



SOUTHWESTERN

AN OREGON COMMUNITY COLLEGE

Course Title and Number: MTH 251		Instructor: Benjamin Holt
Year and Term: Spring 2025	Course Credits: 4	Office Location: Sitkum 2C
Office Phone: (541) 888-7608	Office Hours: M: 10 am – 10:50 am 2 pm – 2:50 pm T: 10 am – 10:50 am W: 10 am – 10:50 am R: 10 am – 10:50 am	Class Location: Sitkum 4
Meeting Time/Days: MW 10 am-11:50 pm		Email Address: benjamin.holt@socc.edu (PLEASE use your socc.edu account!)
Web Page Address: https://holt.blue/MTH_251/homepage.html		Fax Number:

Course Description	<p>Prerequisite(s): 112Z</p> <p>Topics include: pre-calculus concepts and principles; limits and their properties, continuous functions; indeterminate forms and l'Hôpital's rule; derivatives and their properties; the chain rule, implicit differentiation; relative extrema, the first and second derivative tests; applications involving rectilinear motion of a particle and optimization of functions. This course covers the standard differential calculus topics required for engineering, mathematics, and science majors.</p>
Course Objectives Reflecting Expected Student Learning Outcomes	<ul style="list-style-type: none">• Explain the significance and usefulness of limits and the concept of the derivative of a function as an instantaneous rate of change.• Recognize indeterminate forms and apply l'Hôpital's Rule to resolve the indeterminate form.• 3. Explain the relationship between derivatives and intervals of increase, decrease, concavity, extrema, and the first and second derivative tests.• 4. Evaluate limits and derivatives of functions by analytical methods.• 5. Utilize differential calculus to analyze a continuous function and sketch its graph, with particular emphasis on intervals of increase, decrease, extrema, and concavity.• 6. Utilize differential calculus concepts in application problems.• 7. Utilize a systematic analysis approach to obtain solutions to unfamiliar problems with confidence.
Grading	<p>Course Requirements:</p> <p>The next series of items will be used to assess student success in achieving the student learning outcomes.</p> <p>myOpenMath Homework: There will be a homework assignment for each section we cover in this course. Each assignment is completed in Canvas</p> <p>The due dates for all assignments are given in the course schedule on the last page of this syllabus and are also on Canvas.</p> <p>On each homework problem you have 100 attempts. Any problem on and assignment can be swapped for another one at a 20% penalty on the points for that problem.</p> <p>Late homework assignments can be made up with a late pass which extends the</p>



homework due date by 72 hours. You have a total of 6 late passes for the term. Please use them only when you really need them.

Each assignment grade is a percentage. Your average of these percentages is your homework grade. Your homework grade is worth 30% of the course grade.

Exams: There will be two exams over the course of the term covering material up to each exam. Every exam will consist of 10 questions drawn randomly from the homework question bank. To practice for each exam, there will be two ungraded assignments: in Canvas which will allow you to survey potential exam questions.

If for reasons beyond your control (**travel arrangements are not acceptable reasons**), you will be absent on the day of an exam, you must let me know **BEFORE THE EXAM** so we can discuss options. If either 1) you can't provide an acceptable or 2) you don't let me know before the exam, you forfeit the opportunity to take the exam for full credit. Unjustified make-up exams are worth 80% of full credit (a reduction of 2 full letter grades). All make-up exams must be taken **BEFORE** the next exam.

Each exam is worth 35% of the course grade.

Calculators & Technology: For the exam you may use TI 30XIIS, TI Multiview. If there is another calculator that you would like to use, you need to get permission with me beforehand. You **MAY NOT** use any online resources during the exam.

Handwritten Notes: For the exam you may use your handwritten notes. You **MAY NOT** use any online resources during the exam.

Course Grade: Your course grade is determined by the following items and their associated weights:

Homework: **30%**
Midterm Exam: **35%**
Final Exam: **35%**

The letter grade equivalents to the above course grade are:

90≤Course Grade<100 **A**
80≤Course Grade<90 **B**
70≤Course Grade<80 **C**
60≤Course Grade<70 **D**
Course Grade<60 **F**

Please Note:

- 1. No graded items will be accepted past the deadline 11:59 pm on the last day of the course listed in myLakerLink.
- 2. Your final course grade will **NOT** be rounded up no matter how close it is to the next letter grade. Ample opportunity is provided during the term to earn the grade you want and it is your job to make sure your grade lands where you want it. **I will not respond to emails asking me to round grades up.**
- Pass codes from previous terms are **NOT** considered valid and will not be accepted for the present term.

Students who need reasonable accommodation should contact the instructor or call Disability Services for Students.



