1. The Basics

1.1. Time and Place. Lectures are on MWF at 11:45 - 12:35 in MSC W201. The weekly lab [see 2.1 below] is in MSC W301 for 004 and 302 for 005.

Exams will be held in our classroom and other classrooms in the MSC to avoid overcrowding. Locations will be posted on Blackboard and given in class.

1.2. Instructors. The professor responsible for the course is

Luke Postle: MSC W434; luke@mathcs.emory.edu

The lab instructor is

Pascal Phillipp: MSC N406; pphilip@emory.edu

There will be a teaching assistant whose name and contact information will be provided during the first week of class.

1.3. Text and other Materials. We will have one text for this course and Math 116:

*Calculus for the Life Sciences*, Bittinger, Brand and Quintanilla

A detailed syllabus is posted on the Blackboard site for the course [see §3.1 below]. In addition, we will use other sources, almost all on the internet.

1.4. Course Description. This is a first semester mathematics course designed for students with an interest in majoring in the life sciences. The course has similarities with the usual first semester calculus but differs in that it focuses on modeling biological processes. We attempt to motivate and illustrate a great deal of the mathematics in the course with biological problems.

The second semester course, Math 116, differs substantially from the usual second calculus course, Math 112. It includes material on modeling biological systems with differential equations and on probability and statistics, and omits some of the standard calculus topics.

This sequence is not recommended for physics or economics majors. It is now the main mathematics requirement for majors in Biology and is recommended by NBB for its majors. See §6 for a list of mathematics requirements for the Biology BS degree. Math 115 also fulfills the basic math requirement for the Chemistry major.
Concerning placement in the course, if you have any questions, please see the instructor immediately.

1.5. Evaluation. The overall course grade is determined as follows:

- Quizzes and lab work: 20%
- In-class Exams [2]: 40%
- Final Exam: 40%

The final examination will be Thursday, 13 December, 8:30 - 11:00 am. This exam will cover all of the course material. The time of the exam cannot be changed.

The in-class exams are tentatively scheduled for Friday 5 October and Monday 19 November. The times will be confirmed in class well in advance of the exam dates. Regarding absences from exams, see §5.2 below.

2. Labs, Office Hours and Reviews

2.1. Labs. Every student is scheduled to attend one of two recitation sections attached to this class on Tuesday. You must attend the recitation, and at the correct time. If you want to change times, you have to go through drop/add/swap to change the section of the course in which you are enrolled:

Math 115 004 Tuesday 5:00 - 5:50 MSC W301
Math 115 005 Tuesday 8:30 - 9:20 MSC W302

2.2. Office Hours. Dr. Postle and Mr. Philipp [and the as-yet-to-be-announced course teaching assistant] will have scheduled office hours each week – these will be announced soon and posted on the Announcements page on Blackboard. You can also contact either of us by email to schedule an appointment at another time. Use the email addresses at the beginning of this document.

When you have questions about course material from the lectures or readings, please see the course or lab instructor. If you have trouble understanding concepts or doing the assignments, you should make every effort to meet with one or both of us. Please do not use email to ask detailed or lengthy questions – plain text is a poor medium for math and the classes are too large for us to respond to these.

2.3. Reviews. There will be review sessions scheduled before each in-class examination and before the final examination. We may also have some evening review/problem sessions during the term as the need arises.
3. **Internet and Technology Use**

3.1. **Blackboard.** Just about all materials for the course will be posted as .pdf files on the course Blackboard site. You access this by going to the top Emory webpage and clicking on **Blackboard** or using the url

`classes.emory.edu`

All enrolled students should have access – please let me know if you have trouble logging into the course site.

Please consult the BB site several times each week. There will be postings containing

- reading assignments and exercises for each class
- information on the weekly lab
- announcements of in-class exams, quizzes, and review sessions
- solutions to quizzes and exams

3.2. **Other Websites.** We shall make use of web materials. Here is one source which is quite useful, particularly for extra problems and life science examples:

`http://ugrad.math.ubc.ca/coursedoc/math102/index.html`

Go to the notes for Math 102 and follow the links. These are notes developed by Professor Leah Keshet and colleagues at UBC for its life science calculus sequence.

3.3. **Calculator and Laptop Use.** You may use a calculator such as a TI-83 Plus for doing calculations on tests and assignments. On tests, calculator use will be restricted for specific questions. For instance, you may be asked to graph a function without using your calculator, or to do differentiation or integration problems without using a calculator that does symbolic differentiation or integration.

3.4. **Other Technology.** All cellphones, PDAs, laptops, and any other devices with internet, phone or messaging capabilities **must be turned off and put away at the beginning of each class.**

4. **Assignments and Quizzes**

At the end of each class, a reading assignment and set of exercises will be given. Solutions to these daily exercise sets are **not** to be handed in. Keeping up with the course requires that you do the daily readings and exercises.

We plan to give 10 quizzes during the semester. The topic will be announced the preceding week and posted on the Blackboard site. **There are no makeups for missed quizzes, a missed quiz will result in a 0 score, and the 2 lowest quiz grades will be dropped.**
4.1. **Collaboration.** During exams and quizzes, avoid viewing another student’s paper and do not copy solutions. Viewing or copying from another student’s exam is a violation of the honor code and will be treated as such. Do not provide solutions of quizzes or exams to other students, either electronically or hardcopy.

4.2. **Written work.** Take care to write legibly on exams and quizzes. If an answer is not easily readable, you will receive no credit.

You must show your work on exams and quizzes, supplying all necessary reasoning and calculations. No work = no credit! If a graph is part of a solution, axes must be labelled, units marked off, functions labelled, etc.

5. **Emory College Academic Rules**

5.1. **The Honor Code.** The Emory College Honor Code applies to all work in this class, including quizzes, in-class examinations and the final examination. See

   http://www.college.emory.edu/current/standards/honor_code.html

5.2. **Missed Exams.** Please see the section *Absences from Examinations* on p. 59 in the chapter ACADEMIC REGULATIONS of the Emory College Catalog. Here is the address of the e-version of the catalog:

   http://www.college.emory.edu/current/standards/pdf/academic_regs.pdf

The in-class exams during the term are “required midterm examinations” so are subject to the rule described there. If you are ill and know that you will have to miss an exam, **contact the course instructor before the exam.**

6. **Biology Major Mathematics Requirements**

There are 4 ways to fulfill the mathematics requirement for the B.S. degree in Biology:

1. Math 115 and Math 116;

2. 4 hours AP credit for AB calculus and Math 112Z;

3. 4 hours AP credit for AB calculus and Math 116; or,

4. 8 hours AP credit for BC calculus.