
Syllabus

MATH 1022, version 2.0

Effective: January 2024

MATH 1022—Plane Trigonometry

Course Description: Trigonometric functions with applications; graphs with transformations; inverse functions; fundamental identities and angle formulas; solving equations; solving triangles with applications; polar coordinate system; vectors.

Textbooks and Other Materials

Students enrolling in ODL courses are *required* to follow the textbook ordering information provided in the syllabus and Getting Started module of the course. *Do not attempt to order your textbook access codes from other sources.* Courses that require paid codes to access online materials require that special arrangements are made to provide extended material access periods in the event that a course extension is needed. Special ISBN's have been created in these cases.

ODL is not responsible for student purchases that result in the receipt of the wrong materials. It is the responsibility of the student to order the correct textbook materials. Courses are written to specific textbook editions; edition substitutions are not allowed.

Textbook

Kirk Trigsted. *Algebra & Trigonometry. Student Access Kit: 3e MyMathLab eCourse Series*. Third edition. Pearson, 2019.

ISBN-13: 978 013 475 1597

Notice: This is an etext accessible only through MyMathLab.

It is recommended that access to the etext and MyMathLab be purchased during the MyMathLab registration process with a credit card or PayPal Account for immediate access. Alternatively, the Student Access Kit listed above containing a MyMathLab access code can be purchased from the

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publisher's website at <http://www.mypearsonstore.com/> or from the MyLab site, <http://www.pearsonmylabandmastering.com/>.

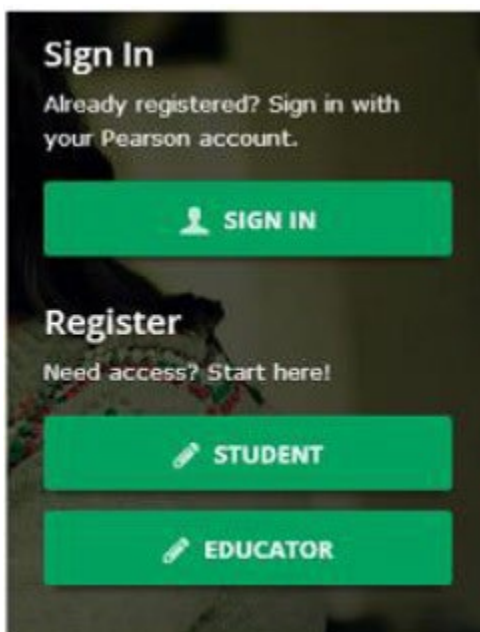
MyMathLab registration Information

Prior MyMathLab users:

1. Go to <http://www.mymathlab.com>. Sign in to your account. (If you are unable to sign in, follow the instructions below to register as a new MyMathLab user.
2. Enter the course ID. Your Course ID for this course can be found in the Getting Started module and the Materials link on the course Moodle site.
3. If your MyMathLab access has expired or is not valid for this course, you will be prompted to pay. Choose 24-month access to ensure you have sufficient time to complete this course. You can pay online with a credit card, PayPal account, or a previously purchased access code.

New MyMathLab users:

1. On the home screen, click "Student" under Register.



2. On the next screen, you will click "Register now." Make sure that you have the three things required to register successfully: an e-mail address, your course ID, and a means of payment (credit card, PayPal)

account, or a previously purchased access code). Your Course ID for this course can be found in the Getting Started module and the Materials link in the Moodle course. Choose 24-month access to ensure you have sufficient time to complete this course.

3. On the next screen, you will see the name of the course listed in the "Your Course" box on the right side of the screen. It should read **MATH 1022 2.0.(4)**, taught by "LSU ODL." Disregard the course end date. At this point, you should create a Pearson account. Once you complete the registration steps, you will have a choice between using a previously purchased access code (see below) and purchasing access.

Other Materials and Resources

Calculator

A non-graphing calculator with logarithmic and exponential capabilities is required. The TI-30XIIS or the TI-30XIIB with a two-line display is preferred. Graphing calculators are *not* allowed on tests or the Final Exam. Calculators with symbolic notation or natural display capabilities, such as the TI-36XPro and any of the TI Multiview series, Casio Natural Display series or the Casio ClassWiz series, the HP SmartCalc series, and the Sharp WriteView series are *not* allowed on tests or the Final Exam. For more information, please read the calculator policy located in the Getting Started Module.

Other Materials

Software: Web Browser, Quicktime, Adobe Acrobat Reader

It is recommended that you use Mozilla Firefox or Google Chrome as your web browser. Internet Explorer is not compatible with your Moodle course site.

