

Syllabus
MATH 2654 – 01
Calculus III
Spring 2016

Instructor: Dr. N. S. Hoang

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Office hours: TR: 9:00 AM–10:30 PM; F: 9:00-9:52 AM

Class meeting time: TR: 11:00 AM–12:20 PM (Boyd 302); F: 10:00-10:52 AM (Boyd 301).

Prerequisites: Math 2634 or the equivalent (with a grade of 'C' or better).

Text: James Stewart, Multivariable calculus, 7th ed, ISBN 978-0538497879/or James Stewart, Calculus: Early Transcendentals, 7th ed, Brooks/Cole, Belmont, CA, 2012. ISBN-13: 978-0-538-49790-9. *The text of this book is available online with your paid subscription to WebAssign.*

Course Description: This is the third course in the Calculus sequence. Topics include functions of two, three, and more variables, multiple integrals, and topics in vector calculus.

Grading: Grades are based on a total of 700 pts given as follows

Total	Homework	Quizzes	Exam 1	Exam 2	Exam 3	Final Exam
700 pts	100 pts	100 pts	100 pts	100 pts	100 pts	200 pts

Grading scale: A: 90–100%; B:80–89%; C:70–79%; D:60–69%; F:0–59%.

Required Equipment: A Webassign software license is required for this course.

WebAssign class key: westga 1039 5803

Exams: There are three midterm exams, given during the regular lecture time. The dates for midterm exams are February 2nd, March 1st, and April 5th. Final exam is scheduled on Tuesday, April 26th from 11:00–1:30 PM and is a comprehensive exam.

Use of calculators: No calculator is allowed during exams.

Homework: Homework assignments will be provided online.

Quizzes: There are quizzes which are worth 10 pts each.

Attendance: Attendance will be recorded every class. You are not allowed to come to class late or to leave early. Students are responsible for any and all materials and announcements they may have missed during their absence.

Common Language for Course Syllabi: Students, please carefully review the following information at the link <http://tinyurl.com/UWGSyllabusPolicies>. It contains important material pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

Withdrawal Policy: The last day for an automatic W withdrawal is: March 3rd. For more information about withdrawal policy, please read the information at the link

http://www.westga.edu/advising/index_5310.php

Make-Up Work: There are NO make-up grades for ANY reason. Students having an unexcused absence on the day of a graded assignment will receive a grade of zero for that assignment. Students having an excused absence on the day of a test will have their test average entered for the missed grade. Absences must be excused before they occur except in extraordinary cases, such as active military duty, jury duty, or hospitalization. Being sick, short of being hospitalized, is not an excuse. If you anticipate being absent from class for a religious holiday, it is your responsibility to notify me in advance.

Other Policies: Usage of cellphones and other electronic devices is *NOT* allowed during class lectures.

Learning Outcomes: The student will be able:

- Perform basic vector operations such as addition, subtraction, scalar multiplication, dot product, cross product, norm, or projection onto another given vector.
- Use the dot product or cross product to find angle between two vectors.
- Determine the components of a given vector that are parallel and orthogonal to another given vector.
- Find equations of lines, planes, and spheres in 3-space given geometric information about them.
- Differentiate and integrate vector-valued functions.
- Find the length of a curve in 3-space.
- Find curvature, tangential acceleration, and normal acceleration for an object moving along a curve in 3-space.
- Find partial and directional derivatives of a function of several variables.
- Find and classify local and absolute extrema of a function of several variables.
- Use Lagrange multipliers to find extreme values of a function of several variables subject to a constraint.
- Evaluate an iterated integral of a function of several variables.
- Determine the limits of integration of a double or triple integral given the region of integration.
- Change variables in a double integral from rectangular coordinates to polar coordinates or in a triple integral from rectangular to cylindrical or spherical coordinates.
- Use double and triple integrals to find masses, centers of mass, and moments of inertia.
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- Determine if a vector field is conservative.
- Evaluate a line integral directly and, in the case of a conservative vector field, using the Fundamental Theorem of Line Integrals.
- Evaluate a line integral over a closed curve using Green's Theorem.
- Evaluate a surface integral directly and using Stokes' Theorem.
- Evaluate a surface integral over a closed surface either directly or using the Divergence Theorem.