



**MTH 112      Trigonometry      Fall 2021**

Instructor:    Nurideen Abubakari                      CRN: 23443  
Office:         WOH-103                                Class time: M-F 8am-8:50  
Office Hours: M 7:30am-8                      Class location: WOH 120  
                    W 7:30am-8  
                    Other times by appointment

Email:         abubakn@linnbenton.edu

**Course Description:** MTH 112 introduces trigonometric functions, trigonometric identities, inverse trigonometric functions, trigonometric equations, right triangle trigonometry, and polar coordinates. It also includes vectors and conic sections.

**Prerequisites:** MTH 97 (Practical Geometry) or equivalent **AND** MTH 111 College (Algebra) or equivalent, each with a grade of "C" or better.

**Student Learning Outcomes:** Upon completion of the course, the student will be able to:

1. Calculate the exact (when possible) or approximate value of the 6 trigonometric functions using both radian and degree measure.
2. Solve for all of the side lengths and angles of a right or oblique triangle, using information given.
3. Graph trigonometric functions (emphasizing sine, cosine and tangent), and conic sections, transform their graphs, and state important features of their graphs.
4. Verify trigonometric identities and use them to solve trigonometric equations involving one or more trigonometric functions.
5. Perform calculations involving vectors and solve vector applications.

**Required Course Materials:**

- We will be using a [free online textbook](#) and online homework through MyOpenMath.com. MyOpenMath also contains links to video lectures.
- Regular, reliable internet access for completing online homework assignments.
- Graphing calculator or graphing software for in-class work and homework: A TI80 series calculator, Desmos, or Microsoft Mathematics will work, and there are many other possibilities.
- Graphing or scientific calculator for tests (no smart phones or laptops will be allowed on the tests).

### Enrolling in MyOpenMath:

- 0 If you have used MyOpenMath before, log in and skip to step 6
- 1 Go to [www.myopenmath.com](http://www.myopenmath.com)
- 2 Click on "Register as a New Student"
- 3 Enter a user name, I recommend using your student ID number
- 4 Choose and confirm a password, one you will not forget
- 5 Enter your first and last names, and your e-mail address
- 6 Enter the Course ID: **126093**
- 7 Enter the Enrollment Key: **F2021**

### Grading Policy:

Assessment Percentage Breakdown: (Grade totals can be found in MyOpenMath)

20% Online Homework MOM

20% Write-Ups (written homework)

30% Three Exams (Each Exam is worth 10%)

5% Active participation

10% Quizzes

15% Final

Letter Grade	Percentage	Performance
A	90-100%	Excellent Work
B	80-89%	Good Work
C	70-79%	Average Work
D	60-69%	Poor Work
F	0-59%	Failing Work

"P" or "NP" will NOT be given in this class. A grade of Incomplete **may** be assigned at the discretion of the instructor under special circumstances. The student must have completed the majority of the course, been in regular participation and passing the course prior to the "special circumstance."

### Late Assignment Policy

MyOpenMath (MOM), the online homework, you have four late passes to use at your discretion. A late pass extends one of the assignments up to 48 hours from the due date, but you must use it before the assignment is actually due.

No extensions/late passes on Quizzes

All Write-Ups will be accepted up to 24 hours past the due date **with a 20% penalty**.

Exams must be taken on the scheduled date, unless prior approval has been granted by the instructor or has authorized accommodations.

**Tests:** All tests (including the final) will be given in our classroom. Tests must be taken on the scheduled day. If you miss a test you will get a score of zero. However, one test grade may be replaced by the final exam score. The *tentative* test dates are listed on the course calendar. The date and time of the final will not change: Monday, December 6.

### **Online Homework**

For online homework we will be using MyOpenMath (MOM). Online Homework will be covering Chapters: 7, 8, 9, 10, and 12, from the online text: OpenStax Algebra and Trigonometry, Algebra and Trigonometry. OpenStax CNX. May 18, 2016.

