

# PRECALCULUS II

## Math 154-002/003, Fall 2020

**Instructor:** Tyler Suronen

**Office:** Samuelson 228I

**Office Hours:** M-F 1-1:50PM

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**Text:** *Precalculus: An Investigation of Functions*, by David Lippman and Melonie Rasmussen ed2.2

The course is subject to change at the discretion of the instructor. These changes will be communicated to you as they happen. Communication is especially important this quarter. Please contact me if you have any questions.

**Description:** A continuation of MATH 153 with emphasis on trigonometric functions, vectors, systems of equations, the complex numbers, and an introduction to analytic geometry.

**Course Objectives:** By the end of this course you will be prepared to:

- Use knowledge of trigonometric functions in relation to the unit circle to graph, create functions, and describe behaviors of trigonometric functions.
- Use knowledge of trigonometric functions in relation to triangles to solve triangles.
- Simplify trigonometric expressions and solve trigonometric equations.
- Convert between rectangular and polar coordinates.

**The Text:** Precalculus by Lippman Rasmussen is available free to read online at <http://www.opentextbookstore.com/precalc/>. You can download the text in pdf or docx format in full or in sections at the link. You can also order printings of the text in full or chapters 5-9 at the link. We will be using chapters 5-8 and links are provided each week for the corresponding sections that will be covered.

**Calculators:** TI-83/84 or comparable. The graphing utility and data features are necessary to follow lectures completely, but we will use other applications which serve some functions better. For many computations a scientific calculator on your PC or phone will suffice. For graphing I prefer [desmos.com/calculator](https://www.desmos.com/calculator) for visualization.

**Contact:** Weekly discussions will be available for discussing the course material including the reading, videos, and homework. Check them and you might see your question already answered (or you may be able to answer a question yourself!)

Expect a response to emails within 1-2 business days. Advice for better and faster responses:

- i) Take your time and write a complete message
- ii) Make your need clear in the subject line

- iii) Include relevant details in the body of the message
- iv) Use salutations and farewells (including your name)
- v) Use email (not canvas messaging, which loses responses removing context)

And you can always see me in virtual office hours offered daily for help with homework, reading, etc.

**Virtual Office Hours:** Office hours will be an open time for questions about the course. They will be hosted in Blackboard Ultra. Details can be found in the "Office Hours" page in the Week 1 introduction section. Office hours are planned for 1-1:50PM daily during week days.

**Reading and Lectures:** Lectures will be provided in the form of pre-recorded videos and are placed in the course to accompany a text section. Each video is roughly between 5-20 minutes in length. I recommend for each section you read the text, then watch the videos, and then attempt the homework.

**Grade percent breakdown:**

- HW 20%
- Quizzes 20%
- Exams 40%
- Final Exam 20%

**Grades:** Your overall grade will be calculated by percentage of completed work with the following cutoffs (+/- grades will be determined later).

$$90 \leq A$$

$$80 \leq B < 90$$

$$70 \leq C < 80$$

$$60 \leq D < 70$$

$$F < 60$$

**Modules:** The course is organized into weekly modules. If you view the text and submit the assignments for the week you have completed the weekly module. Each weekly module requires you to have completed the previous weeks module to begin. Exams are in modules separate from the other content and require you to have completed all modules prior to them.

**Homework:** Homework will be assigned frequently. There are on average 2 each week. Homework is due weekly on Saturday at 11:59PM. You will find assignments on Canvas in each weekly module. Homework is worth 20% of your total grade. There are 18 assignments (one per section). Each homework assignment is 1.11% of your grade. When you have failed to answer any question twice: the answer will be given and a new version of the question will be generated. You have 100 versions to attempt (which is a virtually unlimited number of attempts for each question). Many questions have attached hints and videos to help you along.

**Quizzes:** You have two attempts (from which your highest score is kept). The quizzes are timed. The quizzes are worth 20% of your total grade. There are 13 quizzes. Each quiz is ~ 1.54% of your grade. Due dates for the quizzes are noted in each weekly module.

**Exams:** Each exam will cover one chapter (which will be roughly every two weeks). The exams are timed for one hour per attempt and you have two attempts (from which your highest score is kept). The exams are open to attempt only the day they are due. The exams are worth 40% of your total grade. There are 4 exams (one for each chapter). Each exam is 10% of your grade. Exams are separated into their own modules and their due dates are noted in the module.

