

James Madison University, Department of Mathematics and Statistics
Introductory Calculus Functions I – Math 205.17

Fall 2006, MWF 1:25-2:15 Roop 128

Overview: Math 205 provides an introduction to single variable calculus, with particular attention to modeling and to applications in business and social sciences. Our course will cover much of the material in chapters 1 to 6 of the textbook,

Instructor: Dr. Stephen Lucas.

To contact me: In Person: Roop 324, Office Hours: MF 9-10, T 9:20-10:20 and by appointment.
Phone: 568-6184, Email: lucassk@jmu.edu

Textbook: *Applied Calculus for the managerial, life and social sciences*, 6th edition by S.T. Tan.

Calculators: A graphing calculator will be a very useful aid for this course. I recommend the TI-83, but if you own some other graphing calculator, that should also be OK. If your only calculator is a TI-89 or a TI-92 or any other calculator capable of symbolic manipulation, differentiation, etc, please see me as soon as possible because these types of calculators will be banned from tests and the final exam.

Homework, Exams and Grading: Assignments from the textbook will be set weekly and will be graded. Homework questions will also be given for each lecture, and should be attempted as soon as possible after the lecture, but should not be handed in. The attached syllabus also suggests dates for the tests. Your grade will be determined as follows: Assignments 15%, Midterm Exams 15% (each), Final Exam 40%. The final exam is timetabled for Friday December 15, 10:30am to 12:30pm. Final grades will be somewhat related to A=90, B+=80, B=70, C+=60, C=50, but will vary depending on the class average and natural divisions between raw scores. Borderline cases will be decided based upon class participation, effort, and performance throughout the semester.

Attendance: Attendance is not mandatory. However, past experience suggests there is an extremely strong correlation between attendance and passing. If you cannot make a class where assignments are being collected, please give to a classmate to give to me on the day. If you miss handing in an assignment or a test without previously getting my permission, you will receive a zero for that assignment or test. If there is a medical emergency and you cannot inform me beforehand, let me know as soon as possible.

Getting Help: If you need help, ask! The worst thing you can do in a math course is let things slide, since earlier material is often assumed to be known later. It is best to contact me via email. If you wish to see me outside of office hours, please make an appointment beforehand. I can't guarantee that I will be available if you come and knock on my door at a random time. You can also get help from the Math and Science Learning Center (Wilson 104), which is a resource specifically designed for helping students in courses like this one.

Some random advice

- Read each section of the book either before or after the corresponding lecture, but always before you attempt the homework questions.
- Do the homework problems as soon as possible after the lecture, so that if you have problems you can get help in time, or identify areas you want covered in more detail in the tutorials.

- Don't just copy the answers in the back of the book! Include appropriate amounts of working.
- There are quite a few suggested homework questions, but this will force you to work consistently through the semester, not just cramming it all in a few days before a test. Try and spend roughly ten hours a week on all aspects of this course.
- Don't fall behind. If something doesn't make sense, ask me about it in lectures. It's quite likely that several other students don't understand what is causing you problems, so I can immediately try and explain it in another way. Lectures are not there for me to drone on endlessly; they are there for me to help you learn.
- If you get a bad grade in an assignment or test, don't panic. Instead, get help, and take the time to work out what you missed.
- Math is about understanding, not memorizing. If you are memorizing a lot of things you may be studying the wrong way.
- Working in groups is encouraged, since talking over problems is one of the best ways to learn. I have no problem with you working together on the assignments. However, *simply copying someone else's assignment and handing it in is plagiarism*. Write out your own version.

Proposed Math 205 Syllabus, Fall 2006

Week	Monday	Wednesday	Friday
1	8/28 - 1.1: Precalculus Review I	8/30 - 1.2: Precalculus Review II	9/1 - 1.3: Cartesian Coordinates
2	9/4 - 1.4: Straight Lines	9/6 - 1.4: Straight Lines	9/8 - 2.1: Functions and Graphs
3	9/11 - 2.2: Algebra of Functions	9/13 - 2.3: Fns & Math Models	9/15 - 2.4: Limits
4	9/18 - 2.5: Limits & Continuity	9/20 - 2.6: The Derivative	9/22 - Review
5	9/25 - Test I	9/27 - 3.1: Basic Diff Rules	9/29- 3.2: Product, Quotient Rules
6	10/2 - 3.3: Chain Rule	10/4 - 3.4: Marg Fns Economics	10/6 - 3.5: Higher-Order Derivs
7	10/9 - 3.6: Imp Diff & Rel Rates	10/11 - 3.7: Differentials	10/13 - Fall Break
8	10/16 - 4.1: Applications 1 st Deriv	10/18 - 4.2: Applications 2 nd Deriv	10/20 - 4.3: Curve Sketching
9	10/23 - Review	10/25 - Test II	10/28 - 4.4: Optimization I
10	10/30 - 4.5: Optimization II	11/1 - 5.1: Exponential Function	11/3 - 5.2: Logarithmic Function
11	11/6 - 5.3: Compound Interest	11/8 - 5.4: Exponential Derivative	11/10 - 5.5: Logarithmic Deriv
12	11/13 - 5.6: Exp Math Models	11/15 - 6.1: Antiderivatives	11/17 - 6.2: Int by Substitution
13	11/20 - 6.3: Area & Definite Int	11/22 - Thanksgiving Break	11/24 - Thanks-giving Break
14	11/27 - Review	11/29 - Test III	12/1 - 6.4: Fund Thm Calc
15	12/4 - 6.5: Eval Def Int	12/6 - Review	12/8 - Evaluations, Final Exam Information, Review