Clarendon College
Course Syllabus
MATH 2413– Calculus I
Fall 2023

Instructor: Dr. Jeremy Sain
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Office Hours: I will check my email 3 or 4 times a day.

Optional Text: Thomas' Calculus, 14th Edition; Hass, Heil, and Weir; 2017, Pearson

You can the text on MathXL. It's somewhat inconvenient because the site will only load one section of the book at a time, so it can be difficult to find things. But that is a option if the cost of the book is a factor for you.

Supplies: Graphing Calculator and a MathXL account (see below)

Purpose of the Course: Calculus I partially satisfies the requirements for the Associates Degree at Clarendon College and is designed for transfer to a senior college.

Course Description: Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas.
Prerequisites: 1316 or consent of the instructor.

Core Objectives:

Critical Thinking Skills
- to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
Communication Skills
- to include effective development, interpretation and expression of ideas through written,   oral and visual communication
Empirical and Quantitative Skills
–   to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Learning Outcomes:

Upon successful completion of this course, students will:

1.   Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals. (Assesses EQS with Quiz to demonstrate Mastery of THECB Learning Outcome One)

2.   Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point. (Assesses EQS with Quiz to demonstrate Mastery of THECB Learning Outcome Two)

3.   Determine whether a function is continuous and/or differentiable at a point using limits. (Assesses EQS and CT with Quiz to demonstrate Mastery of THECB Learning Outcome Three)

4.   Use differentiation rules to differentiate algebraic and transcendental functions. (Assesses EQS with Quiz to demonstrate Mastery of THECB Learning Outcome Four)

5.   Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems. (Assesses EQS with Quiz to demonstrate Mastery of THECB Learning Outcome Five)

6.   Evaluate definite integrals using the Fundamental Theorem of Calculus. (Assesses EQS with Quiz to demonstrate Mastery of THECB Learning Outcome Six)

7.   Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus. (Assesses EQS with Quiz to demonstrate Mastery of THECB Learning Outcome Seven)

Methods of Instruction:
1. Reading assignments.
2. Lecture with discussion and examples.
3. Problem assignment.
4. Discussion of problems.

Grading Policies:

All All assignments must be completed on MathXL at _www.mathxl.com_.

I will send you login information for MathXL when you send me a moodle message.

Daily work: 30%   Math takes practice, and the importance of homework cannot be exaggerated. I will drop the lowest homework assignment.

Quizzes: 5%   There are a few quizzes which cover the most foundational topics for the course.

Practice Tests: 5% Practice Tests are available for each of the regular tests and the Final Exam. They are generated with the exact same parameters as the real test, and you can take them as many times as you wish. If you take each practice test at least once, you will get these 5 points on your overall grade.

Tests: 30%   There will be four tests. I will reverse replace test grades, so that a test can replace the immediately prior test if the grade is higher. For example, if a student scores higher on the second test than the first, I will replace the first test's grade with the second. Also, if a student scores higher on the final than on the fourth test, then I will replace the third test's grade with the grade of the final.
Long story short, if you do poorly on one test, working hard and doing better on the next test will allow you to drop the poor test grade.

Final: 30%   The final is comprehensive.

For those of you who like formulas, the above says that your numerical grade will be computed using the

formula

Your grade = .3 (HW ave) + 0.05 (Quiz Ave) +
     .05 (Number of practice tests attempted at least once)/5 +
     .3 (max{T1, T2} + max{T2, T3} + max{T3, T4}+max{T4, Final}) / 3 +
     .3 (Final).

Grading Scale:
90-100	A
80-89.9	B
70-79.9	C
60-69.9	D
<60	F

All work is to be turned in on time. All assignments except for the final exam are already open. If a student cannot take the final exam during the scheduled days, they may contact me after completing all other assignments to open the final exam early. (Part of the reason that I drop the lowest h/w, the lowest quiz, and reverse replace tests is to not penalize a student for missing an assignment due to illness, being in jail, etc.)

Academic Integrity

Clarendon College is committed to a philosophy of honesty and academic integrity. It is the responsibility of all members of the Clarendon College community to maintain academic integrity at Clarendon College by refusing to participate in or tolerate academic dishonesty. Any act of academic dishonesty will be regarded by the faculty and administration as a serious offense.

