SCUPI – Math0240 Analytic Geometry and Calculus 3
Fall Semester 2025, Section 6

INSTRUCTOR: Dr. Tony Ho; **OFFICE:** N-515; **EMAIL:** zh_ho01@scupi.cn
OFFICE HOURS: MTuWTh 13:30 – 15:30pm at Rm N-515, or by appointment.
LECTURES: Mon & Wed: 16:45am – 18:25am at south campus room S-205.
RECITATION: To Be Determined
CREDITS: 4 credit hours
TEXTBOOK: *James Stewart: Essential Calculus 2nd ed.*
TEACHING ASSISTANTS: Baowen Zhang & Feiyu An
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PREREQUISITE: Math 230

DESCRIPTION: This is the third part of three-part calculus sequence for students in SCUPI. Topics mainly focus on multivariable calculus which include: the limits and differential calculus, then a detailed learning of multiple integration techniques, and vectors calculus, which includes the line integrals, Green's Theorem, surface integrals, Stokes' Theorem, and The Divergence Theorem.
COURSE OBJECTIVES: Students will develop a good understanding of the differences between one variable calculus and multivariable calculus, and the vector calculus. Students will acquire basic skills needed to apply integration techniques to solve a wide range of integration problems. Students will develop a basic understanding of the line integrals, Green's Theorem, surface integrals, Stokes' Theorem, and The Divergence Theorem and their applications. Evaluation of students will be determined by in-Class presentation, quizzes, homework and tests.
LEARNING OUTCOMES FOR THIS COURSE:

1) Students will develop a basic understanding of multivariable functions and their graphs, limits, and differentiations.
2) Students will learn various techniques of multiple integration, which include double integrals in both Cartesian and polar coordinates, and triple integrals in Cartesian, cylindrical and spherical coordinates.
3) Students will learn vector calculus including vector fields, line integrals, Green's Theorem, surface integrals, Stokes' Theorem, and The Divergence Theorem.
4) Students will develop a basic understanding of multivariable and vector calculus and their applications.

GRADE: The final grade will be based on the **score**. The score is a number determined by
Attendance: 5% Homework: 10% Quizzes: 10% Major Exams: 20% Final: 35%
The final letter grade is determined from the following table.

A: [90 – 100]	A−: [85 – 89]	B+: [80 – 84]	B: [76 – 79]	B−: [73 – 75]
C+: [70 – 72]	C: [66 – 69]	C−: [63 – 65]	D: [60 – 62]	F: < 60

EXAMS: There are two major tests and a final exam. Tentative Dates are given in the table below. Each major test will be cumulative with more emphasis on the material since the previous test. The lowest test score may be replaced by the final exam score if the final is higher. Here is an example: if a student's grades are: attendance (24/30), quiz average (80), homework average (80), tests (70, 75), and final (80), then the student grade determination is

$$(24/30) \times 5 + 80 \times 10\% + 80 \times 10\% + (70+75) \times 20\% + 80\times 35\% = 77,$$

which is a B. The final exam will be comprehensive. There is **NO** Make up for all the quizzes and exams.

Tentative exam dates are the following:

TEST 1: 10/31	**TEST 2: 12/12**	**FINAL: TBD**

QUIZZES: In-class 10-minutes quiz will be given on some lecture days and recitation classes.

RECITATION: We will decide on a common time for a 45-min recitation every week. Many quizzes will be held during recitation. The recitation class is allocated for answering your questions.
GRADE REBUTTAL: You must retrieve your own exam and quiz papers. For any exam or quiz, you have only one week to request corrections. No corrections will be made after a week after the test paper is returned.
HOMEWORK: There will be a graded homework assignment given on each section covered. They must be handed in before due date. **No late homework will be accepted**. Your TA will collect them and grade some problems. Homework solutions will be provided after the due date.
ATTENDANCE: You are expected to attend all the classes; We will follow Sichuan University's policy for attendance, and we will check attendance for every class. If you miss a third of all semesters' classes, then you may receive a 0-score for this semester's grade. A student who misses a class is responsible for finding out what was covered in the class.
MAKE-UP POLICY: No makeup work will be allowed. The dropped grade in each test period is to account for any missed assignments due to illness or any other circumstances.
CODE OF ACADEMIC CONDUCT: All students in attendance at the Sichuan University are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University expects from its students a higher standard of conduct than the minimum required to avoid discipline. Academic misconduct includes all acts of dishonesty in any academically related matter and any knowing or intentional help or attempt to help, or conspiracy to help, another student. The Academic Misconduct Disciplinary Policy will be followed in the event of academic misconduct.
NON-ACADEMIC MISCONDUCT: All cell phones and other electronic devices are to be turned off and out of sight while you are in the classroom. All newspapers and other materials not related to the class are to be put away once class begins. Operating these devices and reading unrelated materials while in class is disrespectful of your instructor and fellow classmates. If you fail to abide by this rule, the instructor has the right to confiscate the device or materials. If you have an emergency and need to have your phone turned on during class, ask your instructor for permission.

MATERIAL COVERED: Tentative Progress:

Week of	Contents	Descriptions
1 (09/08)	11.1, 10.6	Functions of Several Variables, Cylinders and Quadratic Surfaces
2 (09/15)	11.2, 11.3	Limits and Continuity, Partial Derivatives
3 (09/22)	11.4, 11.5	Tangent Planes and Linear Approximations, The Chain Rule
4 (09/29)	11.6, 11.7	Directional Derivatives and the Gradient Vector, Maximum and Minimum Values
5 (10/06)	11.8	Lagrange Multipliers
6 (10/13)		National Holidays
7 (10/20)	12.1, 12.2	Double Integrals over Rectangles, Double Integrals over General Regions
8 (10/27)	12.3, 12.5	Double Integrals in Polar Coordinates, Triple Integrals
9 (11/03)	12.5, 12.6	Triple Integrals, Triple Integrals in Cylindrical Coordinates
10 (11/10)	12.7, 12.8	Triple Integrals in Spherical Coordinates, Change of Variables in Multiple Integrals
11 (11/17)	12.8, 13.1, 13.2	Change of Variables in Multiple Integrals, Vector Fields, Line Integrals
12 (11/24)	13.3, 13.4	The Fundamental Theorem for Line Integrals, Green's Theorem
13 (12/01)	13.5, 13.6	Curl and Divergence, Parametric Surfaces and Their Areas
14 (12/08)	13.6, 13.7	Parametric Surfaces and Their Areas, Surface Integrals
15 (12/15)	13.7, 13.8	Surface Integrals, Stokes' Theorem
16 (12/22)	13.8, 13.9	Stokes' Theorem, Divergence Theorem
17 (12/29)	**10:30 – 12:30**	**Final exam**
18 (01/05)		