**Final Exam:** The final exam will be comprehensive. The final is timed for two hours. The final is worth 20% of your total grade.

**Late work and Makeup:** No late homework will be accepted. Early homework is welcome. You may not retake homework, quizzes, or exams (beyond the previously mentioned two attempts provided for quizzes and exams). Makeups for all assignments will be given on a case by case basis when circumstances are both valid and verifiable, e.g. illness, bereavement, and school-related activities. Documentation may be required. It is expected that exceptions to due dates be requested prior to the due date.

In compliance with RCW 28B.137.010, Central Washington University makes every effort to deal reasonably and fairly with students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Students must present written notice to their instructor within the first two weeks of class listing the specific dates on which accommodations are required. Contact the Dean of Student Success at (509) 963-1515 for further information or questions.

**Academic Dishonesty:** Consult university policies (CWUP 5-90-040(22), CWUR 2-90-040(22), and WAC 106-125-020) for student conduct, cheating, plagiarism, and other academic expectations. Disciplinary action will be taken, up to and including failure of the course, in accordance with CWU policy and recommendations.

**Classroom Equity:** It is my duty as your instructor to provide a safe and inclusive environment for learning. As students you are expected to share this commitment. Our shared responsibility is to welcome everyone to learn and to treat each other with dignity and respect. Mutual respect and nondiscrimination includes freedom from sexual harassment. CWU policy defines sexual harassment as unwelcome, sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature under particular conditions. Title IX considers sexual harassment to be a form of discrimination. If you experience sexual harassment, or know someone who is being sexually harassed, you are encouraged to report concerns to me, another faculty member or employee, or to Equal Opportunity, at 509-963-1202, [OfficeforEqualOpportunity@cwu.edu](mailto:OfficeforEqualOpportunity@cwu.edu), Mitchell Hall 1st floor. Complete policies are available online at [www.cwu.edu/hr](http://www.cwu.edu/hr).

This extends to the online components of the course in virtual office hours, discussions, canvas chat/discussions, and email correspondence. It is each of our duty to engage with the course and each other in a respectful manner.

**Accessibility and Accommodations:** Central Washington University is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning, discuss your concerns with the instructor. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations. Student Disability Services is located in Hogue 126. Call (509) 963-2214 or email Disability Services, ds@cwu.edu, for more information.

**Resources for Online Students:** CWU offers a variety of services and guidelines for current and future online students. For more information visit: [www.cwu.edu/online-learning/resources-current-and-future-students](http://www.cwu.edu/online-learning/resources-current-and-future-students)

Multimodal Learning recognize and embrace that online learning requires different strategies for students. For more information visit: [www.cwu.edu/online-learning/online-learning-basics-students](http://www.cwu.edu/online-learning/online-learning-basics-students)

**Important Dates:** See <http://www.cwu.edu/registrar/academic-calendar> for a more general list of important dates.

September 9 First day of classes.

September 15 Add/Drop classes.

October 23 Uncontested withdrawal period deadline.

November 11 Veteran's Day. No classes.

November 13 Last day of class instruction.

November 13 Hardship withdrawal petition deadline.

November 16 Study Day.

November 20 End of Quarter

**Other:** Math requires lots of practice. Plan to spend a 1-2 hours outside of class for every hour in class. Reading your notes and text will only get you so far. The deepest understanding comes from working through many examples and internalizing the concepts. Homework is a starting point for this practice, but you may require additional work to understand the concepts. I recommend examples in the text for further practice.

### **Resources:**

1. **YOUR INSTRUCTOR:** I'm available for additional help 5 days a week during my office hours. During office hours I can help you review material, work on practice problems, answer questions related to homework, etc. If you have questions that cannot wait, you don't need to wait for my office hours to ask: you're welcome to e-mail me.

2. **YOUR TEXT AND VIDEOS:** The majority of the material in this class is based on the text. I recommend you keep up with the material in the book as we cover it in class. The text also has practice problems and will make a decent study guide.

3. **FELLOW STUDENTS:** Form study groups, work through homework, share notes, etc. Borrow understanding from others and share your understanding with them.

4. ACADEMIC SUCCESS CENTER: Tutoring and additional resources. For more information visit:

<https://www.cwu.edu/academic-success/>