Math 1226: Calculus of a Single Variable
Instructor: Erika Rappold
Class Time: MWF 12:20-1:10pm T 12:30-1:20pm
Location: MWF MCB 113 T MCB 129

Office: McBryde 423
Office Hours: MTWF: 9:05-10:35am and by appointment
E-mail: erappold@vt.edu (please put your CRN in the subject line)
Phone: (540) 231-6055
Course Website: http://www.math.vt.edu/courses/math1226/

Both the course website and your email should be checked regularly as they will be the main sources of course communications, information and updates.

Prerequisites: The prerequisite is Math 1225 or an equivalent course. If you have credit for Math 1205, please come and speak with me.

Basic Skills Review:

The Department of Mathematics encourages each student enrolled in Math 1226 to take, at the beginning of the term, an online Basic Skills Review covering very basic concepts from Math 1225.

Practice problems will be available to students enrolled in Math 1226. To access practice problems click on the "Practice for Basic Skills Review" button in the menu on the Math 1226 webpage. Once you are logged in, choose the section "Math 1226 (Calculus of a Single Variable)(CRN)" and then choose the Available Unit "Practice -- Math 1226 Basic Skills (401)". The practice Basic Skills problems are constructed identically to the actual Basic Skills Review problems.

The actual Math 1226 Basic Skills Review will become available to all students enrolled in Math 1226 on the first day of classes by clicking on "Start Basics Skills Review" on the Math 1226 webpage. The deadline for successfully completing the Basic Skills Review is midnight on Wednesday, September 2.

Some details regarding the review and the departmental policy follow:

- The primary goal of the Math 1226 Basic Skills Review is to get the students quickly and purposefully active in doing mathematics they have already seen in Math 1225 (or equivalent course), though they may have forgotten some of the material over summer/holiday breaks. The review will require a quick and timely reminder of those basic skills from Math 1225 (or equivalent course) that are essential for success in Math 1226.
- The Math 1226 Basic Skills Review is comprised of 6 multiple-choice questions covering differentiation (product rule, quotient rule, trig functions, chain rule) and basic integration, including u-substitution. A score of at least 5 correct is passing.
- A student may make six total attempts at the on-the-record Basic Skills Review. There is no restriction on the number of reviews that can be attempted in one day.
- Students in Math 1226 are urged to take the Math 1226 Basic Skills Review during the first few days of classes so that they will have maximum flexibility in making course schedule adjustments should that become necessary. Not passing the Basic Skills Review may indicate that a student is better suited to take Math 1225 this semester; please consult me or your advisor if you do not pass the Basic Skills Review.
- Students receive immediate results upon submitting the Math 1226 Basic Skills Review for grading. Hints are provided for each problem when the graded review is returned to the student. All past reviews are available to the student at any time.
- Daily updates of student pass/fail status are available to instructors of all Math 1226 sections.
- The practice Math 1226 Basic Skills Review problems are constructed identically to the actual test problems, are accessible from anywhere, and are independent of the platform. (The Basic Skills Review does not need to be taken at the Math Emporium.)

**Course Materials:** J. Stewart, Calculus: Early Transcendentals, 8th ed. We will be using the online homework system WebAssign, so you will need to at least buy the digital version of the text for this course.

If you already purchased the Stewart textbook for 1225 or 1226 during a previous semester at Virginia Tech, you do not have to buy a new book and can use your current WebAssign account.

If you do not already have the textbook and WebAssign code from a previous calculus course here at Virginia Tech, it will be cheapest for you to buy a new textbook bundled with the WebAssign code. Do not purchase WebAssign or the textbook through WebAssign's website. The university bookstore has negotiated a better price.

Here are the textbook bundle purchase options available at the on campus bookstore. All three options include lifetime of edition electronic access to the textbook and a WebAssign code which is required for the class. Any of the following textbook options will be sufficient for the course:

- Electronic Book Bundle contains - WebAssign code w/eBook - $80.20
- Loose Leaf Bundle contains - Loose Leaf Book w/WebAssign code w/eBook - $104.30
- Hardback Bundle contains - Hardback Book w/WebAssign code w/eBook - $149.75

There is a two week grace period for the use of WebAssign in the course but in order to access the system after that you need a purchased WebAssign code. If you have already purchased the 7th edition with a WebAssign code, during the first two weeks of class you will be using a free trial and then WebAssign will be allowing you access after the first two weeks of class.

Recommended but not required: “The Humongous Book of Calculus Problems” by W. Michael Kelley. I’ve found this to be a fantastic resource both for myself as a student and for my previous students, and highly recommend it.

**Software:** This course will also be using the computer software Matlab. Matlab can be purchased at a discounted price from the Software Distribution Office in 3240 Torgerson. If you do not have a personal computer, or you do not wish to purchase this software, there are computers on campus that can be used. However, this software will be used for several courses, so it is highly recommended.