Text(s)	Required Text(s), Title(s), Author(s) and Edition(s): Calculus, Volume 1, Edwin Herman, Gilbert Strang, ISBN 978-1-947172-13-5 The electronic version is freely available in Canvas and on the course website, and printed copies are available in the campus bookstore for purchase.
Required Materials	The following calculators are acceptable for this course: TI 30XIIS or TI Multiview Calculator.
Term Calendar	Please see the course calendar on the last page of this syllabus.
Prerequisites	MTH 112Z is a prerequisite for this course. If you did not pass MTH 112Z with a "C" or higher, you may be administratively withdrawn from this course within the refund period. This withdrawal could affect your financial aid and/or academic standing. If you are uncertain about whether you have passed MTH 112Z with a "C" or higher, check MyLakerLink or with your advisor within the first week of class to ensure you have met the course prerequisites.
Availability of Tutoring, Learning Lab, Academic Support	In addition to office hours I highly recommend that you visit the tutoring center on the 3rd floor of the Tioga building. There are tutors there waiting to help you! Also, tutoring services are FREEEEEEEEEEEEEEEEEEEEEE!!!!



Policies and Guidelines

Components marked with asterisk (*) are required for every syllabus.

* Course Hours

Southwestern's Credit Hour Administrative Policy (APP 8191) stipulates that credit-bearing courses, regardless of delivery method, are scheduled and conducted in compliance with the definition of the credit hour as set forth in Section 600.2 and 600.24 of the Code of Federal Regulations and the NWCCU Policy on Credit Hour.

For this reason, students are expected to complete a minimum of two hours of out-of-class student work per credit hour each week for the quarter.

* Children in the Classroom

Children represent a disruptive element for the classroom. They also increase the risk of accidents occurring in the laboratory. For those reasons, children should not be brought to either the classroom or the laboratory.

* Academic Honesty: Plagiarism And Cheating

Cheating, plagiarism, and other acts of academic dishonesty are regarded as serious offenses. Instructors have the responsibility to submit, in a written report to the Dean of Students any such incident that cannot be resolved between the instructor and student. The policy of the Board of Education of Southwestern Oregon Community College on Student Rights, Student Code of Conduct, and Student Grievance Procedure outlines penalties ranging from admonition to expulsion from the class or college. In the policy, academic plagiarism is defined as: "The intentional submission for evaluation to a college instructor or administrator of material based, in significant part, on work done by someone other than the submitter without reasonable written indication to the evaluator of the material's true source." Academic cheating is defined as "The intentional submission for evaluation to a college instructor or administrator of material based, in part, on a source or sources forbidden by generally accepted standards or by regulation established by the evaluator and disclosed in a reasonable manner." The complete policy, student rights and responsibilities, penalties, and recourse through the Grievance Procedure can be found in the [Student Handbook](http://www.socc.edu/studentlife/pgs/bm~doc/socc-hb.pdf) (<http://www.socc.edu/studentlife/pgs/bm~doc/socc-hb.pdf>).

* Academic Ethics and Confidentiality

It is the responsibility of everyone engaged in the learning experience to respect the rights and feelings of their fellow learners. Information gathered in the classroom and from on-line discussions and exercises is to be considered confidential. At the same time, students must recognize that the instructor and the College cannot guarantee the confidentiality of what the student may choose to disclose. Students must use their own discretion when engaging in classroom discussion.

* Classroom Behavior

Instructors have the responsibility to set and maintain standards of classroom behavior appropriate to the discipline and method of teaching. Students may not engage in any activity which the instructor deems disruptive or counterproductive to the goals of the class. Students are required to keep cell phones, beepers, and pagers off during class lectures, unless there is permission in advance from the instructor. Instructors have the right to remove offending students from class. Repetition of the offense may result in expulsion from the course.

* Student Conduct

Opt #1: Students must read and be familiar with the Code of Conduct as published in the Student Handbook, policies and procedures as outlined in campus publications, Southwestern Oregon policies.

Opt. #2: Students in this (or any) program of study should be especially aware of the severe consequences of plagiarism. Students that submit work that is not their own will be dealt with quickly and severely. It will be the recommendation of the faculty to remove such students from the College.

Opt. #3: Students that have a concern regarding any inappropriate conduct should bring it to the attention of their instructor, advisor, or Department Chair immediately. Inappropriate conduct situations will be reviewed immediately.



Opt. #4: Students taking this course should be aware of the potential diversity of the artistic perception of the participants - particularly as applicable to violence, artistic statements, and nudity. Please keep your material and remarks professional and appropriate and be sensitive to individuals that have views different than your own.

***Americans with Disability Act – Disability Accommodation Statement**

SWOCC recognizes the contribution that a diverse student body brings to the educational experience. If you have a documented disability that may require assistance, please contact the Accessible Education Office. If you are a student who already has approved accommodations, you are required to talk with your instructors sometime during the first two weeks of the term regarding the accommodations you intend to use in their course.

