Edison State Community College
Fall 2026 Syllabus

MTH 221S-401FS	Calculus/Analytic Geometry I
Prerequisites:	Satisfactory math assessment score and four years of college preparatory mathematics (including pre-calculus) or a grade of "C" or better in MTH-122S and MTH123S, or MTH128S

Days: W **Time:** 5:30 – 7:45 PM and online
Building: West Hall **Room:** 223

Instructor Name: Dr. Brian Murphy PhD Atomspheric Science, Purdue, 2015
Office Phone: (937) 778-7945 MS, Physics, Purdue, 1985
Office Location: West Hall 225
E-mail address: bmurphy2@edisonohio.edu

Office Hours: On campus: MW 7:30 – 9:00 AM
Online via teams: W 3:00 – 5:00 PM ; T 10:30 - 11:30 AM

Text
Strang, G, Herman, E, *Calculus vol. 1,* Openstax
https://openstax.org/details/books/calculus-volume-1

Calculator:
A TI-30XIIS or equivalent basic scientific calculator is permitted for exams and quizzes**. Cell-phone calculators and graphing/calculus-capable calculators are not permitted on exams and quizzes.**

Additional Resources:
Computer (with access to the internet)
Blackboard: https://edisonohio.blackboard.com/webapps/login/
XYZ Homework pass:: www.xyzhomework.com

Grading:
Four components will determine your grade in this class. These components are
1) Homework, 2) Quizzes, 3) Exams, and 4) the Final Exam.

Grading Allocation: Homework 20%, Quizzes 10%, 3 exams 51% and Final Exam 19%.

The grading scale is
90% - 100% --- A
80% - 89% --- B
70% - 79% --- C
60% - 69% --- D
0% - 59% --- F

All scores will be maintained in Blackboard's online grade book.

Homework: Homework will be done online using XYZ homework. There will be homework assigned for each section of material used from the text. XYZ access pass will need to be purchased unless you have one from a previous class that has not expired.

Exams: There will be three exams during the semester and a comprehensive Final Exam.

Makeups/Late submittals:
Due date extensions for late homework may be granted for documented extenuating circumstances.
Submission of written documentation is required.

Quizzes cannot be made up, but may be excused for documented extenuating circumstances.
Submission of written documentation is required.

Exams cannot be missed. Occasionally, with prior approval or with documented extreme circumstances, they can be made up, but this is entirely at the discretion of the instructor.
Submission of written documentation is required.

Attendance:
Please attend all classes, watch the weekly screencasts, and complete all homework in XYZ homework on time. Staying current is crucial to success in this class. A student who misses class is expected to study the missed content and ask questions as needed. You are responsible for all announcements and material assigned or discussed in a class or screencast regardless of whether you attended the class or watched the screencast.

Final Withdrawal Date
Last day to withdraw for Fall semester 2026 semester is Nov. 2.

Academic Honesty Statement:
Any academic dishonesty or deception, such as cheating, copying or plagiarism will not be tolerated.

Testing Your Faith Act Policy

Edison State Community College is committed to providing an environment respectful of students' beliefs. Students are permitted to be absent for up to 3 days each semester based on their faith, religion, or spiritual belief system with no academic penalty. Students must complete the Testing Your Faith Act Accommodations Form, https://www.edisonohio.edu/services-support/student-resources. and provide a copy to their individual faculty within 14 days from the start of the course. The entire policy can be found in the student handbook at https://www.edisonohio.edu/services-support/student-resources.

NOTE: This syllabus and the information contained within it are subject to change without notice.

	Topics
Unit 1	**Week 1: 1.1 – 1.3-**Chapter 1 review material from college algebra **Week 2: 1.5-**Chapter 1 review material from college algebra **2.1 – 2.2-**a preview of calculus, the limit of a function **Week 3: 2.3 – 2.4-**the limit laws, Continuity Quiz1_in class 2026-09-09 over ch. 1 Quiz2_in class 2026-09-16 over sec. 2.2 – 2.4 **Exam 1 in class 2026-09-23** over ch. 1 and ch. 2
Unit 2	**Week 4: 3.1 – 3.3-**Defining the derivative; the derivative as a function, Differentiation rules **Week 5: 3.3 – 3.5**-Differentiation rules; Derivatives as Rates of change **Week 6: 3.6 – 3.7-T**he chain rule, Derivatives of inverse functions **Week 7: 3.8 – 3.9-I**mplicit differentiation, Derivatives of exponential and Logarithmic functions Quiz3_in class 2026-09-30 over sec. 3.2 – 3.3 Quiz4_in class 2026-10-07 over sec. 3.5 – 3.6 Quiz5_in class 2026-10-14 over sec. 3.8 – 3.9 **Exam 2 in class 2026-10-21** over ch. 3
Unit 3	**Week 8: 4.1 – 4.2**-Related rates, Linear approximation and differentials **Week 9: 4.3 – 4.4-**Maxima and minima, The Mean Value theorem **Week 10: 4.5 – 4.6-**Derivative ad the shape of a graph, Limits at infinity and asymptotes **Week 11: 4.7 – 4.8-**Applied Optimization problems, L'Hopital's Rule **Week 12: 4.9 – 4.10-**Newton's Method, Antiderivatives **4.10 – 5.1**-Antiderivatives; Approximating Areas Quiz6_in class 2026-10-28 over sec. 4.1 Quiz7_in class 2026-11-04 over sec. 4.2 – 4.3 Quiz8_in class 2026-11-11 over sec. 4.6 – 4.7 Quiz9_in class 2026-11-18 over sec. 4.8, 4.9 **Exam 3_in class 2026-11-25** over Ch. 4 and sec. 5.1
Unit 4	**Week 13: 5.1 - 5.2-** Approximating Areas, The definite integral **Week 14: 5.3**-Fundamental Theorem of Calculus **Week 15: 5.4 – 5.5-**Integration formulas and the net change theorem, Substitution **Comprehensive final exam in class 2026-12-09**

HW#0		Due 8/29/2026
HW#1	over sec. 1.1, 1.2	Due 9/02/2026
HW#2	over sec. 1.3, 1.4	Due 9/05/2026
HW#3	over sec. 1.5, 2.1	Due 9/09/2026
HW#4	over sec. 2.2, 2.3	Due 9/12/2026
HW#5	over sec. 2.4	Due 9/16/2026
HW#6	over sec. 3.1, 3.2	Due 9/19/2026
HW#7	over sec. 3.3	Due 9/30/2026
HW#8	over sec. 3.4, 3.5	Due 10/03/2026
HW#9	over sec. 3.6	Due 10/07/2026
HW#10	over sec. 3.7, 3.8	Due 10/10/2026
HW#11	over sec. 3.9	Due 10/14/2026
HW#12	over sec. 4.1	Due 10/17/2026
HW#13	over sec. 4.2	Due 10/24/2026
HW#14	over sec. 4.3, 4.4	Due 10/28/2026
HW#15	over sec. 4.5	Due 10/31/2026
HW#16	over sec. 4.6	Due 11/07/2026
HW#17	over sec. 4.7	Due 11/14/2026
HW#18	over sec. 4.8	Due 11/18/2026
HW#19	over sec. 4.9, 4.10	Due 11/21/2026
HW#20	over sec. 5.1, 5.2	Due 12/02/2026
HW#21	over sec. 5.3, 5.4	Due 12/05/2026
HW#22	over sec. 5.5	Due 12/08/2026