

Clarendon College
Course Syllabus
MATH 2413– Calculus I
Fall 2025

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

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

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.)

STUDENT ACADEMIC INTEGRITY AND CLASSROOM ETHICS

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 an 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 activity; 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 vice president, 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.

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 Vice President of Academic Affairs. The Vice President of Academic Affairs will maintain a file on all violations. If a faculty member prefers to report the case directly to Vice President of Academic Affairs, 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 Vice President of Academic Affairs. If the Vice President of Academic Affairs observes any trends in student behavior which involve more than one violation or act of academic dishonesty, the Vice President of Academic Affairs 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 Vice President of Academic Affairs 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:** The schedule of final exams times is published at the beginning of the semester. You can find the schedule for final exams at:
<https://www.clarendoncollege.edu/insideCC>. Do not make plans to leave school before your scheduled final exam. Faculty members cannot on their own authorize a student to take a final exam early. In exceptional circumstances if a student needs to take a final exam early, he/she may request early final exams by filling out the form at:
<https://www.clarendoncollege.edu/Resources/Admin/Request%20for%20Early%20Final%20Exams.pdf>.
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. **Course Withdrawal**--Students desiring to make schedule changes after their initial registration each semester must do so during the designated "Drop and Add" period as scheduled in the College Catalog. Students will be required to pay tuition and fees applicable to any class(es) added to their schedule.

Official withdrawal from a course is initiated in the Office of the Registrar. However, each student should consult with his/her academic advisor or the Associate Dean of Enrollment before officially withdrawing from a course. A student who stops attending a class without officially dropping it may receive a grade of "F" for that class.

5. **Grievance/Appeals:** If you have a dispute concerning your grade or policies in this class, it is the student's responsibility to contact the instructor to discuss the matter. Should things remain unresolved, please follow the procedures described in the Clarendon College Student Handbook or College Policy Manual.
6. **Accommodation Statement** REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT:
In accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, any student who feels that he or she may need any special assistance or accommodation because of an impairment or disabling condition should contact the Associate Dean of Enrollment Services at 806-874-4837 / janean.reish@clarendoncollege.edu or visit the Clarendon campus at Clarendon College. It is the policy of Clarendon College to provide reasonable accommodation as required to afford equal educational opportunity. It is the student's responsibility to contact the Associate Dean of Enrollment Services.
7. **Nondiscrimination Policy**
Clarendon College, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status. It is the policy of Clarendon College not to discriminate based on

gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation. Harassment of a student in class, i.e., a pattern of behavior directed against a particular student with the intent of humiliating or intimidating that student will not be tolerated. The mere expression of one's ideas is not harassment and is fully protected by academic freedom, but personal harassment of individual students is not permitted.

The full details of **Student Rights and Responsibilities** policies can be viewed on Clarendon College's website at: [www.clarendoncollege.edu/Resources/Legal/24-25/FLA\(LEGAL\).pdf](http://www.clarendoncollege.edu/Resources/Legal/24-25/FLA(LEGAL).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 28	Last day to Add/Drop
September 9	HW 1 due
September 16	HW 2 due
September 23	HW 3 due
September 26	Exam 1 and its practice due
September 30	HW 4 due
October 1	Quiz HW 4 (SLO 1) due
October 7	HW 5 due
October 8	Quiz HW 5 (SLO 3) due
October 14	HW 6 due
October 17	Exam 2 and its practice due
October 21	HW 7 due
October 22	Quiz HW 7 (SLO 4) due
October 28	HW 8 due
November 4	HW 9 due
November 5	Quiz HW 9 (SLO 2) due
November 7	Exam 3 due
November 11	HW 10 due
November 12	Quiz HW 10 (SLO 5) due
November 13	Last day to drop with a "W"
November 18	HW 11 due
December 2	HW 12 due
December 3	Quiz HW 12 (SLO 6 & 7) due
December 5	Exam 4 due
December 3	Final Exam opens
December 9	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 Calculations (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)