Math 1B: Integral Calculus
Winter 2022, CRN 32473, Section 40Z
Tuesday & Thursday 6:30 PM to 8:45 PM
This is a fully online course. There are no in-person meetings on campus. Your instructor does not work on campus this quarter.

Instructor Information

Instructor:	Andrew Jianyu YU
Email:	yujian@fhda.edu
Office Location:	
Office Hours:	Tuesday and Thursday from 2:00 pm to 4:00 pm, pacific standard time.

All the assignments must be completed on WebAssign. The due dates follow Pacific Standard Time (PST). If you are living outside of this time zone, please find out the difference. For example, 7AM in California is 10AM in New York.
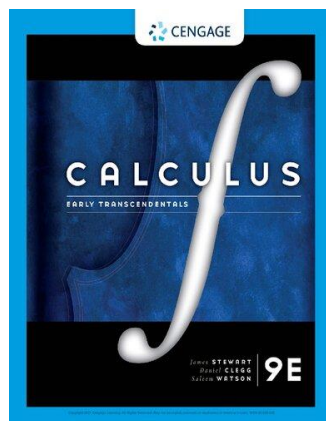
Course Description
Fundamentals of integral calculus focusing on integration, integration techniques, applications of integration, and differential equations.

Prerequisite
Math 1A or Math 1A Honor
Note: This class is not open to students with credit in Math 1B Honor
Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273

Required Textbook
Calculus: Early Transcendental 9th Edition by James Stewart.
Publisher: Cengage Learning; 9th edition (January 9, 2020); Language: English; Hardcover: 1376 pages; ISBN-10: 1337613924; ISBN-13: 978-1337613927
Item Weight: 5.45 pounds
Dimensions: 8.6 x 1.9 x 10.1 inches
Important Notes: It is not necessary to purchase a hard copy of this book because you will not be asked to solve textbook problems on paper. The 8th edition is uploaded to "Files" on Canvas.

Calculator

Graphing calculator is **recommended** for the course. TI-84 Plus or Plus CE is highly recommended. This calculator is widely used in math, science, and engineering courses. You are required to bring a

TI-83 Plus   TI-84 Plus   TI-84 Plus CE   TI-Nspire

physical calculator to the exam, and sharing calculator is considered as cheating incident. Using the calculator apps on your phone is strictly prohibited on the exam. <u>Do not</u> purchase the TI-Nspire Graphing Calculator (around $150) because it is too advanced for this course. Instructions will not be provided for TI-Nspire.

Technical Requirements

- **Your Email:** Please check your email regularly. If possible, connect your email with an app in your smartphone. You are welcome to ask me any questions related to lecture, homework, or personal emergency through email. **Please following the format of the subject line stated below.**

     "Math 1B: _____"

    You write your inquiry after the colon.

- **WebAssign (Work System):** Homework, quizzes, and exams will be assigned and graded on WebAssign. If an assignment is required to be completed on paper, you are required to scan your work and upload it to Canvas. WebAssign is **not free**. You must pay for your own account before the free trial period ends. Otherwise, you will not be able to complete any assignments until you make a payment. The **first module** on Canvas contains a link to register your WebAssign account and another link to access to WebAssign. Alternatively, you can login WebAssign on your web browser though the link https://www.webassign.net/.

- **Canvas (Main Learning Management System):** WebAssign has been integrated to Canvas. Each weekly **module** contains the lecture videos and the weekly assignment. The first module has 3 links – the first link for register your WebAssign account, the second link for accessing WebAssign from Canvas, and the third link for Cengage technical support. There are 2 ways to access an assignment. The first way is to click on the assignment on Canvas, it will directs you to WebAssign. The

second way is to login WebAssign using the link above. **Scores on WebAssign will automatically roll over to the grade book on Canvas. At least one homework and one quiz will be assigned weekly. It is strongly recommended that you check your WebAssign account frequently because late assignments will count as no credits.**

WebAssign Class Key and WebAssign-Canvas Integration

Go to www.webassign.net to register for your account. Please take the advantage of the free trial and do not pay anything yet. **All purchases are non-refundable.** There is no class key for this course because WebAssign has been integrated to Canvas. **Make sure your name on WebAssign matches your official name on Canvas.** Note, if you have a name that you preferred to be called but this name is not in the school system, do not use it on WebAssign. **Please capitalize the first letter of your first and last name. For example, type "Andrew" instead of "andrew". Your instructor is not an employee of WebAssign. If you experience any technical difficulty on WebAssign, please contact them to speak to a customer representative.**

