

Syllabus

This syllabus is a written contract between you and myself, your instructor. Please read it carefully and contact me if you need further clarification. If you decide to continue in this course, it means that you have thoroughly read the syllabus and accept all requirements as stated.

Course Information:

- **Course Title:** Elementary Functions
- **Course Number:** MTH 112
- **CRN:** 12153 & 16195
- **Credits:** 5
- **Term:** Winter 2019
- **Course Prerequisites:** MTH 111 (MTH 111B or MTH 111C), RD 115, and WR 115, or equivalent placement. Recommended: MTH 111 (MTH 111B or MTH 111C) taken within the past 4 terms.

Instructor Information:

- **Instructor:** Wendy Fresh
- **Email:** wfresh@pcc.edu
- **Phone:** 971-722-7602
- **Office Location:** Rock Creek Campus, Building 2, Room 244 or Virtual Office
- **Address:** 17705 NW Springville Rd. Portland, OR 97229
- **Office Hours:**

What	When	Where
Online Office Hours	Monday, 12-1 pm, or by appointment	Click on the "Content" tab above. Then on the "Zoom" tab. From there, a link is provided with live and can be recorded/posted.
On Campus Office Hours	Tuesday/Thursday, 10:30-11:30 am	Rock Creek, Student Learning Center, Building
On Campus Office Hours	Tuesday/Thursday, 11:30 am - 12:30 pm, or by appointment	Rock Creek Campus, Building 2, Room 244



Contacting me

The best way to communicate with me is through email. You can send me an email through either MyPCC or here in D2L, as the two systems are now synced.

Composing an Email Message

To compose a new message to me, click on the Classlist tab here in D2L, and then select my name. This will automatically populate the "To" line with my name and the "Subject" line with our course information; which is very convenient for both of us. Your message will be saved in your Sent Mail folder in Gmail; which you can get to through MyPCC (see below).

Viewing and/or Replying to an Email Message

If you'd like to view messages and/or reply to a message, do so through Gmail by navigating through MyPCC. In MyPCC, click on the envelope icon (Gmail) in the top right corner, and this will load your inbox. Your Sent Mail folder has all of your sent messages, and your Inbox will have any messages that I (or anyone else) have sent to you.

The important thing is that if you have questions or concerns, I want to hear from you! Online courses can feel very isolating at times, but just remember that I am just one click away.

If your question or comment would be of interest to other students, please post it to the Discussions area and/or the Online Cork Board. This way other participants can help answer questions, and all participants will benefit from the answers. Please refer to the information on "netiquette" in the introductory module for guidelines governing the content of written communications. Your first communication assignment is to introduce yourself in the discussion topic "Introduce Yourself".

Even though this is an online course, I want you to contact me as often as you need to. This can be via email or during my available Online or On Campus Office Hours (see available hours above). I want you all to succeed in this class and one of my favorite aspects of teaching is helping students one-on-one, so please don't hesitate to get in touch with me frequently!

When will you hear back from me?

I will be checking email on a daily basis. Email sent on weekdays will be answered within 24 hours. Email sent over the weekend will be answered by at least the following Monday, but likely sooner. If you're struggling with something over the weekend, please email me because it's likely that I will be able to get back to you before Monday.

Course Description

Investigates trigonometric functions, equations and identities. Examines right and oblique triangles, vectors, polar coordinates, parametric equations, and complex numbers. Explores topics graphically, numerically, symbolically, and verbally.

Learning Outcomes

- Demonstrate mastery-level understanding of angles and right triangle trigonometry in various systems of measure.
- Analyze periodic functions and perform graph transformations on trigonometric functions.
- Use variables to represent unknown quantities; create models; solve trigonometric equations and interpret the results.
- Integrate pre-requisite skills to verify trigonometric identities and simplify trigonometric expressions.
- Analyze the graphs of trigonometric functions, the graphs of functions defined on the polar coordinate system, the graphs of parametric equations, and complex numbers, using technology when appropriate.
- Demonstrate mastery of skills necessary for future course work that requires an understanding of trigonometric functions and identities, vector arithmetic, complex numbers, the polar coordinate system, or parametric equations.

