

COURSE DESCRIPTION
MATH 25 – SECTION 03
CALCULUS
SPRING 2012

DEPARTMENT OF MATHEMATICS & STATISTICS
SWARTHMORE COLLEGE

Course Instructor: Dr. Nsoki Mavinga

Office: SC 155

Phone#: (610) 957-6197

E-mail: mavinga@swarthmore.edu

Office Hours: Monday and Wednesday, 3:00 PM – 4:30 PM (or by appointment)

Class Meeting times: MWF 11:30 AM – 12:20 PM

Class Meeting location: SC L32

Prerequisite: Math 15 or placement into this course through Swarthmore's Math/Stat Readiness Examination or Calculus Placement Examination.

Textbook: *Calculus: Single Variable, 5th ed.* by Hughes-Hallett, Gleason, et al., John Wiley & Sons, Inc., 2009; Topics to be covered can be found in Chapters 7– 11.

Webpage: http://www.swarthmore.edu/NatSci/nmaving1/math25-Spring12/math_25.html

Important dates:

First day of class: January 16, 2012

Last day to drop: January 27, 2012

Spring vacation: March 2 – 12, 2012

Last day of class: April 27, 2012

Major exams (tests): Midterm 1: Tuesday, February 21; 8:00 PM – 9:30 PM, SC L32.
Midterm 2: Tuesday, April 03; 8:00 PM – 9:30 PM, SC L32.

If you have a conflict with either one of these exams, you must let me know by **January 30**.

Final exam: To be announced. The final exam will be scheduled by the registrar. Math is often unlucky in that we get late exam slots, so don't buy a ticket home until the exam is scheduled!

Course policies:

- Please make sure that you are able to receive e-mail through your Swarthmore-ID account. Official course announcements may be sent to that address.

Date: January 11, 2012.

- **Special Accommodations:** If you believe that you need accommodations for a disability, please contact Leslie Hempling in the Office of Student Disability Services, located in Parrish 130, or e-mail lhempli1 to set up an appointment to discuss your needs and the process for requesting accommodations. Leslie Hempling is responsible for reviewing and approving disability-related accommodation requests and, as appropriate, she will issue students with documented disabilities an Accommodation Authorization Letter. Since accommodations may require early planning and are not retroactive, please contact her as soon as possible. For details about the Student Disabilities Service and the accommodations process, visit <http://www.swarthmore.edu/x7687.xml>.
- The two lowest quiz grades, the two lowest WebWork scores and the two lowest regular homework grades will be dropped to account for any missed assignments due to illness or any other circumstance. If a test is missed due to a serious verifiable circumstance or official university business, the test grade will be replaced with the properly rescaled final exam score. You have to advise the instructor of such circumstances at the earliest possibility.
- **No books, notes, or calculators** will be allowed during any of the exams or quizzes.

Methods of teaching and learning:

- 42 class meetings of 50 minutes consisting of lectures and discussions of examples and homework problems. Time for quizzes and group work sessions is also included.
- Every two weeks, we will have work sessions in class where exercises are solved in small groups.
- Alternating with the above, we will have every two weeks an individual quiz. This will be part of the assessment and will count towards the course grade.
- Graded homework comes in two forms. One form consists of WeBWoRK problems and the other form is written assignments to be turned in during the semester. (Look for more information below.)

Aims of the course:

The goal of this course is to get a solid grounding in integral calculus. We want to have a thorough understanding of the concept of definite integral, know the basic techniques of integration, and be able to apply the integral to find volumes, work, arc length. We want also to be able to determine the convergence /divergence of improper integrals, sequences, and infinite series and find power series representations of functions and use them for approximation, evaluation of integrals and limits, etc. We will also begin an investigation of some differential equations.

Assessment procedures:

- Student achievement will be assessed by the following measures:
 - **Written homework assignments.** Written assignment will be due at the beginning of class *every Monday*. **Late homework will not be accepted**, but the two lowest homework scores will be dropped. Your homework papers will be judged on both the correctness of the

mathematics and the clarity of your write-ups. I encourage you to work together, but (obviously) the work you hand in should be your own. Unlike high school, we will be spending almost no time in class going over the homework problems. Homework contributes 10% to the course average.

