



Walters State Community College Course Syllabus

Course Information

Course Number and Name: MATH 1910 Calculus I

Section ID: 50345.202350

Semester and Year: Summer 2023

Credit Hours: 4

Start Date: June 01, 2023

End Date: August 03, 2023

Course Format: WEB - Web Classes

Catalog Course Description: Calculus I - A standard first-semester course in single variable calculus and analytic geometry especially for students of science, engineering, mathematics, secondary mathematics education, and scientific computer science. Differential and integral calculus with applications. Prerequisite(s): Two years of algebra and half a year of trigonometry in high school and ACT math score of 26; or MATH 1710 and MATH 1720 or permission of the Dean of Mathematics **F, S, Su**

General Education Course Designation: General Education Course

Meeting Details: TBD

Course Drop Deadline: July 12, 2023

Instructor Information

Name: Erin McCroskey

Role: Assistant Professor of Mathematics

Office Location: ACAD 223

Office Hours: Posted in eLearn.

Office Phone: 865-774-5825

Email: Erin.mccroskey@ws.edu

Supervisor Name: Chris Knight, Dean of Mathematics

Supervisor Phone: 423-585-6879

Secretary Name: Tammy Holt, Executive Aide

Secretary Phone: 423-585-6864

Required Textbook(s) and Materials

Calculus, Volume 1

Subtitle: A free open educational resource

Publisher: OpenStax.org

Additional Information

Students must have on-line access to the textbook/homework through [MyOPenMath.com](https://myopenmath.com).

Supplemental or Optional Materials

A TI-83 or TI-84 calculator is required.

Students will need a computer with a web-cam and microphone as well as reliable internet.

Students will need a [MyOpenMath](https://myopenmath.com) account for accessing homework and exams.

Students may need access to Microsoft Teams for additional tutoring.

Student Learning Outcomes/Objectives

- Evaluate limits of functions including one-sided limits, two-sided limits, limits involving infinity, and limits using l'Hospital's Rule.
- Identify where a given function is continuous. Use the definition of continuity to show a function is continuous at a point.
- Use the definition to find derivatives. Understand the conceptual meaning of derivative.
- Differentiate power functions, exponential, logarithmic, trigonometric, and inverse trigonometric functions.
- Differentiate sums, products, and quotients of functions. Use chain rule to differentiate composite functions. Use implicit differentiation to find derivatives.
- Use derivatives to identify where functions are increasing, decreasing, concave up, and concave down. Use derivatives to find local extrema, find points of inflection, and to graph

functions.

- Use derivatives to solve applied problems.
- Find antiderivatives (indefinite integrals) of linear combinations of power functions, basic trigonometric functions, and exponential functions.
- Approximate signed areas (definite integrals) using right-hand, left-hand, and midpoint rectangles.
- Use Fundamental Theorem of Calculus to find and signed area and construct antiderivatives.

Instructional Approach and Methods

Regular participation is mandatory for your success in this course. This course will require that you spend several hours per week to watch the video lessons, review material, and do homework problems. Students will receive 3 to 4 homework assignments on a weekly basis. Students are expected to do the assignments in preparation for upcoming exams.

This web class has no scheduled or mandatory meetings. Individual help from the instructor is available through meetings on Microsoft Teams.

The best way of emailing me is through Elearn, <https://elearn.ws.edu>, which I will use to communicate with you throughout the term. You may also use erin.mccroskey@ws.edu or Microsoft Teams to communicate with me.



Assessment, Evaluation and Testing Procedures

1. Exams: Four unit exams and a final exam will be given. Each exam is worth 100 points. If it benefits the students, the lowest of the 4 unit exams will be dropped from the final average and the final exam will count double. If an exam is not taken by the due date, that exam will count as the dropped exam. Any further missed exams will receive a score of "0".

Students are expected to complete the exams housed in [MyOpenMath](#) over a 90-minute window by the due date. Students will be required to use the virtual proctoring service HonorLock to monitor exams. This will require students to have a compatible device, microphone, and webcam. In the event

that the student does not use the specified requirements or if the testing protocols are not followed, then the exam will be under review by the faculty member. Appropriate steps will be taken to rectify any deviation of the testing protocols and any grade adjustments will be made. Extensions for a unit test will be granted on a case-by-case basis. No test or exam will be extended more than 24 hours.

Students will need a calculator, scratch paper, and a writing utensil. Cell phones will not be allowed for use on the exam.

2. Homework: Weekly homework is assigned on-line using MyOpenMath. Homework due dates are posted in MyOpenMath. Extensions for homework assignments will be granted up to the day of the unit test. At the end of the term, the proportion of homework completed correctly will be calculated and count 100 points toward the final average.

3. Gateway: Students must score 80% or better on a form of the derivatives proficiency test in order to pass Calculus I. The proficiency test may be taken more than once. If a student does not achieve a score of 80% on a form of the proficiency test, the student will not pass Calculus I, regardless of passing grades on other course material.

