MATH 2413 - Calculus I Syllabus

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Office Hours: Mon-Thurs: 9 am - Noon, Fri: 8 am - 11 am
or by appointment.

Materials: Students must have regular access to the materials listed below.

Textbook: <u>Calculus, Volume 1</u> OpenStax CNX.. This text my be retrieved at `https://openstax.org/details/books/calculus-volume-1` (a direct link is also available on blackboard).

Writing: Suitable writing instruments and paper for taking notes and completing assignments. Written work will be handed in virtually by use of blackboard or email (instructions for how to do this are in a later section). Turned in work should be done in pencil, dark enough to be clearly seen on a digital scan.

Calculator: Calculators with e^x, ln, and trigonometric function keys will be required. These can be found on scientific calculators (inexpensively obtained from Wal-Mart or any other big-box store) or graphing calculators. There are free online options such as Wolfram Alpha (`wolframalpha.com`), Desmos (`www.desmos.com` Desmos also has smartphone apps) or GeoGebra (`www.geogebra.org`). Smartphone apps such as Panecal or ClassCalc are also available for low cost (or free).

Computer: Regular access to a reliable computer and internet connection will be required for study and for completion of assignments. Access to a printer may be needed to print out some assignments. If you do not currently have a computer, or the technology you have becomes unusable, each computer lab at any of SPC's campuses will be available throughout the semester as well. Students will also need a scanner, or a smartphone scanning app for submitting written assignments. As part of their enrollment at SPC, all students have access to Microsoft OneDrive via their SPC email and login. Instructions on how to use OneDrive to scan and submit assignments can be found in the Syllabus and Materials section of the blackboard course (instructions are similar for other scanning apps).

Blackboard: Blackboard (accessible via the SPC website) will be used as a central hub for the course. Students will find this syllabus, and all other course materials, as well as assignments, the textbook, etc. Students should be checking Blackboard often for announcements and updates, and to access the text. Blackboard utilizes students' SPC email, and students should be checking their SPC email regularly. *While there is an app for blackboard access, some features in the mobile app are suppressed. Students should plan on accessing blackboard from a computer at least a few times each week.*

Gradescope: The gradescope app will be used to submit most, if not all assignments. It can be downloaded from both Google Play and iOS app stores.

Class Attendance: Attendance for this course will be assessed by participation. Missing more than 2 exams, or any 5 assignments may result in being dropped from the course.

Assessment: Grading will be done according to the standard 10 percent scale (i.e. 100% - 90% is an A, etc.) with assignments weighted according to the following:

Homework:	30%
Exams	50%
Final Exam	20%

Homework: Homework will be assigned weekly, and each assignment is found in the current week of course content. Please see the document "How to: Writing Mathematically (showing your work)" to learn how written work should be submitted. All work on homework or exams should be neat, organized, well explained, and legible. Graphs, diagrams, tables, and other visual aids are welcome and encouraged wherever appropriate, and should be created with care.

Exams: There will be four midterm exams given during this course, as indicated in the course calendar. Your local faculty member/facilitator will coordinate your exam time with you to proctor the exam. They will administer the exam and collect your work at the end. During the exam all computers, mobile devices, notes and external aides will be prohibited. *Makeup exams are not given.*

Final Exam: The final exam is comprehensive, and a required part of the course. Failure to take the final exam results in an automatic F. The Final Exam must be submitted no later than Wednesday, May 8, 5 pm

Extra Credit: Extra Credit assignments are not offered in this course. Occasionally bonus problems may appear on exams.

Week	Topics	Due Dates Assignments due by 11 pm on Friday of the corresponding week.
Week 1 1/13 - 1/17	Definition of Limit Limit Computation	Assignments 1 and 2
Week 2 1/20 - 1/24	Continuity Definition of Derivative	Assignments 3 and 4
Week 3 1/27 - 1/31	Derivative Rules Exam 1 (2.2, - 2.4, 3.1 - 3.4, 4.6)	Assignment 5 Exam 1
Week 4 2/3 - 2/7	Derivatives of Trigonometric Functions Chain Rule	Assignments 6 and 7
Week 5 2/10 - 2/14	Derivatives of Inverse Functions Implicit Differentiation	Assignments 8 and 9
Week 6 2/17 - 2/21	Exponential and Logarithmic Derivatives Related Rates Exam 2 (3.5 - 4.1)	Assignments 10 and 11 Exam 2
Week 7 2/24 - 2/28	Linear Approximations Mean Value Theorem/Extreme Value Theorem	Assignments 12 through 14
Week 8 3/3 - 3/7	Curve Sketching L'Hopital's Rule	Assignments 15 and 16
Week 9 3/10 - 3/14	Optimization Exam 3 (4.2 - 4.7)	Assignment 17 Exam 3
Week 10 3/24 - 3/28	Anti-Derivatives Definite Integrals	Assignments 18 and 19
Week 11 3/31 - 4/4	Fundamental Theorems of Calculus, Net Change Integration by Substitution	Assignments 20 through 22
Week 12 4/7 - 4/11	Exponential, Logarithmic, and Inverse Trigonometric Integrals	Assignment 23
Week 13 4/14 - 4/18	Area Between Curves Exam 4 (4.10 - 5.7)	Assignment 24 Exam 4
Week 14 4/21 - 4/25	Volumes of rotations	Assignment 25
Week 15 4/28 - 5/2	Hyberbolic Functions	Assignment 26
Week 16 5/5 - 5/8	Final Exam	Final Exam due Wednesday, May 9.