

School of Mathematical & Natural Sciences Course Syllabus

MATH 3495 Calculus II, Fall 2010

INSTRUCTOR & OFFICE: Farrokh Abedi, Science Center A 9, Phone: 460-1216

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OFFICE HOURS: MW 9:30-11:00, MTWT 2:00-3:00 or by appointment.

REQUIRED TEXT & MATERIAL: *Calculus, Concepts and Contexts*, by James Stewart; 4th edition. A graphic calculator such as the TI-83, or better is required. (A graphing calculator TI-89 preferred for checking answers). You should know how to use your calculator.

COURSE PREREQUISITES: A grade of C or better in Math 2255, Calculus I.

COURSE OBJECTIVES: The focus of this course is to develop the fundamentals of integral calculus which include both the ability to perform manipulations and a conceptual understanding of the basic themes. The specific objectives are:

1. To understand techniques of integration such as integration of inverse trigonometry functions, substitution, trigonometry substitution, integration by parts, integration by partial fraction decomposition, integration of exponential and logarithmic functions;
 2. To understand the sequences and series and the methods used to determine their convergence or divergence.
 3. To understand and apply the various tests for convergence of an infinite series.
 4. To understand the concepts of Taylor and Maclaurin series.
 5. To understand vectors, dot product, cross product, orthogonality.
 6. To understand vector functions, their derivatives and integrals, tangent vectors, arc length, curvature.
 7. To understand functions of several variables, their limits, and partial derivatives.
- All topics should be considered graphically, numerically, and algebraically

COURSE CONTENT & SCHEDULE OUTLINE: Revision will be announced as needed.

<u>Topic</u>	<u>Text</u>
Riemann Sum, The Fundamental Theorem of Calculus, Methods of Integration of Exponential, Logarithmic and Inverse Trigonometry Functions, Substitution Rule, Integration by Parts, The L'Hopital's Rule and Improper Integrals	Chapters 5
Test 1	
Applications of Integration, Volumes, Arc Length, Average Value of a Function, Moments and Center of Mass	Chapter 6
Test 2	

Sequences, Infinite Series Integral and Comparison Tests, Alternating Series Test, Ratio Test	Chapter 8.1 - 8.4
Test 3	
Power Series, Taylor and Maclaurin Series, Binomial Series, Taylor Polynomials	Chapters 8.5 - 8.8
Test 4	
Vectors, Dot Product, Cross Product, Equations of Lines and Planes	Chapters 9
Test 5	
Vector Functions, Arc Length and Curvature, Motion in Space	Chapter 10
Test 6	
Functions of Several Variables, Limits, Partial Derivatives	Chapter 11.1 - 11.3
Test 7	
Comprehensive Final Exam	Tuesday December 14 8:00-10:00

Specific homework assignments will be distributed periodically throughout the semester.

GRADING Policy: In addition to the tests and comprehensive final examinations, there will be labs, quizzes, and homework assignments that will contribute to your grade.

Homework, Quizzes -----20 %

Chapter Exams (at least 7) -----60 %

Class Presentations-----5%

Final exam -----15 %

Quizzes are announced in advance and cover those topics in the lecture and the assignments.

Grades are assigned on the following basis:

A 90-100%, B 80-89%, C 70-79%, D 60-69%, F below 60%

SPECIAL POLICIES:

1. No late homework will be accepted and there are no make-up quizzes.
2. If a test is missed then the percentage grade on the final examination will be substituted for the test grade.
3. If no tests are missed and the percentage grade on the final examination is greater than the lowest test grade then the final examination percentage grade will be substituted for the lowest test grade.
4. At the beginning of the semester you will be assigned a code number which will be used

when grades are posted. You may request a new number or that your grades not be posted.

5. You are expected to attend all class meetings and you are responsible for the material covered in these meetings. Normally your attendance will be recorded based upon your submission of homework or a quiz. If you must miss a class meeting you may submit homework but you should write absent on the top of the page. If you do not have an assignment then you should submit a piece of paper bearing your name.
6. To prevent distractions to others, all cell phones, beepers, etc. should be turned off in class
7. Cheating and plagiarism are violations of the Student Conduct Code, and as such are unacceptable behaviors. Any student guilty of cheating or plagiarism will receive a grade of "0" for the assignment and will be referred to the Vice Chancellor for Academic Affairs for possible other actions.

EXPECTATIONS OF THE STUDENT: This course is not a particularly difficult subject if it is approached with the right attitude and commitment. Consistent effort is necessary. Seek assistance when you encounter a difficulty -- not later after the troublesome topic has been used to develop other topics and a simple misunderstanding has become a major impediment. You should commit at least two hour of study time for each hour of lecture.

IMPORTANT DATES:

August 25 (Wed)	First day of classes
October 16 (Sat)	Homecoming
November 8 (Mon)	Preregistration for Spring 2011 begins
November 10 (Wed)	Last day to drop with a W
November 19 (Fri)	Preregistration for Spring 2011 ends
December 7 (Tues)	Last day to withdraw from class
December 10 (Fri)	Last day of classes.
December 14(Tuesday)	Final exam, 8:00-10:00.

The following action is prohibited under the Student Conduct Code:

Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

Students with Disabilities:

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707. AA Doc. 8/9//2010