

Math 5B Calculus II

#53310 Summer 2021

Welcome to Math 5B at Reedley College! I hope you are excited to start a new semester and I look forward to working with you. Over the next six weeks, I will be available to assist you and provide guidance if you need it. I also encourage you to meet with our class tutor, Sydney, as well as other math tutors from the Math Center and Learning Resource Center at Reedley College. Our class is a community that's here to support each other's learning and growth, so don't be afraid to ask for help or help out others.

About Your Instructor

Instructor: Julie Kehoe

Email: Julie.kehoe@reedleycollege.edu

There are a variety of ways that you can get in contact with me, however, the Canvas Inbox is the best way to get a response. If you have not heard back from me within two days then contact me again.

I have been teaching at Reedley College since 2016 and I currently live in Clovis with my husband, three children, and Lego the dog. (Yes, we love to build LEGO in my house!) Originally from Sanger, I started out at Reedley College before transferring to CSU Fresno where I earned a Bachelor of Arts and Master of Arts in Mathematics. While at Reedley College and CSU Fresno, I tried out biology, computer science, and physics before finally deciding on math. It took some soul searching but I finally found my path and I love teaching math. There is nothing better than helping each of you fulfill your potential and achieve your goals.

Course Description

Calculus II is a second course in differential and integral calculus of a single variable. Topics include techniques of integration, infinite sequences and series, polar and parametric equations, and applications of integration.

PREREQUISITES: Mathematics 5A. ADVISORIES: English 1A or 1AH. (A, CSU-GE, UC, I) (C-ID MATH 220)

Student Learning Outcomes

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

1. Evaluate definite integrals using the fundamental theorem of calculus and relate definite integrals to areas and Riemann sums.
2. Apply the use of integrals to problems involving volumes of solids, arc length, surface area, and other applications from science and/or engineering.
3. Find antiderivatives using a variety of techniques of integration.
4. Determine the convergence or divergence of infinite series by using appropriate tests and use infinite series to find polynomial representations of transcendental functions.
5. Analyze conic sections and mathematical relationships given in parametric and polar forms.

Productive Struggle and the Learning Process

You are all highly capable of learning the material in this course and my goal is to provide you with the materials and support you need to be successful. However, there will be times when you struggle to understand and master the concepts of this course. Struggling is normal and an important part of the learning process. But if you find yourself spending a lot of time without making any progress, it is okay to walk away for a bit. Don't allow yourself to get frustrated or give up. Send me a question, meet with a tutor, or just take a break for a few hours or a day.

Time management is also important to success. Because this course is only six weeks, the expected time commitment is about **36 hours per week**. However, we all learn in different ways and at different rates, so your individual time commitment will vary. So, make sure to set aside enough time each week to work on this course. This will help to reduce stress and keep you on track to pass the class.

Course Materials

Textbook

This is a zero textbook cost class! The textbooks and homework system, MyOpenMath, are free and available in our Canvas course. For each section we cover, I will link you directly to relevant textbook materials, videos, and lecture notes in the study materials pages in modules.

Calculators

We will be doing a fair amount of graphing and calculations in this class and a graphing calculator, such as a TI-83 or 84, or its equivalent is highly recommended.

Go to the [Calculators page](#) for more information on getting a calculator, as well as free apps and online programs that can substitute for one.

Technical Requirements

- Fairly recent Mac or PC with a current operating system.
- Current browser (Firefox, or Chrome are preferable) do not use internet explorer
- Reliable and easily accessible internet connection, preferably broadband (DSL speeds) -- for viewing online videos

Technical Issues

Canvas Help

Click on the question mark icon at the bottom of the global navigation bar on the far-left sidebar in Canvas to access links to Canvas Guides.

Student Help Desk

Get help with logging in to Canvas, email, WebAdvisor, or other local systems at 559.499.6070

MyOpenMath Help

If you have issues with MyOpenMath please contact me. The Student Help desk probably won't be able to help with this.