Academic dishonesty violations include, but are not limited to:

(1)   obtaining an examination, classroom activity, or laboratory exercise by stealing or collusion;

(2)   discovering the content of an examination, classroom activity, laboratory exercise, or homework assignment before it is given;

(3)   observing the work of another during an examination or providing answers to another during the course of an examination;

(4)   using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment ;

(5)   entering an office, classroom, laboratory, or building to obtain unfair advantage;

(6)   taking an examination for another person;

(7)   completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person;

(8)   altering grade records;

(9)   using any unauthorized form of an electronic communication device during an examination, classroom activity, or laboratory exercise; and/or,

(10)   plagiarism. (Plagiarism is defined as the using, stating, offering, or reporting as one's own, an idea, expression, or production of another person's work without proper credit. This includes, but is not limited to, turning in a paper purchased or acquired from any source, written by someone other than the student claiming credit, or stolen from another student.)

Students are responsible for reporting known acts of academic dishonesty to a faculty member, the

program coordinator, the associate dean, and/or dean. Any student with knowledge of a violation who fails to report it shall him/herself be in violation and shall be considered to have committed an act of academic dishonesty. Additionally, any student who reports him/herself in violation of this code before it is likely that another might consider this possibility will be understood as repentant and acting in good faith. Though the confession will not excuse the student for the violation, the confession will be considered and the violation should not result in suspension from school except in the most extreme cases.

While academic integrity and honesty are the responsibility of the individual student, each individual faculty member, teaching assistant, and/or laboratory instructor is responsible for classroom management and for maintaining ethical behavior within the classroom and/or laboratory. Faculty who discover or suspect a violation should discuss the matter with the suspected violator(s) and attempt to resolve the case at that point. In cases of convincing evidence, the faculty member should take appropriate action. The faculty member and student should complete a Counseling Sheet regarding the violation. (The Counseling Sheet should contain at a minimum the date and time of the violation, the course, the instructor's name, the student's name, an explanation of the infraction or facts of the case, and the resolution to the incident.) This form should be signed by the student, faculty member, program coordinator, and the Dean of Students. The Dean of Students will maintain a file on all violations. If a faculty member prefers to report the case directly to the Dean of Students, it remains his/her prerogative to do so. Additionally, if the faculty member and the accused student cannot reach a resolution or if the faculty member believes that suspension from school is the only fair sanction, the case should immediately be reported by the faculty member, in writing, to the Dean of Students. If the Dean of Students observes any trends in student behavior which involve more than one violation or act of academic dishonesty, the Dean is responsible for notifying all faculty members involved, for contacting the student(s) involved, and after consultation with the faculty member(s) involved for taking the appropriate action. The Dean of Students is responsible for the timely notification (normally within two weeks) to all parties of an action taken.

Students wishing to appeal a disciplinary decision involving academic integrity or acts of academic dishonesty may do so through the Student Appeals and Grievance Procedure.

Classroom Policies:

1. **Online Attendance Policy**: Weekly attendance is mandatory in all online courses. Specific activities will be identified each week that must be completed in order for students to be considered "in attendance." Students are expected to log into their online course(s) at least twice a week. Progress towards satisfactory completion of weekly assignments is expected on a weekly basis. No progress could jeopardize good standing and financial aid.

My Policy: For this course, I will submit an attendance report each _Wednesday morning_. I will mark as student "present" if they completed at least 30% of the HW assignment due for that week. Students can be placed on academic probation or lose financial aid for non-attendance or failure to work through the course assignments.

2. **Final Exams:** Students must take a final exam for each of their academic courses. The schedule of final exams times is published at the beginning of the semester. Do not make plans to leave school before your scheduled final exam. I will not give any early finals except in extreme emergencies after students have provided documentation of said emergency.

3. **Scholastic Honesty:** I adhere to a strict policy regarding academic honesty. Anyone who is dishonest in any way will receive a zero on that assignment or exam with no opportunity to make up the zero and may be dropped from the course with a grade of F. That student, if allowed to remain in the course, will not be allowed to receive any extra credit points from the time of the

infraction through the remainder of the course. Furthermore, that student will not be allowed to drop their lowest quiz grade or exam grade. A second act of dishonesty will result in an F for the course. Students who commit an act of academic dishonesty will not be allowed to withdraw from the course with a "W." Note that dishonest behavior includes both the act of copying someone else's work as well as allowing someone to copy your work. Both students are equally guilty and will be equally punished.

