MATH 5A: CALCULUS I
SPRING 2023

Instructor Information

- Mrs. Kelsey Casteel
- When you need to get in contact with me, please message me through the Canvas messaging system. When you are in Canvas click on the "inbox" tab on the main left hand side menu. If Canvas is down (fingers crossed that never happens), then please email me @ kelsey.casteel@reedleycollege.edu
- Campus office hours: Mondays and Wednesdays from 11:30 am to 12:20 pm in the Math and Science Building (where the Math Center is) office 133. I am also available to meet online via Zoom. If you would like to schedule a zoom session with me, please send me a message through Canvas and we will schedule it and I will send you the meeting information.

Course Information

Welcome to Math 5A, your first semester of calculus! If you have a verified need for an academic accommodation or materials in alternate media (ie: Braille, large print, electronic text, etc.) per the American With Disabilities Act or Section 504 of the Rehabilitation act please contact me as soon as possible.

Our course section number is 56024. This class lasts from Monday January 30th through Friday May 19th. This is a 100% online course which means you never have to come to campus or attend any Zoom meetings.

Course Description

Calculus I is the first course in differential and integral calculus of a single variable. Topics include functions, limits and continuity, techniques and applications of differentiation and integration, and the Fundamental Theorem of Calculus.

- Advisories: English 1A or English 1AH
- Prerequisite(s): Mathematics 3A or equivalent and Mathematics 4A or equivalent
- Units: 5

Course Materials

- The majority of assignments are through an online platform called MyOpenMath, which is completely FREE to you! You won't need to make an account or sign up for anything – everything is integrated into Canvas.
- Scientific Calculator – cannot be a graphing calculator, feel free to check with me before making a purchase. I recommend the TI 30X IIS

- The textbook used for this course is a completely FREE textbook that I have customized. It is based on the OpenStax book *Calculus Volume I.* The textbook is integrated into the modules in Canvas and there is also a link that will take you to the full textbook.

Student Learning Outcomes

Upon completion of this course, students will be able to:

- Evaluate limits using graphical, analytical, and tabular techniques.
- Calculate and interpret the derivatives of algebraic, trigonometric, and transcendental functions.
- Translate problems from the physical, life, and social sciences into mathematical models and apply appropriate techniques to solve
- Calculate the integrals of algebraic, trigonometric, and transcendental functions.

Course Objectives

In the process of completing this course, students will:

- Compute the limit of a function at a real number
- Determine if a function is continuous at a real number
- Find the derivative of a function as a limit
- Find the equation of a tangent line to a function
- Compute derivatives using differentiation formulas
- Use differentiation to solve applications such as related rate problems and optimization problems
- Use implicit differentiation
- Graph functions using methods of calculus
- Evaluate a definite integral as a limit
- Evaluate integrals using the Fundamental Theorem of Calculus
- Apply integration to find area

Grading

You can see your individual assignment grades and overall class grade anytime in Canvas. Your overall class percentage is broken down as follows:

- Exams (including mandatory cumulative final exam): 60%
- Assignments: 30%
- Discussions: 10%

How does this actually work? Say that at the end of the class you have the following percentages in each category: 82% in exams, 70% in assignments, and 90% in discussions. Your overall class percentage is calculated as follows:

$$.60*82 + .30*70 + .10*90 = 49.2 + 21 + 9 = 79.2\%$$

Letter grades given according to the following intervals:

89.5 - 100% A

79.5 - 89.4% B

69.5 - 79.4% C

59.5 - 69.4% D

0 - 59.4% F

Assignments/Discussions

Most assignments are set up through MyOpenMath with direct access through Canvas (you will NOT need to set up any sort of account outside of Canvas). In assignments, you will have unlimited time on each question and can reset the question as many times as you need. Discussions are posted using the discussion feature in Canvas. You will see all assignments and discussions organized in the modules. Your grades are constantly updated as you work on assignments. It may take some time for the system to sync the grades, so do not panic if you finish something and do not instantly see the correct grade in the gradebook. **There are no penalties for a late assignment or discussion.**

Extra Credit

There are no extra credit opportunities available for this class.

Exams

The content of the course is divided into four exams. You will know at least a week ahead of time of when each exam will take place. **If you have testing accommodations through the DSP&S office, please talk with me as soon as possible. If you need to take an exam on a different day than scheduled please speak with me ASAP so I can set that up for you.

Final Exam

There will be a **mandatory** cumulative final exam at the end of the class. It will contain questions from throughout the semester.

Technology

As a student of SCCCD, you are given a free student email account. Make sure you are able to login to this account and check it on a regular basis (at least once a day). You can also set it up through your smart phone if you have one and set up email alerts so that you never miss anything important. Your student email is the official way your instructors communicate with you outside of class. In addition to your email account, you also have a Canvas account set up by the college. Everything for our course will be available in the Canvas shell.

Access to reliable internet is **mandatory** for success in this class. If you do not have access to the internet from home, you need to figure out places you can go to work. ***Not having access to the internet is not an excuse for incomplete work.***

Drop Policies

If you do not participate in the course for 2 weeks without communicating with me, I will assume you are no longer interested in the course and will drop you. If you desire to drop the course, you can do so through Self Service.

Important Dates

- Monday January 30th – First day of class
- Friday February 17th – Lincoln Day observed, no classes, campus closed
- Sunday February 19th – Last day to drop the course to avoid a "W" (It is as if you were never in the class)
- Monday February 20th – Washington Day observed, no classes, campus closed
- Saturday March 25th – Last day to drop the course to receive a "W" instead of a letter grade (you are dedicated to a letter grade if still enrolled after this date)
- April 3 – 7 – Spring Break, no classes, campus is open Monday through Thursday
- Wednesday May 17th – Final exam in class from 10:00 – 11:50 am
- Friday May 19th – Last day of class!

*** This syllabus is subject to change at the discretion of the instructor ***