Fayetteville State University
COLLEGE OF ARTS AND SCIENCES
Department of Mathematics and Computer Science
MATH 242-01: Calculus with Analytic Geometry III
Spring 2015

“In case FSU must close for an emergency during the semester, instruction will continue using Blackboard.”

I. Locator Information:

Instructor: Dr. Xin Tang
Course # and Name: Math 242-01: Calculus with Analytic Geometry-01
Office Location: Science and Technology (S &T) 424
Semester Credit Hours: 4 hours
Where class meets: S & T 231
Office hours: MWF: 11:00 am-1:40 pm
Day and Time Class Meets: MW 9:00-10:15 am LAB: F 9:00-10:50 am S & T 238
Office Phone: 910-672-2206
Email address: xtang@uncfsu.edu

Webassign Class ID: uncfsu 6707 3350
Webassign Website: www.webassign.com

Final Examination: 8:00am-9:50am, Wednesday, May 6th, 2015.

FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (studentid@broncos.uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail. Rules and regulations governing the use of FSU email may be found at http://www.uncfsu.edu/policy/general/FSUE-mailFINAL

II. Course Description: The third course of a three-semester sequence in calculus with analytic geometry, including studies of vectors, vector-valued functions, functions of several variables, partial derivatives, gradients, directional derivatives, maxima and minima, multiple integrals and applications, line and surface integrals, Green's Theorem, Stokes' Theorem, and Divergence Theorem.
Prerequisites: MATH 241.

III. Disabled Student Services: In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability, please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

IV. TITLE IX – SEXUAL MISCONDUCT
Fayetteville State University (University) is committed to fostering a safe campus environment where sexual misconduct — including sexual harassment, domestic and dating violence, sexual assault, and
stalking - is unacceptable and is not tolerated. The University encourages students who may have experienced sexual misconduct to speak with someone at the University so that the University can provide the support that is needed and respond appropriately. The Sexual Misconduct policy can be found at the following link:  http://www.uncfsu.edu/Documents/Policy/students/SexualMisconduct.pdf

**Consulting with a Health Care Professional** - A student who wishes to confidentially speak about an incident of sexual misconduct should contact either of the following individuals who are required to maintain confidentiality:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office Location</th>
<th>Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>Ms. Pamela C. Fisher</td>
<td>Licensed Professional Counselor</td>
<td>Spaulding Building, Room 165</td>
<td>(910) 672-387</td>
<td><a href="mailto:psmith@uncfsu.edu">psmith@uncfsu.edu</a></td>
</tr>
<tr>
<td>Ms. Linda Melvin</td>
<td>Director, Student Health Services</td>
<td>Spaulding Building, Room 121</td>
<td>(910) 672-1454</td>
<td><a href="mailto:lmelvi10@uncfsu.edu">lmelvi10@uncfsu.edu</a></td>
</tr>
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**Reporting an Incident of Sexual Misconduct** - The University encourages students to report incidents of sexual misconduct. A student who wishes to report sexual misconduct or has questions about University policies and procedures regarding sexual misconduct should contact the following individual:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office Location</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Victoria Ratliff</td>
<td>Deputy Title IX Coordinator for Students</td>
<td>Spaulding Building, Room 155</td>
<td>(910) 672-1222</td>
<td><a href="mailto:vratliff@uncfsu.edu">vratliff@uncfsu.edu</a></td>
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Unlike the Licensed Professional Counselor or the Director of Student Health Services, the Deputy Title IX Coordinator is legally obligated to investigate reports of sexual misconduct, and therefore cannot guarantee confidentiality, but a request for confidentiality will be considered and respected to the extent possible.

Students are also encouraged to report incidents of sexual misconduct to the University’s Police and Public Safety Department at (910) 672-1911.

