

# MAT132 Summer 2020 Syllabus

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## Instructor

Jiahao Hu

## Email

Jiahao[dot]Hu[at]stonybrook[dot]edu

## Time

MWTh 18:00-21:05

## Place

Online through zoom

## Office Hours

Online meeting through zoom or by appointment, time to be announced

## Course Overview

A continuation of MAT 131, covering symbolic and numeric methods of integration; area under a curve; volume; applications such as work and probability; improper integrals and l'Hospital's rule; complex numbers; sequences; series; Taylor series; differential equations; and modelling. May not be taken for credit in addition to MAT 127, MAT 142, MAT 171, or AMS 161. This course has been designated as a High Demand/Controlled Access (HD/CA) course. Students registering for HD/CA courses for the first time will have priority to do so.

## Reference

Single Variable Calculus Stony Brook Edition 4, *James Stewart*

(Note you are NOT required to purchased the book)

## Prerequisites

C or higher in AMS 151 or MAT 131 or 141, or level 7 on the mathematics placement examination

## Grading Policy

Homework and quizzes (30%), Midterm (30%), Final (40%)

## Course Schedule

Date	Subject
July 6	Review on differentiation, Area and distances, Definite integral
July 8	Indefinite integral, Fundamental theorem of Calculus
July 9	Substitution, Integration by parts
July 13	Trigonometric substitution, Partial fractions
July 15	Improper integral
July 16	More about areas, Volumes
July 20	Volume by cylindrical shells, Arc length, Average value

<b>Date</b>	<b>Subject</b>
July 22	Applications: physics, probability
July 23	Review for midterm
July 27	Midterm
July 39	Modelling with differential equations, Directional fields, Euler's method
July 30	Separable equations, Exponential growth and decay
August 3	Logistic equation, Sequences, Series
August 5	Convergence tests: Integral, Comparison and More
August 6	Power series, Tylor and Maclaurin series
August 10	Second order linear differential equations
August 12	Review for final exam
August 13	Final exam

### **Exam Schedule**

<b>Exam</b>	<b>Date</b>	<b>Time</b>
Midterm	July 27	18:00-21:05
Final exam	August 13	18:00-21:05

### **Homework and Exam**

- Homework will be submitted through blackboard.
- Exam is taken online through blackboard at the exact time listed above.

### **Disability Support Services (DSS) Statement**

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at (631) 632-6748 or <http://studentaffairs.stonybrook.edu/dss>. 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 are 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/uaa/academicjudiciary>.

### **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 Judicial Affairs 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.