

MAT 203: CALCULUS III WITH APPLICATIONS SYLLABUS

FALL 2025

Instructor:

Johan Asplund, johan.asplund@stonybrook.edu, Math Tower 3-116

Class time & location: TuTh 11:00–12:20pm, [Engineering 143](#)

Office and MLC hours: math.stonybrook.edu/cards/asplundjohan.html

Course webpage: math.stonybrook.edu/~jasplund/mat203_fall25

Recitation 01:

TA: Jiaji Cai, jiaji.cai@stonybrook.edu

Class time & location: W 11:00–11:55am, [Humanities 3018](#)

Recitation 02:

TA: Jiaji Cai, jiaji.cai@stonybrook.edu

Class time & location: F 12:30–1:25pm, [Physics P127](#)

Recitation 03:

TA: Yiheng Dong, yiheng.dong@stonybrook.edu

Class time & location: Tu 12:30–1:25pm, [Library E4315](#)

Recitation 04:

TA: Yiheng Dong, yiheng.dong@stonybrook.edu

Class time & location: Th 3:30–4:25pm, [Earth&Space 131](#)

Course description: Vector algebra in two and three dimensions, multivariate differential and integral calculus, optimization, vector calculus including the theorems of Green, Gauss, and Stokes. Applications to economics, engineering, and all sciences, with emphasis on numerical and graphical solutions; use of graphing calculators or computers. May not be taken for credit in addition to AMS 261 or MAT 205.

Prerequisites: C or higher in MAT 127 or 132 or 142 or AMS 161 or level 9 on the mathematics placement examination

Attendance: Strongly encouraged, but not mandatory.

Textbook: OpenStax Calculus Vol. 3. This book is free and available for download at this URL: <https://openstax.org/details/books/calculus-volume-3>.

Brightspace: We will use Brightspace for announcements and grades at the end of the course.

Homework: There will be weekly homework consisting of two problems from the textbook. Each homework should be handed in physically at the recitation the upcoming week. Late submissions are not accepted.

You are welcome to collaborate with your classmates on the homework problems, but you must write up your own solutions in your own words.

The lowest homework score will be dropped at the end of the course, before calculating your final grade.

Quizzes: A weekly quiz will be held at the last 15 minutes of each recitation, where you will be asked to solve one problem from the quiz pool consisting of 4–6 problems each week.

The lowest quiz score will be dropped at the end of the course, before calculating your final grade.

Exam dates: You must bring your University ID to all exams.

Exam	Date	Time	Location
Midterm I	Thu Sep 25	11:00–12:20pm	In class
Midterm II	Thu Nov 13	11:00–12:20pm	In class
Final	Wed Dec 10	2:15–5:00pm	TBA

Grades:

Homework:	10%
Quiz:	10%
Midterm I:	25%
Midterm II:	25%
Final:	30%

Makeup exams: Not available. If you e.g. miss one midterm exam with documented evidence (for instance, a letter from Student Accessibility Support Center), the instructor may allow you to shift the weight of the missed midterm exam to the final exam, so that it instead counts with weight 55% in your final grade. A student must attend the final exam at the scheduled time in order to receive a passing grade in the course.

Tentative schedule: See the course webpage for the most up-to-date schedule and for notes. All sections refer to sections in the course textbook.

Week of	Contents	Sections
Aug 26	Vectors and dot product	2.1–2.3
Sep 2	Cross product, lines and planes	2.4–2.5
Sep 9	Parametrizing curves, conic sections and quadric surfaces	1.1, 1.5, 2.6, 3.3
Sep 16	Parametric curves, arclength and different coordinate systems	1.2, 3.1, 3.3, 2.7
Sep 23	Midterm review, Midterm I	
Sep 30	Functions of several variables, partial derivatives, tangent planes	4.1–4.5
Oct 7	The chain rule, directional derivatives and gradient	4.5–4.6
Oct 14	Maxima/minima problems (fall break)	4.7
Oct 21	Lagrange multipliers, double integrals I	4.8, 5.1–5.2
Oct 28	Double integrals II, triple integrals I	5.2–5.4
Nov 4	Triple integrals II, vector fields	5.5, 6.1
Nov 11	Midterm review, Midterm II	
Nov 18	Line integrals, conservative vector fields, Green's theorem	6.2–6.4
Nov 25	Surface integrals (thanksgiving break)	6.5–6.6
Dec 2	Stokes' theorem and the divergence theorem, final review	6.7–6.8
Dec 10	Final exam	

Student Accessibility Support Center Statement: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Academic Integrity Statement: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology and Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at <http://www.stonybrook.edu/commcms/academicintegrity/index.html>.

Critical Incident Management: Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.