CALCULUS I
MATH 114, SECTIONS 1 AND 2
FALL 2014

Information.
Instructor: Dr. S. Muir
Office: Loyola Science Center (LSC) 271
Office Hours: MF: 2 – 2:50 p.m., W: 3:30 – 5:30 p.m.
Office Phone: 570-941-6580
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Web Address: www.scranton.edu/faculty/muirs2/
Class Meetings: Section 1: MWRF 10:00 – 10:50 a.m., LSC 316
Section 2: MWRF 11:00 – 11:50 a.m., LSC 316

Important Dates.
August 25: First day of class
August 29: Last day to add a class
September 1: Labor Day, no class
September 4: Holy Spirit Liturgy
September 24: Last day to drop a class with no grade
October 13–14: Fall break, no class
October 15: Midsemester grades submitted
November 10: Last day to withdraw with a “W” grade
November 26–28: Thanksgiving break, no class
December 8: Last day of class
December 10: Final Exam (tentative) Section 2 (11 a.m. class), 10:15 a.m. – 12:15 p.m.
December 12: Final Exam (tentative) Section 1 (10 a.m. class), 10:15 a.m. – 12:15 p.m.

Textbook: The required textbook for this course is Calculus, 7th edition by Stewart. Loose leaf, hard cover, or soft cover is fine as long as you have the correct edition and you are not required to access WebAssign.

Catalog Description: (Prerequisite: MATH 103 or Math Placement PT score of 14 or higher)
Topics from calculus and analytic geometry including limits, derivatives and their applications, integrals, and the Fundamental Theorem.

General Information: Mathematics is a discipline which builds on prior knowledge. Because of this, it is imperative that fundamental skills are practiced and conquered throughout this course. Students should expect to spend a reasonable amount of time outside of the scheduled class time (typically two to three hours outside class for each hour in class) reading the text, mastering terminology, concepts, and notation, and solving problems. In addition, students should understand that solving a problem is a process and the steps of this process are as important as the final result. Therefore, this emphasis on the process will be reflected in the grading and unsupported answers may receive no credit. Participation in this course is also strongly encouraged.
Student Learning Outcomes: By the end of this course, students should, among other things, be able to

- evaluate functional limits using a definition and/or using properties of limits.
- determine whether a function is continuous at a point or on an interval.
- demonstrate knowledge of the derivative by doing such things as computing derivatives using the definition and/or derivative rules and interpreting the derivative as the slope of a tangent line to the graph of a function or as a rate of change.
- develop in-depth proficiency in the analysis of curve sketching utilizing such things as limits, derivatives, and algebraic approaches (e.g. finding domain and intercepts, checking for symmetry).
- comprehend, set up, and solve applied word problems involving such things as optimization, related rates, and rectilinear motion.
- demonstrate knowledge of integral calculus by using the Fundamental Theorem of Calculus to evaluate definite integrals, utilizing the definite integral to calculate area, finding indefinite integrals and antiderivatives, and integrating using substitutions.

Selected questions on exam(s), which will consist of previously unseen problems, will be used to assess some of these outcomes. You may find it necessary to seek additional help to meet these expectations and objectives.

Grading: There will be four exams each worth 12.5% (so these exams total 50% of your course grade) and a comprehensive final worth 25%. Quizzes will account for the remaining 25% of the course grade. Exam dates will be announced in class. No calculators will be allowed for any graded assignment.

The anticipated grade ranges are as follows: 93 – 100% is an A; 90 – 92% is an A−; 87 – 89% is a B+; 83 – 86% is a B; 80 – 82% is a B−; 77 – 79% is a C+; 73 – 76% is a C; 70 – 72% is a C−; 67 – 69% is a D+; 60 – 66% is a D; 59% or below is an F. See the University catalog for help in interpreting each letter grade.

Homework Quizzes: A quiz will be given at the start of class every Monday and Thursday unless stated otherwise in class. The problems for the quizzes will be taken directly from a list of suggested homework problems announced in class and posted on the web page given above. The two lowest quiz scores will be dropped when computing the final quiz average. You may discuss the homework problems with other members of the class in preparation for the quizzes. However, students who do not make an effort to understand the homework independently are likely to have difficulty with the quiz and exam material. Keep in mind, I assume when you are taking the quiz, you have already worked the problems! Note that the quizzes together weigh as much as two exams.

Electronic Devices: No calculators or electronic devices of any kind may be used on any graded assignment unless stated otherwise in class. Students should not come to rely on calculators too
heavily outside of class as all work on graded material must be supported.