Latest Adobe Acrobat Reader is required to view PDF document files. The latest version of Quicktime is also required for Module Lecture videos.

Hardware: *Web cam with a microphone (built-in or external), headphones or working speakers, and high-speed internet*

Proctored exams are completed online and require the hardware listed above. Students are encouraged to review the technical requirements provided on the ProctorU website and to perform a test on their equipment prior to enrolling in this course to make sure they have the necessary resources available. There is a separate charge for each proctored exam.

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Technical Requirements: <https://support.proctoru.com/hc/en-us/articles/115011772748-Equipment-Requirements>

Equipment Test: <http://www.proctoru.com/testitout/>

Nature and Purpose of the Course

Course Outcomes: Upon completion of this course, students are expected to be able to:

1. Identify and use angles given in degree or radian measure.
2. Identify and use right triangle trigonometry.
3. Extend the trigonometric functions and use them for *any* angle.
4. Graph the six trigonometric functions, apply transformations to these functions, and identify important characteristics of the graphs.
5. Identify and use inverse trig functions.
6. Verify trigonometric identities and use the Sum and Difference, Double Angle, and Half-Angle formulas.
7. Solve trigonometric equations.
8. Solve for missing parts of oblique triangles using the Law of Sines and the Law of Cosines and find the area of oblique triangles.
9. Identify polar coordinates, convert between polar and rectangular coordinates, and graph polar equations.
10. Describe vectors using various notations and solve applied questions.

This course is a prerequisite for calculus and is important for many of the sciences. You will learn the trigonometry needed to succeed in your next math course. You will also learn how to think and how to reason with mathematical facts and to organize information according to mathematical structure and to utilize mathematical concepts.

Working with the Course Materials

Remember, this course covers an entire semester of work or the equivalent of a classroom course lasting 15 weeks. That means that each module in this course equals nearly a week of course work and will require the same time and effort on your part. *Do not expect to complete each module in a single study session. Understand, too, that if you choose to submit assignments at a very high pace (more than two modules in a 24-hour period), your instructor may not be able to grade your work at the same rate.*

Each module contains information, activities, and assignments organized under a consistent series of headings. Get familiar with how the module is organized. Each module in this course is organized into the following sections: the Module Learning Objectives, class notes for each section covered, videos for each

section covered, graded homework, and a graded Quiz. You should work through these parts of the module in order. Specific recommendations are provided in a link to the course module instructions, which you should review before beginning the first module.

This course requires students to complete activities both in Moodle and in Pearson's MyMathLab. All homework, quizzes, tests, and the Final Exam will be completed online using MyMathLab. For more information please see the "Module Assignments" section of this syllabus.

General Education Course Credit

This course satisfies three hours of the General Education Analytical Reasoning requirement at LSU. It includes the following area learning objective: LSU graduates will employ scientific and mathematical models in the resolution of laboratory and real-world problems. See the LSU General Catalog for more information.

MyMathLab Learning Aids

Help Me Solve This

This feature provides an exercise that matches exactly the current iteration of the homework exercise. It is interactive and requires feedback from you throughout parts of the solution process. After completing the "Help Me Solve This" and getting or being given the correct answer, you will be returned to the exercise page, but you will get a different iteration of that exercise to work. The skill being practiced will be the same, but the values and the answers will change.

View an Example

This feature provides you with a static example similar to the current iteration of the homework exercise. You can progress through the solution without giving input using the Continue button at the bottom. When you close that window, you will be returned to the original homework exercise.

Suggested Study Techniques

1. Carefully review the module objectives to help you focus on the information that will be covered on the exams.
2. Concentrate on the reading assignments, the module lecture material, and any additional resources provided. This review should include a detailed examination of any illustrative problems and examples. After an

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assignment has been completed, a rapid re-reading of the related text and other materials is strongly recommended.

3. Put yourself on a definite schedule. Set aside a certain block of hours per day or week for this course and work in a place where distractions are minimal.
4. Try to submit assignments for each module each week or at least every two weeks. Delays in submitting assignments usually result in lagging interest and the inability to complete the course.
5. Review your module assignments in Gradebook in MyMathLab after they have been completed and submitted in Moodle to ensure that you know how to work each exercise.
6. Regardless of how you complete your graded assignments, keep in mind that module completion should not be your sole preparation for your exams. As with any college course, you should study for your exams.

Reading Assignments

A set of class notes is posted in Moodle for each section covered in the course. These notes contain definitions, rules, procedures, and common mistakes made by students, as well as space to work examples while reading the text.

Videos for each section are available in Moodle. You should watch the videos, take notes, and work each example covered in the video on your own.

