# slcc logo.PNG

# CALCULUS I

**MATH 1210-**

# Spring Semester 2013

**INSTRUCTOR:**

**OFFICE:**

**E-MAIL:**

**PHONE:**

**CONSULTATION:**

**WEB PAGE:**

**TEXT:**  *Calculus: Early Transcendentals, 7th edition* by James Stewart**,**

 Brooks/Cole, Cengage Learning (publisher)

**INTRODUCTION:** SLCC is committed to fostering and assessing the following student learning outcomes in its programs and courses:

* Acquiring substantive knowledge in the field of their choice
* Developing quantitative literacies
* Developing the knowledge and skills to be civically engaged
* Thinking critically
* Communicating effectively

**MATH DEPARTMENT WEBPAGE:** The SLCC Math homepage is located at:

http://www.slcc.edu/math/

This site contains many resources for students. Also, copies of this syllabus, homework exercises, class schedule, computer projects, and other items relating to class projects can be accessed from the math homepage.

**PREREQUITES:** Completion of Trigonometry (MATH 1060) or Precalculus (Math 1080) with a grade of C or better or the appropriate Accuplacer score. A solid understanding of College Algebra (MATH 1050) topics is assumed.

**COURSE DESCRIPTION:** Calculus I is an introduction to the basic concepts of Differential Calculus. The following topics are included: limits, the rate of change of a function, the definition of the derivative, derivatives of transcendental functions, the chain rule, implicit differentiation, related rates of change, optimization, Newton’s Method, graphing functions using derivatives, L’Hopital’s Rule, and applications of the derivative in the physical sciences. Basic concepts of Integral Calculus will also be introduced, including definite and indefinite integrals, the Fundamental Theorem of Calculus, the substitution technique of integration, and finding areas between curves.

**COURSE OBJECTIVES:** At the conclusion of the course, the student will be able to:

* Demonstrate a mastery of the above listed concepts and related skills
* Organize thoughts and communicate mathematics both orally and in writing including proofs of mathematical theorems
* Model real world problems using average rates of change, derivatives and integrals
* Obtain mathematical knowledge and understanding of calculus including notation and theorems for use in upper division courses

**REQUIRED MATERIALS: (To be determined by the instructor)**

**CALCULATORS:** Graphing calculators and computer algebra systems are useful tools for demonstrating concepts and facilitating problem solving. They are not a substitute for learning the fundamental concepts of this course. Some homework assignments and projects may require the use of a graphing calculator or computer algebra software such as Maple or Mathematica.

A basic scientific calculator with a simple numeric store and recall memory may be used on in-class tests, including the final exam. Graphing, programmable, or calculators capable of symbolic manipulation are prohibited on in-class tests, including the final exam. Prohibited calculators include the TI89, TI92, TI-Nspire, HP 48SX, HP 48GX, as well as other models and brands. Computers, cell phones, and other communication devices are also prohibited on all in-class tests, including the final exam.

**GENERAL EDUCATION STATEMENT:** This course fulfills the **Quantitative Literacy (QL)** requirement for the General Education Program at Salt Lake Community College. It is designed not only to teach the information and skills required by the discipline, but also to develop vital workplace skills and to teach strategies and skills that can be used for life-long learning. General Education courses teach basic skills as well as broaden a student’s knowledge of a wide range of subjects. Education is much more than the acquisition of facts; it is being able to use information in meaningful ways in order to enrich one’s life. While the subject of each course is important and useful, we become truly educated through making connections of such varied information with the different methods of organizing human experience that are practiced by different disciplines. Therefore, this course, when combined with other General Education courses, will enable you to develop broader perspectives and deeper understandings of your community and the world, as well as challenge previously held assumptions about the world and its inhabitants.

**General Education ePortfolio**—Each student in General Education courses at SLCC maintains a General Education ePortfolio. Instructors in every Gen Ed course will ask you to put at least one assignment from the course into your ePortfolio, and accompany it with reflective writing. **It is a requirement in this class for you to add to your ePortfolio**, and this syllabus details the assignments and reflections you are to include. Your ePortfolio will allow you to include your educational goals, describe your extracurricular activities, and post your resume. When you finish your time at SLCC, your ePortfolio will then be a multi-media showcase of your educational experience. For detailed information visit <http://www.slcc.edu/gened/eportfolio> .

