your instructor. If you receive help from anyone other than your instructor or if you fail to reference your sources you will be violating the Academic Honesty Policy of Moravian College.

All in-class or take-home quizzes are to be completed by you alone without the aid of books, study sheets, or formula sheets unless specifically allowed by your instructor for a particular test.