

## Math 128 - Plane Trigonometry, Fall 2026 Course Syllabus

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**Office:** Learning Resource Center 323J

**Office hours:** Mon 2-3, Tues 12-1, Wed 2-3, Thurs 11-1, Fri 12-1

**Class Room/Time:** INN-B 211, MWF 1:00-1:50 pm

**Course website:** [community.wvu.edu/~bal0018/math128F26.html](http://community.wvu.edu/~bal0018/math128F26.html) (handouts may also be posted on MyOpenMath)

Course announcements may be posted on the website or sent via email. Please be sure to check the website regularly, and to regularly check the email address you have on record. You are responsible for any information posted on the course website.

**Textbook:** Jay Abramson, *Algebra and Trigonometry*, 2nd ed, available to download for free at <https://openstax.org/details/books/algebra-and-trigonometry-2e>.

**Catalog Data:** MATH 128 Trigonometry (3-0) Credits 3. Trigonometric functions, identities, vectors, complex numbers, and trigonometric equations. This course satisfies GEF3 Mathematics & Quantitative Reasoning.

**Prerequisite:** MATH 124 or MATH 126 with minimum grade of C.

**Course material:** A rough schedule of the topics covered can be found on the last page.

**Course Objective:** Upon completion of this course, the student should have a basic knowledge of trigonometry and its uses. This includes graphs, trigonometric identities, trigonometric equations, polar coordinates, the complex plane, and applications. The student will learn critical thinking skills and be able to express information in a mathematical setting.

**Course Outcomes:** Upon successful completion of the course, the student will be able to do the following:

1. Compute the values of the trigonometric functions of an angle.
2. Graph the trigonometric functions, in particular, sinusoidal curves.
3. Use basic trigonometric identities to simplify expressions, solve equations, and prove identities.
4. Solve right triangles, solve oblique triangles, and find the area of a triangle.
5. Use the properties of inverse trigonometric functions to simplify expressions.
6. Use the trigonometric form of a complex number to compute products, quotients, powers, and roots of complex numbers.
7. Convert from polar coordinates to rectangular coordinates and vice-versa.
8. Use mathematical analysis to solve various types of problems.

**Grading:** Your final grade will be based on homework, quizzes, three exams during the semester, and the final exam. Your final course score will be the maximum of the following two grading schemes:

- 10% Homework + 5% Quizzes + 20% Exam 1 + 20% Exam 2 + 20% Exam 3 + 25% Final Exam
- 10% Homework + 5% Quizzes + 25% (highest grade of the three exams) + 25% (middle grade of the three exams) + 5% (lowest grade of the three exams) + 30% Final Exam

**Letter Grade Cutoffs:** A: 90%, B: 80%, C: 70%, D: 60%, F: below 60%

**Exams:** There will be three exams, tentatively scheduled for Friday, September 18; Friday, October 16; and Friday, November 13. These will be 50 minute exams taken during the regular lecture time. The final exam time has been set by the university, and will be on Monday, December 7 from 1:00-2:50 pm. Make-up exams will only be given to students with excused absences, and such make-up exams must be scheduled within 24 hours of the missed exam.

**Quizzes:** There will be two or three quizzes throughout the semester. The dates of these quizzes will be announced at least a week in advance in class and on the course website, and will be on specific predetermined topics from the course.

**Homework:** Homework will be completed online with MyOpenMath.com. When you sign-up, you will use the Course ID and Enrollment Key given in class and posted on the eCampus site. Homework assignments will be due most Fridays. Note that most problems on the homework assignments may be resubmitted as often as needed until they are correct, so you should strive for a homework percentage near 100%!

A note about the homework: the only real point of the homework is for you to do it. The time you spend thinking, trying things, getting wrong answers, and (hopefully) getting right answers is the purpose of the homework. The exams are where your course grade will really be decided, and the homework is your training for the exams. Don't skip your training!

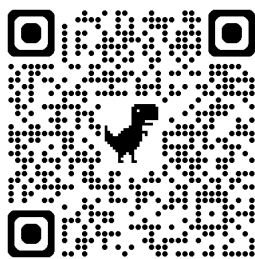


Figure 1: \*  
QR Code for Course Website

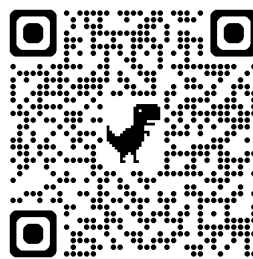


Figure 2: \*  
QR Code for MyOpenMath

**Getting Help:** Always remember: asking for help when you need it is not a sign of weakness, but a sign of strength! Please feel free to attend my office hours or email me if you have questions about the course material. If you are unable to make it to my regularly scheduled office hours, I am willing to make an appointment to meet at another time if possible. Free tutoring is also available through the Student Success Center, located in the library on the second floor of LRC. You should also find out if you qualify for TRIO SSS, located in Benedum 100, which also provides tutoring services. Additionally, for quick math questions, you can feel free to stop by the Math Department in LRC 323 and ask any math professor with an open door. Finally, I would also encourage the formation of study groups, to learn from each other and help each other learn.

