Welcome to Calculus! *Understanding calculus can be challenging, but it can also be fun! This is the time and place to have an open mind, be curious, ask questions, and be ready to learn.*

Instructor **Heather May** **email** Heather.May@uc.edu
Phone *N/A* *.. email is the preferred method of*
Office *4222 French Hall – West* *.. Include (**15Math256 xxx**) in subject line*
Office Hours *T 3:45-5:15, W 4:50-5:20* *.. Include your full name at end of your*

	(II) Section 003	(II) Section 901	
Lab	12:00-12:50 PM on H in 60 W Charlton rm120	5:30-6:20 PM on W in 60 W Charlton rm120	

Since all sections are closed and you are required to be seated at a computer. You **must** attend the lab period in which you are registered.

Course overview

Use the software package *Mathematica* to help visualize concepts that are introduced in Calculus II. This course will enhance your understanding of concepts such as: Taylor polynomials, convergence of sequences and series, vectors, surfaces, space curves, and cylindrical and spherical coordinates.

This course was designed following the guidelines of the University of Cincinnati General Education Program. It satisfies, or partially satisfies the Quantitative Reasoning distribution requirement.

Pre-requisites

Math: Qualification for Calculus II *(Math 252)*.

Co-requisite

Calculus II Lecture *(15 Math 252)* is a co-requisite to this course. This means that you **must** take the lecture and lab together, except in special circumstances approved by the instructor.

Required materials

1. **Storage Drive**: *Preferably a USB drive.*
2. ***Mathematica* 8.0** (highly recommended).

Attendance

Attendance at all class meetings is highly recommended. Each class missed will reduce your grade by 10%. You will be responsible for all information covered in all classes whether or not you attend. Make arrangements with another student to obtain copies of class notes and any other missed material.

Studying

You are responsible for printing and reading class notes from Blackboard, and working on a variety of problems on the computer until you can solve these problems correctly. It is your responsibility to check Blackboard routinely for specific requirements for all assignments.

Since learning *Mathematica* requires building on prior knowledge, some labs are **comprehensive**. While most questions typically focus on topics covered recently in class, you should be prepared to answer questions based on your cumulative knowledge of previous topics.

To learn and retain the course material, you should develop effective study habits and schedule regular, uninterrupted study time. You should study at least 3 hours outside class for each hour of scheduled class time, which is a minimum of (3 x 5/6) 2.5 hours of practice each week. Some of this time can be used in checking problems you worked by hand with programs we create in lab.

Active Learning Outside Class

How should you spend your study time? If you want to complete this course successfully, you will need to actively practice to remember commands. Some effective training activities:

- **Assigned Homework** – the best way to learn *Mathematica* is by working problems. Most of the homework will be assigned under the Lab Reports tab in Blackboard. Assignments and grading criteria will be posted on Blackboard and discussed in lecture.
- **Problem Diary** – keeping a record (like a diary) of the topics introduced in each lab and rewriting the descriptions in your own words. This will also prepare you for the final project; a compilation of the basic calculus topics and commands used in the homework. If you keep up with the assignments in class and update your diary weekly; many of the commands we learn will help you strengthen your confidence and check your work in Calculus III. This can also be used as a reference guide down the road in your collegiate career.
- **Reading** – Since we meet on Tuesdays some of the topics introduced in lab may not be introduced in lecture until later in the week. If you read the material you will be covering that week in class before lab it will help understand the concepts we cover and allow you to complete some of the labs in class instead of doing them as homework.

Electronic Communication Policy

The computers are **only** to be used for class assignments during class time. Please, no web surfing, email, instant messaging, social networking, working on other assignments etc. As such is distracting to classmates, myself, and to you. If I receive any information or complaints that this policy is being violated this could affect you attendance/grade as you will be asked to leave and this will count as an absence.

Use of cell phones, pagers, IPODs, CD players, radios, and similar electronic devices are **prohibited** in the classroom and laboratories. All cell phones must be out of sight and should be set to vibrate for the ring or turned off while in class. **No text messaging**. If you need to talk, presumably due to an occasional emergency, please be considerate and go outside the classroom.

Late Assignments

Any work submitted after a due date, if accepted, may receive a late penalty. Submissions more than one day late will not be accepted unless you made prior arrangements with me by email.

Make-Ups & Extensions

There is no make-up homework (HW). HW not submitted for any reason will earn a grade of zero. In general, an extension for HW may be requested once per quarter.

If, however, you must miss a class for any reason, please notify me by email **before the class**, or as soon thereafter as is reasonably possible, to ask for an extension. Except under unusual situations approved by the instructor, only one late HW is permitted each quarter. Make sure you pay attention to possible Blackboard maintenance schedules and submit HW accordingly.

Students with Disabilities

University of Cincinnati is committed to providing all students equal access to learning opportunities. Disability Services is the official campus office that works with students who have medical or learning disabilities. Students who have or think they have a disability are invited to contact Disability Services for a confidential discussion, preferably early in the quarter to allow adequate time for arrangements. Location: 210 University Pavilion. Phone: (513) 556-6823. More information can be located at http://www.uc.edu/aess/programs_services/disability.html .

