F25 MATH D001B 03Y, 03Y Calculus I Syllabus

Class Modality:

This class meets in-person on **Monday through Thursday, 9:30-10:20am** in Room **S-16**, with one TBA hour per week.

Course Description:

This course covers the fundamentals of integral calculus. Specifically, the course explores indefinite and definite integrals, and their applications. The topics covered will include antiderivatives of all of the functions you learned in precalculus and their combinations. We will also cover applications, such as, motion, area, volume, arclength, surface area, work, center of mass, probability and differential equations.

Student Learning Outcomes:

Upon successful completion of the course, students will be able to:

- 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

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Course Content:

- Analyze and explore aspects of the integral calculus
- Analyze and evaluate the definite integral as a limit of a Riemann sum and examine its properties
- Examine the Fundamental Theorem of Calculus
- Find definite, indefinite, and improper integrals using various techniques
- Apply the definite integral to applications
- Examine differential equations

Expectations:

- **Communication**: I expect you to check your email and log into Canvas every day. I will send occasional reminders or make announcements this way, and I don't want you to miss them. Feel free to contact me via email (bambhaniadoli@fhda.edu) or via Canvas message outside of class with any issues related to the class. You do not have to wait until the next class meeting. You can expect a response within 24 hours on weekdays and within 48 hours on the weekend. If you don't get a reply back to your email, try Canvas message, and the vice versa.
- **Attendance and Engagement**: I expect you to attend each class and be fully engaged with the class throughout the quarter. I will look for your participation during class, during office hours, and through the submission of assignments. Be sure to submit all first week and second week assignments to get into the "rhythm" of the class. Please note that if you're not attending class and/or not submitting the assignments during the first two weeks of class in both classes, and not communicating with me, I will assume that you are not interested in the taking the classes and may drop you!
- **Feedback**: Any feedback on your discussions, problem sets, quizzes and exams will be provided as either annotation/comment in Canvas or on paper. If you need additional feedback regarding grading (especially on automatically graded items such as homework), please email/message me directly about that assessment. I will aim to grade all items within a few days of submission, but you can expect most assignments and assessments to be graded within 1 week of submission.

Textbook and Calculator:

Great news: your textbook for this class is available for **free** online!
[*Calculus II: Integral Calculus*](#)

You may use a scientific calculator for this class. More advanced calculators will not be allowed on quizzes and exams. On occasion, during lecture or while you do your homework, you are welcome to use the online app at https://www.desmos.com/.

Prepared Lecture Notes:

I have put together prepared lecture notes designed to help you keep your lecture contents organized. Here is the file: [Math 1B - Prepared Lecture Notes (F25) - DA ZTC.pdf](#). Please print the file (double-sided, black and white), or open it on a tablet if you have the ability to annotate PDF files electronically. When you attend the lecture, you are expected to take notes on this document ideally. If you wish to take your own notes separately, that's fine, but these notes I am providing will streamline note-taking. Keep all your notes organized in a binder. If you don't

have access to a printer or a tablet, please use the ePrintIt app through MyPortal to print on campus.

Weekly Schedule:

- **Monday, Tuesday, Wednesday, Thursday**: We will have in-person class meetings 9:30-10:20am in S-16. You're expected to attend each of these meetings **on time**. I will take attendance. Please be sure to have the prepared lecture notes, writing instrument, calculator, and scratch paper during these meetings. During class meetings, we will cover new content, practice, take assessments, and I will answer questions from your homework.
- **TBA hour**: Each week, there will be some activity that will be assigned at the end of the week that you are to complete before you return to class the following Monday. This will typically involve working out some problems.
- **All days:** Read textbook, work on homework and problem sets, respond to discussion boards, and study!

Office Hours:

- Mondays, 12:30-1:30pm in S-54 (MESA Center)
- Tuesdays, Thursdays: 12:30-1:30pm in S-55 (PST Village)
- Fridays, 8:30am-9:30am on Zoom
- Or, by appointment (email me to schedule)

Homework and Problem Sets

The best way to succeed in any math class is to do all of the assigned work correctly and in a timely manner, making sure you really understand what you are doing! Focus on how to think mathematically about problems, not just on following a procedure! Time spent on the homework and problem sets will directly benefit you on quizzes and exams.

