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
Phone       N/A
Office      Old Chem 825
Office Hours T 8:30-9, 11:30-12 and By Appointment

email  Heather.May@uc.edu
.. email is the preferred method of
.. Include (15Math25700x) in subject line
.. Include your full name at end of your

<table>
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<tr>
<th></th>
<th>Section 001</th>
<th>Section 002</th>
<th>Section 003</th>
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<tbody>
<tr>
<td>Lab</td>
<td>9:00-9:50 AM on T in Old Chem 825</td>
<td>10:00-10:50 AM on T in Old Chem 825</td>
<td>12:00-12:50 PM on T in Old Chem 825</td>
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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 III. 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.


Co-requisite  Calculus III Lecture (15 Math 253) 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.

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.
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.

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.

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 your 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 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? Lecture notes – Some of the lectures will be presented using Mathematica Notebooks. If you miss lecture or lose your lecture notes, you can print out 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)

<table>
<thead>
<tr>
<th>Lab Date</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1 September 28</td>
<td>Taylor Polynomials</td>
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<td>2 October 5</td>
<td>Sequences</td>
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<td>3 October 12</td>
<td>Series</td>
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<tr>
<td>4 October 19</td>
<td>Taylor and Maclaurin Series</td>
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<td>5 October 26</td>
<td>Parametric Surfaces</td>
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<tr>
<td>6 November 2</td>
<td>Vectors</td>
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<tr>
<td>7 November 9</td>
<td>Surfaces</td>
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<tr>
<td>8 November 16</td>
<td>Space Curves, Cylindrical &amp; Spherical Coordinates</td>
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<tr>
<td>9 November 23</td>
<td>Arc Length and Speed</td>
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<td>10 November 30</td>
<td>Final Project TBD</td>
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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

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<tr>
<td>Pass</td>
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<td>70.0 – 100</td>
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<tr>
<td>Fail</td>
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<td>0 – 69.9</td>
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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 06Oct10 (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 18Nov10. 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) 15Math257 xxx where xxx is your section number (subsubtitle 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 by Tuesday before class begins.
8) Save file as Lab#_xxx_YourFullName.(xxx is your section number 001,002, or 003)

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 Old Chem 825.** 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.

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 (Old Chem, Room 614).** 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 29Oct10.