**Class policies:**

- Graphing calculators will never be allowed during any exams. Scientific calculators will be considered on an exam by exam basis. You may use any calculator to help you do the homework if you wish, but you should keep in mind that you may be required to solve similar problems without a calculator on the quizzes and exams.
- While class attendance does not directly factor into your grade computation, attendance of each lecture is highly recommended. Regular attendance will tend to lead to better understanding of the course material, which tends to lead to better performance on exams.
- If you believe a problem on a homework assignment or midterm exam has been graded incorrectly, you must notify the instructor of your complaint within 7 days of the date the exam is handed back. If you are unable to retrieve your graded material at the time it is handed back, it is your responsibility to make arrangements with the instructor to retrieve the material at another time.

**Institutional Policies:** Students are responsible for reviewing policies on inclusivity, academic integrity, incompletes, sale of course materials, sexual misconduct, adverse weather, student evaluation of instruction, and other statements. For these detailed policies of West Virginia University, please review:

<https://facultysenate.wvu.edu/resources/syllabus-policies-and-statements>.

| Day | Date   | Topic                                             |
|-----|--------|---------------------------------------------------|
| 1   | 19-Aug | Syllabus, 7.1: Angles                             |
| 2   | 21-Aug | 7.3: Unit Circle Trigonometry                     |
| 3   | 24-Aug | 7.3: Unit Circle Trigonometry                     |
| 4   | 26-Aug | 7.2: Right Triangle Trigonometry                  |
| 5   | 28-Aug | 7.2: Right Triangle Trigonometry                  |
| 6   | 31-Aug | 8.1: Sinusoidal Trig Graphs                       |
| 7   | 2-Sep  | 8.1: Sinusoidal Trig Graphs                       |
| 8   | 4-Sep  | 8.2: More Graphs of Trigonometric Functions       |
| 9   | 9-Sep  | 8.3: Inverse Trigonometric Functions              |
| 10  | 11-Sep | 8.3: Inverse Trigonometric Functions              |
| 11  | 14-Sep | 8.3: Inverse Trigonometric Functions              |
| 12  | 16-Sep | Review                                            |
| 13  | 18-Sep | Exam 1                                            |
| 14  | 21-Sep | 9.5: Basic Trigonometric Equations                |
| 15  | 23-Sep | 9.5: Basic Trigonometric Equations                |
| 16  | 25-Sep | 9.1: Trigonometric Identities                     |
| 17  | 28-Sep | 9.2-9.4: Common Trigonometric Identities and Uses |
| 18  | 30-Sep | 9.2-9.4: Common Trigonometric Identities and Uses |
| 19  | 2-Oct  | 10.1: Law of Sines                                |
| 20  | 5-Oct  | 10.1: Law of Sines                                |
| 21  | 7-Oct  | 10.2: Law of Cosines                              |
| 22  | 12-Oct | 10.2: Law of Cosines                              |
| 23  | 14-Oct | Review                                            |
| 24  | 16-Oct | Exam 2                                            |
| 25  | 19-Oct | 10.3: Polar Coordinates                           |
| 26  | 21-Oct | 10.3: Polar Coordinates                           |
| 27  | 23-Oct | 10.4: Polar Graphs                                |
| 28  | 26-Oct | 10.4: Polar Graphs                                |
| 29  | 28-Oct | 10.5: Polar Form of Complex Numbers               |
| 30  | 30-Oct | 10.5: Polar Form of Complex Numbers               |
| 31  | 2-Nov  | 10.8: Vectors                                     |
| 32  | 4-Nov  | 10.8: Vectors                                     |
| 33  | 6-Nov  | 10.8: Vectors                                     |
| 34  | 9-Nov  | Catch-Up                                          |
| 35  | 11-Nov | Review                                            |
| 36  | 13-Nov | Exam 3                                            |
| 37  | 16-Nov | 12.3: Parabolas                                   |
| 38  | 18-Nov | 12.1: Ellipses                                    |
| 39  | 20-Nov | 12.2: Hyperbolas                                  |
| 40  | 30-Nov | 12.5: Conics in Polar Coordinates                 |
| 41  | 2-Dec  | Catch-Up                                          |
| 42  | 4-Dec  | Review                                            |