

TTU – MATH 1451 – Calculus I with Applications

Section / Time / Location:	026 / MWF 3:00-3:50pm / MCOM 075 026a / M 4:00-4:50pm / MCOM 075	Instructor:	Josh Engwer
		E-mail:	josh.engwer@ttu.edu
		Website:	http://www.myweb.ttu.edu/jengwer
Office Hours:	MWF 11:30am - 1:30pm (or by appointment)	Office:	MATH 106C
Text:	<i>CALCULUS</i> 5 th Custom Edition by Strauss, Bradley, and Smith (published by Pearson)		

Prerequisites: Any one of [A]-[G] below. (Legend: / = 'or', + = 'and', :X = 'at least a grade/score of X')

(**COURSE-RELATED**) [A] MATH 1350/1550:C [B] MATH 1321:B [C] MATH 1321:C + MPE:5

(**EXAM-RELATED**) [D] MPE:7 [E] SATM:660 [F] ACTM:29 [G] Calculus AB AP:3 + MPE:5

Course Content: (not exhaustive, but the main themes)

- Chapter 1 : Review of essential Algebra & Trigonometry
- Chapter 2 : **Limits & Continuity** of Functions
- Chapter 3 : **Derivatives**, Rectilinear Motion, **Related Rates**, Differentials
- Chapter 4 : **Extrema** of Functions, M-V-T, **Curve Sketching**, L'Hôpital's Rule, **Optimization**
- Chapter 5 : **Integration**, Riemann Sums, **F-T-C**, Intro to ODE's, Average Value, Numerical Integration

Supplementary Notes: The instructor has written notes to supplement/summarize/clarify the book material. See website.

Final Grade Assessment: Attendance – 5%, Homework – 10%, four Midterm Exams (15% each) – 60%, Final Exam – 25%
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Final Grade Scale: A: 100%-90% B: 89%-80% C: 79%-70% D: 69%-60% F: 59%-0%

Attendance Policy: Attendance will be taken, and it's your responsibility to sign your name on the roll sheet each class.

Homework: All homework (HW) is assigned & completed online through WeBWorK

You should work HW problems by pencil & paper to realize the amount of work to be expected for similar problems on exams.

Midterm Exams: In-class, closed-'everything' (i.e. no books, no notes, no formulas, no calculators/phones/PC's/tablets, ...)

Sufficient correct work must be shown to receive full points on exam problems – answers without work earn no credit!

Be prepared to show a photo ID (ideally, your RaiderCard)

Final Exam: Comprehensive, departmental, Bluebook required, closed-'everything'.

It will be administered on **Friday, December 7th, 10:30am - 1:00pm in room TBA.**

Make-up Policy: Homework will not be accepted late – hence, no make-ups for homework.

There will be no make-up exams given except for observance of a religious holiday.

If a midterm exam is missed for a **legitimate documented** reason, then the Final Exam score will replace it.

Some legitimate excuses (with documentation): university field trip, severe illness, death in the family, ...

Some non-legitimate excuses: "I already bought plane tickets", "I was stuck in traffic", "I overslept", ...

Tutoring Resources for Students:

T.S.C. (Tutoring & Study Center) - A free public tutoring service provided by Math Dept in MA 106.

P.A.S.S. Learning Center - A free tutoring service for several subjects offered in Holden Hall, Room 80.

Tutoring List - A list of tutors in the Math Dept that you may independently contact for a fee.

Important Dates: (see instructor's website for midterm exam dates)

09/03 (Mon) – Labor Day (no class)

10/29 (Mon) – LAST DAY TO DROP OR DECLARE PASS/FAIL INTENTIONS

11/21 (Wed) to 11/25 (Sun) – Thanksgiving (no class)

12/05 (Wed) – Last day of class

12/07 (Fri) – FINAL EXAM (10:30am - 1:00pm) Room TBA

Learning Objectives: MATH 1451 satisfies part of the university Core Curriculum requirement in Mathematics: “*Students graduating from Texas Tech University should be able to demonstrate the ability to apply quantitative and logical skills to solve problems.*” It meets the TTU general education student learning outcomes for mathematics that students will:

- Apply arithmetic, algebraic, geometric, statistical and logical reasoning to solve problems.
- Use mathematical and logical reasoning to evaluate the validity of an argument.
- Represent and evaluate basic mathematical and/or logical information numerically, graphically and symbolically.
- Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics and draw inference from them.

Students will develop skills to:

- Compute & interpret limits of functions.
- Explain the concept of continuous functions.
- Compute & interpret derivatives of functions.
- Solve related rate and optimization problems via differentiation.
- Compute & interpret definite and indefinite integrals.
- Apply specific concepts to certain problems from the sciences.

Academic Integrity: (from OP 34.12)

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and a high standard of integrity. The attempt of students to present as their own any work that they have not honestly performed is regarded by the faculty and administration as a serious offense and renders the offenders liable to serious consequences, possibly suspension.

Civility in the Classroom: Students are expected to assist in maintaining a classroom environment conducive to learning.

In order to assure that all students have an opportunity to gain from time spent in class, troublesome behavior will not be tolerated. At a minimum, this includes using cellular phones or pagers, making offensive remarks, reading newspapers, leaving class early, arriving to class late, sleeping or engaging in any other form of distraction.

ADA Accommodation: (from OP 34.22)

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructors office hours. Please note: instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the **Student Disability Services office in 335 West Hall or 806-742-2405.**

Religious Holy Day Observance: (from OP 34.19)

Texas House Bill 256 requires institutions of higher education to excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.