Scanning Your Paperwork

If an assignment is expected to finish on paper, you have to download the assignment from Canvas, print the assignment, and completed the assignment. If you do not have a scanner at home, use a free app called Genius Scan. It allows you to take pictures of your work and merge multiple pictures into one PDF document. *Submitting multiple pictures is not allowed. Points will be deducted if you do so.*

Lectures and Expected Preparation

All the lectures are pre-recorded and uploaded on Canvas. Please take a couple minutes to explore the first 2 modules on Canvas. Students are expected to take notes while watching the videos. Most importantly, this is a transferred-level math course. Do not expect your instructor to explain all the homework problems in lectures. When you encounter problems that require profound thoughts and interpretation, think before you ask. Each weekly module has links to your weekly assignments, including exams.

Canvas

There are a few places that you have to visit frequently on Canvas.

- **Modules**

  A new module will be created every week. All the lectures and the assignments will be clearly listed on the module.

- **Files**

  If I want to share lecture notes, tables, or any documents with you. The documents will be posted on the Files tab. At this point. The syllabus is posted on Files.

- **Discussion**

  If we want to have a discussion regarding any topics, we will do this in the Discussion tab.

Attendance

The course is in a virtual mode. You are expected to maintain a good self-discipline to finish the assignments on time because late works will receive no credits.

Homework, 10% of the Course Grade

Problems will be assigned from each section taught in lecture. You are required to finish most of the homework on WebAssign. If an assignment is required to be written on paper, you have to scan your work, merge all the images into one PDF document with multiple pages, and submit to Canvas.

Quiz, 15% of the Course Grade

A quiz will be assigned and graded on WebAssign at the due date of every homework. All the quizzes are open-book and open-notes. Quiz is an individual assignment. You are required to do your own work. Group-work is strictly prohibited.

Every homework and quiz score counts. Lowest score will not be dropped. Every student has one chance to receive one extension on homework and one extension on quizzes without penalties. This extension does not apply to midterms, final exam, and the last homework/quiz. More importantly, your one-time extension must be redeemed within 7 days after the due date. For example, if homework 1 is due on October 1st at 11:59pm, the deadline to request an extension is October 8th at 11:59pm.

The incident of falsifies information for financial aid is increasing in every school district. If you do not complete the first week's assignment or having no activities on Canvas, you will be dropped from the course.

Midterm, 40% of the Course Grade (Proctorial Will be Enforced)
There are 2 midterms in this course, and both midterms will be assigned and graded on WebAssign. Midterm date will be announced in advanced. All the midterms are open-book and open-notes. Midterm is an individual assignment. You are required to do your own work. Group-work is strictly prohibited. Dropping the lowest scare is not applicable on midterms. If you seek for assistances to complete the exam, your exam score is zero and you will get an F in this course.

Final Exam, 35% of the Course Grade (Proctorial Will be Enforced)
A comprehensive final exam will be assigned and graded on WebAssign. Although this is also an open-book and open-notes exam, you must do your own work. Group-work is strictly prohibited. If you seek for assistances to complete the exam, your exam score is zero and you will get an F in this course.

<div align="center">**Enforcing Proctorial on Midterms and Final Exam**</div>
A laptop or desktop (not including tablet and smart phone): Although you will be taking midterms and finals at home, Instructor will be using Proctorial to proctor the exam. You are required to have a laptop or desktop with a web camera, audio, and stable Internet connection. Tablets and smart phones (e.g. iPad and iPhone) will not work. You must have all these equipment to take midterms and final. While you are taking your exams on WebAssign. Proctorial will record everything happened on your screen. The camera and audio will record everything behind you. You will also need to hold your photo identification (student ID is preferred, driver's license is not preferred since your address is written on the card) to prove that you are the actual student taking the test. The exams are open book and open notes. Proctorial prevents student hires another professional to take the midterms and finals. Proctorial will record everything and save it. I will review the videos if I found any suspicious activities on your exam.

