MAT 296-U800/U801 Calculus II (12/17/2018 – 1/11/2019) Online
Winterlude, 2019

Course Meetings: This course is online. There are no scheduled meetings other than the day of exams and quizzes

Instructor: Professor Jeffrey L. Meyer
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Course Description: Integration: the definite integral and applications, trigonometric functions, methods of integration, improper integrals, infinite series, elementary differential equations, parametric equations, polar coordinates.
PREREQ: MAT 295 WITH MINIMUM GRADE C-

MAT 296 is the second course in a three-semester sequence in calculus. This sequence is designed for mathematics, science and engineering majors and for those students in other majors who intend to take more advanced courses in mathematics. This course covers techniques of integration, applications of integration in a variety of contexts, exponential growth and decay, improper integrals, parametric curves in the plane, polar coordinates, sequences and series (including power series, Taylor and Maclaurin series).

Learning Goals: The broad learning goals for this course are for you to:

- ✓ have a basic knowledge and understanding of the analytic and geometric concepts taught, and some of their classical applications to other sciences such as physics;
- ✓ understand the nature and role of deductive reasoning in mathematics;
- ✓ have the ability to use and understand the usage of mathematical notation;
- ✓ have the ability to do hand calculations accurately and appropriately; and
- ✓ have the ability to follow proofs and other mathematical discourse.

Background for Course: Completing MAT 295 (Calculus I) or equivalent course with a grade of C- or better is a prerequisite for MAT 296 (Calculus II). **If you have not satisfied this prerequisite, you must drop MAT 296.** Students who earned a C or less in MAT 295 are at great risk in MAT 296. For these students it is important to review material from earlier courses, especially as it comes up again. At the same time it is also vital not to fall behind with the current material. Students who have scored a 4 or 5 on the Advanced Placement Calculus BC exam cannot receive both AP credit and credit for MAT 296.

Text: *Essential Calculus: Early Transcendentals,* by James Stewart; Thompson, Brooks/Cole, 2nd edition.

Purchasing Your Textbook and WebAssign Access Code:
All students are required to have a WebAssign access code for online homework
assignments. This code includes access to the online electronic version of the textbook.
Some students will also want a physical copy of the textbook. **You may choose between
the following options.** If you are unsure about which option to choose, please consult
with your instructor.

(1) Purchase a WebAssign access code either at the SU bookstore or online at
www.webassign.net. This access code includes access to the online electronic version of
the textbook. If you purchase this code at the SU bookstore, it is valid for future
semesters in the Calculus sequence. If you purchase it online and plan to take MAT 397,
you should purchase the multi-term (lifetime of edition) version.

(2) Purchase a new textbook bundled with a WebAssign access code at the SU
bookstore. This access code includes access to the online electronic version of the
textbook, and is valid for future semesters in the Calculus sequence.

(3) Purchase a new textbook bundled with a WebAssign access code from the
publisher's website at http://www.cengagebrain.com/micro/1-1HYUMAO. You can
also purchase just your WebAssign access code at the publisher's website.

Other Resources: Your textbook comes with access to an online resource at
http://www.stewartcalculus.com/media/13_home.php. This website has some interactive
visuals to accompany the topics in your textbook. It also has "homework hints" for the
problems in your textbook that are marked in blue. Other interactive visuals can be found
by clicking the TEC icon in the pages of your ebook**.**

Calculators: A scientific graphics calculator is acceptable in this course. If you wish to
use one and don't own one, the TI-83 or TI-84 calculator is recommended. Students who
already own and know how to use another equivalent calculator are free to use it.
*However, a symbolic calculator (one with CAS) such as a TI-89 or TI-92 or TI-Nspire
with CAS may not be used on quizzes or exams.* On exams and quizzes, you must
present complete solutions, not merely answers. For example a numerical computation of
an integral by calculator is not acceptable.

Course Format: This course is a 4-week online class. The material is presented in
videos (really just narrated PowerPoint presentations). Homework is done online via
WebAssign. Quizzes are done through Blackboard. Exams are done on paper in the
presence of an approved proctor (see **Exams and Quiz Procedures**), then scanned and
emailed to the instructor for grading.

