Course Subject, Number and Title

MATH 222 – Calculus and Analytic Geometry 2

Credits

4

Canvas Course URL

https://canvas.wisc.edu/courses/199512

Course Designations and Attributes

Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S

Meeting Time and Location

MTWR 11:45 AM – 1:00 PM through BBCollaborate Ultra in real time. (Lectures will be recorded and posted on Canvas.)

Instructional Mode

Online

Specify how Credit Hours are met by the Course

This class meets for four 75-minute class periods and four 50-minute discussion periods each week over the summer semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc) for
about 2 hours out of classroom for every class and discussion period. The syllabus includes additional information about meeting times and expectations for student work.

INSTRUCTORS AND TEACHING ASSISTANTS

Instructor Title and Name

Yu-Chan Chang

Instructor Availability

10:00 am to 12:00 pm on Sunday, except July 5 & July 26

Instructor Email/Preferred Contact

ychang252@wisc.edu

Teaching Assistant (if applicable)

Dionel Jaime
Jianhui Li
Ian Seong
Zinan Wang
Shuqi Yu

TA Office Hours

Dionel Jaime  3:00-4:00 pm on Tuesday & Thursday
Jianhui Li  9:40-11:40 am on Monday
Ian Seong  2:30-3:30 pm on Monday & Thursday
Zinan Wang  9:30-11:30 am on Monday
Shuqi Yu  3:25-4:25 pm on Tuesday & Wednesday

TA Email/Preferred Contact

Dionel Jaime  djaime@math.wisc.edu
Jianhui Li  jli2266@math.wisc.edu
Ian Seong  iseong@math.wisc.edu
Zinan Wang  zwang894@math.wisc.edu
Shuqi Yu  syu93@wisc.edu
OFFICIAL COURSE DESCRIPTION

Official Course Description
Techniques of integration, improper integrals, first order ordinary differential equations, sequences and series, Taylor series, vector geometry in two and three dimensions.

Enroll Info: None

Requisites

MATH 217, 221, or 275. MATH 211 or 213 does not fulfill the requisite.

LEARNING OUTCOMES

Course Learning Outcomes

1. Apply a variety of integration techniques to compute proper and improper integrals (e.g., integration by parts, substitution including trigonometric substitution, partial fractions, etc.).
2. Find and analyze the solutions to first order differential equations and initial value problems (e.g., separable equations, equilibrium solutions, linear equations and integrating factors, etc.).
3. Recall the main definitions and results related to limits, continuity, sequences, and series (e.g., convergence, divergence, convergence of geometric sequences, convergence of geometric series, different tests for convergence and divergence, the Integral test, etc.).
4. Derive and manipulate asymptotic expansions of functions, and use these expansions to understand the properties of the functions they approximate (e.g., Taylor series, etc.).
5. Describe objects in three dimensional space and how they interact with each other (the coordinate system, vector addition and scalar multiplication, the dot product and cross product, etc.).
6. Describe physical and biological phenomena using mathematical models (e.g. linear growth models, logistic growth models, pressure and force, moments and center of mass, etc.).
7. Offer informal mathematical arguments and formal computations in English using appropriate mathematical terminology, notation, and grammar.

GRADING

Midterm 1 - 25%
Midterm 2 - 25%
Final exam - 30%
Discussion quizzes - 10% (The lowest grades will be dropped)
Online homework - 10% (The lowest four grades will be dropped)

Grades for the course will be assigned according to the following standard
A - 90%+
AB - 88%+
B - 80%+
BC - 78%+
C - 70%+
D - 60%+
F - 0+

DISCUSSION SESSIONS

Discussion sessions will be delivered through BBCollaborate Ultra in real time.

REQUIRED TEXTBOOK, SOFTWARE & OTHER COURSE MATERIALS

- Stewart Calculus 8e ebook, Chapters 7-12
- WebAssign

EXAMS, QUIZZES, PAPERS & OTHER MAJOR GRADED WORK

- Quizzes: There will be weekly quizzes given through Canvas.
- Exams: There will be two Midterms and one cumulative Final Exam given through Canvas.

HOMEWORK & OTHER ASSIGNMENTS

- Homework assignments are on WebAssign.

RULES, RIGHTS & RESPONSIBILITIES

- To see the Guide’s Rules, Rights and Responsibilities information, refer to http://guide.wisc.edu/undergraduate/#rulesrightsandresponsibilitiestext.

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

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/