Online Homework: You will have online homework for each section we cover. The homework uses the free software MyOpenMath, and will be graded for correctness. The links and due dates are within the Canvas Modules. You will typically have at least one full day to complete the homework after we finish the section in class. Within MyOpenMath, each student is given 3 late passes, each of which will give you a 24-hour extension on the homework for a particular section with 5% penalty.

Problem Sets: Each week, we will have a problem set that you will work on. These problems will be posted as a PDF in the Canvas modules. These sets include problem-solving and critical-thinking exercises that rely on your conceptual understanding of the material and related skills.

Problem Sets Guidelines:

- *Write out the problems neatly on **separate paper**, or on a blank tablet file. There is not enough room on the Problem Set PDF.*
- *You are encouraged to discuss the problems with your classmates and consult any resources, but the work you submit must be your own. **Never** copy any source for any reason!*
- *Label each problem clearly – use a **highlighter** to mark the number, or put a **box** around it so it's easy to find. You don't need to write the question, just fully-worked out solutions.*
- *Don't squeeze a lot of work into small amount of space. Leave some white space around the problem for brief comments.*
- *Do the problems in **order**, showing all work neatly, clearly and completely.*
- *Write your solutions out in full detail, as modeled in the textbook and in lectures. It's important to write up problem sets neatly, showing all work, and explaining the logic behind each step. You should also draw well-labeled and appropriately scaled diagrams and graphs when they are helpful in understanding your solution.*
- *You may submit your problem set on paper or online. If you submit online, submit a **single PDF document**, NOT multiple images. Use the Notes app on iOS, or a scanning app such as Adobe Scan or Genius Scan (both free). Be sure to check that your scanned copy is legible and has correct orientation. I will need to be able to read it for you to get points.*
- *Problem sets are due on Tuesdays at 11am in class. I will answer questions on Mondays. You can have a 24-hour **extension** with 10% penalty.*

Discussions:

Every couple of weeks, you will have a discussion prompt to respond to. Discussions are worth points, so be sure to complete them. When grading these posts, I will look for your engagement with the discussion topic through how well you articulate your thoughts (you won't be graded for spelling and grammar).

Entrance Cards:

At least once a week, you will have an unannounced question that you will be asked to do at the very start of class. You may use your notes and calculator on this question. It will be based on the material from the previous class. Please keep **half sheets** of paper with you.

Participation:

You are expected to actively participate. I expect you to:

- Attend each class fully prepared to engage and contribute.
- Ask and answer questions during class.
- Participate actively during group activities.
- Outside of class, post and answer questions in 'Questions Discussion Board' (0.5 point extra credit for posting or answering a question - up to a maximum of 5 points).

You will be given a subjective participation grade at the end of the quarter.

Quizzes:

We will have **seven** 15-minute quizzes (see the calendar at the bottom of this page). These will usually be similar to your online homework and problem sets. They will take place during Tuesday's class at the start. *IMPORTANT: There will be NO MAKEUPS for any of the quizzes, and your lowest **two** quiz scores will be dropped.*

Exams:

We will have **three** midterm exams, and a <u>cumulative</u> final exam. See the calendar for the dates. Exams must be taken at the scheduled time, so pay careful attention to their dates and times.

IMPORTANT: There will be NO MAKEUPS for any of the exams. However, your lowest midterm exam score will be replaced by your final exam score, proportionally, if the final exam score is higher. The final exam score will also be used in case of a missed midterm exam.

IMPORTANT NOTE: The final exam must be taken at our scheduled time. If there's an unforeseen emergency due to which you cannot take the final exam, then an 'Incomplete' grade may be assigned given sufficient proof.