**V. Textbook:**  *CALCULUS Concepts & Contexts* 4E by James Stewart – THOMPSON BROOKS/COLE Publication.

**VI. Student Learning Outcomes** - This course provides necessary background in calculus for students in mathematics, computer science, engineering, physics, chemistry, and other sciences. After the completion of this course, students will be able to

1. Use vectors to describe functions in three variables using Cartesian, cylindrical and spherical coordinates
2. Find derivatives and integrals of vector valued functions in higher dimensions
3. Evaluate partial derivatives of several variable functions
4. Calculate maximum and minimum values of multi variable functions, form and solve applied mathematical problems
5. Evaluate double integrals in regular and polar coordinates, evaluate triple integrals in regular, cylindrical and spherical coordinates
6. Evaluate surface integrals
7. Use computers and graphing calculators to solve mathematical problems
VII. Course Requirements and Evaluation Criteria:

COURSE REQUIREMENTS

1. Students are expected to attend all class sessions. Excessive absences may result in an EA grade.

2. Students are expected to enter the class room on time, and remain for the full class period. Students should not make other appointments in conflict with their class schedule. Three late arrivals and early departures will constitute an absence from the class.

3. All tests will be announced prior to their administration. A make-up exam will be given only if the student has a documented and valid written justification for unavoidable absence from the exam. There is no more than one make-up exam for each student during the semester.

4. The Instructor's office hours are times when you may seek assistance without prior appointment. You are encouraged to seek help as needed.

5. Students must refrain from smoking, eating and drinking in the classroom. The rights of others must be respected at all times.

6. Students are encouraged to ask questions of the instructor in class and to respond to those posed by the instructor. They should not discourage others from asking or answering questions.

7. Students are expected to complete all class assignments, to spend adequate time on their class work, and to read each topic prior to class discussion to insure that the course outcomes are met. At least two hours of home study is expected for each class.

8. Talking in class between students is strictly prohibited. Discussions should be directed to the instructor. Unacceptable behavior in the class will result in a reduction of your final grade.

9. Dishonesty on graded assignments will not be tolerated. The university policy on cheating will be applied to any violations. The minimum penalty will be a grade of zero on the assignment.

10. NO CELL PHONE USE: Please refrain from using your cell phone during the class time.

EVALUATION CRITERIA

Evaluation in the course shall be by continuous assessment. Mode of assessment would include homework assignments, Quizzes, chapter exams, class attendance and participation, a project and the final examination. The lowest test score and the quiz score will be dropped. The grading scale for determining the course grade and weights given to various activities are given below.

a. A = 90-100%  B = 80-89%  C=70-79%  D=60-69%  F=Below 60%

b. Homework: 20%;
   Tests : 45%;
   Quizzes: 10%;
   Project: 5%;
   Final Exam: 20%;

Extra Credit:
5 points: for proper attendance, good behavior and class participation.
c. No make-up exams or late assignments will be accepted without a legitimate reason. Should you expect to miss an exam, you need to get instructor’s approval for a possible makeup in advance.

d. Each test and quiz will be administered in the LAB.

e. Attendance for lab is compulsory.

VIII. Academic Support Resources: One-on-one tutoring is available at University College Learning Center (HTC 216 –C) (see http://www.uncfsu.edu/learningcenter/math/). University College Learning Center is open 8:00 a.m. to 8:00 p.m. Monday through Thursday and 8:00 a.m. to 5 p.m. on Friday. Also 24/7 Academic Assistance program “Smarthinking” is available to all FSU students; access through http://blackboard.uncfsu.edu. Extra help or tutoring, provided by a graduate assistant may be available through the department of Mathematics and Computer Science. Please check Blackboard for more information.

IX. COURSE OUTLINE
*The instructor may modify this schedule as needed to best meet the course objectives and student needs.

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<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8: Test #2, 12.1</th>
<th>Week 9: 12.2, 12.3</th>
<th>Week 10: 12.4, 12.5</th>
<th>Week 11: 12.6, 12.7, 12.8</th>
<th>Week 12: Test #3, 13.1, 13.2</th>
<th>Week 13: 13.3, 13.4, 13.5</th>
<th>Week 14: 13.6, 13.7, 13.8</th>
<th>Week 15: Test #4</th>
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<tbody>
<tr>
<td>9.1, 9.2</td>
<td>9.3, 9.4</td>
<td>9.5, 9.6, 9.7</td>
<td>Test #1, 10.1</td>
<td>10.2, 10.3, 10.4, 10.5, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7</td>
<td>Test #1, 10.1</td>
<td>12.6, 12.7, 12.8</td>
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X. TEACHING STRATEGIES
The majority of the material of the course will be given in lecture format. There is a short review before and after each lecture. There will be a comprehensive review after the completion of each chapter. Power point, Maple will be used in the class to help students develop a firm grasp of the underlying mathematical concepts.

XI. Bibliography