MATH 252-07
CALCULUS III
Meets: Monday, Wednesday, Friday   **Time:** 12:00-1:15   **Room:** 853

COURSE DESCRIPTION

Covers analytic geometry, vectors, and vector-valued functions. Includes functions of several variables, vector calculus, surfaces and surface integrals, partial derivatives, multiple integrals, line integrals, and Green's Theorem. Requires graphing calculator.

INSTRUCTOR CONTACT INFORMATION AND OFFICE HOURS

Instructor: Shannon Gracey
Phone: 619-421-6700 ext. 5517
e-mail: sgracey@swccd.edu
Office: Room **320D**
Office Hours:
MW, from 1:30PM-2:05PM, TTH from 2:00PM-3:30PM
You may make an appointment by calling or e-mailing me, using the contact info written above.

COURSE MATERIALS

Required Text: *Calculus, 9th ed.,* Larson and Edwards
Recommended Text: *Third Semester Calculus Student Supplement, 3rd ed.,* Rasky
Calculator: A graphing calculator is REQUIRED. TI 84 is recommended.

PREREQUISITES AND RECOMMENDED PREPARATION

Prerequisite: MATH 251; or the equivalent skill level as determined by the Southwestern College Mathematics Assessment or equivalent

Recommended Preparation: RDG 56 or the equivalent skill level as determined by the Southwestern College Reading Assessment or equivalent

QUESTIONS

Questions are an important part of the learning process. If you have a question, please feel free to ask me at any time! If you have a question, there are probably at least 5 other students with the same question. If I cannot answer your question immediately, I will come back to it ASAP.

HOMEWORK

- Homework will be collected on exam days at the beginning of the class.
- Homework is graded on completeness.
- Each new assignment must be started on a new paper, be clearly labeled with the chapter, section, and assignment, and stapled.
- In order to be successful in this course, YOU MUST PRACTICE MATH PROBLEMS!!!
- **No late homework will be accepted.**

EXAMS

- There will be 5 exams. Your lowest exam will be dropped. There are **NO MAKE-UPS FOR ANY REASON!**
- Some of the exams will **NOT** allow the use of a calculator. Be sure to know the unit circle and be able to work with fractions.

ATTENDANCE & TARDIES

Each student is responsible for his/her registration in classes. Each student must attend the first class meeting or make arrangements with the instructor if he/she is going to be absent. Failure to attend the first class meeting or excessive unexcused absences, that is, more than 8 hours of missed class time, may result in a student being dropped from this class.

DISABILITY SUPPORT SERVICES (DSS)

DSS provides programs and services for students with disabilities. Southwestern College recommends that students with disabilities discuss academic accommodations with their professors during the first two weeks of class. This syllabus and course handouts are available in alternate media upon request.

TUTORING AND ACADEMIC SUCCESS CENTER REFERRAL

To further your success, reinforce concepts, and achieve the stated learning objectives for this course, I refer you to Academic Success Center learning assistance services. You will be automatically enrolled in NC 3: Supervised Tutoring, a free noncredit course that does not appear on your transcripts. Services are located in the ASC (420), the Writing Center (420D), the Reading Center (420), Math Center (426), the Library/LRC Interdisciplinary Tutoring Lab, MESA (396), specialized on-campus School tutoring labs, the Higher Education Center, and the San Ysidro Education Center. Online learning materials and Online Writing Lab (OWL) are available at www.swccd.edu/~asc.

BEHAVIOR

- **CHEATING ON ANY TEST OR QUIZ WILL EARN A GRADE OF F!!! PLAGIARISM (COPYING) OF OTHER PEOPLE'S WORK IS NOT ACCEPTABLE. Any person caught doing this will get an F on the assignment or test in question and can also potentially be given a grade of F for the course and/or be referred to the college discipline process.**
- You may not use your cell phone during class at any time.
- During class your cell phone/pager should be off.
- If you know you need to leave class early, or if you arrive late, take a seat near the door.
- **RESPECT YOUR FELLOW STUDENTS AT ALL TIMES!!!**

GRADING

Exams (5—NO MAKE-UPS, LOWEST SCORE IS DROPPED)…………………………………………………..**60%**
HOMEWORK (NO LATE ASSIGNMENTS ACCEPTED)……………………………………………………… ..**10%**
Final (CUMULATIVE)……**30%**
A: 90%—100% B: 80%— 89% C: 70%— 79% D: 60%— 69% F: 59% and below
Final grades are left to the discretion of the instructor.