Evaluation:

Your final grade will be computed as follows:

Point Values of Assignments and Assessments		
Category		**Points**
Homework	Top 25 @ 4 points each	100
Problem Sets	Top 10 @ 5 points each	50
Discussions	Top 5 @ 4 points each	20
Entrance Cards	Top 10 @ 2 points each	10

Attendance and Participation		20
Quizzes	Top 5 @ 20 points each	100
Exams	3 @ 80 points each	240
Final Exam		110
TOTAL		**650**

Letter Grade based on Overall Percentage	
Overall percentage	**Your grade will be at least**
97% or greater	A+
92% to less than 97%	A
90% to less than 92%	A-
87% to less than 90%	B+
82% to less than 87%	B
80% to less than 82%	B-
75% to less than 80%	C+
70% to less than 75%	C
55% to less than 70%	D
less than 55%	F

Help:

1. Your classmates are a great resource. Ask for help and provide help to others either within your current groups or using the Questions Discussion Board (worth extra credit)!
2. Message me through Canvas with questions or attend office hours. For online homework questions, message me by using 'Message Instructor' button in the problem.
3. Ask questions during lecture.
4. Get help from De Anza's Math Student Success Center located in S-43. See details at http://deanza.edu/studentsuccess/.
5. Use NetTutor for help through Canvas.
6. If you need any technical help with MyPortal, Canvas, etc., visit https://www.deanza.edu/quarter-guide/#Learning.
7. On the link above, you will also find links to services with some specific to this time, such as for help with tech equipment, food and financial assistance, health services, resources for undocumented students, etc.

Academic Integrity:

All students are expected to exercise academic integrity throughout the term. Any instances of cheating or plagiarism will result in disciplinary action, including at minimum, 0 on the assignment or assessment, but may include recommendation for dismissal. You are encouraged to work with peers and tutors, and use online sources for learning, but simply copying down work that is not yours in a submission is wrong! Cheating on a quiz or an exam is more serious. It will certainly result in getting a 0 on the assessment, but could result in getting an 'F' in the course or dismissal from the class. Also, each incident of cheating will be reported to the Dean of the Physical Science, Mathematics and Engineering Division and the Office of Student Development. Please see the De Anza College's page on Academic Integrity: https://www.deanza.edu/policies/academic_integrity.html. Check out this video produced by De Anza College on this topic: https://www.youtube.com/watch?v=4unoOe-I0eY.

A note about AI and online forums: I encourage you to ask and answer questions amongst yourselves, as well as use AI, to strengthen your understanding of topics in this class. However, be careful that you don't compromise your academic integrity or entice others to compromise theirs! For example, on forums such as Discord, never answer a classmate's question about a homework problem by providing a complete, fully worked out solution! That may create too much of a temptation to copy (not necessarily for the original question poster but other classmates), and your solution could be incorrect, causing unintended confusion. With AI, never offload learning to it! Use AI to help you master the content of this and other classes as it can serve as an infinitely patient and knowledgeable tutor. Just as it is wrong to ask a tutor to do your work for you, it is wrong to use AI in that way.

Disability Notice:

If you feel that you may need an accommodation based on the impact of a disability, please contact me privately to discuss your specific needs. Also, please contact Disability Support Programs & Services through https://www.deanza.edu/dsps/ for information or questions about eligibility, services and accommodations for physical, psychological or learning disabilities.

Tips for Success:

In any math class, and especially this one, your goal should be to get **ownership** of the material. This means that not only you understand the concepts, and can demonstrate the skills, but also that you can explain them to someone who doesn't have them. The material covered in this class

is essential for the next courses in the series. This is not a "learn and forget" class; rather, it's a "learn well so you can succeed going forward" class.