Assignments

4 Unit Exams	100 points each
Final Exam	100 points
Homework	100 points
Gateway	Pass/Fail

Grading Scale

A	540 - 600 points
B	480 - 539 points
C	420 - 479 points
D	360 - 419 points
F	0 - 359 points

Online/Web-Enhanced Course Supplementary Information

For issues with Elearn, passwords, WSCC requirements, students can call the WSCC computer helpdesk at (423) 318-2742 or visit <http://helpdesk.ws.edu>.

Additional Course Requirements/Details/Information

Optional Review of Algebra

Knowledge of materials presented in the Optional Review is essential to be successful in the course. Students may not be prepared to start Calculus I without these basic pre-calculus concepts. If the material is unclear, the student may consider taking Math 1710 and Math 1720 instead.

Unit 1 – Limits

1. A Preview of Calculus
2. The Limit of a Function
3. The Limit Laws
4. Limits at Infinity
5. Continuity
6. Defining the Derivative

Unit 2 – Derivatives

7. Differentiation Rules
8. Derivatives as Rates of Change
9. Derivatives of Trigonometric Functions
10. Applications of Derivatives
11. The Chain Rule
12. Implicit Differentiation
13. Derivatives of Logarithmic and Exponential Functions

Unit 3 –Applications of the Derivative

14. Derivatives of Inverse Functions
15. Related Rates
16. Absolute Maxima and Minima
17. The Mean Value Theorem
18. Relative Maxima and Minima

19. Derivatives and the Shape of a Graph

20. Applied Optimization Problems

Unit 4 – Integration

21. Linear Approximation and Differentials

22. L'Hospital's Rule

(Newton's Method Optional)

23. Antiderivatives

24. Approximating Areas

25. The Definite Integral

26. The Fundamental Theorem of Calculus

Academic Honesty

Faculty expect all students to refrain from acts of academic misconduct including but not limited to:

1. Plagiarism - refers to using another person's ideas or writing without giving proper credit to the original source. Indulging in this type of conduct will subject the student to disciplinary sanctions, which may be imposed through the regular institutional procedures of Walters State Community College as outlined in the Student Handbook. Plagiarism will result in a grade of "0" for the paper/exam/presentation. Student Conduct and Disciplinary Sanctions contained in the college Catalog/Student Handbook apply (see policy 04:18:02 Disciplinary Sanctions).

Plagiarism includes, but is not limited to the following:

- a. Using cut/paste tool from original document with no references given.
 - b. Copying another student's work and submitting it as one's own.
 - c. Forging or otherwise altering signatures.
 - d. Giving or falsifying academic documents or materials.
2. Cheating - construed as attempting to deceive or mislead which includes, but is not limited to the following:
 - a. Utilizing old tests, projects, notes or written papers.
 - b. Providing unauthorized information to a fellow student about exam content.
 - c. Receiving unauthorized aid from any source with quizzes, examinations, or other assignments.

- d. Seeking information in an unacceptable manner during/preceding an exam or other assigned work (cheat sheet, verbal exchange, looking at another person's paper or electronic device, utilizing headphones, using textbook when the test/quiz is not an open book test/quiz, using textbook test bank etc.).
- e. Consulting with a classmate or others when taking a computerized test.
- f. Disregarding other specific policies and procedures outlined for a particular class.
- g. Utilizing unapproved technology/electronic equipment during testing (i.e.: mobile devices such as cell phones, smart devices, or tablets, etc.).
- h. Using the same Internet Protocol network address (IP address) as another student for testing without approval from the course faculty.

Student Resources

TUTORING SERVICES

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located as follows:

- Morristown Campus - Student Services Building Room L107 - (423) 585-6920
- Niswonger Campus - GRNV 226 - (423) 798-7982
- Sevierville Campus - MMH Room 210 - (865) 286-2787
- Claiborne Campus - Room 123A - (423) 851-4761

Specific tutoring assistance in mathematics and writing is available in-person and online as follows:

- Morristown Campus - English Learning Lab - HUM 120 - (423) 585-6970

[Walters State English Learning Lab \(opens in new window\)](https://www.walters.edu/academics/humanities/writing-lab)
[ws.edu/academics/humanities/writing-lab](https://www.walters.edu/academics/humanities/writing-lab)

- Morristown Campus - Mathematics Lab - MBSS 222 - (423) 585-6872

[Walters State Mathematics Learning Lab \(opens in new window\)](https://www.walters.edu/academics/mathematics/learning-lab)
[ws.edu/academics/mathematics/learning-lab](https://www.walters.edu/academics/mathematics/learning-lab)

TECHNOLOGY SUPPORT

Students who need assistance with computing and technology issues should contact the IET Helpdesk by phone at Morristown: (423) 318-2742; Niswonger: (423) 798-8186; or Sevierville: (865) 286-2789 or on-line access.

