MATH 2413 - Calculus I Syllabus

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Office Hours:	Virtual meetings available by appointment

Prerequisites: Completion of MATH 1316 or MATH 2412 with a grade of C or better.

Materials: We will be using the text Calculus, Volume 1 by Gilbert, et al. via OpenStax. This text is free digitally via a link on Blackboard. Students will also need the following materials:

Calculator: a scientific calculator (or calculator that can perform exponential, logarithmic, and trigonometric calculations) is required. A graphing calculatoris helpful, but not required. Webapps such as Wolfram Alpha (wolframalpha.com), Desmos (www.desmos.com) or GeoGebra (www.geogebra.org) are very helpful for study (but not allowed on quizzes or exams).

Gradescope: The gradescope app will be used to submit all assignments. It can be downloaded from both Google Play and iOS app stores.

OneNote: the OneNote app will be used both as a repository for all notes and examples worked during class, as well as a communication mechanism for students to ask questions in and out of class.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives:

- Communications skills - to include effective written, oral and visual communication

- Critical thinking skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

- Empirical and quantitative competency skills - to manipulate and analyze numerical data or observable facts resulting in informed conclusions.

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

- Develop Solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.

- DDraw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point.

- Determine whether a function is continuous and/or differentiable at a point using limits.

- Use differentiation rules to differentiate algebraic and transcendental functions.

- Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situation and determine solutions to applied problems.

- Evaluate definite integrals using the Fundamental Theorem of Calculus.

- Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus

IT IS THE RESPONSIBILITY OF THE STUDENT TO BE FAMILIAR WITH SOUTH PLAINS COLLEGE POLICIES. BELOW ARE ITEMS SPECIFIC TO THIS 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:

Participation:	25%
Exams	25% each
Final Exam	25%

Pedagogy: This class is conducted in a "flipped" model. That is, students are expected to introduce themselves to the material and begin working on the material *before* the class meeting. Class time will be spent discussing more difficult parts of the material, answering student questions, and working on parts of the homework as a class or small groups.

Class Attendance: Students are expected to be in class and prepared for the day's lesson. Students are responsible for the material covered in this course, whether or not they are in class for any reason. A student missing more than 4 individual class days without continuing notification may be dropped from the course. Please note that state guidelines only allow for 6 withdrawn courses total.

Assignments (including exams) cannot be submitted late, nor made up in the case of an absence except at my discretion

Notes and Worked Problems: Assignments over the learning material will be turned in almost daily to Gradescope. They should consist of any notes taken over the material (from any source!) and fully worked problems from the assignments given over the material. Additional study habits such as mind-maps and written summaries should absolutely be included within these assignments. They will be graded on both the quantity and quality of the content submitted.

Quizzes: Quizzes will be given daily (except the day of an exam and the following day) to determine the collective standing of the class. Questions will be taken from the homework directly.

Exams: There will be two midterm exams given during this course. Questions will be similar (but not necessarily identical) to assigned homework problems or quiz questions. During exams cell phones, laptops, and other such objects should be turned off and put away. There is no tolerance for violations. Students who break these rules will be asked to leave the exam (counted as an absence) and receive a zero for their exam grade. *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. As the final exam is comprehensive, your course grade will not be lower than your final exam score. The Final Exam will be held in this classroom on **Friday**, July 2, at 3 pm

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

Date	Topics	Due Dates
		Assignments are due by 11 pm on the indicated day. Quizzes are due at the end of class.
2-Jun	Lesson 1, Lesson 2	Quiz 0
3-Jun	Lesson 3, Lesson 4, Lesson 5	Assignments 1 and 2, Quiz 1
4-Jun	Lesson 6, Lesson 7	Assignments 3 - 5, Quiz 2
5-Jun	Lesson 8	Assignments 6 and 7, Quiz 3
9-Jun	Lesson 9	Assignment 8, Quiz 4
10-Jun	Exam 1 (Lessons 1 through 9)	Assignment 9, Quiz 5
11-Jun	Lesson 10	
12-Jun	Lesson 11	Assignment 10, Quiz 6
16-Jun	Lesson 12	Assignment 11, Quiz 7
17-Jun	Lesson 13	Assignment 12, Quiz 8
18-Jun	Lesson 14	Assignment 13, Quiz 9
19-Jun	JUNETEENTH (campus closed)	Assignment 14
23-Jun	Exam 2 (Lessons 10 through 14)	
24-Jun	Lesson 15	
25-Jun	Lesson 16, Lesson 17	Assignment 15, Quiz 10
26-Jun	Lesson 18	Assignments 16 and 17, Quiz 11
30-Jun	Lesson 19, Lesson 20	Assignment 18, Quiz 12
1-Jul	Lesson 21	Assignments 19 and 20, Quiz 13
2-Jul	FINAL EXAM	Assignment 21