Check Points:
- All the lectures are pre-recorded and are posted in weekly module on Canvas.
- Homework 10%, Quiz 15%, Midterm 40%, Final 35%; Zero credit to all the late and missing work, no exception.
- The due dates follow the United States Pacific Standard Time (PST). If you are taking this course outside PST zone, please check the difference

between the two time zones.
- You are expected to check the due dates on your WebAssign account at least once a day to plan accordingly. Also, you are expected to check our Canvas page to see announcements and week module regularly.
- Comparing to homework, you will have much fewer attempts on quizzes and exams. Please solve the problems on a separate sheet of paper and double-check your work before submitting your answer to WebAssign. Additional attempts will not be granted for any reasons.
- Anyone who skipped Proctorial will receive a huge penalty on exam scores. Your instructor will provide a sample assignment to make sure Proctorial runs properly on your device. If you encounter any technical issues (web camera, audio, or web browser), troubleshoot the issue and seek for a solution.

Tutoring at the Student Success Center (SSC)
The Student Success Center (SSC) has moved services into virtual rooms via Zoom for all forms of tutoring and workshops. Please visit the following website for details. https://www.deanza.edu/studentsuccess/

Grading Rubrics
Your course grade will be assigned in the following standard:

A: 100% to 94%	A-: 93% to 90%	
B+: 89% to 86%	B: 85% to 83%	B-: 82% to 80%
C+: 79% to 75%	C: 74% to 70%	
D: 69% to 60%	F: below 60%	

All the cut-offs are not negotiable. For examples, 89% is not an A-minus and 69% is not a C. Transferring to UCs, CSUs, top-ranking universities, or scholarships are not a reason to ask for a higher grade.

Extra Credit Assignment
There are no extra credit assignments in this course to improve your grade. Please do not ask for any.

Academic Integrity
Academic dishonesty will not be tolerated. Any student attempting to defraud the instructor on a quiz, exam, final exam, or any other assessment item designated as an individual assignment will receive a zero on that assignment. This score is irreplaceable. If a cheating incident is detected on your work, the

rest of your works in the course will be closely monitored and examined. All the assistant seekers and assistant providers will be reported to the college. *For example, bringing a quiz or an exam problem to a tutor is considered as cheating. Posting a quiz or an exam problem to websites such as Chegg, Course hero, or a forum is considered as cheating.*

Course Content
Chapter 5: Integrals
Section 5.1: Areas and Distances
Section 5.2: The Definite Integral
Section 5.3: The Fundamental Theorem of Calculus
Section 5.4: Indefinite Integrals and the Net Change Theorem
Section 5.5: The Substitution Rule

Chapter 6: Applications of Integration
Section 6.1: Areas Between Curves
Section 6.2: Volumes
Section 6.3: Volumes by Cylindrical Shells
Section 6.4: Work
Section 6.5: Average Value of a Function

Chapter 7: Techniques of Integration
Section 7.1: Integration by Parts
Section 7.2: Trigonometric Integrals
Section 7.3: Trigonometric Substitution
Section 7.4: Integration of Rational Functions by Partial Fractions
Section 7.5: Strategy for Integration
Section 7.6: Integration Using Tables and Computer Algebra Systems
Section 7.7: Approximate Integration
Section 7.8: Improper Integrals

Chapter 9: Differential Equations
Section 9.1: Modeling with Differential Equations
Section 9.2: Direct Fields and Euler's Method
Section 9.3: Separable Equations
Section 9.4: Models for Population Growth

Academic Calendar:

January 3: First day of winter quarter

January 15: Last day to add classes

January 17: Last day to drop classes without a W.

January 17: Martin Luther King Jr. Holiday – no classes, offices closed

January 28: Last day to request "Pass/No Pass"

February 18 to 21: President's Holiday – no classes, offices closed.

February 25: Last day to drop classes with a W.

Important Note: It is student's responsibility to drop or withdraw the class if that student decides not to finish the class. After the last day to withdraw is passed, student cannot withdraw from the class.

March 1: Last day to file for fall degree or certificate

March 21 to 25: Final exam's week.

The professor reserves the right to make changes to the syllabus, including project due dates and test dates (excluding the officially scheduled final examination), when unforeseen circumstances occur. These changes will be announced as early as possible so that students can adjust their schedules.

Student Learning Outcome(s):

*Analyze the definite integral from a graphical, numerical, analytical, and verbal approach, using correct notation and mathematical precision.

*Formulate and use the Fundamental Theorem of Calculus.

*Apply the definite integral in solving problems in analytical geometry and the sciences.