SOUTHWESTERN
AN OREGON COMMUNITY COLLEGE

Course Title and Number: MTH 241 Calculus for Bus & Soc Science I		**Instructor:** Benjamin Holt
Year and Term: Winter 2023	**Course Credits:** 4	**Office Location:** Sitkum 2C
Office Phone: 541-888-7608	**Office Hours:** MW: 11 am – 11:50 am, TR: 10 am –10:50 am	**Class Location:** Sitkum 10
Meeting Time/Days: MW 1:00 pm – 2:50 pm		**Email Address:** benjamin.holt@socc.edu
Web Page Address: https://holt.blue/MTH_241/homepage.html		Fax Number:

Course Description *(as it appears in the approved College Course Outline)*	Prerequisite(s): MTH 111. Review of functions and their graphs. Overview of limits and continuity. Introduction to differential calculus of polynomial and rational functions. Cover rules and techniques of differentiation. Introduction to First and Second Derivative Tests, curve sketching, and optimization. Applications in economics, business, social and managerial sciences. This course may be taken 1 time for credit.
Course Objectives Reflecting Expected Student Learning Outcomes	Identify various characteristics of graphs of functions. • Differentiate algebraic functions. • Setup and solve a variety of optimization problems. • Use first and second derivatives to study functions and their graphs. • Determine derivatives of functions using the limit concept. Differentiate using the product rule, the quotient rule, the chain rule, and implicit differentiation.
Grading	**Course Requirements:** **myOpenMath Homework**: There will be a homework assignment for each section we cover in this course. Each assignment is completed in Canvas. The due dates for all assignments are given in the course schedule on the last page of this syllabus and are also on Canvas. 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. Late homework assignments can be made up with a late pass which extends the homework due date by 72 hours. You have a total of 3 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 20% of the course

grade.

Hometown Data Modeling Project: Students are required to complete a data modeling project using data from their hometown. The components of the project are:

- 1. Find population and average-high-temperature data about your hometown.
- 2. Do analysis on your data by fitting curves to the data.
- 3. Apply calculus techniques on these curves to draw conclusions.

Part I: Get Your Data, Fit Your Models. You may may get your population and temperature data from any credible source. You may use wikipedia as long as you cite the sources which they used to write the article about your hometown. Once you have your data, you will fit curves to them and analyze them using calculus techniques.

Part II: Write Your Report. Your report must also have a title page with all of the appropriate information such as title, your name, etc. The report must also be typewritten and all graphs and accompanying figures must be made electronically with a statistical software program. All mathematical notation should also be typewritten.

For details on how to
write your report, please visit

http://holt.blue/MTH_241/project.html

An example of a written project can be found here:

http://holt.blue/MTH_241/Projects/hometown.pdf

This project is worth 20% of the course grade.

Exams: There will be three 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.

Each exam is worth 20% percent of the course grade.

Exam 3: Exam 3 will NOT be cumulative and will have the same format and weight as the other 2 exams. Exam 3 (the final exam) will be given ONLY on the day that is scheduled by the college. (Please see the schedule on the last page of this syllabus.)

	Calculators & Technology: For the exam you may use the TI 30XIIS calculator. 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. Your course grade is determined by the following items and their associated weights: myOpenMath Homework: **20%** Hometown Data Modeling Project (Rough Draft+Final Draft): **20%** Exam 1: **20%** Exam 2: **20%** Exam 3: **20%** 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** **Policies on Missed Exams and Late Work:** Late homework assignments can be made up with a late pass which extends the homework due date by 72 hours. You have a total of 3 late passes for the term. Please use them only when you really need them. Missed exams can be made up at a penalty of 20% subtracted from the score received. If you miss an exam for reasons which are beyond your control, you are welcome to present your circumstances to me. Right before class is generally not a good time to do this, so please be mindful. My office hours are usually the best place to discuss such matters. Also, please be aware that travel arrangements made in advance of exam dates are NOT considered circumstances beyond your control. **Students who need reasonable accommodation should contact the instructor or call Disability Services for Students at 541-888-7405.**
Text(s)	**Optional Text:** OpenStax Calculus, Volume 1, Edwin Herman, Gilbert Strang, ISBN 978-1-947172-13-5 (The electronic version is freely available on the course website.

	Printed copiesare available in the campus bookstore for purchase.)
Required Materials	A TI 30XIIS or TI Multiview Calculator.
Term Calendar *(The instructor reserves the right to alter dates of presentations and exams/projects.)*	Please see the course calendar on the last page of this syllabus.
Prerequisites	MTH 111 is a prerequisite for this course. If you did not pass MTH 111 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 111 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 FREEEEEEEEEEEEEEEEEEEE!!!!!

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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).

*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.

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***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, inform your instructor and then contact the Disability Services Office for coordination of your academic accommodations. To ensure that your instructor is aware of your request, you are required to set up an appointment to talk with them sometime during the first two weeks of the term. The Disability Services Office is located on the Southwestern campus in Student Support Services, Stensland Hall. Please call the following number for more information (541) 888-7405.

***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.

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Day	Topic	Due
W 1/4	Course Introduction Section 1.1: Review of Functions	Intro Assignment
M 1/9	Section 1.2: Basic Classes of Functions Section 2.1: A Preview of Calculus	Section 1.1
W 1/11	Section 2.2: The Limit of a Function Section 2.3: Limit Laws	Section 1.2 Section 2.1
M 1/16	Martin Luther King Holiday	
W 1/18	Review	Section 2.2 Section 2,3
M 1/23	Exam 1: Sections 1.1, 1.2, 1.3, 2.2, 2.3	
W 1/25	Section 3.1: Defining the Derivative Section 3.2: The Derivative as a Function	
M 1/30	Section 3.3: Differentiation Rules	Section 3.1 Section 3.2
W 2/1	Section 3.4: Derivatives as Rates of Change	Section 3.3
M 2/6	Section 3.6: The Chain Rule	Section 3.4
W 2/8	Review Project Consultation	Section 3.6
M 2/13	Exam 2: Sections 3.1, 3.2, 3.3, 3.4, 3.6	
W 2/15	Section 3.8: Implicit Differentiation	Project Rough Draft
M 2/20	Presidents Day Holiday	
W 2/22	Section 4.1: Related Rates	Section 3.8
M 2/27	Section 4.3: Maxima and Minima Section 4.5: Derivatives and the Shape of a Graph	Section 4.1
W 3/1	Section 4.7: Applied Optimization Problems	Section 4.3 Section 4.5
M 3/6	Section 4.7: Applied Optimization Problems (Continued)	
W 3/8	Review Project Consultation	Section 4.7
M 3/13	Exam 3: Sections 3.8, 4.1, 4.3, 4.5, 4.7 (12 pm – 1:50 pm)	Hometown Data Modeling Project