For more information, please go to the [Course Content and Outcome Guide](#) for this course.

Instructional Approach

This course is organized by modules where each module becomes available on Monday at 11 pm PST and ends on Monday of the following week at the same time. The exception to this is the first week of the term, where there are due dates before the end of the week. Each module can be found in the Content tab on the course navigation bar.

Due dates for each week's assignments will be listed in the Course Calendar; which is available in the Welcome Module in the Content tab. Assignments within the modules may direct you to use many of the tools contained in D2L Brightspace, including Assignments and Discussions. These tools will be accessible both from within the weekly content modules, as well as from the course navigation bar.

Course Content Organization

The Content area in this course is structured by modules. Each module contains the content covered for one week. For example, Module 1 corresponds to Week 1. In each module description, I have embedded an application called Padlet. This app lets you post anonymous questions about course materials on a cork board. These questions can be directed to other students or to me. **They can also be questions you'd like to see addressed during the online office hours.** You will need to click the "allow" button to view the cork board.

Within each module are multiple sub-modules. The sections covered within MyLabMath will have their own sub-module that will contain the corresponding Section Video Notes. For these sections, the Section Videos are found within MLM. In weeks where the homework is a Write-Up assignment, the Section Video will be posted alongside the Write-Up assignment in the "Assignments" tab above. The last sub-module in each module contains a reminder/link to the items that must be completed for the week.

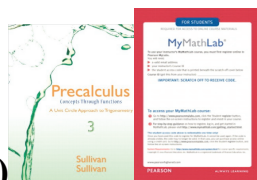
Participation Expectations

Along with working in MyLabMath on Assignments and Quizzes, students in this course are expected to login to the Brightspace D2L course *at least 3* times a week to work on the modules, check email, and participate in discussions. Prompt participation in discussions is important especially when the discussion has a "response" component. Each time you log into the course be sure to check for any new announcements, email and discussion messages, and calendar postings. ***Although I am happy to help***, please do your due diligence in thoroughly referring to the materials available in the course before emailing me. Be prepared that if I see that you haven't logged in often, opened many links, or spent much time in the course that I may refer you back to the course materials before answering your question.

In an on campus class, students spend 5 hours per week in class and an additional ≈ 10 hours per week doing homework and studying. So for this online course, plan to spend *at least 15* hours per week, if not more, learning the material, doing homework, asking questions, taking quizzes, etc. ***If you signed up for an online course thinking it would be less time consuming, please reconsider.*** Online math courses are often MORE time intensive than on campus courses and require a lot of perseverance and self-discipline.

Instructional Materials

Textbook(s)



- *Precalculus: Concepts Through Functions, A Unit Circle Approach to Trigonometry*, 3rd Edition, Sullivan and Sullivan, ISBN: 9780134308104. This course requires MyLabMath (MLM), which comes bundled with a NEW textbook from the PCC bookstore. If you have a MyLabMath card, this is all you'll need as MLM comes with the eBook. If you have used MLM in MTH 111 using the same textbook, you do not need to purchase anything further.

