

**Math 111--Applied Calculus**

<b>Terry Rood</b> <b>Office:</b> B152 Science Bldg  <b>*Email:</b> <a href="mailto:trood@uwsp.edu">trood@uwsp.edu</a> (* preferred method of contact)	<b>Office Hours</b>	<b>Course Meeting Times</b>
	Thursday <b>1 – 4:00 PM</b> or <i>by appointment</i>	Mon, Wed, Thurs, Fri <b>Section 3: 12:00-12:50PM CCC 111</b>

**Text (rental):** *Applied Calculus for the Managerial, Life, and Social Sciences: A Brief Approach*, 10<sup>th</sup> Ed., by S. T. Tan (Published by Cengage, ISBN: 978-1-285-46464-0). Topics include most of those in Chapters 1 – 6.

**Calculators:** A graphing calculator can be a helpful tool for understanding concepts and working homework problems in this class. The TI graphing calculator such as the TI-84 is most familiar to me. Computers, phones, Ipads, and calculators with a "QWERTY" keyboard are not allowed during exams or quizzes. You will not always be allowed to use a calculator on all parts of quizzes and tests, so do not become too dependent on using them. You may not share a calculator with another student during a quiz or exam.

**Prerequisites:** Math 100 (College Algebra) or a suitable placement test.

**General Course Goals:** In addition to achieving the Quantitative Literacy learning outcomes of the university's General Education Program, students will develop communication skills, and problem-solving approaches to applied problems in fields such as biology, natural resources, and social science, using the central concepts of introductory differential and integral calculus.

**Learning Outcomes:** Students will be able to

- 1) Find limits, derivatives, and integrals from graphs and from formulas.
- 2) Determine when limits, derivatives, or integrals are useful in applied problems.
- 3) Use rules for finding derivatives and integrals and identify which rules apply.
- 4) Identify features of a graph using derivatives.
- 5) Optimize a function or value using derivatives, and construct a conclusion using quantitative justification.
- 6) Use the Fundamental Theorem of Calculus to relate derivatives & integrals to each other.
- 7) Find exact area under a curve and area between two curves, and estimates for these areas.
- 8) Communicate their conclusions and justifications using mathematical notation and language and using English sentences. This includes the use of mathematical terminology.

**Evaluation:** Final course grades will be determined by the following:

- 10% for assignments (most homework will be given on Webwork)
- 10 % for quizzes (your lowest score of the five quizzes will be dropped at the end of the semester)
- 20 % for **Exam 1**, in-class
- 20 % for **Exam 2**, in-class
- 20% for **Exam 3**, in-class
- 20% for the **Comprehensive Final Exam** (See next page for date & time.)

**100%**

Course Grades (%) at or above	93	90	87	83	80	77	73	70	67	60
will receive at least a grade of	A	A -	B +	B	B -	C +	C	C -	D +	D

\* I reserve the right to exercise discretion in raising a student's grade if the final weighted average does not appear to reflect the quality of a student's work (for example, because of one low exam score early in the course). I will not use discretionary judgments to lower a student's final grade.

**Homework:** Almost every day a list of homework problems will be given on Webwork or in class. Each of these will be a *minimal* list of problems which you need to understand in order to do well in this course. Doing the homework is extremely important, so make sure you stay on top of it and ask questions on whatever you don't understand. The homework will be graded for completion.

**Attendance** is expected at every class meeting. Everyone becomes ill sometimes. If you become ill, I expect you to make a reasonable effort to come to class. If the illness or other emergency requires absence from class, I expect you to contact me immediately, preferably by email. I expect you to keep up with what is being taught by following in your book and making every attempt to do the homework.

Quizzes and exams may not be made up unless arranged with me ahead of time, and then only for sufficient reason.

If a dire emergency occurs, contact me as soon as possible to see if an exception is in order.

**Incompletes:** A grade of incomplete may be given when circumstances arise which are beyond the student's control and the student is unable to complete the course *IF* the student was passing when the circumstances arose.

**Disability Accommodations:** Reasonable accommodations are available for students who have a documented disability. Please notify the instructor during the first week of class of any accommodations needed for the course. For information on accommodations available to students with disabilities, call 715-346-3365, visit the Disability and Assistive Technology Center in room 609 of the Learning Resources Center, or visit their website: <http://www.uwsp.edu/disability/Pages/default.aspx>.

