

SYLLABUS
MULTIVARIABLE CALCULUS AND LINEAR ALGEBRA (TNCC MTH265 & MTH266)

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TEXT – Calculus, Early Transcendentals 7E by James Stewart (Chapters 12 to 16)
Elementary Linear Algebra (11th ed.) by Howard Anton and Chris Rorres

PREREQUISITES – AP Calculus BC, Governor's School Calculus, or completion of TNCC MTH 174 or equivalent with a score of B or better, and placement through the multivariable calculus readiness test.

COURSE DESCRIPTION & PURPOSE -

This course focuses on extending the concepts of geometry, algebraic operations, function, limit, continuity, derivative, integral and vector from the plane to the three dimensional space. Features instruction for mathematical, physical and engineering science programs. It will prepare students for further study in mathematics, engineering and science programs by providing the necessary competencies in calculus concepts in the three dimensional space.

COURSE OUTLINE

Multivariable Calculus

- Vectors (Ch.12)
- Vector-Valued Functions (Ch.13)
- Partial Derivatives (Ch.14)
- Multiple Integrals (Ch.15)
- Topics in Vector Calculus (Ch. 16)

Linear Algebra

- Vectors and Matrices
- Linear Equations
- Vector Spaces
- Orthogonality
- Determinants
- Eigenvalues and Eigenvectors
- Linear Transformations
- Numerical Linear Algebra

GRADING

<u>9-week grades are computed as following</u>		<u>Semester grades will be computed as follows:</u>	
Tests	50%	Average quarter grade	80%
Homework	15%	Semester final exam grade	20%
Quizzes	15%		
Classwork	10%		
Project	10%		

Grading Scale	%	90-100	80-89	70-79	60-69	<60
Grade		A	B	C	D	E

Your **final course grade** for Calculus I and II is determined as the average Semester grades:

Semester 1 (Calculus I)	50%
Semester 2 (Calculus II)	50%

COURSE ESSENTIALS -

- ❖ Homework will be assigned for each section and collected often on the date posted on CANVAS. All assignments, including classroom practices, will be collected and graded.
- ❖ A 3-ring binder (or part of a 3-ring binder shared with other classes) is suggested for this class. Divide out a section for notes and a section for homework, classroom exercises, and other assignments that will be collected.
- ❖ Students will need to spend at least 30 – 45 minutes **daily** on their homework (this includes working over the weekends). Work on your homework nightly! Skipping just a day or 2 will mean that you need to spend 2 or more hours to catch up.
- ❖ Assignments turned in late will be penalized 10% per day.
 - This means school day, not class day. For example, an assignment due on Monday will be counted as 2 days late if it is turned in on the next class day (Wednesday).
 - Assignments 5 or more days late will not be accepted.
 - Partial assignments will not be accepted.
 - Once a graded assignment is returned, late work will not be accepted.
- ❖ **Assignment due dates will be posted on CANVAS and other media.** Please check regularly.
- ❖ Every effort should be made to be present on test and quiz days. If you must miss a test or quiz, be sure to bring a written note explaining the absence. Unexcused absences on quiz or test days will result in a 0 (zero) grade for that assessment.
- ❖ All missed tests and quizzes will be made up in class on the first day back if you were absent on the test day only. Otherwise, tests quizzes will be made up at the earliest possible date within 5 days of returning to school.
- ❖ Students with school-excused absences or pre-arranged absences are expected to contact the instructor to make arrangements to complete missed work *before* the absence. Failure to make arrangements prior to such absences may result in a grade of zero on missed assignments.
- ❖ Work missed due to an unexpected absence should be turned in the first day back at school when circumstances permit. If not, contact me to arrange a make-up schedule. All missed work must be completed within 5 days of your return to school. It is the student's responsibility to ask for missed work!
- ❖ The collaboration policy for the class is posted on Canvas. When in doubt, ask me before collaborating with someone on an assignment.
- ❖ Assignments will include group work. When these assignments require you to turn in individual work, you should discuss the assignment with the other members of your group, but complete the problems on your own.

ACADEMIC HONESTY – Academic honesty is crucial to the learning process. This course follows the Governor's School policy and all work will be covered by the Governor's School Honor Pledge and collaboration guidelines, posted in the classroom.

ATTENDANCE AND PARTICIPATION – Regular attendance is necessary for successful completion of this course. This course involves in-class projects and discussion, so class participation is essential.

OFFICE HOURS: 9:20 – 11:20 a.m., 12:10 – 12:45 p.m., and by appointment. Texting and emails are best way to communicate with me.

➤ **Any changes to this syllabus will be announced in class.**