Instructor: Shawn McDougal   **E-mail:**   smcdougal@peralta.edu

Class Meeting Days/Times: M/W 3-5:15   **Location:**
Office Hours: M 5:15-6:15pm, TWTh 2-3pm (+ by appointment)
Prerequisites: Math 2, or Math 1 + Math 50, or placement through assessment

Textbook: *Single Variable Calculus: Early Transcendentals,* by James Stewart (7th edition).

Materials: You should obtain a scientific calculator. Access to a graphing utility for some of homework problems is encouraged but not required.

Catalog Description
Theorems on limits and continuous functions, derivatives, differentials, and applications: Fundamental theorems of calculus and applications; properties of exponential, logarithmic, and inverse trigonometric functions, and hyperbolic functions.

Class format
Our typical class will be a mix of lectures clarifying and expanding upon the points raised in the book and the videos, hands-on problem solving sessions, solution presentations (from students as well as me), and open discussion. A portion of the class will be "workshop"—you will be working on problems individually or in groups as I go around helping as needed. In addition to providing feedback and guidance, I will often ask you to talk through the problems or ideas with other students. Talking through your ideas with others is a good way to 1) test and refine your ideas, 2) learn multiple ways of thinking about a concept or solving a problem, and 3) practice putting the ideas in your own words.

Self-intros
Every day (until all have had a turn) several students will get a chance to briefly introduce themselves to the class. "Briefly" meaning 30 sec.-1 min. This will allow all of us to get to know a bit about each other. When you do your self-intro, include a response to *one* of the following prompts:
   • An experience you had after age 12 that really shaped who you are or how you think
   • If you could, what is one thing you would change about society?
   • An idea/concept that is not very widely known that you find especially useful or interesting

Homework
For each section that we cover in the book I provide a list of suggested homework (HW) problems to guide your study, but I will not collect or grade the HW. Doing the HW problems is key to mastering the concepts and skills in the course.

Grading Allotment (400 points = 100% for the course)

	points each	total points	total %	notes
Check-ins (10)	4	40	10%	
Solution Share (2)	40	80	20%	first due by end of W5, can redo one of them
SWYK (3 keep 2)	80	160	40%	W4, 9, 13 (tentatively)
Final	120	120	30%	

Grading Scale A: 81–100%, B: 61–80%, C: 41–60%, D: 21–40%. F: 0–20%

Solution Shares
I want students to learn from each other, think through challenging problems, and improve their math communication skills. Twice during the term, you will present your solution to a HW problem called a *Solution Share* (SS). Each SS is worth 40 points. The problems available for SS credit are indicated on the Suggested HW list (in the last column). A problem from a given section of the book must be presented within 2 class meetings after we've covered that topic in class. You choose which one you want to do. Two students cannot do the same problem, so it's a good idea to let me know in advance which you choose. The presentations take place in class. Your first one must be done by the end of W5, otherwise it will be worth only half credit. Each SS you do must come from a different section of the book.

Final Exam
The Final Exam will take place during class in Finals Week. It will not be long. It will be conducted as a one-on-one oral interview, either in person or on Zoom, lasting up to 12 minutes. It will be 2 problems, randomly drawn from a list of around 12 problems. (I will give you the list at least a week in advance.) The problems will cover topics from throughout the semester, and be based on your HW and the examples or proofs we discuss in class. It's worth 120 points (30% of the course total).

Show What You Knows
Besides the Final, there are tests called *Show What You Know* (SWYK), taking place (tentatively) in Weeks 4, 9, and 13. Of the 3 SWYKs, I will only keep your best 2. Like the Final, the SWYKs will be conducted as one-on-one oral interviews. The SWYK will consist of one problem, randomly drawn from a list of around 6 problems (which I will give you well in advance). There are no make-ups. Each SWYK is worth 80 points (20% of the course total).

Remark on the Exams: Both the Final Exam and the SWYKs are 'open notes': you can use notes that you've written down during the test. The grading for these tests will focus on your ability to clearly explain your steps and reasoning. In addition to being given the list of problems in advance, you will be given a rubric that clearly explains how each will be graded.

Canvas Check-ins
Once per week throughout the semester you are expected to write a Canvas *Check-in*. (Actually, you can skip weeks: you only need to do it 10 times.) The purpose of the Check-ins is to 1) encourage folk to discuss the material outside of class, 2) let me know which concepts I most need to clarify in class, and 3) build community among students.

For credit, the Check-ins must be 1) posted before the start of the next week--by Sunday 11:59pm--in the appropriate weekly forum, 2) be about the math discussed in class or the book for that week, and 3) be a *useful* question, comment, or response to someone else's question, where by "useful" I mean thoughtful and helpful in promoting conversation. (It doesn't have to be correct.) Some examples:
- *not-so-useful questions:* "I don't get problem X." or "Please do problem X for me."
- *useful question:* "On problem X I tried [STEPS] because [REASONS] but got stuck. What am I missing?"
- *not-so-useful comment: "I like method X."*
- *useful comment:* "I like method X more than Y because [REASONS]"
- *not-so-useful response:* "I agree."
- *useful response:* "I agree. Also, Method Y uses Theorem W, which I don't really get."

