

# Calculus III Section N1 Syllabus: Spring/Summer 2008

<b>Instructor</b> Edmond J. Nadler	<b>Contact-email is best</b> enadler@wccnet.edu (734) 677-5009	<b>Office</b> LA 178	<b>Office Hours</b> M,W 11:00am—noon F 11:00—11:30am
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## Class Meeting Schedule & Location

MTH 293 section N1 (CRN 50098): Monday, Wednesday, Friday 9:00–10:55 am, room LA 334

**Description:** This is a third-semester college calculus of more than one variable. Topics include geometry in the plane and in space, vector-valued functions, partial derivatives, multiple integrals, and an introduction to vector calculus.

## Objectives:

- Perform basic vector operations in plane and space
- Find domain, range, limits, partial derivatives of functions of more than one independent variable
- Graph functions of several variables
- Solve multiple integrals using appropriate coordinate systems (rectangular, cylindrical, spherical)
- Solve application problems including using 2<sup>nd</sup> partial derivative test and the method of Lagrange multipliers to find extrema of functions of more than one variable, finding surface area and volumes using multiple integrals.

**Prerequisites:** MTH 192 with a minimum grade of C. A good knowledge of concepts and techniques of differentiation and integration of functions of one variable will be assumed throughout.

## Requirements:

**Textbook:** "Calculus: Early Transcendental Functions", 4<sup>th</sup> Edition, by Larson, Hostetler & Edwards

**Calculator:** TI-83 Plus graphing calculator

## **Policies and Procedures** [Instructor reserves the right to make appropriate modifications.]

**Attendance:** Regular, prompt attendance is required and necessary for success in this course. You are responsible for all assignments and material, including topics covered in class and not found in the text. Office hours are not a substitute for missed classes.

**Credit Standard:** You are required to show full supporting work for all problems. The work is to be based upon material covered. Credit is awarded based upon the completeness and appropriateness of this work, not just the answer. A correct answer with insufficient or inappropriate work might receive little or no credit.

**Homework** will be assigned and discussed in each class meeting. It is absolutely *critical* to your success in this course that you keep up with the homework. Mathematics is best learned by *doing* it.

**Tutoring** is available in the Math Resource Center, LA 258.

**Grading:** Course grade will be based on 4 tests, and a comprehensive final exam, weighted as follows:

2/3 (~67%): 3 (of 4) test scores; the lowest of the 4 test scores will be dropped

1/3 (~33%): final exam

*No make-up tests will be given.*

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## Grading *(continued)*:

The planned grading scale is: **A:** [93-100%], **A-:** [90 – 93%), **B+:** [87 – 90%),  
**B:** [83 – 87%), **B-:** [80 – 83%), **C+:** [77 – 80%), **C:** [73 – 77%), **C-:** [70 – 73%),  
**D+:** [67 – 70%), **D:** [63 – 67%), **D-:** [60 – 63%).

**Course registration changes** (credit/audit status, withdrawal, etc.) must be completed according to WCC policies and are each student's responsibility. Consult the WCC Bulletin for policies and deadlines. The instructor will permit you to withdraw from the course through the last day of class if you notify him of this need.

**Special needs:** If you have *special learning needs*, please inform the instructor and contact Learning Support Services, LA 104, 973-3342.

## **Topics with approximate times**

Introduction & Chapter 11 (all): **Vectors and the Geometry of Space:** ~2 weeks

Chapter 12 (all): **Vector-Valued Functions:** ~1½ weeks

Chapter 13 (all): **Functions of Several Variables:** ~3 weeks

Chapter 14 (all): **Multiple Integration**, and, time permitting, some of Chapter 15 through section 4: **Vector Analysis:** ~3 weeks

## **Tentative test schedule** [*Instructor reserves the right to make appropriate modifications.*]

Test #1: June 13

Test #2: June 30

Test #3: July 18

Test #4: August 4

Final Exam: August 8