Homework: There will be homework assignments on WebAssign, a web-based system
for homework problems. These assignments will be scored based on completion of the
assignments. In addition, problems from the textbook are listed below. It is very
important that you attempt the homework problems **as soon as possible** after the material
has been covered in class. The problems you see on the exams will be based on the

material presented in class and on the homework assignments. Written homework will not be collected or graded. **There are no extensions granted on WebAssign.**

Exam and Quiz Procedures

Quizzes: Each quiz will be available the day before through the date shown in the syllabus. Quizzes are available by clicking the "Assignments" button. You may take the quiz early, but once you open the quiz, you will have 45 minutes to complete and submit the quiz. **You will have only one attempt at each quiz and you must submit the quiz before 7:00pm EST on the due date.** You will write your work on paper (it does not need to have the quiz problem printed on it). Then scan the page(s) to a pdf file. Use a scanner or your phone, but with a pdf creating app like **Office Lens** or **Adobe Scan**. Please make sure that the document you submit is clear enough for me to read.   **Your solutions must be saved and submitted as pdf files – I will not accept jpeg or other photo file types.** Save each answer to your computer and then upload the file to the answer in Blackboard. Once you are finished with the quiz, submit the answers in Blackboard.   There are no makeup quizzes. If you miss a quiz, your score will be zero for that quiz. I will drop the lowest quiz score when computing your final grade. There will be no exceptions to this policy. *Again, you may take the quiz early, but once you open the quiz, you must submit your answers within 45 min.*

Exams: You will need to secure a proctor for Exam 1, Exam 2, and the Final Exam. Instructions for this are included in a separate document. Prior to the exam, I will email your proctor with the exam attached. You or your proctor will need to print the exam. At some point on the day of each exam, you will take the exam with your proctor. **Note that the exam is due at 7:00pm EST.** You will have **two hours to take each midterm exam and three hours to take the final exam**. When you are finished with your exam, your proctor will need to scan the exam and email it to me at jlmeye01@syr.edu.   Your exam must be scanned to create a pdf file. If you do not have access to a scanner, you can use a pdf creating app like **Office Lens** or **Adobe Scan**. Please make sure that the document you submit is clear enough for me to read.   **Your solutions must be saved and submitted as pdf files – I will not accept jpeg or other photo file types.** There are no makeup exams. In case of documented reason for missing the exam, we will use the relevant portion of the final exam to replace the missing exam. There will be no exceptions to this policy.

Rules: You may use an approved calculator for quizzes and exams, but you must show your steps to receive credit. You must do the quizzes and exams on your own with
       no assistance from other people,
       no communication with anyone, including members of this class,
       no books or notes,
       no use of the internet or other electronic device besides an approved calculator.
For exams, you and your proctor will certify that you followed the rules by signing and submitting a form with your exam.

By submitting the quiz or exam, you are certifying that you have upheld this policy. If I/we discover that you have violated this policy, you will be brought before the Academic Integrity unit of Syracuse University.

You must take your exam on the date indicated and I need to have received your exam by 7:00pm EST on the indicated date:

Exam 1	**Thursday, December 27, 2018;**
Exam 2	**Wednesday, January 9, 2019;**
Final Exam	**Friday, January 11, 2019.**

Makeup Exams and Quizzes: <u>**There will be no makeup exams or quizzes given.**</u> The math department policy for a missed exam is that, if you can justify the absence to the satisfaction of your instructor, I will substitute your grade on the relevant portion of the comprehensive final exam for the missing exam grade. Typically, I will not allow you to make up more than one exam this way. If you cannot justify your absence from an exam, then you will receive a grade of zero for that exam. The course supervisor must approve any exceptions to these procedures. If you know in advance that you will have to miss a quiz or exam because of some major event, you should discuss this matter with your instructor well before the quiz/exam. **I will drop your lowest quiz score. There are no provisions beyond this for makeup quizzes.**

Final Exam: The final examination covers the entire course. You will have three hours to complete the exam on **Friday, January 11, 2019**.   The procedure for the final exam is the same as with the exams during the session. **This date is unchangeable; all students must take the final exam on this date.**

Grades: Course grades will be determined by:

Component	Percentage
Exam 1	25%
Exam 2	25%
Final Exam	30%
Quizzes	10%
Homework	10%.

I will assign your course grade based on the following guidelines:

Range	**Letter**	**Range**	**Letter**
92-100	A	78-79	C+
90-91	A-	72-77	C
88-89	B+	70-71	C-
82-87	B	60-69	D
80-81	B-	0-59	F

Help: There will be a help forum on Blackboard. Please feel free to post questions and comments. I will respond. Others may as well. The forum will be open for the whole session.