While you may consider yourself an expert multi-tasker and while you may not intend it to be, texting and other cell phone usage is disruptive and disrespectful to your fellow classmates (and to me!). Thus, cell phones must be put away during class and should be silenced, set to vibrate, or turned off. If there is a real need to have access to your phone (e.g. family illness/emergency), please inform me before class.

**Attendance/Missed Assignments:** Go to class. I expect you to be in attendance for every class. If you miss for any reason, you are still responsible for all announcements made and all material presented. Make-up privileges for absences may be extended at the discretion of the professor. It is your responsibility to contact me to request alternative arrangements. If at all possible, contact should be made prior to the absence and contact is expected to be made within one class period of an absence except under unusual circumstances. Keep in mind things such as sniffles and oversleeping do not justify make-up opportunities and the two lowest quizzes are dropped to account for such possible events. You are free to choose not to attend class, but if you attend class, you are expected to maintain a certain level of decorum that includes, but is not limited to, the cell phone usage expectation above. If need be, additional cell phone and other policies will be implemented throughout the semester.

**Cheating:** Copying or cheating on any graded work is not allowed! The penalty for cheating can be a failing grade in the course, and the student will be reported to appropriate administrators. Whenever you turn in any work to be graded, you are implicitly stating that you abided by the conditions stated in this syllabus, the directions for an assignment, and the Academic Code of Honesty. You are encouraged to read this code which can be found in the catalog and in the Student Handbook.

**Other stuff:** When writing email, please use capitalization, punctuation, and complete sentences, and I assume you regularly check your University email account.

In order to receive appropriate accommodations, students with disabilities must register with the Center for Teaching and Learning Excellence (CTLE) and provide relevant and current medical documentation. Students should contact Mary Ellen Pichiarello (Ext. 4039, LSC 577) or Jim Muniz (Ext. 4218, LSC 580) for an appointment. For more information, please visit [www.scranton.edu/disabilities](http://www.scranton.edu/disabilities).

The CTLE offers individual and group tutoring. For more details and a sign up form, see [www.scranton.edu/tutoring](http://www.scranton.edu/tutoring).

**Some keys to success:** Often the best way to learn math is through practice, and this practicing needs to permeate the semester. Working diligently and frequently is a key to success in this course. As “cramming” does not usually lead to a meaningful course nor a deep understanding, the quiz schedule is set up to facilitate regular practice. You should be studying on average two to three hours outside of class for each hour inside of class. Below are a few suggestions that you may find helpful.
• Attend class and participate in class regularly.

• Actively read the text. You should have paper and a pen in hand while reading. Try working through the examples before reading the solution. Check that you are using proper notation and terms and put the steps for solving problems into your own words.

• It is often a misconception that the homework should be problems that simply and perfectly mimic examples done in class. In fact, while the homework problems are great opportunities to learn through practice and repetition, homework is also fundamental to learning concepts in mathematics. Students who independently master the homework in advance of the quizzes are likely to be more successful on the quizzes and exams and as I stated above, I assume you have worked the problems before taking a quiz. So here are some homework tips:

  – Start the homework early so that you can be prepared to ask questions and learn from others’ questions during the class period prior to a quiz or exam where some time is specifically dedicated to answering questions.

  – Working backwards can help you work towards a complete solution and can be a good learning opportunity, but then you should work similar problems until you are comfortable working in the forward direction!

  – As you do the homework, make lists of formulas and techniques and identify key words in the directions associated with these techniques to use later when you study for tests.

  – When working homework problems, write out complete solutions as if you were taking a quiz or a test. I have had numerous students have success writing practice quizzes. To do this, before you start the homework, select two to three problems from the list and write the problems and directions on a sheet of paper leaving room for work. Once you have finished studying and think you are ready for the quiz, go do something else for about an hour or more! Go to dinner, workout, start writing a paper, whatever. Then give yourself about 13ish minutes to see if you can do the problems without having to look at your notes or book. You can create several practice quizzes in this manner so that if you need to do more studying after the first, another practice quiz is ready!

  – And work more problems if needed!

• My office hours (listed above) are times for you to drop in (no notice needed!) to ask questions about course material, assignments, study tips, etc. While some class time is dedicated to answering questions in advance of each quiz and exam, due to the pace of the course, there will not always be enough time to answer all questions in class.

• Consider using the free drop-in or individual tutoring provided by the CTLE.