After you have picked an ePortfolio platform, go to the corresponding help site to watch the tutorials and look at the examples so you can get started on your own:

<https://sites.google.com/site/slcceport>

<http://slcceportfolio.wordpress.com>

<http://slcceportfolio.weebly.com>

If you would like to start your ePortfolio in a computer lab with a person there to help you, sign up online for one of the **free workshops** at the Taylorsville-Redwood library: <http://libweb.slcc.edu/services/forms/eportfolio>. You may also visit an **ePortfolio Lab** (in the Taylorsville-Redwood Library LIB 047 as well as in HTC 102a on the Jordan Campus) during business hours, and staff will help you without an appointment. Finally, questions regarding the ePortfolio can be directed to eportfolio@slcc.edu.

**POLICIES AND PROCEDURES:**

* **Course Schedule**: Attached is a weekly schedule for the course. This schedule will be followed as closely as possible. However, some modifications may be necessary. Please see the schedule for important dates.
* **Attendance: Class attendance is expected**. It will be your responsibility to learn any information you miss due to lack of attendance. You will be held responsible for announcements made in class. You will not be allowed to make up in-class projects or group exercises completed during class time.
* **Homework:** Attached is a list of homework exercises for the semester.
	+ If your instructor has chosen to assign online homework, most of your homework will be completed online and the attached problems are the only written textbook exercises that will be graded by your instructor. Your instructor will stipulate procedures and deadlines for turning in online and written assignments. You should be keeping a notebook containing the written work for the problems you submit online. Your instructor may check this notebook occasionally. It should be legible and orderly with problem and section numbers included.
	+ If your instructor is not requiring online homework, all assignments will be collected and graded as stipulated by your instructor. Assignments must be completed neatly and legibly via paper and pencil. All steps in solving problems must be included to receive credit for homework assignments. Also, please make sure your assignments are labeled and that multiple pages are STAPLED!Practice is crucial for the mastery of calculus. Please keep up with assignments and be prepared to ask questions on homework in class.
* **Other Assignments:** There will be at least one “signature assignment” that will be used to fulfill the QL ePortfolio requirement. Other applied projects, group exercises, and computer assignments may be assigned throughout the course.
* **Exams:** There may be up to four chapter exams taken during a scheduled class period. Full credit will be awarded on test problems only if your work can be readily followed and solutions are precise and clearly indicated.
* **Final Exam:** The final exam will be comprehensive. It is an SLCC Math Department policy that students attaining a score of less than 60% on the final shall receive a grade no higher than “D” for the course. Permission to take the final at a time other than the scheduled time must be approved by the Mathematics Department Chair.
* **Cheating:** The minimum penalty for students found cheating on an exam will be a “0” for that exam.
* **Classroom Deportment:** Each student is responsible for his/her own behavior. Any student who shows a pattern of disrespect for others, or who at any time displays egregious disrespect for others, will be subject to penalties as per the student code of conduct.
* **Withdraw Policy:** Students may withdraw from the course through **March 26**. Withdrawals will not be approved after that time
* **Permanent Folder:** Keep all homework, labs, and exams in a folder until you have received a grade for the course.
* **Grades:** Final grades will be posted on-line through MyPage. Final grades are awarded as follows:

 **SCALE:**

A 93 – 100 % C 73 – 76 %

 A- 90 – 92 % C- 70 – 72 %

 B+ 87 – 89 % D+ 67 – 69 %

 B 83 – 86 % D 63 – 66 %

 B- 80 – 82 % D- 60 – 62 %

##  C+ 77 – 79 % E 0 – 59 %

**WEIGHTS:**

Homework & Projects % of final grade

 Chapter Exams % of final grade

 Final Exam % of final grade

**ACCOMMODATIONS:** Students with medical, psychological, learning or other disability desiring accommodations or services under ADA must contact the Disability Resource Center (Redwood Student Center - Room 244 or South City Campus - Room W138), 957-4659 (voice), 957-4646 (TTY), and 957-4947 (FAX).

**EXTRA HELP:** Calculus I is a challenging course, but the methods for success are simple: read the text, participate in class, and keep up on assignments. Many students find that forming study groups with other students is a very effective way for them to master mathematics. If you need extra help, free tutoring is available in the Learning Centers (phone 957-4172) at Redwood in LIB 042c and TB-213, South N308, Sandy Bldg. B, and Jordan Rm. 102. A list of private tutors who may be hired is available in the Learning Centers.