Important Dates

- June 21 Start of 6-week Summer Session
- June 25 Last Day to Add, Last Day to Drop **without** a 'W'
- July 5 Independence Day Holiday observed (no classes, campus closed)
- July 9 Last Day to Drop with a 'W'
- July 30 End of 6-week Summer Session

Communication

This course will be delivered entirely online making it really important to stay informed and up to date by checking the calendar, emails, announcements, and discussion forums. If you have a smartphone, I highly recommend downloading the Canvas Student app. **Also, update your notification settings in your account (top left sidebar under the RC logo in Canvas) to ensure that you get notifications from me.**

Assignments & Exams

My Grading Philosophy

Your grade in this class will be based entirely on the math skills you learn this semester. Common grading elements such as homework, participation, effort, extra credit, and turning assignments in 'on time' will not be part of your grade. This will likely be very different from what you are used to, but the grading system outlined below is designed to be bias-resistant, motivating, and an accurate representation of what you have learned in this class.

This may sound a little scary, but keep reading!

Homework Practice

Unit modules have a set of specified skills to learn, along with study materials and homework to help you practice these skills. Homework assignments are your chance to practice, to make mistakes, to learn. Making mistakes is part of the process of learning math and is expected. For this reason, homework scores will NOT be included in your grade. Do as much of the homework practice as you need to master the concepts. There are an unlimited number of attempts on homework questions and these assignments will be available for the entirety of the course. There are due dates listed for each of these assignments to help keep you on pace to complete the class by the last day.

There is an option to **Add Work** to every homework practice, but this is **not required**. This is available so you can practice uploading your work to an assignment so you are familiar with how to do it on the exams. You can also add your work if you have a question on a problem and want me to give you feedback on your work.

Community Center & Discussion Boards

There will be at least one discussion forum each week to enable communication between you and other students in the class. Use these forums to connect with me and your classmates, ask questions, and share helpful resources with each other. There will also be some discussion boards to help you understand what is expected to demonstrate skill mastery and for me to get feedback on the rubrics I have created.

Exams & Retakes

Each unit will end with an exam on the skills covered. The exams are your chance to show you have learned the skills that your grade will be based on. You will need to submit your work for most problems, so make sure to review the rubric for each skill and show work that explains your solution.

If you have not yet mastered a skill in the exam, you will have additional opportunities to show you have learned the material, either in an exam retake or when the skill is revisited in a future exam (depending on the skill). Before attempting a retake exam, you will be expected to study, work on homework, and seek out tutoring help. If you show improvement on a retake or future exam, then your grade on that skill will be replaced to reflect your most recent work.

The final exam is the last retake and your last opportunity to demonstrate you have mastered the skills of the course. For any retake exam, including the final exam, you will only need to complete problems that assess the skills you wish to improve your score on. Yes, that means if you have mastered all of the required skills by the final, then you will not need to take it!

Note: Do not log out in the middle of an exam or your score will be automatically recorded. If you run into a problem with this, please contact me right away.

Graded Assignments & Final Grades:

Your grade in this class will be based on your demonstrated level of understanding of each skill assessed in exams and exam retakes. Each skill is assessed using a 4-point rubric that can be found on the Study Materials pages under [Modules](#) and on each skill listed under [Assignments](#). Final grades are calculated by averaging the assessment level of all skills in the course using the following scale:

- **A** - 3.50 - 4.00 (87.5%-100%)
- **B** - 2.75 - 3.49 (68.75%-87.4%)
- **C** - 2.00 - 2.74 (50%-68.74%)
- **D** - 1.25 - 1.99 (31.25%-49.9%)
- **F** - 1.24 and below (below 31.25%)

Grades will be tracked in the Canvas Gradebook. Nongraded assignment like the homework Practices and discussion boards will also appear in the gradebook, but only to track progress. They are not used to determine your grade in the class.

Your first assignment in this course is the [Syllabus Scavenger Hunt](#). I want to make sure everyone gets a good start in the class, so if you have not completed it by Monday, June 21st at 11:59pm, I will be checking in with you on Tuesday. I will be monitoring your progress regularly to ensure you are keeping up with the schedule of assignments and contacting you if you are falling behind. I do not drop students from my class unless they stop completing assignments and do not respond to my messages.

Please let me know if you are having trouble completing assignments for any reason. The more I know, the more I can help you. Considering dropping a class? [Read this article](#) first.

Support Services

Ways to get help from me!

- I am just an email away if you have questions.
- I can video chat with you using Zoom by appointment.
- Message me through Canvas. (Don't forget to download the Canvas Student app!)

