Math 234 - Calculus - Functions of Several Variables, Sections 2 and 5

Credits: 4

Canvas: https://canvas.wisc.edu/courses/161695

Course Designations and Attributes:

Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S

Meeting Time and Location:

Section 2: MWF 9:55 - 10:45am, BASCOM 272
Section 5: MWF 1:20-2:10pm, B102 Van Vleck

Credit Hours: The four credit hours are met by five 50-minute meetings and a minimum of seven hours of out of class student work per week for 15 weeks.
INSTRUCTORS AND TEACHING ASSISTANTS

Instructor: Sergey Bolotin

Office hours: MWF 2:20-3:20pm, 621 Van Vleck

Email: bolotin@math.wisc.edu

Teaching Assistants:

Sections 321 and 323: Boggess, Brandon
Email: bboggess@wisc.edu
Office hours: 11-12 Monday and 4-5 Tuesday, in Van Vleck 722.

Sections 322 and 329: Gan, Chun.
Email: cgan5@wisc.edu
Office hours Tuesday, Thursday, 9:45 to 10:45 am in Van Vleck 101.

Sections 324 and 326: Nair, Anjali
Email: nair25@wisc.edu
Office hours 10:55-11:55 on Mondays and Wednesdays in VV 516

Sections 325 and 327: Wei, Junyi
Email: jwei53@wisc.edu
Office hours Monday and Wednesday 4pm-5pm in Van Vleck 722.

Sections 328 and 330: Powers, Michael
Email: mnpowers@math.wisc.edu
Office Hours: Monday 1:00 - 2:00, Friday 11:15 - 12:15 in 618 VV

Sections 331 and 332: Ding, Yida
Email: yding54@wisc.edu

Office hour 1:15-2:15pm every Tuesday and Thursday in Van Vleck 318.

Sections 391 and 403: Anirudh Muralidharan

Sections 392 and 393: Newton, Kit

Email: k.cole.newton@gmail.com

Office hours Wednesday 12:10pm-1:10pm and Thursday 12:00pm-1:00pm in 418 Van Vleck.

Sections 394 and 401: Yuan, Ye

Email: yuan@math.wisc.edu

Office hours 1-2pm and 4:30-5:30pm each Tuesday, in VV 718.

Section 399: Ongay Valverde, Ivan

Sections 396 and 397: Schwend, Jeremy

Email: jschwend@wisc.edu

Office hours Monday 11:30-12:30 and Tuesday 10:30-11:30 in Van Vleck 316.

Sections 398 and 395: Yuan, Chaojie

Email: cyuan25@wisc.edu

Office hour Tuesday and Thursday, 3:30pm - 4:30pm
Section 399: Oh, Changkeun

Email: coh28@wisc.edu

Office hours: Monday 5-6pm and Friday 3:30-4:30pm Van Vleck 816.

Sections 400 and 402: Han, Yuxi

Email: yuxi.han@wisc.edu

Office hours from 3:20-5:20 pm every Friday in 616 VV.

OFFICIAL COURSE DESCRIPTION

Introduction to calculus of functions of several variables; calculus on parameterized curves, derivatives of functions of several variables, multiple integrals, vector calculus.

Prerequisites: Math 222 or 276

LEARNING OUTCOMES

By the end of Math 234 you should be able to:

- Analyze the behavior of functions of several variables, including their asymptotic behavior, local behavior and existence of extrema with the tools of calculus.
- Describe and analyze motion in space with the tools of calculus.
- Represent and compute a wide variety of areas and volumes by means of multiple integrals.
- Derive relations between different physical phenomena and their integral representations by the use of Green’s theorem, the Divergence theorem, and Stokes’ theorem.
Describe physical phenomena using mathematical models.

**GRADING**

Midterm 1 - 20%
Midterm 2 - 20%
Final exam - 40%
Discussion quizzes - 10%
Online homework - 10%

The grading curve will be determined after the final exam. You may check historical grade distributions on the math department web page.

**REQUIRED TEXTBOOK, SOFTWARE & OTHER COURSE MATERIALS**

- Stewart Calculus 8e ebook, Chapters 13-16. See purchase information on Canvas.
- Web Assign

**EXAMS, QUIZZES, PAPERS & OTHER MAJOR GRADED WORK**

There will be two midterms and a final for this course. The final exam will be cumulative. The dates for the exams are

- Midterm 1: Friday October 11, in class.
- Midterm 2: Wednesday November 13, in class.
- Final exam: Thursday December 19, 2:45-4:45pm, place TBA.

All exams are closed book, closed notes. There will be some formulas given on the last page of the exam. No electronic devices of any kind are allowed.
The only valid reason to miss a midterm is medical emergency supported by a doctor's note.

The final exam will be cumulative: it will cover the entire course, but with more problems on later subjects. There will be no early final exams given for any reason; please make your travel plans accordingly.

If you are a McBurney student, come to my office hours the first 2 weeks of the class to make exams arrangements.

Old exams  https://uwadison.app.box.com/v/math234

HOMEWORK & OTHER ASSIGNMENTS

- **Quizzes**

There will be weekly quizzes every Thursday discussion, except the first week and examination weeks. The first quiz will be on Thursday September 12. Quiz content and grades are managed by your TA. The two lowest scores will be dropped. Makeup quizzes will not be given.

- **Homework**

There will be weekly online homework assignments, available on WebAssign. Homework will be assigned on Wednesday evening, and will be due the following Tuesday by 11:55pm. The first WebAssign homework (assigned on September 4) will not count. Two lowest homework scores will be dropped.

**Piazza:**  We will be using Piazza for class discussion. The system is catered to getting you help fast from classmates, the TA, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza.

Find our class page at: https://piazza.com/wisc/fall2019/fa19math234002and005/home

**If you need help**

Don't stay confused. Ask for help as soon as possible. After midterm 1 it is often too late.

- **TA office hours.** You may attend the office hours of your own TA or of another TA.
· **My office hours.** You are encouraged to attend.

· **Mathematics Tutorial Program:** Free small group tutoring is offered to students who are in danger of getting a D or F, for students who have not had a math course in several years, or for students who are retaking the course.

A significant time commitment is required. Any student can apply to the program, but after the first two weeks of the semester, a referral from an instructor is required. Students may apply in room 320 Van Vleck.

· **Math Lab:** a free, drop-in tutorial program in B227 Van Vleck. Tutoring is available Monday through Thursday from 3:30–8:30PM and Sunday 3:30–6:50PM.

· **Tutoring in University Residence Halls:** free, drop-in math tutoring is available every evening Sunday–Thursday at various residence halls. This table has more information.

· **GUTS:** Greater University Tutoring Service offers free small group, individual, and drop-in tutoring at various locations around campus. It is staffed mostly by student volunteers.

Stop by their office (333 East Campus Mall, Rm. 4413) to sign up for a tutor or try drop-in tutoring.

· **Private Tutors:** A list of tutors is available at the link or from the receptionist on the second floor of Van Vleck.

This information was taken from the [Getting help in your math class](#) page.

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**RULES, RIGHTS & RESPONSIBILITIES**

- See the Guide’s [Rules, Rights and Responsibilities](#)

**ACADEMIC INTEGRITY**

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison’s community of scholars in which everyone’s academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course,
disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

McBurney Disability Resource Center syllabus statement: “The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.” [http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php](http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php)

**DIVERSITY & INCLUSION**

Institutional statement on diversity: “Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.” [https://diversity.wisc.edu/](https://diversity.wisc.edu/)