**\*Desire to Learn (D2L)**      <https://uwsp.courses.wisconsin.edu/d2l/home>.

To access D2L, use your regular campus logon ID and password, and then click on our course:  
**MATH 111 Applied Calculus**

Homework assignments, handouts, class work, grade information, and other class announcements can be found on the web in Desire to Learn (D2L).

All students are expected to know the UWSP Community **Rights & Responsibilities** and the **Student Academic Standards and Disciplinary Procedures** found on the Dean of Students webpage at <http://www.uwsp.edu/dos/Documents/CommunityRights.pdf>.

**Food/Beverage:** I would prefer that you not eat in class. It is a distraction.

**Cell Phones:** I understand that occasionally you may want to take a picture of what is on the board. Other than that, cell phones should be silenced and put away once class begins.

**For Academic Support:**

- 1) Ask questions as they arise.
- 2) Come to see me before or after class, stop by during my office hours, or check to see if I am available at other times.
- 3) Tutoring services are available for this course. **The Math Help Room** in the Science Building offers free drop-in tutoring just off the Main Lobby of the older part of building, room **SCI A113A**.
- 4) **The Tutoring Learning Center** (lower level of the **LRC**) offers support as well.

***Tutoring***

Tutoring in Math and Science (TIMS) in the Tutoring-Learning Center (TLC), in cooperation with the Math Department, offers free group and Drop-in Study Table Sessions to support you in your math classes. In addition, TIMS offers the option for individual math tutoring sessions. The math tutors are UWSP students who have done well in their classes and who are here to share their successful study habits and math content knowledge to help others succeed. Talking about math and working problem sets together helps to clarify and solidify knowledge, and the tutors in the lab are eager to help. If you have questions about the schedule or would like to make an appointment, please visit room LRC 018 or call (715) 346-3568 for information.

**\*\*We have a Supplemental Instructor: Charisse Bragg [charisse.t.bragg@uwsp.edu](mailto:charisse.t.bragg@uwsp.edu)**

*\* Tentative Math 111 Schedule \**

Week	Dates	Sections	Topic
1	Jan 23-27	1.1 1.2 1.4 2.1	Precalculus Review Precalculus Review II Straight Line Models Functions and their Graphs
2	Jan 30-Feb 3	2.2 2.3 Quiz 1 2.4	The Algebra of Functions Functions and Mathematical Models  Limits
3	Feb 6-10	2.6 Quiz 2	The Derivative
4	Feb 13-17	3.1 3.2 3.2 (cont'd) 3.3	The Basic Rules of Differentiation The Product Rule The Quotient Rule The Chain Rule
5	Feb 20-24	3.4 Exam I	Marginal Functions in Economics
6	Feb 27- Mar 3	3.5 4.1 4.2	Higher Derivatives Applications of the First Derivative Applications of the Second Derivative
7	Mar 6-10	4.3 Quiz 3	Curve Sketching
8	Mar 13-17	Exam II	
	<b>Mar 20-24</b>		<b>SPRING BREAK</b>
9	Mar 27-31	4.4 4.5 Quiz 4	Optimization Optimization II
10	Apr 3-7	5.1 5.2 5.4 5.5	Exponential Functions Logarithmic Functions Differentiation of Exponential Functions Differentiation of Logarithmic Functions
11	Apr 10-14	5.6 Quiz 5 6.1	Exponential Functions as Models Antiderivatives and Rules of Integration
12	Apr 17-21	6.2 6.4 6.5	Integration by Substitution The Fundamental Theorem of Calculus Evaluating Definite Integrals
13	Apr 24-28	6.6 Exam III	Area Between Two Curves
14	May 1-5		Extra Topics, as time allows
15	May 8-12		Review for Final Exam
16	Thursday, May 18th	Final Exam	8:00AM - 10:00 AM

Emergency Response Guidance:

In the event of a medical emergency call 9-1-1 or use Red Emergency Phone [list location nearest your classroom]. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure at [list primary location for shelter closest to classroom,]. See [www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx](http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx) for floor plans showing severe weather shelters on campus. Avoid wide-span structures (gyms, pools or large classrooms).

In the event of a fire alarm, evacuate the building in a calm manner. Meet at [state logical location to meet 200 yards away from building]. Notify instructor or emergency command personnel of any missing individuals.

Active Shooter/Code React – Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders. See UW-Stevens Point Emergency Procedures at [www.uwsp.edu/rmgt/Pages/em/procedures](http://www.uwsp.edu/rmgt/Pages/em/procedures) for details on all emergency response at UW-Stevens Point.