[Walters State Helpdesk \(opens in new window\)](#)
helpdesk.ws.edu

STUDENTS WITH DISABILITIES SUPPORT SERVICES

Students with disabilities must register with Student Support Services each semester in the Student Services Building, Room U134 (phone (423) 585-6892) if they need any special facilities, services, or consideration.

[Walters State Student Support Services \(opens in new window\)](#)
ws.edu/student-services/disability/

SUICIDE PREVENTION STATEMENT

Walters State is committed to and cares about all students. Support services are available for any person at Walters State who is experiencing feelings of being overwhelmed, hopelessness, depression, thinking about dying by suicide, or is otherwise in need of assistance. For immediate help, contact the National Suicide Prevention Lifeline by calling or texting 9-8-8 or the Trevor Lifeline at 1-866-488-7386. Veterans may also contact the Veterans Crisis Line at 1-800-273-8255 (press 1) or Text 838255.

Walters State has a relationship in place with the following community agencies to provide services (may include crisis referral services, prevention screenings, etc.):

- Cherokee Health Systems 423-586-5032
- Frontier Health 423-467-3600

College Policies

STUDENTS HANDBOOK AS OFFICIAL GOVERNING DOCUMENT

This class is governed by the policies and procedures stated in the current Walters State Community College Student Handbook. All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes.

[Walters State Catalog \(opens in new window\)](#)
catalog.ws.edu/

[Walters State Timetable of Classes \(opens in new window\)](#)
ws.edu/admissions/registration/

PURPOSE, LIMITATIONS AND MODIFICATION OF SYLLABUS

This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. The instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus for the semester/year specified in the Course Information section of the syllabus. This syllabus is only valid for the semester/year specified and course requirements are not guaranteed for future semesters.

COURSE GROUND RULES

- Students must attend the first day of on-ground class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class. Excessive absences may substantially lower the course grade.
- Regular class attendance is a student's obligation for any course regardless of format. (See the Walters State Catalog/Student Handbook). If a student misses class, it is his or her responsibility to contact the instructor regarding missed assignments and/or activities and to be prepared for the next class assignment.
- Students enrolled in web courses must follow the course attendance policy defined for online attendance during the first week of class and throughout the term. Failure to do this may result in being dropped from the class during week one OR may result in the accrual of absences which may negatively impact the student's grade in the course.
- Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Walters State student information system (MyWS) will not be allowed to remain in class or receive credit for this course.
- Electronic devices must not disrupt the instructional process or college-sponsored academic activity. Use of electronic devices is prohibited unless use of the device is relevant to the activity and use is sanctioned by the faculty member in charge. Electronic devices that are not relevant to the activity or sanctioned by the faculty member in charge should be set so that they will not produce an audible sound during classroom instruction or other college-sponsored academic activity.

FINANCIAL AID

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

All forms of student Financial Aid may be jeopardized or lost due to the lack of Satisfactory Academic Progress in one or multiple courses. Lack of Satisfactory Academic Progress may negatively impact a

student's degree/certificate completion pace and further jeopardize Financial Aid eligibility.

CANCELLATION OF CLASSES AND ACADEMIC CONTINUITY

For information related to the cancellation of classes due to inclement weather or other events, please check the Senators Emergency Text system or the college's Web site at:

[Walters State Homepage \(opens in new window\)](#)

ws.edu/home/

[Walters State Facebook page \(opens in new window\)](#)

<https://www.facebook.com/WaltersState/>

[Walters State Twitter page \(opens in new window\)](#)

<https://twitter.com/waltersstate>

or call the college's student information line, 1-800-225-4770, option 1; the Sevier County Campus, (865) 774-5800, option 7; the Niswonger Campus (423) 798-7940, option 7; or the Claiborne County Campus, 423-636-6200, option 7. Also, please monitor local TV and radio stations for further announcements.

When an event or disaster interrupts the scheduled operations of the college and the ability to proceed with the academic course activities as planned, the college and your instructor may alter the course plan outlined in the syllabus. Should an event occur, students should refer to their course e-Learn pages and/or class materials previously delivered to receive guidance from their instructor. Students should continue to monitor the official college channels of communication listed in the above paragraph. If you would like to sign up for the Senators Emergency Text system, please go to the following Web site:

[Senator Emergency Text System \(opens in new window\)](#)

ws.edu/set/

Dual Enrollment students attending on a high school campus should refer to the high school inclement weather cancellations.

LEARNING MANAGEMENT SYSTEM

Brightspace (commonly known as eLearn or D2L) is the college's Learning Management System (LMS).

Brightspace is committed to accessibility by "deliver[ing] a learning experience that meets the needs of all people, regardless of age or ability." [Brightspace Accessibility Standard \(opens in new window\)](#)

Brightspace is also committed to guarding student data and privacy. [Brightspace Privacy Policy](#) ([opens in new window](#)).