Software/ Hardware / Equipment / Technical skill expectations

- **MyLabMath Access:** This course will use an online learning environment called MyLabMath, (MLM). Your weekly assignments and quizzes will be completed here. More information about MyLabMath is under Resources in the Course Home tab on the course navigation bar. Course ID is **fresh05529**.
- **Online Access:** This is an online course, so you must have access to a computer that is connected to the Internet. *MyLabMath has issues with Explorer and Safari.* Therefore, you should use either [Google Chrome](#) or [Mozilla Firefox](#) as your internet browsers. [User Accessibility help info for MyLabMath](#) Screen reader users should turn on Accessibility settings. This disables the on-screen math equation keyboard which is not keyboard accessible. These students need to use the [Quick Start Guide](#) that has keyboard commands for math equation symbols.”
- **Graphing device:** A physical graphing calculator is not required for this section, but will sometimes be used to demonstrate. An online graphing calculator, such as [Desmos](#) or [GeoGebra](#), can be used in its place and will also be demonstrated throughout the course. Some quizzes and some parts of exams will not allow the use of technology, but the parts that do will allow the use of a physical graphing calculator and/or an online graphing calculator such as [Desmos](#) or [GeoGebra](#). Please note that if you have arranged for outside proctoring, you will only be able to use a physical graphing calculator. In-person proctored exams will take place in a computer classroom.
- **Word Processor:** Microsoft Word is the preferred word processor for this course, but you can use a different word processor as long as it has an equation editor and can create .pdf documents. **You can get [Microsoft Office for free](#) directly with a valid school email.**
- **Equation Editor:** To write mathematical content, you may find it useful to use an equation editor that is more powerful than the one that comes with Microsoft Word. PCC has a site license for MathType. To download for free, use the following links and product keys (please do not share these outside of PCC): **PC:** Product Key: MTWE691-001823-63XT2 or **MAC:** Product Key: MTME671-002268-XTMSD.
- **Scanner or scanner software:** A scanner is not required, but there may be times when you'll want to upload your hand-written work. This can be easily done using either a scanner (hardware) or using a smartphone or tablet with a **free scanner application** (software): [ScanBot](#) (for iPhone or Android) or [GeniusScan](#) (for iPhone) or [Adobe Scan](#) (for iPhone or Android). In addition, PCC library scanners are free to use.
- **PDF Creator:** All electronic documents submitted in this class are required to be in .pdf form. If you have Microsoft Word, you can create a .pdf using "Save As". Otherwise, you'll need a free PDF Creator, such as [CutePDF](#).

Graded Assignments

Discussions

To emulate the interaction that occurs in a classroom setting, there will be topics each week that will give you the opportunity to build relationships with other students and possibly even form study groups. Working together in a math class is key to success. Instructions will be given in each module.

MyMathLab Assignments

- One of the keys to learning mathematics is to practice. If you bought a NEW book from the PCC bookstore, then it came with a MyLabMath access code. The course ID for this course is **fresh05529**. On the Course Home tab on the course navigation bar, under MyLabMath on the right, there is an instruction link that will walk you through how to register. On top of doing the homework here, MyLabMath includes an electronic copy of the textbook and student solutions manual. There is an orientation homework assignment that will be due the first Tuesday by 11 pm PST that will help you learn how MyLabMath works and all the features available.
- For assignments, there will be assignments assigned each Monday at 11 pm PST that you will complete within MyLabMath. The week's work will be due by the following Monday by 11 pm PST. Although the assignments are electronic, you should still keep a notebook of all your worked out problems. Think of MyLabMath as a tool for learning where you can also input final answers to get immediate feedback. Keeping a notebook of your work gives you something to refer back to and allows you to practice correct formatting.
- The assignments each week consist of two assignments. You will be graded on the number of questions you get correct per assignment. The "Section Learning Assignment" is where you should begin. This is where most instructional videos are embedded. You will be awarded points for watching the videos and working the problems. You will be given unlimited "tries" on this assignment. The "Section Practice Assignment" should be done next. This is where you will find slightly more challenging problems, but on the same content as in the Section Learning Assignment. You will be given 3 "tries" on each problem in this assignment. The multiple tries are useful if you need help on a problem/topic. Within the problem you can make use of MyLabMath resources (the "help me solve this" link, video link, or "email instructors" tab), and then attempt a similar problem to see if you've learned the material. Please note that you should not begin the Section Practice Assignment until you feel you've mastered the concepts. Mastering the concepts is achieved by successfully working through the Section Learning Assignment.
- Although downloading the available Section Video Notes (found within each module) that go along with the Section Videos is not required, I would strongly recommend doing this. Taking notes will aide in retention of the material. In addition, if your grade ends up being borderline, showing me your completed notes for each section may be taken into consideration.

MyLabMath Quizzes

There are two types of quizzes, both done in MyLabMath:

- "High Score" quizzes may be taken as many times as you like before the deadline. I recommend that you master the "High Score" quiz before taking the one chance quiz.
- "One Try" quizzes may only be taken once.

Please note that both types of quizzes count towards your quiz grade so make sure you **do both each week**. All quizzes should be **done by only you without outside resources**.