In general, a credit-worthy post will involve you sharing your own thought process/rationale.

Examples of the kinds of posts that *won't* get credit (even if they're be reasonable things to do):
a. merely restating what someone else has said, without substantially adding anything
b. "fake" answers: e.g. posting a solution or resource that no one has asked about, without saying why you find it interesting or relevant
c. "fake" questions: e.g. asking people to check if your solution is correct, without explaining why you are not sure/what part you need help with
d. posting a file/link that people have to open separately in order to read your question/comment
e. asking logistics questions: e.g. what will be on the quiz. These questions should be posted in the Student Lounge/Logistics Forum

You are encouraged to participate frequently in the Canvas discussions, though you can get credit for at most one Check-in per week. Each Check-in is worth 4 points (i.e. 1%). If you do more than 10 weeks' worth, I will keep your best 10 scores.

Extra Credit
Here are some ways to get extra credit points in this class.
1. If Shawn makes a math mistake at the board and doesn't catch it within 1 minute, whoever first points it out will get 1 point. (You can do so up to 4 times during the semester.)
2. If you come up with a better solution to a problem than the solution(s) presented by Shawn, you will get 2 extra credit points. (You can do so twice during the semester.)

Weekly Schedule (tentative)

Week of...	Sections	Week of...	Sections
8/23	1.1-1.3	10/18	3.8-11
8/30	AppD; 1.5-2.2	10/25	4.1-3
9/6	2.2-2.3	11/1	4.5-7
9/13	2.3-2.5	11/8	4.8-Ch4 Rev.
9/20	2.6-8	11/15	5.1-2
9/27	2.8-3.2	11/22	5.3-4
10/4	3.3-3.4	11/29	5.5
10/11	3.5-7	12/6	6.1 + review
Final Exam: M 12/13 (during class)			

Important Dates (cf. Peralta Spring 2021 Academic Calendar)
Aug. 29 – Last day to add (without permission number or add card)
Sep. 3 – Last day to add (with permission number)
Sep. 6 – Last day to drop (without a "W") and get a refund; Holiday
Sep. 10 – Last day to file for P/NP grading option for regular session classes
Oct. 8 – Last day to file petitions for AA or AS degree/certificate
Oct. 20 – No classes (Professional Day)
Nov. 11 – Holiday
Nov. 19 – Last day to drop with "W"
Nov. 25 – Holiday

Attendance
Students who miss more than 2 consecutive classes without contacting me to explain their absences may be dropped from the course. Anyone who misses the first 2 class meetings may be dropped. Still, do not assume that I will automatically drop you if you merely stop attending class. Anyone whose name appears on the final grade roster who has not been attending class will receive an F.

Academic Honesty
Any evidence of cheating on an exam or quiz will result in a score of zero (0), and may incur further penalties. Cheating includes but is not limited to bringing notes or written or electronic materials into an exam or quiz, copying off of another person's exam or quiz, allowing someone to copy off of your exam or quiz, and having someone take an exam or quiz for you.

General Information/Expectations
- For personal questions (e.g. about your grade), email me or talk to me in office hours.
- For general questions about the course—e.g. if you missed a class or want to know what will be on the quiz—do NOT email me. I almost never answer questions about the course over email. (One: I don't want to be swamped with emails. Two: I prefer to answer a question once rather than multiple times.) To get your questions answered by me and/or your peers, and to help students share ideas and build community with each other, you should post your general questions in the *forums* on Canvas.

Justification for Course

Satisfies the General Education and Analytical Thinking requirement for Associate Degrees. Provides foundation for more advanced study in mathematics and related fields. Satisfies the Quantitative Reasoning component required for transfer to UC, CSUC, and some independent four-year institutions. Acceptable for credit: CSU, UC. AA/AS area 4b, CSU area B4, IGETC area 2A.

Student Learning Outcomes (General)

At the end of the course students will be able to:
1. represent relevant information in various mathematical or algorithmic forms.
2. calculate accurately and comprehensively.
3. interpret information presented in mathematical or algorithmic forms.
4. draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis.
5. explain quantitative evidence and analysis.

Student Health and Wellness

Students are required to pay the Student Health fee of $18.00 per semester for fall and spring semesters ($15 for summer session). This fee is collected at the time of enrollment. The health fee covers low cost health, mental health and wellness services on campus at: 2000 Center St., Suite 100.

Disabilities Statement

Berkeley City College is committed to providing reasonable accommodations for all individuals with disabilities. Any student with a documented disability needing academic accommodations is requested to speak with Programs & Services for Students with Disabilities (PSSD), located in Room 261 and the instructor as early in the semester as possible. I encourage any student who suspect they may have a learning disability to contact PSSD for assistance. They can be reached by phone at (510) 981-2812 or 2813. All conversations will remain confidential. The syllabus and course material are available in alternate formats upon request.