Specific sections will be due at the end of each week (Sundays at 11:59 PM with the exception of Week 11).

Success in a math class goes hand-in-hand with completing the homework assignments. I find that students who succeed in this course are the students who are staying on top of their homework and asking questions. So please do start on these as soon as possible.

### **Quizzes**

Timed Quizzes will be on Wednesdays, open from 12:01 AM until 11:59 PM that day. These will be no more than 5 questions related to the previous weeks Online Homework. For example, your first quiz is on Wednesday of Week 2 and it will cover problems from 7.1A,B and 7.2A in MyOpenMath. I will drop your lowest 2 quiz grades from the gradebook. Quizzes will be in MyOpenMath (tentatively).

### **Write-Up (Work in groups)**

You will have to complete several write-ups this term.

The write up will include: each question written out fully, all steps--including the algebra necessary to solve it, appropriate explanation of the process and the answer clearly identified. It should be written so that anyone in a MTH 112 class would be able to easily follow and understand your solution. Write-Ups will be graded on correctness, presentation, readability, and the communication of your solution. Up to one half of the grade is based on the communication and explanation of the solution. In other words, an incorrect but well-explained solution can still earn up to half of the points. Similarly, a correct solution without explanation can lose up to half of the points. I will drop the lowest write-up score from the gradebook at the end of the term.

### **Resources:**

**Class time:** Much of class time will be devoted to answering questions; if you have a question or are unsure of something, please ask me or a fellow student.

**MyOpenMath:** In addition to the textbook and video lectures, MyOpenMath also has a discussion forum.

**Office hours:** If you have questions, please come see me and ask. If my scheduled office hours don't work, set up an appointment with me for another time.

**Learning Center:** The Learning Center, WH226, is an excellent place to study and to get help with your homework. (Please remember to log on and log off the computer with each visit to the Learning Center.) The other LBCC campuses have similar facilities with Math Help available, for example BC 232 in Corvallis.

- There is free wireless available in the Learning Center (and lots of places to plug in so your battery won't be depleted.)
- The relaxed atmosphere and table arrangement in the Learning Center provide a great location for study groups to meet and work.
- Instructional assistants are available at the **help desk** to answer your math, and graphing calculator questions.
- The Learning Center offers some free **individual and small group tutoring** in addition to the help desk.

**Notes online:** Class notes will be available on MyOpenMath. I will also use MyOpenMath to post the syllabus, my schedule, handouts, test information, grades and announcements. I will e-mail the class from MyOpenMath if there is a class cancellation or correction.

**Study groups:** Many students find that working with classmates is the best way to learn and understand the material. There is also a forum available on MyOpenMath where you can post questions to the whole class and answer each other's questions.

**Tips for success:**

- Read the relevant sections of the book or watch the videos before coming to class. Try the homework problems before coming to class. Come to class and ask questions. Review your (or my) class notes after class, the same day if possible.
- Expect to spend at least 10 hours per week on this class, more if you are having difficulty.
- Find the resources that work best for you.

**Academic Honesty:** I assume that you are ethical and honest. However, if there is an incident of academic dishonesty (cheating), you will receive a score of zero for that test/assignment and the incident will be reported to the college administration for possible further disciplinary action. If there is a second offense, you will receive a grade of F for the course and the incident will be reported to the college administration with a recommendation for disciplinary action.

**Special Circumstances:** Students who have any emergency medical information the instructor should know of, who need special arrangements in the event of evacuation, or students with documented disabilities who may need accommodations, should **make an appointment with the instructor as early as possible, no later than the first week of the term.** If additional assistance is required, the student should contact the Center for Accessibility Resources at 541917- 4789.

**LBCC Comprehensive Statement of Nondiscrimination:** LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

**Statement of Inclusion:** The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. (related to Board Policy #1015)

***The instructor reserves the right to make changes to the syllabus/calendar at any time.***