The deadlines for quizzes are Monday nights by 11 pm PST. Each quiz covers the topics of the previous week.

Homework Write-Up Assignments

There will be several homework write-ups during the term that can be found in the Assignments tab on the course navigation bar. A "homework write-up" is a small selection of problems that you will type up or hand write and submit electronically as one PDF file to be graded for accuracy and mathematical notation. I'm

completely okay with you doing these problems by hand on your own paper, including the original problem, scanning them, and submitting them as a PDF. In fact, that will probably help you for exams since they will be done by hand. If you choose to type up your homework write-up, you must include the original problem, it **must** be word processed, with equations displayed properly using an equation editor. Please save your file (whether hand written or typed) as **one PDF File** and submit electronically via the Assignments tab on the course navigation bar by the due date. In order to receive full credit, not only do you need to have correct and accurate mathematics, your mathematics must be written using the appropriate mathematical notation with all work shown. This is a part of learning how to communicate mathematics and is a component of ALL MTH 112 courses...not just mine. More instructions will be given within each write-up.

Exams

There are two required on campus proctored exams during the term - a Midterm and a Cumulative Final Exam (both two hours long). If you live in the Portland Metro area then you will be expected to come to the Rock Creek campus for the exam. Arrangements will **not be made** to have the exam taken at any of the other campuses.

If you live outside of the Portland area (more than 60 miles from the Rock Creek campus), then you will be responsible for making arrangements to have your exams proctored elsewhere by a college testing center. **Contact me by the end of the first week of the term if this applies to you.** I will then send you my proctoring form to be completed by both you and the proctor and returned back to me via PCC email. **For any consideration of this accommodation, the completed form must be returned to me by the end of the second week of the term.** Note: you must be within the United States for this accommodation.

The exams are traditional paper and pencil exams that will be graded for accuracy of answer and process. These exams have two parts: a graphing device section and a non-graphing device section. You will not be allowed to use any notes on the exams. Your study of the online lecture notes and videos, write-up assignments, and your practice of the MyMathLab homework and quizzes will best prepare you for the exams. The on campus exams will not be multiple choice like some of the MyMathLab work.

Late Work & Make-up Policy

- MyLabMath Quizzes are accepted 3 days late with a 50% deduction. No other work will be accepted late.
- No Make-Up work will be accepted. In extenuating circumstances, documentation will be required.

Grading Criteria:

For more information, please go to the [PCC Grading Guidelines](#).

Activities	Percent
Discussion Posts	5%
Homework Write-Up Assignments	5%
MyLabMath Homework	10%

MyLabMath Quizzes (High Score and One Try)	10%
On Campus Midterm	30%
On Campus Final Exam	40%
Total	100%

Grading Scale:

Letter Grade	Grading Scale by Percentage
A (or P)	$89.5\% \leq A \leq 100\%$
B (or P)	$79.5\% \leq B < 89.5\%$
C (or P)	$69.5\% \leq C < 79.5\%$
D (or NP)	$59.5\% \leq D < 69.5\%$
F (or NP)	$F < 59\%$
Audit	attendance $\geq 70\%$

PCC Policies and Deadlines

Student is responsible to add/ drop/ withdraw class. Please review [PCC Registration Policy](#) for more information.

Add and Drop Deadlines

- Students need to register online via MyPCC. Please review [Online Registration Instructions](#) to find out how.
- For 8-12 week classes, students need to drop by the end of the first week of classes. Students can view course specific deadlines from the MyPCC Home tab, 'View My Drop & Withdraw Dates' link.
- For late add, students must add within two business days of the course drop deadline.

Payment Deadlines

Payment is due two Mondays before the first day of term. Students who register after the payment deadline must make the same day payment arrangements. You can see your balance or access your bill online in the MyPCC Paying for College tab. Please review [PCC Payment Policy](#) for more information.