COURSE OBJECTIVES

1. Student will apply the concepts learned in the previous two courses to functions of two or more variables.
2. Student will perform operations on vectors and vector-valued functions and will use them in applications to lines and planes in space, velocity and acceleration, and loci in space.
3. Student will evaluate partial and directional derivatives, differentials, and apply these to extrema of functions and tangent planes and normal lines.
4. Student will evaluate multiple integrals and use them in applications to areas and volume, including tranformations to polar, cylindrical, and spherical systems.
5. Student will evaluate line integrals and surface integrals, use vector fields and use Green's Theorem and the Divergence Theorem as applications of vector calculus.
6. Student will demonstrate the ability to graph a variety of surfaces in 3-space, including quadric surfaces, cylinders, and solids of revolutions.

STUDENT LEARNING OUTCOMES

Upon successful completion of Math 252, the student should be able to:

- State and apply basic definitions, properties, and theorems of multivariable Calculus.
- Apply vector operations in two and three dimensions and use vector methods to analyze plane and space curves, and curvilinear motion.
- Apply standard techniques of multivariable calculus, both differential and integral, to solve selected applied problems.
- Apply standard techniques of vector analysis to analyze and solve problems involving vector fields and (line, surface, or flux) integrals.

GRACEY/MATH 252-07 TENTATIVE SPRING 2011 SCHEDULE

MONTH	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
JANUARY	10	11	12	13	14
			Intro, 11.1		11.2
JANUARY	17	18	19	20	21
	HOLIDAY		11.3		11.4
JANUARY	24	25	26	27	28
	11.5		11.6		11.7
JANUARY/FEBRUARY	31	1	2	3	4
	REVIEW	EXAM 1/CH. 11			12.1
FEBRUARY	7	8	9	10	11
	12.2		12.3		12.4
FEBRUARY	14	15	16	17	18
	12.5		REVIEW		HOLIDAY
FEBRUARY	21	22	23	24	25
	HOLIDAY	EXAM 2/CH. 12			13.1
FEBRUARY/MARCH	28	1	2	3	4
	13.2		13.3		13.4

Month					
MARCH	7	8	9	10	11
	13.5		13.6		13.7
MARCH	14	15	16	17	18
	13.8		13.9		REVIEW
MARCH	21	22	23	24	25
	EXAM 3/CH. 13		14.1		14.2
MARCH/APRIL	28	29	30	31	1
	14.3		14.5	HOLIDAY	14.6
APRIL	4	5	6	7	8
	14.7		REVIEW		EXAM 4/CH. 14
APRIL	11	12	13	14	15
	15.1		15.2		15.3
APRIL	18	19	20	21	22
	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
APRIL	25	26	27	28	29
	15.4		15.5		15.5-15.6
MAY	2	3	4	5	6
	15.6, 15.7		15.7		REVIEW
MAY	9	10	11	12	13
	EXAM 5/CH. 15		REVIEW		REVIEW
MAY	16	17	18	19	20
	FINAL (8AM-10AM)				

IMPORTANT DATES
January 12 Spring instruction begins for full term and first short sessions—Wednesday
January 12–26 Late admission period/class change period—Admissions
* January 26 Last day to add classes
Refunds—Last day to withdraw from full-semester classes and qualify
for a refund of enrollment fees and non resident tuition. (See information
below for short session deadline.)
Last day to get a refund in the Bookstore
Last day to get a refund for Student Activities sticker
Last day to get a refund for Parking
January 28 Last day to file a petition for independent study
February 4 Last day to withdraw from a class without receiving a "W" grade
Last day to file a petition for Pass/No Pass
March 4 Deadline to petition for Spring 2011 Graduation
March 14 2nd Short Session Begins
* April 1 Last day to withdraw from full-semester courses and receive a "W" grade for
full-term (18 week) sections.
April 8 Deadline to petition for Summer 2011 Graduation
May 3–5 Grad Fest
May 20 Commencement at DeVore Stadium 4 p.m.
* You may add classes with an add code or drop from classes via **WebAdvisor** at **www.swccd.edu**
(Click on WebAdvisor or go to **https://webadvisor.swccd.edu**)