

Professor: Dr. Talitha M. Washington

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Office hours: M 1-2:30; TTh 9-11, 1-2:30; F 1-2:30

Text: *Calculus - Early Transcendentals*, Sixth Edition, by Stewart

Course Website: *Blackboard*, <http://acebb.evansville.edu>

Course Description: MATH 222 Calculus II (4): Covers applications of integration; integration techniques, infinite series, conic sections, parametric and polar equations and an introduction to differential equations.

Prerequisite: Grade of C- or better in Mathematics 211 or 221.

Course Learning Objectives: Math 222 is the second course in a three-course sequence: 211/221, 222, 323. This course strives to help you:

- develop skills in applying the techniques of integral calculus,
- develop an understanding of the central concepts of integral calculus,
- develop critical thinking and problem solving skills,
- develop an ability to communicate mathematics, both in writing and orally, and
- prepare for further study in mathematics, the physical sciences, or engineering.

Methods of Instruction: The method of instruction for most classes will be a lecture/discussion. Most classes will begin with a discussion of homework problems followed by an introduction of new material. You are encouraged to participate in class by asking questions, contributing to discussions, and working problems. Outside of class, all students are expected to read the text, complete all assigned homework, and come to my office hours and ask questions about the homework.

Grading: The weights in determining your final grade are as follows:

- Attendance – 3%
- Homework Teams – 12%
- Quizzes – 10%
- Gateway Exam (**Feb 15-Mar 22**) – 10%
- Four Tests (**Feb 2, Mar 2, Apr 1, Apr 22**) – 40%
- Comprehensive Final Exam (**Apr 30, 10:15 AM**) – 25%

The lowest test score will be replaced by the grade on the final exam if the final exam score is higher than the lowest test score. The course grade will be given on a 90-80-70-60 curve based on total points. Individual tests are not curved. Other factors which may (positively) affect your course grade are: the quality of your final exam, your interest in the course, etcetera.

Course requirements and policies:

a. Calculators: You may use a calculator on all exams. If you do not already have one, consider purchasing a TI-83+ or TI-84+. Calculators with symbolic algebra capability (e.g. TI-89 or TI-92) **will not** be allowed during tests, exams or quizzes.

b. Attendance: Since you are expected to attend class on time every day, attendance will be taken almost daily. However, if you miss a day, it is up to **you** (not me, or your classmates) to catch up and learn what you have missed.

c. Homework Teams: This will be done outside of class in teams of 2-4 students and each team will submit one per team to be graded. Each team is expected to meet regularly and each member is expected to contribute to the preparation of the homework. The work is expected to be neat, accurate, and may be expected to contain explanations using full sentences and Standard English. All work must be shown and an answer without an explanation is not worth any credit. Through this collaborative learning experience, students will enhance their understanding and knowledge of integral calculus.

d. Quizzes: These will be given during the last 15 minutes of class. There are NO make-ups for quizzes. At the end of the semester, the lowest in-class quiz score of each student will be dropped. Note that the in-class quizzes are on the Schedule (see *Blackboard*).

e. Gateway Exam: The Gateway Exam is a test of basic integration skills. It is a pass/fail exam and will be given in class on **February 15**. It can be retaken by appointment only from February 15 through March 22. Calculators are NOT allowed. The basic reason for giving the gateway is to make sure that students who complete this course on integral calculus can integrate accurately and efficiently.

f. Make-ups: Assignments that are to be completed outside of class will **not** be accepted late for any reason. Make-up exams will be given only in extreme circumstances that are documented university approved excused absences, and only if I am aware of the circumstances prior to the exam. In particular, make-ups will never be given to accommodate travel plans.

g. Assignments: These will be assigned daily and are found on page 3. These problems are for your practice and will not be graded; HOWEVER, you should do all these problems and are responsible for knowing how to work them. Many questions on the quizzes, tests and exams will be strikingly similar to problems in the assignment.

h. Submitted Work: Take care in writing up your solutions for the homework assignments and exams. If critical steps in the solution of a problem are missing, expect to lose points. In general, be sure to show your work. All written solutions must be clear, concise and correct. Even if your solution is correct, expect to lose points if it is difficult to read and understand. This includes solutions that are confused, incomprehensible, unnecessarily complicated, verbose, illegible or incomplete.

i. Honor Code: It is expected that students are familiar with and will comply with the terms of the University's Academic Honor Code.

I will neither give nor receive unauthorized aid, nor will I tolerate an environment which condones the use of unauthorized aid.