Academic Integrity (rules about cheating, plagiarism, or sharing work)

Students are required to complete this course in accordance with the Student Rights and Responsibilities Handbook. Cheating includes any attempt to defraud, deceive, or mislead the instructor in arriving at an honest grade assessment, and may include copying answers from other students or using unauthorized notes during tests. Plagiarism is a particular form of cheating that involves presenting as one's own the ideas or work of another, and may include using other people's ideas without proper attribution and submitting another person's work as one's own. Dishonest activities such as cheating on exams and submitting or copying work done by others will result in disciplinary actions including but not limited to receiving a failing grade. For further information, review the institution's [Academic Integrity Policy](#).

Student Rights and Responsibilities Handbook:

Students are required to comply with the policies contained in the [Student Rights and Responsibilities Handbook](#). The Handbook includes the Code of Student Conduct and the Academic Integrity Policy.

Internet Etiquette (or Netiquette)

[Click here for more information about Netiquette.](#)

Special Accommodations

PCC is committed to supporting all students. If you plan to use academic accommodations for this course, please contact your instructor as soon as possible to discuss your needs. Accommodations are not retroactive; they begin when the instructor receives the “Approved Academic Accommodations” letter from you (submitted in person for courses on campus; via email for Distance Learning courses). To request academic accommodations for a disability, please contact a disability services counselor on any PCC campus. Office locations, phone numbers, and additional information may be located on the [Disability Services website](#).

Title IX/ Non-Discrimination

Portland Community College is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you believe you have encountered sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin, veteran status, sex, sexual orientation, gender identity, or disability please contact the Office of Equity and Inclusion at (971) 722-5840 or equity.inclusion@pcc.edu.

Sanctuary Statement

PCC promotes the success, dignity and worth of each individual by providing a safe environment where the examination of divergent ideas, experiences and systems of inequality adds depth to the learning experience. PCC strives to provide opportunity to all students and the appropriate level of support services to ensure the highest level of success. See [Resources for undocumented and DACA students](#).

Flexibility

The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather or class situations.

Course Calendar

General Due Dates:

- Monday by 11pm PST

Week 1 Exception:

- Introduce yourself Discussion in D2L due Tuesday by 11 pm PST in order to avoid "No Show"
- Syllabus Quiz in MyLabMath (MLM) due Wednesday by 11 pm PST in order to avoid "No Show"
- Orientation Homework in MyLabMath (MLM) due Thursday by 11 pm PST in order to avoid "No Show"



Module

Sections Covered/Items Due

Module 1:

Opens Monday, 1/7/2019

Due by Monday, 1/14/2019

- Section 5.1: Angles and Their Measure
- Section 5.2: Trigonometric Functions: Unit Circle Approach
 - D2L Welcome Module Discussion Post due Tuesday, 1/8/19, by 11 pm PST
 - MLM Syllabus Quiz due Wednesday, 1/9/19 by 11 pm PST
 - MLM Orientation Homework due by Thursday, 1/10/19 by 11 pm PST
 - MLM Homework over Sections 5.1 - 5.2
 - MLM High Score Quiz over sections 5.1 - 5.2
 - MLM One Try Quiz over sections 5.1 - 5.2
 - D2L Module 1 Discussion Post

Successful completion and submission of all items in RED count as your attendance for the first week. If any of these items has not been turned in by their due date, a "NO SHOW" will be given, which means you will be withdrawn from the course.

Module 2:

Opens Monday, 1/14/2019

Due by Monday, 1/21/2019

- Section 5.3: Properties of the Trigonometric Functions
- Section 5.4: Graphs of the Sine and Cosine Functions
 - MLM Homework over Sections 5.3 - 5.4
 - MLM High Score Quiz over sections 5.3 - 5.4
 - MLM One Try Quiz over sections 5.3 - 5.4
 - D2L Module 2 Discussion Post

Module 3

Opens Monday, 1/21/2019

Due by Monday, 1/28/2019

- Section 5.5: Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
- Section 5.6: Phase Shift; Sinusoidal Curve Fitting
- Section 6.1: The Inverse Sine, Cosine, and Tangent Functions
- Section 6.2: The Inverse Trigonometric Functions
 - Write - Up #1 over Section 5.6
 - MLM Homework over Sections 5.5, 6.1 - 6.2
 - MLM High Score Quiz over sections 5.5, 6.1 - 6.2