4. **Withdrawal:** If you decide that you are unable to complete this course or that it will be impossible to complete the course with a passing grade, you may drop the course and receive a "W" on your transcript instead. Withdrawal from a course is a formal procedure that you must initiate. If you do not go through the formal withdrawal procedure, you will receive a grade of "F" on your transcript. A student is permitted to drop a course if he/she obtains an official drop slip from the office and has the instructor sign the slip before the 12th class week. **Remember, a student is only allowed to drop the same class twice before he/she will be charged up to triple the tuition amount for taking the class a third time or more. Furthermore, beginning with the Fall 2007 semester, students in Texas may only drop a total of 6 courses throughout their entire undergraduate career. After the 6, he/she will no longer be able to withdraw from any classes.** If you think you need to drop this course, please talk with me about it first. It is possible that there is something you can do to still pass the course. Don't hurt your chances for a passing grade in the course by not attending labs or taking exams before we have discussed your situation. **The last day to withdraw from the course with a "W" is November 3rd.**

American with Disabilities Act Statement: Clarendon College provides reasonable accommodations for persons with temporary or permanent disabilities. Should you require special accommodations, it is your responsibility to notify the Office of Student Services (806-874-3571). We will then work with you to make whatever accommodations we need to make.

The full details of **Student Rights and Responsibilities** policies can be viewed on Clarendon College's website at: http://www.clarendoncollege.edu/Resources/Student%20Services/StudentRightsResponsibilities.pdf.

Course Schedule:

All assignments are due at 11:59pm **Central Time**. Notice that the "due date" does not mean the day that you are supposed to submit an assignment. The "due date" is the last possible day to submit an assignment.

I encourage you to stay a few days ahead of the due dates. You never know when computers/internet will crash or when life situations will prevent you from being able to work on an assignment. If you are a few days ahead of the due dates, you won't be stuck with the possibility of missing an assignment due to unforeseen issues.

August 21	Last day to Add/Drop
August 29	HW 1 due
September 5	HW 2 due
September 12	HW 3 due
September 15	Exam 1 due
September 19	HW 4 due
September 20	Quiz HW 4 (SLO 1) due
September 26	HW 5 due
September 27	Quiz HW 5 (SLO 3) due

October 3	HW 6 due
October 6	Exam 2 due
October 10	HW 7 due
October 11	Quiz HW 7 (SLO 4) due
October 17	HW 8 due
October 24	HW 9 due
October 25	Quiz HW 9 (SLO 2) due
October 27	Exam 3 due
October 31	HW 10 due
November 1	Quiz HW 10 (SLO 5) due
November 3	Last day to drop with a "W"
November 7	HW 11 due
November 14	HW 12 due
November 15	Quiz HW 12 (SLO 6 & 7) due
November 17	Exam 4 due
November 28	Final Exam opens
December 5	Final Exam due

Unit 1:   Algebra Review (Sections AR 2, AR 4, and AR 5 in text)

Unit 2:   Graphing and Transformations (Sections 1.1, AR 7, 1.2, and 1.4 in text)

Unit 3:   Trig Function Review (Sections AR 9, and 1.3 in text)

Unit 4:   Limits (Sections 2.1, 2.2, and 2.4 in text)

Unit 5:   Formal Definition of Limit, Continuity (Sections 2.3, 2.5, and 2.6 in text)

Unit 6:   Definition of Derivative, Basic Caculations (Sections 3.1, 3.2, and 3.4 in text)

Unit 7:   Differentiation Rules, Derivatives of Trig Functions (Sections 3.3, and 3.5 in text)

Unit 8:   Chain Rule and Applications (Sections 3.6, 3.7, and 3.8 in text)

Unit 9:   Applications of the First Derivative (Sections 4.1, 4.2, and 4.3 in text)

Unit 10:   Applications of the Second Derivative (Sections 4.4, 4.5, and 4.6 in text)

Unit 11:   The Definite Integral (Sections 5.1, 5.2, and 5.3 in text)

Unit 12:   Antiderivatives and the Fundamental Theorem of Calculus (Sections 4.7, 5.4, 5.5, and 5.6 in text)