

# PRE-CALCULUS II

Math 154-001, Winter 2018  
M-F 9-9:50 AM, Bouillon 102

**Instructor:** Tyler Suronen

**Office:** Black 225-40

**Office Hours:** M-F 11-11:50 AM

**Phone:** (509) 963-2991

**E-mail:** tyler.suronen@cwu.edu

**Text:** *Precalculus*, Michael Sullivan, 2nd Custom Edition for CWU.

**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.

**Required Materials:**

- The Text: The course is taught from material in the text. We follow the material in the text in order (with some exceptions) from Chapter 6 onward. Practice problems will be assigned from the text regularly.
- A graphing calculator: TI-83 or TI-84 is preferable. I will teach using the TI-83. Higher TI models (such as TI-89) will have similar features, but the steps may differ. *Phones are not an acceptable substitute in testing situations.*
- Internet access for:
  - E-mail: Primary method of communication outside of class and office hours.
  - Canvas: For announcements and additional materials.
  - MyMathLab: For graded online homework assignments.

**Attendance:** Daily attendance is important for your success in this course. It will be your primary source for learning in this course. Announcements will be made during lecture and assignments given and received. If you are absent, you are responsible for obtaining any information or materials presented in lecture. Please bring your text and calculator to every lecture. The calculator will be handy for in-class work (which will be frequent) and the text will be used to reference tables, graphs, etc.

**Grade percent breakdown:**

- HW 10%

- Quizzes 25%
- Exams 45%
- Final Exam 20%

**Grades:** You must show all work. Answers without adequate justification will not receive full credit. Any kind of guess-and-check solution or recalling the solution without showing the process will not suffice. Occasionally, answers without work or explanation will be acceptable (e.g. reading values from a graph) and I will make it explicitly clear when such problems are given. I will make clear the amount of detail necessary with examples in lectures. Problems will be done by hand unless explicitly stated otherwise. Answers should be presented in exact form unless explicitly stated otherwise (that means giving as many digits as you are given: no rounding).

Your overall grade will be calculated by percentage of completed work with the following cutoffs (+/- grades will be determined later roughly following the standard of 3 points above and below the cutoffs).

$$\begin{aligned}90 &\leq A \\80 &\leq B < 90 \\70 &\leq C < 80 \\60 &\leq D < 70 \\F &< 60\end{aligned}$$

**Homework:** Homework will be assigned frequently (including the final week of instruction). Homework from the text will be assigned for practice. Worksheets from Canvas and online homework through MyMathLab will be graded. Homework is worth 10% of your total grade. Although homework will vary in length each is worth the same percent of your grade. The homework will reflect the material covered recently in class. It is expected that you keep up with the homework. You are expected to attempt all problems. Homework may be due on the same day we discuss a topic (this is important for practice). Worksheets will be due during lecture on the day they are due. I will take homework questions at the start of lectures and accept the worksheets afterwards. If you struggle with homework I recommend that you: 1. Talk to me 2. Check your notes and the text 3. Consult your fellow students and your friends.

**Quizzes:** We will have a quiz during any week that we do not have an exam (including the final week of instruction). Quizzes will typically be given at the end of the week and regard the most recent material covered in class. You must be present to take the quiz during the time it is given. In the event of planned or unplanned absence each student will be allowed one quiz retake regardless of circumstance. The retake must be completed at the earliest possible date before the next quiz or exam. In the event of any additional planned absences you may speak to me in advance to reschedule the quiz. All quizzes combined are worth 25% of your grade.

**Exams:** We will have 3 exams during the quarter and a final exam at the end of the quarter. The 3 exams will each cover roughly 2-3 weeks of the most recent material. Exams will take 55 minutes. Exams must be taken in class on the date given unless arranged in

advance for necessary absence (see Late Work and Make-ups). The three exams together are worth 45% of your grade.

**Final Exam:** The final will be held on Tuesday March 13th 8:00-10:00 AM in our regular classroom. The final will be two hours long, the material will be comprehensive, and is worth 20% of your grade.

**Late work and Make-ups:** No late homework will be accepted. Early homework is welcome. In-class quizzes must be taken on the dates they are given (with the exception of one retake). Make-ups for exams are not given without good reason (including but not limited to severe illness and work/military requirements). If you need to make-up an exam missed due to medical emergency I require a Doctor's note. In the event of unavoidable scheduling conflict for work a note and contact information for your supervisor will be required in advance.

**Academic Dishonesty:** Cheating will result in failure of the course and may have a larger impact on your standing with the university. Cheating includes copying work, hinting, helping, and using notes/book (when not instructed to do so) on an in-class quiz or exam.

**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 Gail Farmer, Equal Opportunity, at 509-963-2206, farmer@cwu.edu, Bouillon 205. Complete policies are available online at [www.cwu.edu/hr](http://www.cwu.edu/hr).

**Accessibility:** Students who have special needs or disabilities that may affect their ability to access information or material presented in this course are encouraged to contact me or the Center for Disability Services (cgs@cwu.edu, 963-1202, Bouillon 140).

### **Important Dates:**

January 3 First day of classes.

January 9 Add/Drop classes.

January 15 Martin Luther King Jr. Holiday. No classes.

February 16 Uncontested withdrawal period deadline.

February 19 Presidents Day. No classes.

March 9 Hardship withdrawal petition deadline.

March 9 Last day of classes.

March 12 Study day.

March 13 FINAL EXAM

**Other:** Participation is not graded, but it is essential for your learning! I will often ask for your input in class. You will be asked questions directly. Be prepared for that. I may ask for students to “give me the next step” or even present a full solution at the board. Similarly I also expect you to ask questions about the material. The more input I have from you, the better I can facilitate your learning needs.

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.

**Other:** Our classroom time will be for three things: learning new material through lecture, practicing with examples, and testing. The majority of our time will be spent on these first two. Expect that the start of a classroom session may include either lecture or practice. When new concepts have been introduced, we’ll reinforce them with examples that the class will work through together and then we’ll spend time individually or in groups to practice the methods.

Testing will come on a regular basis. Exams will take up our entire class session. Quiz days will typically begin with either lecture or discussion and include some practice before we attempt the quiz.

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### **Resources:**

1. **YOUR INSTRUCTOR:** I’m available for additional help several 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, you don’t need to wait for my office hours to ask: you’re welcome to e-mail me.

2. **YOUR TEXT:** 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. **YOUR FELLOW STUDENTS:** Again, math is a collaborative effort. Form study groups, work through homework, share notes, etc. Borrow understanding from others and share your understanding with them.