Topic Outline

This course covers the following specific topics:

Module	Topic
01	Degree and Radian Measure; Arclength and Sector Area
02	Right Triangle Trigonometry
03	Linear Inequalities, Absolute Value Equations and Inequalities
04	Trigonometric Functions of General Angles
05	Graphs of Sine and Cosine
	Test 01
06	Graphs of Tangent, Cotangent, Secant, and Cosecant
07	Inverse Trigonometric Functions
08	Trigonometric Identities; Sum and Difference Formulas
09	Double-Angle and Half-Angle Formulas
10	Trigonometric Equations

Test 02

- 11 Applications of Right Triangle Trigonometry; Law of Sines
- 12 Law of Cosines; Area of Triangles
- 13 Polar Coordinates and Polar Equations
- 14 Graphing Polar Equations
- 15 Vectors

Test 03**Final Examination****Module Assignments**

Each module contains one or more homework assignments related to sections in the etext along with a quiz on that content. It also shows those specific objectives or examples from certain etext sections that are to be omitted from the course. You should complete the homework, making sure that you can work each exercise on your own, then take the quiz. The goal on the quiz is to be able to make a 100% without any assistance.

You should do your math work in MyMathLab in the same order as the assignments are listed in the Moodle modules. You will not be given credit for your work until it has been completed in both MyMathLab *and* Moodle.

Homework

You should review the class notes and read the etext before attempting the homework.

When working your homework assignments, you should save after completing each exercise.

If you rely on the MyMathLab learning aids or other help to get a Skill Check, Standard, Step-by-Step, or Brief Exercise correct, then use the Similar Exercise feature and rework the exercise repeatedly until you can get it correct without any help. This is essential. Many students who become overly dependent on the learning aids or other assistance to get a score of 100% on the homework assignment find that they score much lower on the tests.

All of the work you submit in MyMathLab must be your own. Each response must be independently written and entered into MyMathLab.

When you have completed a homework assignment in a module in MyMathLab, you will click on "Section XX Assignment Verification" in Moodle and follow the instructions given there. That homework assignment will then have a due date of that day and time you submitted in Moodle and you will not be able to open

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that assignment and change your grade after that date. You can review your homework assignments completed in the Gradebook in MyMathLab.

There are practice homework sections (labeled Practice Homework) open for the duration of your enrollment period that are copies for each graded homework assignment in MyMathLab for you to use to practice and study. They are at the bottom in Homework in MyMathLab. These do *not* count towards your course grade.

Your homework assignment average is worth 15% of your course grade.

There are three categories of homework exercises. For each category, the result of your last attempt for each exercise will be recorded when you save.

Type of Exercise	Sample of Numbering	Features
Skill Check Standard Step-by-Step Brief	1.1.SCE-2 2.1.15 4.1.SbS-13 5.3.BE-47	<ul style="list-style-type: none">• learning aids usually available in MML• in general, three attempts allowed for each iteration with feedback after each• Similar Exercise (new iteration for same exercise number) available an unlimited number of times
Reading Assessment	2.1.RA-3	<ul style="list-style-type: none">• learning aids <i>not</i> available in MML• can be attempted only twice with feedback after each• Similar Exercise <i>not</i> available• multiple choice, usually found at the end of each homework assignment, three to seven questions

Quizzes

You should master your homework before attempting the quizzes, and you should try to do the quizzes without any help. If you rely on help to get a 100% on the quizzes, you will score much lower on the tests.

Each quiz contains ten questions with each question drawn from a pool of homework exercises having the same or similar learning objectives. It is recommended that you take a quiz at least four times, even if you earn a score of 100% on an early attempt, to ensure that you see a cross-section of the exercises.

Each quiz in MyMathLab can be attempted up to ten times, but only the highest score of your attempts for each quiz will be recorded in Moodle to be used in the course grade.

The maximum working time allowed for each attempt of each quiz is 75 minutes. While working on a quiz with time remaining, you can close the browser (rather than choosing Submit) and re-open that same quiz later without any additional elapsed time.

You will not get feedback after each exercise answer is entered. You must work through the quiz and submit it before seeing your score. You can review your quiz in the gradebook in MyMathLab, and the MML learning aids will appear for the review.

Quizzes should be used as preparation for the tests. Re-take the quizzes until you can do the work correctly without any assistance.

Collaboration

You are allowed to consult with other people regarding math concepts but not regarding specific answers to questions. You may discuss the concepts demonstrated in the quizzes, but do not share or assist another student in deriving an answer. Your work must be independently written and entered into MyMathLab. You are prohibited from using any additional online or third-party resources that are not explicitly listed in the syllabus or provided by your teacher.

