



**Syllabus:** Calculus III

**Course Number:** MATH 2415

**Semester & Year:**

**Instructor Information**

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Office Hours: Will be posted on office door

**Description**

This course includes the three dimensional analytic geometry and vectors, differentiation and integration of vector valued functions, velocity and acceleration, tangent and normal vectors, arc length and curvature, functions of several variables, partial derivatives. Differentials, differentiating functions of several variables, applications involving functions of several variables, multiple integration and applications, and vector analysis including Green's and Stokes' theorems will be covered in this course. Prerequisite: MATH 2414

**Textbook Information: OPEN SOURCE –**  
<https://legacy.cnx.org/content/col12172/1.2/pdf>

**Student Learning Outcomes for the Course**

**Upon successful completion of this course, students will:**

1. Perform calculus operations on vector-valued functions, including derivatives, integrals, curvature, displacement, velocity, acceleration, and torsion.
2. Perform calculus operations on functions of several variables, including partial derivatives, directional derivative, and multiple integrals.
3. Find extrema and tangent planes.
4. Solve problems using the Fundamental Theorem of Line Integrals, Green's Theorem, the Divergence Theorem, and Stokes' Theorem.
5. Apply the computational and conceptual principles of calculus to the solutions of real-world problems.

## **Student Requirements for Completion of the Course and Due Dates**

To complete the students must show up to class, do all of the homework, take three major tests, take a mid-term exam and a final exam. The student must maintain a math binder that will include all homework. This binder will be turned twice on the dates of the mid-term and final exam to be graded.

## **Student Assessment**

You have the following possibilities for earning points:

- |                              |                 |
|------------------------------|-----------------|
| (1) Major Test               | 45% Final Grade |
| (2) Math Binder – (Homework) | 15% Final Grade |
| (3) Mid Term -               | 15% Final Grade |
| (4) Final Exam -             | 25% Final Grade |

## **Grading Scale**

<b>Grade</b>	
<b>A</b>	90-100
<b>B</b>	80-89
<b>C</b>	70-79
<b>D</b>	60-69
<b>F</b>	59-below

## **Class Schedule**

### **Attendance Policy**

Attendance in a math class is very important, therefore a student may be dropped from math 2415 if they have (3) three absentees. The student will be contacted on the second absence and a meeting will be scheduled to talk about the absentees. If the student misses One more class they may be dropped.

### **Make-up Policy**

It is important that students attend every math class, therefore there will not be any makeup opportunities given for test.

### **Academic Integrity Statement**

Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated by the Dean of Students. Proven

violations of this nature will result in the student being dropped from the class with an "F".

This policy applies campus wide, including TC Testing Center, as well as off-campus classroom or lab sites, including dual credit campuses. This information can be found in the Student Handbook at <https://texarkanacollege.edu>.

**Disability Act Statement:**

Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance.

If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need for this class. *It is best to request these changes at the beginning if not before the start of class* so there is ample time to make the accommodations..

**Financial Aid:**

**Attention!** Dropping this class may affect your funding in a negative way! You could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.

Name: \_\_\_\_\_ Date: \_\_\_\_\_