The Accessible Education Office is located on the Southwestern Coos Bay campus in Student Support Services, Stensland Hall. For more information:

1. Visit Accessible Education Services or
2. Call (541) 888-1578 or
3. Email accessibility@socc.edu



***Notice of Non-Discrimination**

Students, their families, employees and potential employees of the Southwestern Oregon Community College District are hereby notified that Southwestern Oregon Community College does not discriminate on the basis of race, color, gender, sexual orientation, marital status, religion, national origin, age, disability status, gender identity, or protected veterans in employment, education, or activities as set forth in compliance with federal and state statutes and regulations. Any persons having inquiries concerning Southwestern's compliance with Title II, Title IV, Title VI, Title VII, Title IX and/or Section 504 or wish to make a complaint may contact the College's Affirmative Action Officer:

Vice President of Administrative Services
Southwestern Oregon Community College
1988 Newmark Ave., Tioga Hall, Room 511
Coos Bay, OR 97420
(541) 888-7402

Southwestern Oregon Community College offers the following career and technical education programs for all students regardless of race, color, gender, sexual orientation, marital status, religion, national origin, age, disability status, gender identity or protected veteran status, including those with limited English proficiency: Business, Office Technology, Computer Technology, Childhood Education, Criminal Justice, Culinary, Fire Sciences, Health Sciences, and Welding and Fabrication. Persons seeking further information concerning the vocational education offerings and specific pre-requisite criteria should contact:

Ali Mageehon, Vice President of Instruction and Student Services
Southwestern Oregon Community College
1988 Newmark Ave., Tioga Hall, Room 506
Coos Bay, OR 97420
(541) 888-7417 ali.mageehon@socc.edu

***Grievances**

For more information on the grievance process visit the Student Handbook.

Class Cancellations (Faculty Absence)

Notices of class cancellations at SWOCC are made through an automated system called RAVE. Notices of class cancellations due to faculty absence will be sent to through the following devices: Voicemail to cell phone, text to cell phone, and email to college email account. To receive these important notices, please update your cell phone, telephone and email contact information through myLakerLink, click on the Student Information tab, then Rave User Portlet.

Cell Phone Use Policy

Given the disruptive potential posed by cell phones, students are required to keep cell phones off during class lectures. Use of cell phones during laboratory exercises are permissible, but please consider those around you.

***Basic Needs Statement**

Our college is dedicated to ensuring every student's academic success and well-being. If you face challenges like food insecurity or housing instability, contact our Benefits Navigator for confidential assistance and community referrals. We aim to create a supportive environment where all students thrive.

541-888-7462 or benefitsnavigator@socc.edu



Day	Topic	Due
M 3/31	Course Intro Section 1.1: Review of Functions	MyOpenMath Intro
W 4/2	Section 1.2: Basic Classes of Functions Section 1.3: Trigonometric Functions	
Su 4/6		Section 1.1 Section 1.2 Section 1.3
M 4/7	Section 1.4: Inverse Functions Section 1.5: Exponential and Logarithmic Functions	
W 4/9	Section 2.2: The Limit of a Function Section 2.3: Limit Laws	
Su 4/13		Section 1.4 Section 1.5 Section 2.2 Section 2.3
M 4/14	Section 2.4: Continuity Section 2.5: The Precise Definition of a Limit	
W 4/16	Section 3.1: Defining the Derivative Section 3.2: The Derivative as a Function	
Su 4/20		Section 2.4 Section 2.5 Section 3.1 Section 3.2
M 4/21	Section 3.3: Differentiation Rules Section 3.4: Derivatives as Rates of Change	
W 4/23	Section 3.5: Derivatives of Trigonometric Functions Section 3.6: The Chain Rule	
Su 4/27		Section 3.3 Section 3.4 Section 3.5 Section 3.6
M 4/28	Section 3.7: Derivatives of Inverse Functions Section 3.8: Implicit Differentiation	
W 4/30	Section 3.9: Derivatives of Exponential and Logarithmic Functions	



Su 5/4		Section 3.7 Section 3.8 Section 3.9
M 5/5	Exam Review	
W 5/7	Midterm Exam: Section 1.1 through Section 3.8	
		Nothing due!!! Enjoy!!
M 5/12	Section 4.1: Related Rates Section 4.2: Linear Approximations and Differentials	
W 5/14	Section 4.3: Maxima and Minima Section 4.4: The Mean Value Theorem	
Su 5/18		Section 4.1 Section 4.2 Section 4.3 Section 4.4
M 5/19	Section 4.5: Derivatives and the Shape of a Graph Section 4.6: Limits at Infinity and Asymptotes	
W 5/21	Section 4.7: Applied Optimization Problems	
Su 5/25		
M 5/26	Memorial Day Holiday	Section 4.5 Section 4.6 Section 4.7
W 5/28	Section 4.8: L'Hôpital's Rule Section 4.9: Newton's Method	
Su 6/1		Section 4.8 Section 4.9
M 6/2	Section 4.10: Antiderivatives	
W 6/4	Review	
Su 6/8		Section 4.10
M 6/9	Final Exam: Section 3.9 through Section 4.10	