Quiz Completion

Just as you do with the homework assignments, when you have completed a quiz in a module in MyMathLab, you will click on "Module XX Quiz Verification" in Moodle and follow the instructions. That quiz will then have a due date of the day and time you submitted in Moodle and you will no longer be able to take that quiz. You can review your quiz in the Gradebook in MyMathLab.

Your quiz average counts as 15% of your course grade.

Suggested Study Techniques

Here is the cycle you should follow:

- A. *Begin each section by reading the etext.* Use the Class Notes to help guide you as you read, working examples from the etext for those objectives listed in your class notes in the spaces provided. Take additional notes as needed. Watch the video for that section and take additional notes, reworking on your own each example covered in the video.
- B. *Next, start the homework assignment.* Try to work each exercise on your own. If you rely on the learning aids to get an exercise correct, be sure to rework another exercise of that type using the

Similar Exercise button at the bottom of the screen until you can work the exercises without help. Many students who become overly dependent on the learning aids or other assistance to get a score of 100% on the homework assignment find that they score much lower on the tests. Only the score on your last attempt counts.

- C. *Review your notes.* After you have completed all of the homework assignments covered on a quiz, review all of your notes from those sections. Then, take the quiz. While working a quiz, remember that you have 10 attempts at a quiz, that you should work it at least 4 times to see a cross-section of the exercises covered, and that only your best score counts.
- D. *To prepare for a test, determine the specific sections covered.* Once you have completed all of the homework assignments and quizzes covered on a specific test, work the associated Practice Test. Use the practice homeworks to rework exercises that you get incorrect on the practice test. Continue to retake the Practice Test without any assistance until the score you get is one that you would be happy with on the test. Then, take the test.
- E. *The Final Exam will be cumulative.* Once you have taken Test 3, prepare for the Final Exam by working the Practice Final Exam as many times as possible. Use the practice homeworks to rework the exercises you get incorrect. Continue to retake the Practice Final Exam without any assistance until the score you get is one that you would be happy with on the Final Exam. Then, take the Final Exam.

Module Assignment Competition

You should submit each module assignment as soon as it is completed. Some courses have restrictions that require that a grade be received before you can submit additional assignments. Specific information on assignment submission is included in the Module Instructions. Please be sure to follow these instructions.

Once you *submit* an assignment, you cannot revise it, so be sure to check your work. Your instructor will normally post a grade for your assignment within *seven calendar days*. Understand that occasional delays will occur, such as during holidays and semester breaks or if you submit several module assignments within the same week.

Requirements to Take the Final Exam

You must have a *grade posted in the Moodle grade book for both Test 03 and the MyMathLab Coursework Completion Notification in order to unlock access to the Final Exam*. You must have been enrolled in the course for *at least three weeks* before you can take the Final Exam, regardless of when the modules and other exams are completed. Please allow *at least seven days* for the final assignment grade to be posted in the gradebook.

Do not rely too heavily on your textbook or other resource material when preparing your assignments. If you do, you may not realize until exam time that the perfect response you prepared for an assignment was only possible because you referred to resource material without really learning or understanding the material and concepts. Therefore, *you should attempt each assignment without referring to the resource material*, and if you find it necessary to look up an answer, be sure you have actually learned the concept and material rather than merely reflecting it in the answer.

Academic Integrity

Students in Online Distance Learning (ODL) courses must comply with the *LSU Code of Student Conduct*. Suspected violations of the academic integrity policy may be referred to LSU Student Advocacy & Accountability (SAA), a unit of the Dean of Students. If found responsible of a violation, you will then be subject to whatever penalty SAA determines and will forfeit all course tuition and fees.

Plagiarism

Students are responsible for completing and submitting their own course work and preparing their own modules. All work submitted in the course modules must be the student's own work unless outside work is appropriate to the assignment; all outside material must be properly acknowledged. It is also unacceptable to copy directly from your textbook or to use published answer keys or the teacher's edition of a textbook.

Collaboration

Unauthorized collaboration constitutes plagiarism. Collaborative efforts that extend beyond the limits approved by the instructor are violations of the academic integrity policy. Students who study together are expected to prepare and write their own individual work for submission and grading.

For more information and links to the *LSU Code of Student Conduct* and the SAA website, go to the [ODL Academic Integrity policy](#) on our website.

Examinations and Grading Policy

You will take a test after Module 05, Module 10, and Module 15. The Final Exam is taken after completing Test 03. It covers content from all modules.

All tests and the Final Exam will be taken through MyMathLab. Like homework and quizzes, once you have completed your test in MyMathLab, you will return to Moodle and click on the "Test X Verification" and follow all of the given instructions.