Module	Sections Covered/Items Due
	<ul style="list-style-type: none"> ○ MLM One Try Quiz over sections 5.5, 6.1 - 6.2 ○ D2L Module 3 Discussion Post
Module 4:	<ul style="list-style-type: none"> ● Review for Midterm Exam <ul style="list-style-type: none"> ○ Midterm: Rock Creek Campus, Thursday, January 31st, 2019, 4:00 - 6:00 pm, Building 2, Room 251 ○ D2L Module 4 Discussion Post
Opens Friday, 1/25/2019	
Due by Monday, 2/4/19	
Module 5:	<ul style="list-style-type: none"> ● Section 6.3: Trigonometric Equations ● Section 6.4: Trigonometric Identities <ul style="list-style-type: none"> ○ MLM Homework over Section 6.3 ○ MLM High Score Quiz over sections 6.3 ○ Write - Up #2 over Section 6.4 ○ MLM One Try Quiz over sections 6.3 - 6.4 ○ D2L Module 5 Discussion Post
Opens Thursday, 1/31/19	
Due by Monday, 2/11/2019	
Module 6:	<ul style="list-style-type: none"> ● Section 6.5: Sum and Difference Formulas ● Section 6.6: Double-angle and Half-angle Formulas ● Section 6.7: Product-to-Sum and Sum-to-Product Formulas <ul style="list-style-type: none"> ○ MLM Homework over Sections 6.5 - 6.7 ○ MLM High Score Quiz over sections 6.5 - 6.7 ○ MLM One Try Quiz over sections 6.5 - 6.7 ○ D2L Module 6 Discussion Post
Opens Monday, 2/11/2019	
Due by Monday, 2/18/2019	
Module 7:	<ul style="list-style-type: none"> ● Section 7.1: Right Triangle Trigonometry ● Section 7.2: The Law of Sines ● Section 7.3: The Law of Cosines <ul style="list-style-type: none"> ○ MLM Homework over Sections 7.1 - 7.3 ○ MLM High Score Quiz over sections 7.1 - 7.3 ○ MLM One Try Quiz over sections 7.1 - 7.3 ○ D2L Module 7 Discussion Post
Opens Monday, 2/18/2019	
Due by Monday, 2/25/2019	
Module 8:	<ul style="list-style-type: none"> ● Section 8.1: Polar Coordinates ● Section 8.3: The Complex Plane <ul style="list-style-type: none"> ○ MLM Homework over Section 8.1 ○ MLM High Score Quiz over section 8.1 ○ MLM One Try Quiz over section 8.1 ○ Write - Up #3 over Section 8.3 ○ D2L Module 8 Discussion Post
Opens Monday, 2/25/2019	
Due by Monday, 3/4/2019	
Module 9:	<ul style="list-style-type: none"> ● Section 8.4: Vectors ● Section 8.5: The Dot Product <ul style="list-style-type: none"> ○ MLM Homework over Sections 8.4 - 8.5
Opens Monday, 3/4/2019	

Module	Sections Covered/Items Due
Due by Monday, 3/11/2019	<ul style="list-style-type: none">○ MLM High Score Quiz over sections 8.4 - 8.5○ MLM One Try Quiz over sections 8.4 - 8.5○ D2L Module 9 Discussion Post
Module 10:	<ul style="list-style-type: none">● Section 9.7: Parametric Equations, Implicit Equations, and Conics● Review for Final Exam<ul style="list-style-type: none">○ Write - Up #4 over Section 9.7○ D2L Module 10 Discussion Post
Opens Monday, 3/11/2019	
Due by Monday, 3/18/2019	
Module 11:	<ul style="list-style-type: none">● Review for Final Exam<ul style="list-style-type: none">○ Cumulative Final Exam: Rock Creek Campus, Thursday, March 21st, 2019, 4:00 - 6:00 pm, Building 2, Room 251○ D2L Module 11 Discussion Post
Opens Friday, 3/15/2019	
Due by Thursday, 3/21/2019	

If you have questions, please ask!

IMPORTANT NOTES

The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather or class situations.

Course Calendar