Our Own Embedded Tutor and the Reedley College Math Center

The Math Center is a free tutoring resource available to all Reedley College math students. It is currently offering online tutoring with our own Reedley College embedded tutors, other student tutors, and math faculty. Please [self-enroll in the Math Center Canvas course](#) to view the schedule for drop-in tutoring, available Monday-Friday 8am-5pm. If you want to plan ahead, or need help in the evenings, or on weekends, connect with a Reedley College tutor by making an appointment through Canvas Messaging.

In addition to all of the great tutors in the Math Center with have our own embedded tutor assigned to this class. [Learn more about Sydney and her schedule here!](#)

Learning Resource Center

The [Tutorial Center](#) is a free tutoring resource available to all Reedley College students as well. The center offers tutoring facilitated by well-qualified student tutors and online tutoring in a variety of subjects (not just math!).

Smarthinking Online Tutoring

Smarthinking is a free online tutoring service available in Canvas. Go to the Smarthinking page in the Canvas Week 0 module to learn more!

Accommodations for Students with Disabilities

Disabled Students Programs & Services (DSP&S) is designed to provide specialized services and accommodations that assist students with documented physical, psychological and learning disabilities reach their maximum potential while achieving their educational goals. Staff specialists interact with all areas of the campus to eliminate physical, academic and attitudinal barriers. Disabled Students Programs & Services takes a personal interest in meeting the special needs of students with disabilities.

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Academic Honesty

You are a member of an academic community at Reedley College. One of the most important values of an academic community is the balance between the free flow of ideas and the respect for the intellectual property of others. Any test, paper or report submitted by you and that bears your name is presumed to be your own original work. Cheating may include, but is not limited to, using unapproved technology to solve a problem, copying from another's work, supplying one's work to another, using or displaying notes or devices inappropriate to the conditions of the examination, or allowing someone other than the officially enrolled student to represent the student. If you are not clear about the expectations for completing an assignment or taking a test or examination, be sure to seek clarification from your instructor beforehand. Finally, you should keep in mind that as a member of the campus community, you are expected to demonstrate integrity in all of your academic endeavors and will be evaluated on your own merits. The consequences of cheating and academic dishonesty, including a formal discipline file, are simply not worth it.

Tentative Course Schedule

Please note, this schedule is tentative and may change if necessary. **Graded assignments are bold.**

Unit 0 Getting Started

- Review Course Materials
- Syllabus Scavenger Hunt
- Getting to Know You Survey
- Class Norms Forum
- Class Introductions

Unit 1 Integration Techniques

- Calculus I Review and 8.2-8.6 Study Materials
- Calculus I Review and 8.2-8.6 Homework Practice
- Integration by Parts Rubric Discussion Board
- **Exam 1 - Due June 28**

Unit 2 More Integration Techniques

- Unit 2 Community Center Forum
- 8.8-8.9, 9.3 Study Materials
- 8.8-8.9, 9.3 Homework Practice
- **Exam 2 - Due July 2**

Unit 3 Applications of Integration

- Unit 3 Community Center Forum
- 6.2-6.4 Study Materials
- 6.2-6.4 Homework Practice
- **Exam 3 - Due July 8**

Unit 4 Physical Applications

- Unit 4 Community Center Forum
- 6.5-6.6 Study Materials
- 6.5-6.6 Homework Practice
- **Exam 4 - Due July 13**

Unit 5 Sequences & Series

- Unit 5 Community Center Forum
- 10.2-10.4 Study Materials
- 10.2-10.4 Homework Practice
- **Exam 5 - Due July 15**

Unit 6 Series Convergence Tests

- Unit 6 Community Center Forum
- 10.5-10.7 Study Materials
- 10.5-10.7 Homework Practice
- **Exam 6 - Due July 21**

Unit 7 Power Series

- Unit 7 Community Center Forum
- 11.1-11.3 Study Materials
- 11.1-11.3 Homework Practice
- **Exam 7 - Due July 27**

Unit 8 Parametric and Polar Equations

- Unit 8 Community Center Forum
- 12.1-12.4 Study Materials
- 12.1-12.4 Homework Practice
- **Exam 8 - Due July 29**
- **Final Exam - Due July 30**