Blackboard

We will be using the UC Blackboard™ internet site http://blackboard.uc.edu/ in this course.

How do I access Blackboard?

All students at UC already have a username and a password that will allow use of Blackboard. Select Please click here to activate your account in the Login Here box of the Blackboard home page http://blackboard.uc.edu/ to begin.

What if I don't have a computer?

Even if you don't have your own computer, UC provides computers for student use at several places around campus: (1) Old Chem 825, (2) UCIT Labs http://labs.uc.edu/labHours.php. You can use these computers before, between, or after classes and on weekends.

What might I find on Blackboard?

You should check Blackboard frequently for

- Lecture notes – Some of the lectures will be presented using Mathematica Notebooks. If you miss lecture or lose your lecture notes, you can printout a copy from Blackboard. You should also check with another student for notes on topics that were discussed verbally.
- Homework – Projects/lab reports and solution keys
- Syllabus – The most up to date version is posted along with other guidelines.
- Supplementary material – including shortcut keys, links, and additional reading.
- Grades – Please check that I've entered your grades correctly. You will have one week after each grade is posted to submit any corrections to me. Please check your grades weekly.

Course schedule (Tentative)

Lab	Date		Topics
1	September 21	September 22	Introduction to *Mathematica*
2	September 28	September 29	Approximating and Computing Area
3	October 5	October 6	FTC
4	October 12	October 13	Net or Total Change as the Integral of a Rate
5	October 19	October 20	Exponential Growth and Decay
6	October 26	October 27	Area Between Two Curves
7	November 2	November 3	Volumes of Revolution, Cylindrical Shells
8	November 9	November 10	Integration by Parts
9	November 16	November 17	Trigonometric Substitution and Partial Fractions
10	November 30	December 1	Final Project TBD

Course Grade Your final grade will be based on your performance in the course as measured primarily by your participation* in lab (including an instructor evaluation of up to 10% of the course grade), lab reports, and final project.

***minus 10% for each class absent**

	Range
Pass	70.0 – 100
Fail	0 – 69.9

Grade Replacement: If you have an excused absence (accident report, note from doctor) then you can possibly earn the opportunity to replace the 10% deducted for your absence.

Withdrawal policy: After **Wednesday 05Oct11** (the last day to drop), you will be registered in this course until you officially withdraw by submitting a form (paper or electronic) to the registrar's office. The last day to officially withdraw with a grade of W is **Thursday 17Nov11.** If you decide to withdraw, please contact me in person for a brief exit interview so I can understand why this course didn't work for you.

Academic Integrity: The University Rules, including the Student Code of Conduct [http://www.uc.edu/conduct/], and other documented policies related to academic integrity will be enforced. Any violation of these policies, including acts of plagiarism or cheating, may result in failing scores or dismissal from the course.

Lab Assignment Guidelines

Projects/lab reports will be assigned each class meeting. After an introduction lecture on the topic you will be able to work on the project. The project will be due before the beginning of the next class; no late lab reports will be accepted. There will be **NO MAKE-UP LABS.**

Lab Reports

1) Lab reports must be typed using *Mathematica.*
2) Title of Lab (title Alt+1)
3) Your Name (subtitle Alt+2)
4) 15Math256 xxx where xxx is your section number (subsubtitile Alt+3)
5) All problems must be numbered and include the question. (as text Alt+7)
6) Followed by the solution worked in *Mathematica.*
7) Pages must be submitted through Blackboard before class begins.
8) Save file as Lab#_xxx_YourFullName.(xxx is your section number 003 or 901)

Reports not following the above specified format will not be accepted. *Points will be deducted for incomplete work and late work.*

Getting Help

General Guidelines

If you don't understand something, get help right away! Don't wait until an assignment is due! You can …

1. **Ask questions in class**. Please, please, please, don't be afraid to ask questions in class. If you are outside class, write down your questions so you don't forget to ask later.
2. **Drop by UCBA Math Lab**. Just walk in and say, "Hi. I have a question."
3. **Ask another calculus student**. Sometimes another student can explain things better than a professor! You might even form a study group that meets regularly to help each other learn. Just make sure your work is unique!
4. **Send me an email with your question**. I usually check email at least once a day (during the week, but not weekends), so you should get a response within 24 hours and sometimes sooner. To help me know your email is not junk, follow the guidelines on the front page!
5. **Visit the Mathematics Learning Center (2133 French Hall - West)**. Check the schedule in the MLC for exact hours. The tutoring is done by Mathematics GAs and you may ask help from any GA in the room

Email

U.C. requires that you use your UConnect email address to communicate with your instructor about course-related topics. Go to your "personal settings" in BB and make sure your email account is set to your BOL address.

This syllabus is a tentative outline of expected course policies. These policies may be modified, updated or supplemented from time to time as the course progresses at the discretion of the instructor. You must attend class and check Blackboard routinely to be notified in a timely manner of changes to the syllabus.

This syllabus was last updated 19Sep11.