



MATH 213 section 004, Fall 2018

Analytic Geometry/ Calculus III

TTh, 9:00-10:15 am, Planetary Hall 129

Instructor: Dr. Sarah Khankan

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Office: Exploratory Hall 4219

Office Hours: T 10:30-11:30 and by appointment

TA: Wafa Mahzari, email: wmahzari@masonlive.gmu.edu,

TA Office Hours: M 1:30-3pm, Exploratory 4311

Credit Hours: 3

Text(s): Briggs and Cochran, Calculus - Early Transcendentals, 2nd Edition. (ISBN: 9780321947345)

Prerequisites: C or better in MATH 114 or MATH 116.

Broad purpose of the course: We will cover partial differentiation, multiple integrals, line and surface integrals, and three-dimensional analytic geometry.

Disability statement: If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703.993.2474. All academic accommodations must be arranged through that office.

Tutoring Center: The Math Tutoring Center is located in the Johnson Center Room 344. Help is available on a walk-in basis. For hours of operation see <http://math.gmu.edu/tutor-center.php> University Honor Code: You are expected to follow the GMU Honor Code <http://oai.gmu.edu/the-mason-honor-code/>.

Exams:

- Exam 1: 10/02/2018
- Exam 2: 10/30/2018
- Final Exam: 12/13/2018, 7:30-10:15 am

Grade Distribution:

MyMathLab	15%
Quizzes	20%
Exam 1	20%
Exam 2	20%
Final Exam	25%

Letter Grade Distribution:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	below 60%

+ or - may be attached to the grade for *approximately* the upper or lower 2 points.

Homework: We will be using MyMathLab for online homework.

MyMathLab Course ID: khankan04746

Weekly Quizzes: 10 minutes. During recitation. Similar to practice problems.

Course Policies:

- Exams are closed book, closed notes.
- No makeup exams will be given.
- Assignments: Students are expected to work independently. Discussion amongst students is encouraged, but when in doubt, direct your questions to the professor or tutor.
- No late assignments will be accepted under any circumstances.
- Attendance is expected.
- Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.

Tentative Course Outline:

The weekly coverage might change as it depends on the progress of the class.

Week	Content	Sections covered
1 (08/28-08/30))	<ul style="list-style-type: none"> • Vectors in the plane • Vectors in three dimensions • Dot Products 	11.1, 11.2, 11.3
2 (09/04-09/06))	<ul style="list-style-type: none"> • Labor Day • Cross Products 	11.4
3 (09/11-09/13))	<ul style="list-style-type: none"> • Lines and Curves in space • Calculus of vector-valued functions • Motion in space 	11.5, 11.6, 11.7
4 (09/18-09/20))	<ul style="list-style-type: none"> • Length of Curves • Curvature and Normal vectors • Planes and Surfaces 	11.8, 11.9, 12.1
5 (09/25-09/27))	<ul style="list-style-type: none"> • Graphs and level curves • Limits and continuity 	12.2, 12.3
6 (10/02-10/04)	<ul style="list-style-type: none"> • EXAM 1 • Partial Derivatives • The chain rule 	12.4, 12.5
7 (10/09-10/11)	<ul style="list-style-type: none"> • Fall Break • Directional derivatives and the Gradient 	12.6
8 (10/16-10/18)	<ul style="list-style-type: none"> • Maximum/Minimum problems • Lagrange Multipliers (if time allows) 	12.8, 12.9
9 (10/23-10/25)	<ul style="list-style-type: none"> • Double integrals over rectangular regions • Double integrals over general regions • Double integrals in polar coordinates 	13.1, 13.2, 13.3
10 (10/30-11/01)	<ul style="list-style-type: none"> • EXAM 2 • Triple integrals • Triple integrals in polar coordinates 	13.4, 13.5
11 (11/06-11/08)	<ul style="list-style-type: none"> • Change in variable in multiple integrals • Vector fields • Line integrals 	13.7, 14.1, 14.2
12 (11/13-11/15)	<ul style="list-style-type: none"> • Conservative vector fields • Green's theorem • Divergence and Curl 	14.3, 14.4, 14.5
13 (11/20-11/22)	<ul style="list-style-type: none"> • Divergence and Curl • Surface integrals • Thanksgiving Break 	14.5, 14.6
14 (11/27-11/29)	<ul style="list-style-type: none"> • Stoke's theorem • Divergence theorem 	14.7, 14.8
15 (12/04-12/06)	<ul style="list-style-type: none"> • Review 	
12/13, 7:30-10:15 am	<ul style="list-style-type: none"> • Final Exam 	