Course Schedule:

Week 1:   **12/17 Review, Section 7.1**
12/18 Sections 7.2, 7.3, Quiz 1(covers 7.1, 7.2)
12/19 Sections 7.3, 6.1
12/20 Section 6.1, Quiz 2(7.3, 6.1)
12/21 Section 6.2
12/22 Sections 6.2, 6.3, Quiz 3(6.2), WebAssign HW due (7.1, 7.2, 7.3, 6.1)

Week 2:   **12/24 Catchup, Review videos**
12/25 Catchup or Day off
12/26 Section 6.3, Quiz 4(6.3)
12/27 <u>Exam 1</u>
12/28 Sections 7.4, 7.5
12/29 Sections 7.7, 6.6, WebAssign HW due (6.2, 6.3, 7.4, 7.5)

Week 3:   **12/31 Sections 6.6, 8.1, Quiz 5(7.4, 7.5, 7.7, 6.6)**
1/1   Catchup or Day off
1/2   Sections 8.2
1/3   Sections 8.3, 8.4, Quiz 6(8.1, 8.2)
1/4   Sections 8.4, 8.5
1/5   Sections 8.5, 8.6, Quiz 7(8.3, 8.4), WebAssign HW due (7.7, 6.6, 8.1, 8.2, 8.3&8.4)

Week 4:   **1/7   Section 8.6**
1/8   Section 8.7, Quiz 8(8.5, 8.6)
1/9   <u>Exam 2</u>, Section 9.3
1/10   Section 9.4, Quiz 9(8.7, 9.4)
1/11   <u>Final Exam</u>, WebAssign HW due (8.4, 8.5, 8.6, 8.7, Polar Coordinates)

Suggested practice problems from the text by section:

6.1   3, 5, 10, 11, 16
6.2   1, 2, 13, 17, 18, 19, 47, 51, 57
6.3   9, 18, 19, 22, 23, 24
7.1   1, 5, 6, 11, 12
7.2   1, 2, 4, 5, 9, 12, 17

7.3	3, 4, 7, 15
7.4	3, 4 (set up but don't evaluate the integral)
7.5	1, 2, 3, 5, 7 (set up but don't evaluate the integral)
7.7	1, 3, 9, 15, plus the worksheet on differential equations
6.6	5, 8, 9, 11, 17, 19, 20
8.1	9, 11, 15, 17
8.2	7-10
8.3	6, 7, 9, 10, 18, 19, 24, 26, 30
8.4	3, 5, 6, 7, 13, 15, 19-27
8.5	3-13, 15, 16
8.6	3, 4, 7, 13, 17
8.7	5, 8, 13, 14, 18
9.3	13, 23-31 (use calculator)
9.4	6-9, 11, 15, 17

Course Supervisor: Prof. L. Kovalev
                        Email: lvkovale@.syr.edu
Please inform your instructor of any problems you have with this course. Bring problems
not satisfactorily resolved with your instructor to the attention of the Course Supervisor
immediately.

How to Succeed:

(1) It is absolutely essential that you understand how to solve all the assigned problems.
Since quiz and exam questions will be similar to these problems, it is crucial that you
know how to solve every one of them. Once you understand how to solve a problem,
write your solution down neatly and in full detail with explanations that would make your
reasoning clear to a friend who sees the problem for the first time. Save these solutions
in a three-ring binder for review when you prepare for the exams.

(2) Ask questions in lecture or at the clinic about anything that is not completely clear.
Do not hesitate to bring questions to your course instructor during office hours.

(3) Every day, read and study the sections in the textbook covered in the lecture.
Reading mathematics takes time! Read carefully and work through all the examples in
complete detail. It can be helpful to try to work through an example on your own before
reading the solution.

(4) Stay caught up! Calculus concepts build on each other cumulatively and you need to
stay on top of the material at every stage. If you are having difficulty, don't expect that
the problem will take care of itself and disappear later. Contact your course instructor
immediately and discuss the problem!

(5) Form a study group! Many students benefit from a study group to work through
challenging problems and to review for exams. You should attempt the problems ahead
of time by yourself and then work through any difficulties with your study partners.
Explaining your reasoning to another student can help to clarify your own understanding!

(6) We believe you can be successful in this course! You should expect to work hard. Do not get discouraged if you find some of the material difficult. Be persistent and patient! If you follow the above suggestions, your experience in this course will be a rewarding one.

Academic Integrity: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. *The use of or availability of any electronic device during a midterm exam or final exam is a violation of the Academic Integrity Policy.* For more information about the policy, see http://academicintegrity.syr.edu.

Religious Observances Policy: Syracuse University's religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that maybe missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.

Students with Disabilities: If you need accommodations for a disability, please contact the Office of Disability Services (ODS), http://disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations

may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.