Mathematics 125-03: Applied Calculus : TTr 10:50 a.m.-12:05 p.m.
Instructor: Weisgram
Prerequisite: Mathematics Placement examination or a grade of C- or higher in Mathematics 101

Prospectus:
This course is a general introduction to The Calculus with emphasis on application of its concepts to a variety of disciplines.

Format:
Classes will be conducted in the lecture/discussion format. The first few minutes of each period are reserved for questions based on readings, prior lectures, and homework. Other appropriate questions will be entertained as they arise. Note Standard 7 below.

Office Hours/Contact:
Office hours are Tuesday and Thursday 12:10-1:40 p.m. in Maria Sanford 211. No appointment is necessary. To contact your instructor, call the following Voice-Mail number and leave a message: (860) 832-2222 x 12080.

Evaluation:
Students will be evaluated by means of examinations, announced and unannounced quizzes, and written assignments. There will be five in-class examinations including the comprehensive final examination administered, without exception, on Thursday, May 12, 11:00-1:00 a.m. Failure to attend the final examination will result in a grade of “F” for the course. All examinations bear equal weight. Written assignments and quizzes will, in total, count as a single examination. Standards for written assignments will be distributed in class. There are no extra credit assignments in this class. Note Standards 1,3,5, and 6 below. See separate Homework Standards sheet.

Attendance:
Regular class attendance is expected at this university. While no formal policy will be applied to this course, students benefit from lectures and class discussions in direct proportion to the frequency of their attendance and participation. Note Standards 3,6, and 6, below.

Standards:
1) The purpose of examinations and quizzes is to measure mastery of the concepts and techniques previously studied. That is, to determine whether the student can apply these ideas correctly to new situations. Students will be responsible for accurate and grammatical statement and illustration of all definitions and theorems, and for solving problems which require a thorough understanding of concepts, their relations, and methods.
2) Clear and accurate grammatical expression is essential, especially in Mathematics. All written work will be subject to this standard. Consult the Homework Standards.
3) Written assignments must be submitted at the beginning of the class for which they were assigned. Otherwise, they will not be accepted for credit. Late assignments will not be accepted. Answers alone will not suffice for written assignments or examinations; derivations and clear explanations are required.
4) The calculator will be used to perform arithmetic calculations, to illustrate concepts, and to provide a means for testing conjectures. It will **not** replace the need to develop critical conceptual and analytical skills. Calculators capable of symbolic manipulation are prohibited for use on examinations or quizzes.

5) Make-up examinations will **not** be given. If significant circumstances (as judged by the instructor) obtain, the missed examination will be assigned the student’s grade on the final, comprehensive examination. Any subsequent missed examinations will be assigned a grade of “F”. It is the student’s responsibility to attend all examinations, submit all written assignments in a timely manner, and to prevent the occurrence of circumstances which compromise this responsibility.

6) Students are responsible for determination of all assignments and announcements made in their absence and for completion and timely submission of all such assignments. Lectures will not be repeated.

7) The general standard of civility which respects each person’s right to speak and listen without interruption or disturbance will apply throughout this semester. If you have a question or wish to answer a question, raise your hand and you will be acknowledged in turn. Unless you are asking the instructor a question or you are answering a question directed to you or to the class, you should not be talking while class is in session. **Do not engage in private conversations or distracting activity during class.** Failure to comply with standard will result in a **one letter grade** reduction to the cumulative quiz/homework grade. Use of a cell phone during an examination will result in a failure (a grade of F) for that examination.

8) **Cell phones are to be turned off and removed from sight of both the student and the instructor during class.** Failure to adhere to this standard will result in a **one letter grade** reduction to the cumulative quiz/homework grade. Use of a cell phone during an examination will result in a failure (a grade of F) for that examination.

9) Assignments, examinations, and quizzes are returned on the first class period after they are submitted. It is the student’s responsibility to collect submissions returned in his or her absence. **Papers not collected within two weeks will be discarded.**

**Schedule:**

Entries in the “Tuesday” and “Thursday” columns refer to sections from the text covered that period. This schedule is subject to change if conditions warrant modification. **Homework** consists of at least the first 25 problems in each section covered and the problems cited in the following schedule. **Only** the problems listed below are to be submitted for grading. See **Homework Standards** document.

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**Special Needs:**
Students with special needs must obtain the appropriate documentation from the Student Disability Services Office, Willard Hall 101-04 and present it to the instructor during the first week of classes.

