

MATH 240 - ANALYTIC GEOMETRY AND CALCULUS 3

Syllabus Spring 2017

INSTRUCTOR: Dr. Sam Ghalambor **OFFICE:** Rm221

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OFFICE HOURS: Mondays 10:00AM –12:00PM Rm221, or by appointment.

LECTURES: Mondays 08:15am –10:00am; Tuesdays 1:50pm -3:30pm {section 1}
Tuesdays 04:45pm –06:25pm; Wednesdays 1:50pm -3:30pm {section 2}

TEXTBOOK: Calculus early transcendental Second edition (International metric version).

DESCRIPTION: This is the second part of two-part calculus sequence for students in SCUPI. Topics include vectors, parameterized curves and surfaces, differentiation of functions of several variables, optimization, integration of functions of two and three variables, line integrals, flux integrals, and calculus of vector fields. Prerequisite: MATH 0230. 4 credit hours.

GRADE: The course point grade will be determined by

Class Participation /Homework: 30% Three Major Tests: 30% Final Exam: 40%

The course letter grade is determined from the following table.

A+: 95 – 100	A: 92 – 94	A-: 90 – 92	B+: 88 – 90	B: 82 – 88	B-: 80 – 82	
C+: 78 – 80	C: 72 – 78	C-: 70 – 72	D+: 68 – 70	D: 62 – 68	D-: 60 – 62	F: < 60

TESTS: Each major test will emphasize material since the previous test, but may include anything covered previously. The lowest major test score may be replaced by the final exam score if the final is higher. No make-up tests. A missed test will be counted as an irreplaceable 0 except in the event of serious illness or other extreme cases with documents provided timely and in this case it will be replaced by the final exam score. Only nonprogrammable (no differentiation and integration capabilities) calculators are allowed on tests.

Tentative Major Test dates: All tests will be given in **Rm216 during class hours**

Test 1: for Chapter 11	Test 2: For Chapter 12
Test 3: For Chapter 13	

Final Exam : **End of June**

ATTENDANCE: Class attendance and participation is required. Students are solely responsible for any work missed during an absence.

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 be 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. Leaving the classroom without permission or other disruptions are disrespectful of your instructor and fellow classmates. If you fail to abide by this rule, you lose credit for your final assessment. If you have an emergency and need to have your phone turned on during class, ask your instructor for permission before class begins.

SCHEDULE

Week 1 (Feb 27 –Mar 3rd)

1. Parametric equations
2. Polar coordinates

Week 2 (Mar 6th – Mar 10th)

1. Calculus in Polar coordinates (recall the definitions/graphs of conic sections)
2. Review vectors operations (dot and cross product)

Week 3 (Mar 13th – Mar 17th)

1. Lines and curves in Space
2. Calculus of vector value functions

Week 4 (Mar 20th -24th)

1. Motion in Space /Length of Curves
2. Curvatures

Week 5 (Mar 27th – Mar 31st)

1. Test
2. Planes and surfaces

Week 6 (April 3rd – April 7th)

1. Graphs and level curves
2. Limits and Continuity

Week 7 (April 10th –April 14th)

1. Partial derivatives
2. The Chain Rule

Week 8th (April 17th –April 21st)

1. Directional derivatives and the gradient
2. Tangent planes and linear approximation

Week 9th (April 24th - April 28th)

1. Minimum and Maximum problems
2. Lagrange Multipliers

Week 10 (May 1st – May 5th)

1. TEST
2. Double integrals over rectangular regions/Double integral over general regions

Week 11 (May 8st – May 12th)

1. Double integral in Polar coordinates
2. Triple integral

Week 12 (May15th- May 19th)

1. Triple integral in Cylindrical and Spherical Coordinates
2. Mass computation/ Change of variables in Multiple integrals

Week 13 (May 22nd –May 26th)

1. TEST
2. Vector Field

Week 14 (May 29th – June 2nd)

1. Line integrals
2. Conservative field,/ Green Theorem

Week 15 (June 5th –June 9th)

1. Divergence and Curl
2. Surface Integrals

Week 16 (June 12th – June 16th)

1. Divergence theorem
2. Stokes' theorem

Week 17 (June 19th – June 23th)

Review

Week 18

End of term test

I hear and I forget.
I see and I remember
I do and I understand!!!

Remember APPA	&	SCUPI
A ttend classes		S incere
P repared before classes		C ourteous
P articipate in classes		U nselfish
A ttitude - positive towards all classes		P roud
		I ntelligent