

Course Syllabus  
MAT 202–Calculus II  
Fall 2014  
Dr. John Peter

**Course Description:** MAT 202 covers basic integral calculus and some of its standard applications. We will cover most of Chapters 5 through 8 of the textbook, including (in)definite integration, applications of integration in the sciences, and some basic differential equations. This is the second part of Utica College’s four-part calculus sequence. The course will be predominantly example–driven, but we will spend some time developing ideas and deriving the necessary formulas.

**Course Learning Goals:**

- In accordance with the Program Learning Goals of the Mathematics Department, this course will assess the student’s ability to formulate and solve mathematical problems, as well as the student’s ability to communicate mathematics in written form.
- *Integration:* The student should understand integration (both definite and indefinite), including the definition of the integral using Riemann sums and the limiting process. The student should be able to recognize the inverse relationship between differentiation and integration, with particular emphasis on the Fundamental Theorem of Calculus. The student should become familiar with integration techniques such as substitution, integration by parts, and partial fractions, and be able to deal with improper integrals and use L’Hôpital’s Rule.
- *Applications of Integration:* The student should be able to apply integration techniques to solve problems involving areas between curves, volumes of solids of revolution, arc length, areas of surfaces of revolution, work, centers of mass, and centroids.
- *Differential Equations:* The student should gain an understanding of basic methods in differential equations including solving first–order linear equations. The student should also be able to sketch and analyze slope fields, use exponential equations to model growth and decay, and analyze competing–species differential equations.

**Class Meetings:** Monday, Wednesday, & Friday from 8:30am to 9:20am in 105 Hubbard Hall

**Required Text:** *Calculus: Early Transcendental Functions*, Fifth Edition, by Ron Larson and Bruce H. Edwards. ISBN: 978-0-538-73550-6

**Contacting me:** EMAIL: jwpeter@utica.edu (The best way to contact me)  
OFFICE PHONE: 315-792-3730

**Office/Hours:** Room 104 DePerno Hall  
Monday from 10:00AM to 12:00PM  
Tuesday and Thursday from 11:00AM to 12:00PM  
By Appointment (made either in person or by email)

**Coursework/Weights:** (See the tentative schedule on the course webpage for specific dates.)

Assessment	% of Final Grade
Weekly Homework	5%
Weekly Quizzes (Drop Lowest)	15%
<i>Mathematica</i> Projects	5%
Midterm Exam 1	25%
Midterm Exam 2	25%
Final Exam	25%

**NO MAKE-UP WORK WILL BE GIVEN.**

**Grading:** The grading scale will be *no worse* than:

90 – 100% = A/A-      70 – 79% = C+/C/C-      Below 60% = F  
80 – 89% = B+/B/B-      60 – 69% = D+/D

**Course Webpage:** (Including this syllabus, a tentative course schedule, and a link to assigned homework)

[https://www.utica.edu/faculty\\_staff/jpeter/mat202af14.cfm](https://www.utica.edu/faculty_staff/jpeter/mat202af14.cfm)

**Secrets to success in this course:**

- Do lots of problems ... homework and more!
- Come to class
- Read the book
- ASK QUESTIONS!

**Calculators:** You may find a graphing calculator useful for a number of topics that we cover. However, everything that will appear on quizzes and exams can be done without one! Calculators will NOT be allowed on quizzes and exams.

**Attendance:** It is mandatory that I keep track of your attendance. An attendance sheet will be available for you to sign at the beginning of each class. Your attendance will not formally count for any part of your grade. However, it may be used, at the instructor's discretion, to determine borderline grades at the end of the semester. **YOU ARE EXPECTED TO ATTEND EVERY CLASS PERIOD.** In the event that you miss class (or are mentally absent from class!) it is your responsibility to keep up with all announcements, syllabus adjustments, and/or policy changes made during scheduled class time and/or sent to you via your Utica College email. Please make sure that your Utica College email is functioning properly, and make every effort to contact me using your Utica College email address (as opposed to gmail, yahoo, etc.) to avoid confusion. If class must be canceled for some reason, you will be notified as early as possible via your Utica College email.

**Integrals Proficiency Exam:** During the latter half of the semester students will be given several opportunities to take an Integrals Proficiency Test (IPT). Knowledge of basic integration rules is vital to success in this course and in further courses in the calculus sequence. In order to pass this course a student must receive a score of at least 90% on the IPT. Failure to score 90% on this test will result in a grade of F for the course. Otherwise, the IPT will have no effect on the grade for this course. A link to a practice IPT is available on the course webpage.

**Mathematica:** Two assignments that require the use of the software package *Mathematica* will be assigned throughout the semester. The assignments will provide you with the majority of the necessary *Mathematica* code, but having some familiarity with the program before the first project is assigned can't hurt! *Mathematica* is installed on computers in all major computer labs, including the library computers. Most of the relevant information for obtaining/using *Mathematica* can be found here: <http://www.utica.edu/academic/iits/computerservices/mathematica/index.cfm>

**Classroom Etiquette:** Always keep in mind that you are in a college classroom. You and all of the people around you have paid to be here. By simply showing up for class, you are demonstrating that you take very seriously the opportunity to pursue the best learning experience possible. You are expected to treat all people in the classroom with respect, and to come to class prepared to learn. Disruptive behavior, including (but not limited to) talking, whispering, texting, eating loudly, etc. will

negatively impact EVERYONE'S experience and will not be tolerated.

**Intellectual Honesty:** Academic honesty is necessary for the free exchange of ideas and Utica College expects academic honesty from all students. Academic dishonesty includes both *cheating* and *plagiarism*. Plagiarism is the intentional or unintentional use of other people's ideas, words, and/or factual information without crediting the source. Cheating refers to both the giving and the receiving of unauthorized assistance in the taking of examinations or in the creation of assigned and/or graded class work. Utica College faculty are authorized to assign a wide range of academic penalties for incidents of academic dishonesty. Depending on the nature of the offense, the penalty may include a reduced grade for the particular assignment or course, a grade of "F" for the course, or the grade of "F for cheating" for the course. Incidents of academic dishonesty will be reported to the Vice President for Academic Affairs, who will refer any repeat offense, or any particularly egregious first offense, to the Academic Standards Committee, which may recommend a more severe penalty than that imposed by the faculty member.

**Disability Disclosure:** Any student who has need of special accommodations in this class due to a documented disability should speak with me as soon as possible, preferably within the first two weeks of class. You should also contact Kateri Henkel, Director of Learning Services in the Academic Support Services Center (315-792-3032 or khenkel@utica.edu) in order to determine eligibility for services and to receive an accommodation letter. We will work with you to help you in your efforts to master the course content in an effective and appropriate way.

**Writing Proficiency:** Students are expected to possess and use adequate writing skills. All written assignments should be well-written and free of grammar, punctuation, and spelling errors. Help is available in the Writing Center located in the library.

**Math and Science Center:** Peer tutors are available in the Math and Science Center located in the library.

*The author of this syllabus reserves the right to change it at any time during the semester.*