**Material Covered:** Advanced integration techniques and applications, probability, Taylor polynomials, sequences, series, parametric curves and polar coordinates.

**Attendance:** Class attendance will be taken daily and kept for Mathematics Department records. Students are responsible for course materials and announcements covered in class. Students are also responsible for information delivered via Scholar or email.
Classroom Courtesy:
You and your classmates are entitled to learn in an atmosphere of mutual respect, and freedom from distractions and disturbances. The following guidelines are in effect for this class:

- Students are expected to arrive on time and stay until class is dismissed. If you know ahead of time that you will be late or must leave early, please let me know in advance, sit as near the exit as possible, and enter or leave quietly.
- Talking to classmates during class, aside from group assignments, is disruptive to those around you and will not be tolerated.
- Laptops used as a tablet PC are permitted provided they are used in the flat, tablet position. Open laptops are not allowed.
- Cell phones must be silent or turned off. That goes for anything else electronic that makes noise.

Caution: If you are not on the class roll that comes out after the last “add” date, immediately check your schedule and start attending the proper section. For no foreseeable reason (computer and registrar personnel mistakes included) will you be allowed to stay in the wrong section or to drop the section for which you are actually enrolled. By simply attending a section, you will not be placed on its roll.

Academic Honesty: I encourage you to consult with others on homework assignments and before exams; study circles can be very useful for you. Getting help from available resources is both authorized and encouraged for out of class work; copying solutions from any source will be considered a violation of the honor code. A violation on the honor code will be turned over to the Undergraduate Honor System for resolution. If you have any questions about how the honor code applies to a particular situation, it is your responsibility to ask.

Disabilities: If you need adaptations or accommodations because of a documented disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible.

Math Emporium & Tutoring: The staff in the tutoring lab at the Math Emporium will be able to assist you with your questions. Since this course is not an Emporium course, it is not appropriate to approach the floor staff in the general area with your questions about Math 1226. The tutoring lab is open 4:30pm to 9:30pm Sunday through Thursday. Also, you may hire a private tutor by sending an email to math_tutors-g@vt.edu indicating your specific needs.

Office Hours:
If for some reason you can’t attend any of my listed office hours, I will try to provide extra hours if you ask. E-mail me with your available times and we can see what we can do to help you through this course.

Grading Policy:
The grade distribution will be as follows:

- 90% or higher guarantees an A-
- 80% or higher guarantees a B-
- 70% or higher guarantees a C-
- 60% or higher guarantees a D-
- Below 60% will receive an F

The breakdown of your final grade is as follows:

- Midterm Exams: 60% (Three exams worth 20% each)
Final Exam: 20%
WebAssign: 10%
Other Coursework: 10% (This includes hand-written in-class and/or take home exercises, MATLAB, etc.)
Basic Skills Review: (0%)

If you believe that an error has been made in grading an assignment or test, please re-examine the problem, as well as the solution, and contact me the next day. Any concern should be brought to my attention within one week of the graded work being returned. Appeals outside of this time frame will not be considered.

**Exams:** There will be three mid-term exams, and a common-time final exam. The midterm exams (each worth 20%) will be given during a regular class meeting and you must take the exams on the specified date. The use of calculators is not permitted on these exams. The common time final exam consists of a multiple choice section and a written section, each worth 10% of your final grade. If it is to your benefit, your grade on the written portion of the final exam will replace your lowest mid-term exam grade. The final may not be in our lecture room, and will be scheduled by the department. The final exam will be held Friday, December 11th from 4:25-6:25pm. The location of this exam will be announced at a later time.

Be advised that the final exam is a required class meeting that will not be rescheduled for discretionary reasons, including conflicts with work schedules, conflicts with classes and exams at other colleges, and travel plans.

**WebAssign:** Each week a set of WebAssign assignments will be available for your access on Mondays, and must be submitted by 5pm on the following Saturday. You will have three attempts at each assignment. You must redo an entire question if you get a part of it wrong, however the higher of your grades on each part will be used. **There will be no extensions on WebAssign assignments, so plan accordingly.** I will drop your lowest three* WebAssign grades.

*If you receive a score of 5 or 6 on the Basic Skills Review, I will grant you an additional dropped WA assignment, bring the total to four WebAssign assignments dropped.

**Graded Coursework:** Approximately once per week you will be assigned graded coursework either in the form of a homework assignment or an in-class exercise. You are encouraged to work together on homework assignments; however your final write-up must be done independently. No late assignments will be accepted and there will be no makeup in-class exercises. To account for this, your two lowest written assignment scores will be dropped.

**Make-up policy:** Make-up tests or in-class exercises will not be given. For an excused absence from a test, a portion or the entire final exam will substitute for the test grade. Late work will not be accepted. (Exceptions to the late-work policy may be made for individuals in the event of a serious illness or personal emergency at the instructor’s discretion; contact me immediately if such a situation arises. Exceptions generally will be made only if I am notified about an emergency prior to the due date of any affected graded work.)