

Calculus With Functions I

MATH 231-02

Location. MWF 11:15 - 12:05 227 033 Burruss, T 11:00 - 12:15 033 Burruss.

Professor. Leonard Van Wyk (rhymes with “bike”), 124 Roop Hall, ×8-2514,
vanwykla@jmu.edu.

Text. *Integrated Calculus*, by Laura Taalman.

Office Hours. 10:10 - 11:00 MWF, 12:30 - 1:45 T, and by appointment.

Course Web Page. www.math.jmu.edu/~vanwyk/courses/231/ contains announcements, sections covered to date, homework assigned, etc.

Material. We will cover most of Chapters 0–6. This book was written in a readable fashion, and I expect you to read it. In particular, *do not assume that exams will only consist of things I talked about in class*. There may be a few things in the book that I did not have time to cover during class that I will expect you to know.

General Education Goals and Objectives. This course meets the following objectives of Cluster 3, Track 1, Group 1:

- Objective 1: Describe the methods of inquiry that lead to mathematical truth and scientific knowledge and be able to distinguish science from pseudoscience.
- Objective 2: Use theories and models as unifying principles that help us understand natural phenomena and make predictions.
- Objective 5: Use graphical, symbolic, and numerical methods to analyze, organize, and interpret natural phenomena.
- Objective 8: Evaluate the credibility, use, and misuse of scientific and mathematical information in scientific developments and public-policy issues.

Homework. Selected homework problems will be assigned during each class. These will not be collected, but are designed to help you study for the exams and written quizzes. I will answer questions on these problems in class. The purpose of the homework is to give you chosen problems on which you can test your understanding of the material. Many of these problems will reappear on exams, so it is definitely in your best interest to do them when they are assigned.

Quizzes. There will be a quiz given at the *beginning* of each Wednesday class except on exam days. Each quiz will be graded out of 10 points. The purpose of the written quizzes is to give you an incentive to work on the homework problems when they are assigned.

Exams. There will be three exams: February 10, March 17, and April 21 (all Wednesdays). Each exam will be graded out of 100 points. DO NOT MISS AN EXAMINATION. (See “make-up policy” below.) Most of the exam questions will be similar to assigned homework problems.

Final Exam. The final exam is cumulative and will be graded out of 200 points. The final exam will be Tuesday, May 4, 10:30 - 12:30, 033 Burruss.

Cards and Attendance. I keep a stack of index cards with your names on them, and use these to ask a *lot* of questions during class. Aside from keeping the class more interesting for you, using these cards allows me to better evaluate your understanding of the material; this could influence your grade by a third of a letter or so (for example, $C+ \leftrightarrow B-$). I also use these cards to keep track of your attendance; this also impacts your grade. *You are responsible for the material covered in my class, whether or not you attend.*

Grading. At the end of the semester, I will total everyone's points from quizzes, exams, and the final, plot them on a graph, and determine the grades from that distribution. I try to write my exams so that there shouldn't be any great surprises about the grades (e.g., 90's is some kind of A, 80's is some kind of B, etc.). The reason I plot out the totals is to look for "gaps" in the grades to help me determine where the cutoffs are for A's, B's, C's, etc. I also reserve the right to make minor adjustments in grades based on attendance, class performance, etc. I will try to keep you abreast on your standing in the class. For example, after each exam, I will provide you with a distribution containing all the exam grades.

Make-up Policy. DO NOT ASSUME YOU WILL BE GIVEN A MAKE-UP EXAM/QUIZ JUST BECAUSE YOU MISSED CLASS. With the exception of extraordinary situations, anything you miss counts as a "0". If you are unsure about whether or not your situation falls under the "extraordinary" category, talk to me. I am more likely to be understanding if you talk to me *before* the fact than after the fact.

Cheating. JMU has an honor code, and you should abide by it. If I catch you cheating, I will hand over supporting evidence to the administration and let them deal with you as with you as they see fit.

Precalculus. MATH 231–232 is a combination of all of the topics in MATH 235 (Calculus I) together with a variety of precalculus topics. The student who completes this sequence will be prepared to enter MATH 236 (Calculus II). One might think the precalculus topics in MATH 231 are the "easy" part of the course, but in fact some of the more difficult topics for students are precalculus courses, so you should spend as much time on these as on the more traditional Calculus topics.

Advice. It is one thing to watch me do problems on the board, and quite another to do them yourself under exam conditions, so DO YOUR HOMEWORK THE DAY IT IS ASSIGNED. *When (and whether or not) you do your homework will have the greatest impact on your grade, without a doubt.* Be sure to budget time for this class in your schedule starting *now*; it's much harder to find time once the semester gets busy.