**Admonitions:**
1) Mathematics is learned not by accident or passive observation, but through active, focused, intellectual inquiry and problem solving. Text problems are critical to one's success in this course. Do not expect to pass this course by only watching the instructor lecture.
   a) In addition to the problems assigned for submission, you should attempt to solve as many text problems as possible. This will expand and reinforce your understanding.
   b) Memorize, recite, and illustrate all definitions and theorems.
   c) Compose problems which reflect the concepts being studied. Create your own tests.
   d) Ask yourself constantly how the concepts currently being studied relate to prior topics.
2) **Comprehension is coextensive with expression.** One only knows what one can communicate accurately and objectively. This is why written assignments play a major role in this course.
   a) Take great care in writing your assignments. Be guided by the principles of Standard English usage and by the understanding that writing which is illegible, incoherent, or ungrammatical is incorrect and unacceptable, regardless of the writer’s intentions. The inability to couch one’s thoughts in precise grammatical form is a deficiency which can obviate the best creativity, analysis, and effort.
   b) Like English, Mathematics has a grammar to which the student’s work must conform. Abuse of mathematical grammar will result in incorrect and unacceptable exposition. Note that all mathematical statements are always literal and never metaphorical. Notational errors on homework assignments will result in reductions to the overall assignment grade.
   c) “Neither can his Mind be thought to be in Tune, whose words do jarre; nor his reason in frame whose sentence is preposterous.” Ben Jonson
3) While the student may have formally satisfied the prerequisites for this course, it is possible that he or she is actually deficient in knowledge of some prerequisite material. It is the student’s responsibility to identify any such deficiencies and to master the relevant topics through self-study.
4) Questions in class are both expected and encouraged. If you have a question about a topic or problem, be certain to ask it. Do not accept answers which you do not understand.
5) The understanding of definitions and the concepts they represent is critical to success in this course. Having previously seen all the words in a definition does not constitute understanding of what it defines. Do not assume that you understand a concept unless you can recite it verbatim, illustrate it with a non-trivial example, and use it in solving problems.
6) The only true measure of one’s knowledge of any mathematical subject is the ability to solve a wide variety of related problems without reference to the text or notes.
7) Understanding course material requires one to master new mathematical concepts, not merely to revisit concepts already learned. Students must be prepared to recognize the difficulties which are inherent in learning to think abstractly, to acknowledge the possibility that new study skills may be required, and to approach the course with an open, receptive, yet critical mind. Be advised that success in prior Mathematics courses does not guarantee success in this course.
8) Falling behind in any Mathematics course can be academically fatal and, ultimately, catching up requires more effort and study time than is required to stay on schedule. Getting ahead and staying ahead is a valuable practice.
The Difficulty of Learning Calculus

Calculus has been described as the greatest, single, intellectual achievement of Mankind. For many students, this course will be their first exposure to the subject. Expect to be challenged to master new concepts and new techniques by means of a thorough understanding of prerequisite (i.e. PreCalculus) material.

Gaining mastery of this important body of knowledge will be challenging. A poor background in Mathematics, lack of dedicated time for regular, daily study, and failure to regard this as a serious and demanding course will compromise one’s chances of success. To learn Calculus, one must achieve technical proficiency of the material through study, reflection, and practice (i.e. solving problems).

Do not delude yourself into believing that you understand a topic because your instructor understands it. See separate “Preparation” Sheet. If one “understands” the material when it is presented in class, but cannot solve the associated problems, then one truly does not understand the material.

A poor performance on an examination means one thing: the student did not practice enough problems and exercises to be exposed to the methods and nuances of the concepts studied. A disregard for the precept that only through working many problems, regularly, will one pass this course is both imprudent and academically fatal. The hope that sufficient understanding can be obtained from the class lectures to pass examinations is totally unfounded.

This course requires independent thought, reflection, self-initiative, and constant self-evaluation.
Mathematics 125-03: Applied Calculus

1. Name

2. Major

3. Year (Freshman, Sophomore, Junior, Senior)

4. Telephone Number

5. The prerequisite for this course is the Mathematics Placement Examination or a C- or better in Mathematics 101. How and when did you satisfy this requirement?

6. List all the Mathematics courses you have taken at the college or university level.

7. Do you have a calculator capable of performing logarithmic and exponential calculations? You will need one.

8. What concerns do you have about this course and its subject matter?

9. Are there other issues which you wish to communicate?

Read the following statement and sign and date it.
I have read the syllabus for Mathematics 125-03, Spring, 2016. I understand its content. I agree to comply with the standards cited therein and I understand the consequences of failing to do so.

___________________       ________________________       ______
Name (Printed)               Signature                   Date