Here are my recommendations for succeeding in this class in the online setting:

1.
    1. **Do some class-related work every day!** Check for upcoming deadlines and make sure you are aware of them.
    2. **Stay on schedule**. Stick to the schedule on the calendar. Don't fall behind! Be disciplined about this to stay on top of the class. Take careful notes during class.
    3. **Come to the lecture fully prepared and ready to contribute!** Be sure to have completed any previously assigned work ready to ask questions and learn new material.
    4. **Be fully present in every class.** Allowing yourself to occasionally miss class, or multi-task during class, is a slippery slope and a bad habit that will likely cost you your desired grade.
    5. **Invite productive struggle.** To succeed in any STEM class, you must **do your work diligently**. Yes, many resources are available for immediate help. However, **productive struggle** is essential in learning and retaining the material, and in gaining the confidence in your problem-solving ability. You must sweat through the problems, especially the ones that challenge you.
    6. **Work in a cohesive group**. Exchange your contact information with at least 3 other people in the class community and stay connected with them. This is an **essential college skill**, especially for STEM students.
    7. **Turn everything in!** Every worksheet, every homework, every discussion, every problem set. Don't allow yourself to skip! Also, pay close attention to the dates of quizzes and exams, so you don't miss any part of them.
    8. **Prepare for quizzes and exams well.** Preparing well for the quizzes will help you retain the material for exams. Preparing well for the exams will help you retain this material for when you need it for the classes that come next in the sequence.
    9. **Don't wait to ask for help!** Whether it's to your classmates, the tutors, or me, get your questions answered in a timely manner.
    10. **Practice personal discipline**! Succeeding in a college class, or any worthwhile activity, requires **personal discipline** and **a sustained focus**. This is especially true for STEM classes. It's too easy to put things off until later, distracting ourselves with social media and other apps. **Be mindful of what you are giving your attention to.** Think carefully about your priorities, and give the most time and attention to your biggest priorities. When working on this class, turn off all notifications on your devices, silence your phone and keep it out of immediate reach. This class will often challenge you. Don't put off working on something because it's hard or unpleasant. Working through challenges is what ultimately leads to true personal growth.

Course Calendar:

Math 1B Calculus Tentative Calendar (Fall 2025)

	Monday	Tuesday	Wednesday	Thursday
Week 1	22-Sep Introduction/Orientation 1.1	23-Sep 1.1, 1.2	24-Sep 1.2	25-Sep 1.3
Week 2	29-Sep Questions 1.3	30-Sep Problem Set 1 due **Quiz 1** 1.4	1-Oct 1.4, 1.5	2-Oct 1.5
Week 3	6-Oct Questions 1.6	7-Oct Problem Set 2 due **Quiz 2** 1.7	8-Oct 2.1	9-Oct 2.2
Week 4	13-Oct Questions 2.2	14-Oct Problem Set 3 due **Midterm Exam 1** (1.1-2.1)	15-Oct 2.3	16-Oct 2.3
Week 5	20-Oct Questions 2.4	21-Oct Problem Set 4 due **Quiz 3** 2.4	22-Oct 2.5	23-Oct 2.5, 2.6
Week 6	27-Oct Questions 2.6	28-Oct Problem Set 5 due **Quiz 4** 2.6	29-Oct 3.1	30-Oct 3.1, 3.2
Week 7	3-Nov Questions 3.2	4-Nov Problem Set 6 due **Midterm Exam 2** (2.2-3.1)	5-Nov 3.3	6-Nov 3.3, 3.4
Week 8	10-Nov Questions 3.4	11-Nov Problem Set 7 due **Quiz 5** 3.4	12-Nov 3.5, 3.6	13-Nov 3.6
Week 9	17-Nov Questions 3.6	18-Nov Problem Set 8 due **Quiz 6** 3.7	19-Nov 3.7	20-Nov 3.8
Week 10	24-Nov Questions 4.1	25-Nov Problem Set 9 due **Midterm Exam 3** (3.2-3.7)	26-Nov 4.2	27-Nov **Thanksgiving HOLIDAY**
Week 11	1-Dec Questions 5.1	2-Dec Problem Set 10 due **Quiz 7** 5.2	3-Dec 5.2, 5.3	4-Dec 5.3, 5.4
Finals Week	8-Dec	9-Dec **Final Exam** **9:15am-11:15am**	10-Dec	11-Dec

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.

Office Hours:

M	12:30 PM - 1:30 PM	S-54
T,TH	12:30 PM - 1:30 PM	S-55
F	8:30 AM - 9:30 AM	Zoom