

HNRS 2414 – Honors Calculus II
Spring 2024

Professor: Dr. David Milan

Office: RBN 4006

Office Hours: MWF 1:30pm-2:30pm, or by appointment

Email: dmilan@uttyler.edu

Office Phone: 903-565-5839 (email is best)

Web: class page on canvas **Class Meeting Time:** 10:30 – 11:55 MWF

Required Text:

Calculus Volume 2, by OpenStax. This is an open educational resource textbook. The online edition is available for free at <https://openstax.org/details/books/calculus-volume-2>. There are print copies for about \$35, but you can use the online version for free.

Prerequisites: HNRS 2413 or MATH 2413.

Course Description: A study of differentiation and integration of transcendental functions, polar coordinates, techniques of integration, sequences, series and improper integrals.

Student Learning Outcomes:

- Apply integration to solve problems involving area, volume, and physical work.
- Apply substitution, integration by parts, trigonometric substitution, partial fractions to evaluate definite and indefinite integrals.
- Apply the concepts of limit, convergence and divergence to evaluate some classes of improper integrals.
- Define sequences and series, and determine convergence or divergence.
- Find the Taylor and MacLaurin series to represent elementary functions.
- Apply the ideas of polar coordinates to find areas, lengths of curves and representations of conic sections.

Summary of grading policy: Your grade will be based on:

Participation and Attendance	10%
Quizzes	25%
Three Exams	50%
Final Exam	15%

The grading scale will be no harsher than: 90% = A, 80% = B, 70% = C, 60% = D.

Quizzes: There will be a quiz each week unless a test is scheduled for that week. Quiz problems will be very similar to the assigned homework.

Homework: Written homework will be assigned daily. Solutions will be discussed during each class meeting. Homework is not graded, but students are unlikely to succeed on the quizzes and exams without first working these problems.

Tests and Final Exams: There will be 3 tests and a comprehensive final exam. The three semester tests will be held on Wednesdays. A preliminary list of the test dates is given below. At least one week of advanced notice of any change in test dates will be given.

Important Dates:

Jan. 29: Census date: date to withdraw without penalty and grade replacement deadline.

March 11-15: Spring break

March 25: Last day to drop course with a W.

Final Exam:

Wednesday, May 1 from 10:15am to 12:15pm.

Approximate Daily Schedule

Week 1 (Jan. 16 – Jan. 19):	1.5, 1.7, 2.1
Week 2 (Jan. 22 – Jan. 26):	2.2, 2.3, 2.4
Week 3 (Jan. 29 – Feb. 2):	2.5, 2.6
Week 4 (Feb. 5 – Feb. 9):	Test 1 , 3.1
Week 5 (Feb. 12 – Feb. 16):	3.2, 3.3
Week 6 (Feb. 19 – Feb. 23):	3.3, 3.4
Week 7 (Feb. 26 – March 1):	3.4, 3.7
Week 8 (March 4 – March 8):	Test 2 , 5.1
March 11 – March 15: Spring Break	
Week 9 (March 18 – March 22):	5.2, 5.3
Week 10 (March 25 – March 29):	5.4, 5.4
Week 11 (Apr. 1 – Apr. 5):	5.6, 6.1
Week 12 (Apr. 8 – Apr 12):	6.2, 6.3
Week 13 (Apr. 15 – Apr. 19):	Test 3 , 7.1, 7.2
Week 14 (Apr. 22 – Apr. 26):	7.3, 7.4
Week 15 (Apr. 29 – May 3)	Final Exam

Calculator Policy: No calculators will be allowed on quizzes or tests. Occasionally, you might want to use Mathematica or a calculator on the homework.

Participation and Attendance: Daily attendance and participation will be recorded and will factor into your course grade. Students will present their work at the beginning of class on days when there is not a quiz or test.

I will keep a tally of the number of times students present *high quality* work and the number of times they make *useful* comments during other students' presentations. I will also note absences from class in this portion of the grade. In order to do well, students should make an effort to attend all classes and to finish assigned problems before the next class meeting.

Make-ups: Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor.

University Policies: See <https://www.uttyler.edu/academic-affairs/files/syllabuspolicy.pdf> for these important University policies: UT Tyler Honor code, student rights and responsibilities, campus carry, UT Tyler a tobacco-free university, grade replacement and forgiveness, state-mandated course drop policy, student accessibility and resources, student absence for university-sponsored events, social security and FERPA, emergency exits and evacuation, and student standards of academic conduct.