

**Instructor:** Dr. Tom Cuchta  
**Email:** [tcuchta@fairmontstate.edu](mailto:tcuchta@fairmontstate.edu)  
**Time:** MTWF 8:00–8:50  
**Location:** HH 303 (and virtual)  
**Office:** ET 423  
**Drop-in office hours:** Please see my website for the times when I have scheduled my daily office hours when I will guarantee that I am available: <http://tomcuchta.com>. You are welcome to meet with me virtually during this time – just email or message me in Teams. Office hour times may change throughout the semester; the website will always contain my current official schedule. Alternate times may always be scheduled.

**Class webpage:** <http://tomcuchta.com/teach/classes/2021/MATH2501-Fall2021-FairmontState/>  
**Textbook:** “Calculus Volume 1” by OpenStax  
 (freely downloadable at <https://openstax.org/details/books/calculus-volume-1>)

**Course description:** This course is the calculus of one variable, beginning with an intuitive study of limits and a geometric interpretation of the derivative. Topics include differentiation of functions and the application of the derivative to graphing functions, approximating functions, solving max/min problems and related rate problems, anti-differentiation and its link to the signed area under a curve, the fundamental theorem of calculus and applications of the definite integral.

**Prerequisites:** MATH ACT score of 25 or old MATH SAT 570 or New Math SAT 590 or ACCU-PLACER College Level Math 75 or MATH 1115 or MATH 1540 or MATH 1186 or MATH 1586

**Technology requirements:** Written homework will be regularly submitted to Blackboard. Online homework will be done via WeBWork. Some free online calculators and function plotters (e.g. WolframAlpha, Desmos, CalcPlot3D) will be used, but students are not assumed to know how to use them in advance. Presentations should be done in class when possible; if they must be done virtually, then you must be prepared for doing so.

**Course delivery:** Our course is designed as “Lecture”, meaning it meets in person every day. Due to extra university requirements, the class will be synchronously streamed and recorded.

**Attendance policy:** In-person or virtual attendance itself will **not** be recorded for a grade. If a class is missed, then it is the **student’s responsibility** to find out what was missed.

**Exams:** There will be **no exams** in this course.

**Coursework:** You will receive work in this course in various “grade categories”, as described on the next page.  
 The following standard scale applies universally:

Grade	Percentage
A	≥90% of points
B	≥80% of points
C	≥70% of points
D	≥60% of points

Your coursework will be given on a grade as follows:

A	B	C	D	F
+4 points	+3 points	+2 points	+1 point	+0 points

- “A” (+4) – excellent; perfect submission, no errors;
- “B” (+3) – good; nearly perfect maybe with some errors (e.g. arithmetic);
- “C” (+2) – some problems; there are some issues but you are on the right track;
- “D” (+1) – tried; there are fundamental issues or misunderstandings but it is clear that you made an honest attempt; and
- “F” (+0) – not gradable; does not seem to contain an honest attempt at the work.

**Written work:** The content that would otherwise be on an exam will be broken down into smaller assignments. There will be approximately two such assignments per week of class, each with its own due date that will be specified (typically within one week of assignment). Grades of B, C, D, or F will receive feedback from the instructor that must be addressed if the student chooses to revise the submission.

Revisions must come with a reflection essay, at least two paragraphs long, containing **both** a description of what went wrong with the student's thinking and approach in the first submission **and** a description of what was done to improve it in the resubmitted version. Only problems identified in the feedback need to be revised, but the *whole* problem should be rewritten (not just "corrected"). Improperly formatted revisions will be returned with the grade of F.

The highest score among all submissions will be the one that counts for the grade.

**Timely completion:** There will be some points assigned to you for completing your **written homework** in a timely fashion. You must submit your first attempt by its due date and also get a score of A, B, C, or D on it to get the +1. Otherwise you receive +0 timely completion points for that submission. Timely completion for homework submitted via Blackboard will be indicated by increasing the base score by 0.5. For example, a "3.5" means you earned an "B" and received timely completion.

**Timely completion points convert into written work points:**

5 timely completion points = 1 written work point

**IMPORTANT:** This conversion for timely completion can only increase your written work score by up to 10% of the total possible written work points **in a given 5 week period**. Timely completion earned in any 5 week period applies only to that 5 week period. Staying on top of your work can increase your grade by one letter!!

**Online work:** Online homework will be administered through the Fairmont State instance of WeBWork, which can be found at <https://csmath.fairmontstate.edu/webwork2>. Homework may be attempted an infinite number of times, and the highest point score earned will be counted.

**Accessing WeBWork:** The online homework is provided for **free** by Fairmont State University at our WeBWork server. This server can be accessed on campus by going to <https://csmath.fairmontstate.edu>. If you are off campus, then you will need to use the Fairmont State cloud service to access the online homework system. See the following webpage for an explanation of reaching WeBWork from off-campus: <http://tomcuchta.com/fsucsmathserver>.

