

MATH 2300 Calculus I
Fitchburg State University
4 undergraduate credits

Instructor: Dr. Catherine Buell cbuell1@fitchburgstate.edu
Office Hours: TBD
Class Times/Days: July 1 – August 2nd, 2019---Shanghai, China

Textbook: *Calculus Early Transcendentals* 7th or 8th Edition, by James Stewart, Thompson/Brooks/Cole.

Course Materials: You will need a calculator for this class (not attached to a phone or tablet and is a TI-84 or less). A standard scientific calculator is perfectly acceptable. I suggest bringing the calculator to class and use the same one for homework. Some quizzes will be non-calculator quizzes.

Course Content: The course involves the study of the derivative, rates of changes, applications of differentiation, as well as an introduction to integration. *Prerequisite:* PreCalculus (Math 1300) or its equivalent.

Grading: The final grade will be based tests (40%), homework/presentation/attendance (20%), quizzes (15%), and a final exam (25%). The standard Fitchburg State plus/minus grading system will be used.

FSU	4.0	3.7	3.5	3.3	3.0	2.7	2.5	2.3	2.0	1.7	1.5	1.3	1.0	0.0
Letter	A	A-	A-/B+	B+	B	B-	B-/C+	C+	C	C-	C-/D+	D+	D	F
Numerical	95-100	92-94	89-91	86-88	83-85	80-82	77-79	74-76	71-73	69-70	67-68	64-66	60-63	0-59

Homework/Presentations/Attendance/WebWork: Homework will be assigned every day. On occasion, homework will be presented. On those days, student grades are assigned by participation in the group discussion and check plus/check/check minus on the homework (which could still be collected). So on these days your homework grade includes participation in the presentations (presenting homework and commenting on the presentations) and the completeness of your own work.

Quizzes: In-class activities and announced quizzes can happen throughout the semester. Quizzes will typically come from HW problems. Quizzes are worth 15% of your grade.

Exams: There will be two tests during the semester each worth 20% and one final exam worth 25%. If an exam is missed, you must contact the instructor (via email) within 12 hours to have any chance to make up the exam. If you missed the exam for a legitimate reason, you must make up the exam before the class following the exam.

Academic Honesty: I expect each student to be honest with themselves and with me and I expect to see YOUR work. I know what the INTERNET might say, I want to know what you say. If you work closely with another student, you should indicate that on your homework. All students should be aware of and follow the college's Academic Integrity Policy which can be found on page 43 of the Undergraduate and Graduate Course Catalog. Any acts of cheating on an assessment (homework, quiz, or exam) will earn the student a score of zero on that assessment and may result in a formal accusation to be reported to the student's Dean, as outlined in the Course Catalog.

Expectations:

1. Attendance will be taken every day and students are expected to attend class.
2. Leave all distractions such as newspapers, crossword puzzles, iPods, and work for other courses at home or packed away.
3. Turn off all cellphones in class. Please set your phone to silent and step outside if you must answer a call.
4. Your enthusiasm, your questions, and your excitement are always welcome in class.

Goals:

How to succeed in this class:

1. Come to class, participate, and take notes.
2. Ask lots of questions.
3. Visit me in office hours, email me, and visit the tutor.
4. Ask lots of questions.
5. Keep up with homework and reading the text.

Students with Disabilities: If you have a disability and require accommodations, please contact me during the first two weeks of class or as soon as you become aware of the need, so that your learning needs may be met. You will need to provide documentation of your disability to the Disability Services.

Extended Campus Library Services

The Gallucci-Cirio Library at Fitchburg State University provides a full range of library services including borrowing privileges; document delivery (books and articles mailed to your home); Interlibrary Loan; reference assistance via: phone, email, IM, Blackboard's Collaboration and Elluminate tools, Skype and in-person; library instruction; research help and more. Any questions relating to library services should be directed to the Linda LeBlanc, Access Services Librarian, at 978-665-3062 or dllibrary@fitchburgstate.edu. There is also a special section for Distance Learning and Extended Campus Services at <http://fitchburgstate.libguides.com/dlservices> outlining the wide range of services available to you and how to access them.

Course Schedule

Week	Topics
1	The Tangent and Velocity Problems Calculating Limits Using the Limit Laws One Sided Limits Continuity Limits at Infinity; Horizontal Asymptotes
2	Derivatives and Rates of Change Interpretations of the Derivative Basic Differentiation Rules The Product and Quotient Rules

	The Chain Rule
3	Implicit Differentiation Derivatives of Inverse Functions/Logarithmic Functions Extreme Values The Mean Value Theorem, IVT, EVT Increasing and Decreasing Functions Concavity Curve Sketching
4	Related Rates Optimization Problems Indeterminate Forms and L'Hopitals Rule Antiderivatives The Definite Integral Riemann Sums The Fundamental Theorem of Calculus
5	Numerical Integration The Substitution Rule Integration by Parts