- **Online homework (WeBWork).** WeBWork assignment will be due *every Wednesday at 8:00 pm* (generally one week after it was assigned). WeBWorK problems are done over the web and provide instant feedback as to whether you have done a problem correctly or not. When you have done a WeBWorK problem correctly, your credit for the problem is immediately recorded in the database. You are encouraged to discuss problems with other students, however WeBWorK problems are individualized for each student, so you must do your own assignment. You are encouraged to retake the homework problems until you obtain correct answers. The solutions are posted each Thursday at 8:00 am. Homework contributes 10% to the course average. The set OrientationWW is meant to familiarize you with WeBWorK and will not count toward your grade.

Problems on tests are modeled after regular homework and WeBWork problems. Staying on top of homework is therefore extremely important. To get access to WeBWork, go to:

<https://courses.webwork.maa.org/webwork2/swarthmore-math15/>

- **In-class quizzes.** We will have a quiz *every other Friday*. Quiz problems are taken from the homework problems and classroom work. This allows you to gauge whether you are ready to work problems in a test situation. Individual quizzes contribute 8% to the course average. *Make-up quizzes will not be given.* If you miss a quiz with a valid excuse, such as a serious illness or emergency with supporting documentation, you should contact me in person or via email as soon as you reasonably can. If your excuse is undocumented, or I deem it invalid or not presented in a timely manner, a zero will be averaged into your grade.
- **Group work sessions.** Every other Friday, we will have work sessions in class where exercises are solved in small groups. Books, notes, or calculators are allowed during the group sessions. Group work sessions contribute 7%.
- **Two 90-minute tests.** Each midterm contributes 20% to the course average.
- **A comprehensive final examination.** The final contributes 25% to the course average.
- **Summary of grading policy**

Written Homework	10%
WeBWork	10%
Quizzes	8%
Group work	7%
Midterm 1	20%
Midterm 2	20%
Final Exam	25%

How to get access to WeBWork:

- (1) Go to <https://courses.webwork.maa.org/webwork2/swarthmore-math15/>.
 - (2) Enter your Webwork login name and password. The login name should be the same as your *Swarthmore email user ID* (the first part of your Swarthmore email address), and initially your password will be also your *Swarthmore email user ID*. You can change your password after your first log in. If at the beginning of the semester you cannot log into WebWork, please email me and I will set up the account for you and contact you when it is activated.
 - (3) Links to some useful WeBWorK pages can be found in the following link:
http://webwork.maa.org/wiki/Student_Information
 - (4) **WeBWork Feedback:** All WebWork problems have a button for “email instructor.” Clicking this button allows you to write a message that is emailed to the instructors. Someone will get back to you within a day or so (and maybe sooner). You do not have to copy out the problem (the system automatically does this). If WebWork won’t accept your answer, then say what that answer is and how you came up with it. It helps us if you give some idea of your thought process.
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Resources:

- Calculus Study Sessions with the Math π -rates! Come to work on your calculus homework with your friends (math is more fun with a friend!) and the calculus-savvy π -rates three evenings each week (where/when TBA)!
 - Help is also available in the Math Clinic, staffed by math majors and held in our department lounge from 7 - 10 pm Sunday through Thursdays.
 - Kaitlyn Litwinetz, our department’s friendly neighborhood Academic Support Coordinator, is a terrific resource as well—she is happy to have you drop by her office (SC 136) or set up appointments with her.
 - Be sure to visit my office hours or to make appointment with me.
 - By working steadily and regularly, you will increase your chances to succeed in this course.
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Common Courtesies for Any Class:

- Please arrive for class a few minutes early so that class can begin without interruption. If there is a problem, let the instructor know.
 - If you need to leave class early, it is polite to tell the instructor before the class starts. Class attendance is expected.
 - Putting your head on your desk resting or sleeping during class is rude. If you need sleep, please go to your room or home - not to class.
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