Note that collaboration on homework is allowed and encouraged, but giving or receiving help of any kind on tests, exams or quizzes is strictly prohibited.

j. Accessibility: Please let me know immediately if you have a learning or physical disability requiring accommodation. For more information, contact the Office of Counseling and Health Education at 488-2663.

k. Some advice: Here is some advice from a UE student:

- Try the homework before asking for help
- Read the book before class
- Be active in class and come every day, on time
- Actively seek understanding
- Prepare for tests other than the night before
- Question why things are done a certain way
- Correct all old tests

You should expect to spend at least **8 hours** each week studying outside of class. Your study time should include reading the text and working on all homework problems. I recommend that you keep your notes, quizzes, exams, and class handouts **organized** – you will need them to prepare for the Final Exam. Please do not hesitate to stop by my office, call me, or send me an email if you are having difficulty with any part of the course.

Have a great semester!

Assignments

5.2	p. 376	1, 3, 7, 37
5.3	p. 388	11, 13, 27, 29, 31, 33
5.4	p. 398	59, 62, 64
5.5	p. 406	11, 19, 25, 27, 29, 35, 37, 55, 59, 67, 77
6.1	p. 420	1, 3, 7, 9, 13-27 odd, 29, 33, 43, 44
6.2	p. 430	3, 9, 11, 15, 17, 19, 23, 27, 41, 47, 49, 51, 56, 58, 59
6.3	p. 436	1, 3, 7, 9, 11, 17, 19, 23, 25, 28, 45
6.4	p. 441	3, 5, 9, 11, 13, 15, 19, 21, 23
6.5	p. 445	5, 7, 9, 14, 15, 17
7.1	p. 457	3-31 odd, 53, 57, 59, 61, 63

Test 1, Tuesday, February 2

7.2	p. 465	1, 3, 7, 11, 15, 17, 19, 23, 55, 61
7.3	p. 472	1, 5, 9, 11, 13, 17, 19, 33
7.4	p. 481	1, 5, 7, 9, 11, 15, 17, 21, 23, 63, 64
7.7	p. 505	3, 9 (use $n = 4$), 17, 29, 31a, 37
7.8	p. 515	5, 7, 9, 13, 19, 25, 31, 33, 35, 41, 63
8.1	p. 530	1, 3, 5, 7, 11, 15, 23 (use $n = 4$), 33, 37
8.2	p. 537	1, 3, 5, 7, 11, 13, 17 (use $n = 4$), 25
8.3	p. 547	1, 3, 5, 7, 9, 13, 17

Test 2, Tuesday, March 2

9.1	p. 571	1, 3, 5, 7, 9, 11, 14
9.2	p. 578	1, 3, 4, 5, 6, 7, 21, 23, 28
9.3	p. 586	1, 3, 7, 9, 11, 13, 19, 34
9.5	p. 606	1, 3, 5, 7, 9, 11, 13, 17, 19
10.1	p. 626	5, 7, 9, 11, 13, 15, 19, 21, 24, 25, 31, 33
10.2	p. 636	1, 3, 5, 11, 13, 17, 19, 29, 37, 39, 41, 45, 51, 59, 65
10.3	p. 647	1, 3, 5, 7, 9, 11, 15, 17, 21, 25, 29, 31, 35, 37, 43, 49, 56, 57, 61, 63
10.4	p. 653	3, 5, 7, 9, 13, 17, 23, 27, 29, 33, 35, 37, 45

Test 3, Thursday, April 1

11.1	p. 684	5, 7, 9, 11, 13, 19, 21, 25, 27, 29, 31, 33, 41, 45, 55
11.2	p. 694	3, 9, 11, 13, 15, 17, 19, 21, 23, 25, 41, 43, 47, 51
11.3	p. 703	3, 7, 9, 11, 13, 15, 17, 19, 21, 25
11.4	p. 709	1, 3, 5, 7, 13, 15, 17, 19, 23, 29
11.5	p. 713	3, 5, 7, 9, 11, 13, 15, 19
11.6	p. 719	1, 3, 5, 9, 11, 12, 15, 17, 21, 25, 29, 31
11.7	p. 722	1, 3, 5, 7, 9, 12, 13, 17, 21, 25, 31, 37
11.8	p. 727	3, 7, 9, 13, 17, 19, 23, 25, 30

Test 4, Thursday, April 22

11.9	p. 733	3, 5, 7, 9, 11, 13, 14, 35, 38
11.10	p. 746	5, 7, 9, 13, 15, 17, 19, 29, 31, 47, 55, 63, 67

Final Exam, Friday, April 30, 10:15 AM

**Changes to Test dates and assignments will be announced in class*