**Presentations:** What will distinguish this from a non-honors course is regular presentations from the students to the class. These presentations will occur often (likely two per week) and will be "low pressure" in that there will be opportunity for improvement on any presentation. Each presentation will be scored with a presentation rubric completed by the rest of the class ("peer review"). Those scores will be averaged to obtain a numerical grade for each presentation. Any presentation may be revised in response to the peer review feedback to improve the grade on it. The revised presentation may be presented to the instructor during office hours or at another arranged time outside of class.

**Peer review:** Students will submit a short peer review for each presentation by another student in the class. In order to ensure quality reviews, students will receive a grade for participating in this aspect of the course. A completed peer review must include the following aspects: a short description of what the presenter is doing, a description of what the reviewer thinks is the "most important aspect" of the presentation *and why*, and any additional constructive comments to the presenter for improvement. Peer reviews must be submitted **within 48 hours** of the presentation occurring to be counted for full credit and application to the presenter's grade. Each day one is late decays the max possible score on a peer review by 1 point (to a minimum of +2).

**Final grade:** Each grade category (written work, online work, presentations, and peer review) will receive a letter grade for each 5 week period based on the work that was due in that 5 week period. The ultimate "5 week period" grade will be the lowest grade among all categories for that period. Your final grade in the course will be the lowest of your grades from the three 5 week periods. For example, consider the following chart of possible grades in a semester:

5 Wk. Period	Written HW	Online HW	Presentations	Peer Review	Total Grade
1	A	B	A	C	<b>C</b>
2	B	B	B	A	<b>B</b>
3	A	A	A	A	<b>A</b>

In that case, the final grade in the course is a "C".

- LEAD Center:** The Learning Enrichment and Academic Development Center (LEAD) is located on the second floor of the library and provides students with free support resources, including learning assistance in a wide range of courses. The LEAD Center opens no later than the second week of classes. Assistance is primarily offered on a drop-in basis with appointments available for select courses. To book an appointment, see more information on services, hours, or a list of current workshops, visit <https://www.fairmontstate.edu/academics/lead-center>. You may also contact the coordinator Brittany Cuchta at [lead@fairmontstate.edu](mailto:lead@fairmontstate.edu).
- Cheating:** I encourage you to work together, to attend tutoring, and to seek out help from me. However, copying the work of others and not putting in an honest effort yourself is not acceptable. If you are caught cheating on any assignments, then you will forfeit any points on that assignment with no possibility of revision. If you are caught cheating more than once, then you may receive an "F" in the course.
- Safety:** We will follow the university guidelines for face masking, which may change as the semester progresses. See this webpage for the current university policy pertaining to the coronavirus: <https://www.fairmontstate.edu/coronavirus>. Students who prefer to always wear a mask are encouraged to do so.
- Student handbook:** <http://www.fairmontstate.edu/publications/campushandbooks/studenthandbook/default.asp>
- Disability support:** Disability services are available to any student, full or part-time, who has a need because of a documented disability. It is the *student's responsibility* to register for disability services and to provide any necessary documentation to verify a disability or the need for accommodations. Students must provide their professors with a copy of their academic accommodation letter each semester in order to receive accommodations. Faculty, students, and the Office of Disability Services must cooperate to ensure the most effective provision of accommodations for each class.

The Office of Disability Services is located in suite 316 of the Turley Student Services Center. For additional information, please call (304) 333-3661 (**TTY**: (304) 367-4906).

**Learning outcomes:** All learning outcomes will be assessed via written homework.

1. Apply derivatives to solve a variety of real world problems using appropriate strategies, e.g. geometric, trigonometric, and function, and symbolic manipulation skills and determine if solutions are reasonable.
2. Define, determine and use the continuity of a function at a point and on an interval.
3. Use the language of mathematics to define, evaluate and analyze statements involving limits.
4. Use the language of mathematics to define, interpret, and evaluate simple antiderivatives and integrals using various methods including the Fundamental Theorem of Calculus.
5. Demonstrate conceptual understanding of and facility with the derivative, synthesizing mathematical knowledge to model, interpret and calculate the derivative of a function.

# Estimated Math 2501-010 Calendar Fall 2021

<b>Week</b>	<b>Sections</b>
9 Aug – 13 Aug	review of prerequisite material
16 Aug – 20 Aug	2.5, 2.2
23 Aug – 27 Aug	2.3, 2.4
30 Aug – 3 Sep	3.2, 3.3
6 Sep – 10 Sep	3.4, 3.5, 3.9
13 Sep – 17 Sep	3.6, 3.7, 3.8
20 Sep – 24 Sep	4.1
27 Sep – 1 Oct	4.2, 4.3
4 Oct – 8 Oct	4.4, 4.5, 4.6
11 Oct – 15 Oct	4.7
18 Oct – 22 Oct	4.8, 4.9, 4.10
25 Oct – 29 Oct	5.1
1 Nov – 5 Nov	5.2
8 Nov – 12 Nov	5.3 <i>12 November – LAST REGULAR CLASS DAY</i>
15 Nov – 19 Nov	<i>FINALS WEEK</i>