After completing the homework and quizzes, you should prepare for tests and the Final Exam by repeatedly practicing until you can get all exercises correct without any assistance. Practice Tests and a Practice Final Exam are available in MyMathLab for each test and will be open throughout the course. They do not count toward your course grade, but it is essential that you work the Practice Tests repeatedly until you can do the work without any help.

You will not get feedback after each exercise answer is entered. You must work through the test and submit it before seeing your score. You can review your test in the Gradebook, and the MyMathLab learning aids will appear for the review.

Only one attempt is allowed for each test and for the Final Exam.

The maximum time allowed is two hours for each test and two hours for the Final Exam.

You are not allowed assistance of any kind on a test or on the Final Exam. This includes notes, formula sheets, or any other type of outside help. While testing, you are not allowed to access other online materials, including your homework, quizzes, and online learning aids in MyMathLab. Remember, academic dishonesty is a violation of the university Code of Student Conduct. A scientific calculator with exponential and logarithmic capabilities is allowed on all tests and the Final Exam. Refer to "Calculator" under Other Materials and Resources in this syllabus or the Calculator Policy document in the Getting Started Module for more information about allowed calculators and calculators that are not allowed.

You are allowed a blank white board during the exam. To verify the white board is blank, you must show your white board to the proctor before you begin your exam. At the end of the exam, the proctor will instruct you to wipe clean the white board; the proctor must witness you wiping clean the white board.

The only allowed material is an ODL-approved formula sheet that is posted in Moodle and in MyMathLab for you to use for Modules 08, 09, and 10, Test 2,

and the Final Exam. No other formula sheets are allowed, nor may you add any other information to the given formula sheet.

There will be three tests and a Final Exam. Test 01 will be after Module 05, Test 02 after Module 10, and Test 03 after Module 15. The Final Exam can be completed after Test 03. The three tests each count for 15% of your course grade and the Final Exam counts for 25% of your course grade.

**YOU MUST PASS THE FINAL EXAMINATION
IN ORDER TO PASS THE COURSE.**

If you pass the final exam, your grade will be computed as follows.

Course grade = average of module homework assignments (.15) + average of quizzes (.15) + test scores (.45) + final exam (.25).

Course grade =

Component	Weight (%)
Homework	15%
Quizzes	15%
Tests 01, 02, and 03	45%
Final Exam	25%

The following grading scale applies:

97%–100%	= A+
93%–96%	= A
90%–92%	= A-
87%–89%	= B+
83%–86%	= B
80%–82%	= B-
77%–79%	= C+
73%–76%	= C
70%–72%	= C-
67%–69%	= D+
63%–66%	= D
60%–62%	= D-
0%–59%	= F

IMPORTANT: The final exam cannot be taken until you meet the following requirements. Under no circumstances may the final exam be taken earlier.

1. You must have been enrolled in the course for *at least three weeks*, regardless of when the modules and other exams are completed.
2. You must have a *grade posted in the Moodle grade book for both Test 03 and the MyMathLab Coursework Completion Notification in order to unlock access to the Final Exam*. Please allow at least 7 days for the final assignment grade to be posted in the gradebook.

To read the full exam policy and other policy statements, visit <http://www.outreach.lsu.edu/Extended-Campus/Online-Distance-Learning/Guidelines-Policies/Policies>. Go to Continuing Education's homepage. Click on *Extended Campus*, select *Online Distance Learning*, and then click the link for *Guidelines and Policies*.

Taking Your Examinations

You are *required* to create a Louisiana State University ODL ProctorU account and to take your examinations through ProctorU, a remote proctoring service that allows you to take exams anywhere with internet access (some restrictions apply). Information on creating your ProctorU account can be found in the Getting Started module. You cannot use an account created through another university, so if you already have an account, you will still need to create an account associated with LSU Online Distance Learning (ODL).

The ProctorU website provides links you can use to find out how ProctorU works and to check your computer to see that it meets the technical requirements. In addition, to test using ProctorU, you need *access to a web cam with a microphone (built-in or external), headphones or working speakers, and high speed internet* to use this service. A complete list of technical requirements is available from the ProctorU website.

You should schedule your exams about a week before you are ready to take them in order to avoid any additional charges.

Transcript Information

After you have completed this course, your grade will be filed with the Office of the University Registrar. If a transcript is needed, it is your responsibility to make a request to the registrar. If you would like to order a transcript, visit the Office

of the University Registrar Transcript Requests page to view your options
(<http://sites01.lsu.edu/wp/registraroffice/student-services/transcript-request/>).

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MATH 1021 Plane Trigonometry
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