

**College of Science and Health  
Department of Mathematics  
Course Syllabus**

**Welcome to our Online Precalculus Course at WPU!**

Below are some details about the course, as well as some of the class information that you will find useful including the homework, assessment, make-up and grading policy. It is your one stop shop for information but feel free email me with any questions you may have regarding this course that are not addressed here!

Many of the important pieces of information you will want to have handy are in **ORANGE** or **BLUE** bold font for your convenience.

**Title of Course, Course Number and Credits:**

Math 1160-080 Precalculus 3 credits

**Department secretary's telephone number and e-mail address**

**Mathematic's Department secretary:** Kathy Garbowski

**Telephone No.:** (973)-720-2158 **E-mail address:** [garbowskik@wpunj.edu](mailto:garbowskik@wpunj.edu)

**Semester:** **Winter – 2022 (1/03/2022 – 1/21/2022)**

**Faculty Information:**

**Name:** **Dr. Fengya**

**E-mail:** [fengyad@wpunj.edu](mailto:fengyad@wpunj.edu) (preferred method of contact)

**Office Hrs:** **online via ZOOM by appointment.**

**Note:** If you have any questions or concerns you can email me and will get back to you as soon as possible. If you would prefer to make an appointment to attend an office hour on ZOOM you can email me and I will set up a ZOOM session at a mutually agreed upon time and will send you the link information to join the ZOOM session.

**Text and Materials**

**College Algebra and Trigonometry 4th Edition with MyLab Math (MyMathLab) Access**

**Publisher:** Pearson

**Author(s):** McWaters, Marcus | Ratti, J. | Skrzypek, Leslaw

**Note: Important Information regarding the text and MyMathLab!!!**

A hardcopy of the textbook is **NOT required** but you may purchase it if you would like a physical book instead of an online version (E-book).

You WILL however need to purchase a Pearson MyMathLab Math Access Code which will automatically come with an E-book (online version of the textbook). The Access Code can be purchased either through the bookstore or on Pearson's MyMathLab website directly.

You can and should access MyMathLab directly from Blackboard.

**A MyLab Math Access code which comes with an E-Book is REQUIRED and you should purchase it immediately!**

## **Some Details about the Course in General:**

### **Description of Course:**

A comprehensive study of exponential, logarithmic and trigonometric functions. Topics include function properties, exponential and logarithmic functions (their properties and graphs), solving exponential and logarithmic equations, trigonometric functions (their properties and graphs), trigonometric identities and solving trigonometric equations.

### **Course Prerequisites:**

College Algebra - Math 1150 or by placement with permission from the Department Chairperson

### **Course Objectives:**

To prepare students for calculus by introducing and investigating important transcendental functions (exponential, logarithmic and trigonometric) including their properties and applications. To integrate the knowledge of algebraic functions with transcendental functions and further develop critical thinking in problem solving.

### **Student Learning Outcomes Course Specific SLO's:**

This is an approved  
UCC – 3E course.

Upon the completion of this course students will be able to:

- i. Understand and analyze exponential, logarithmic and trigonometric functions. (Meets UCC Program SLO 2)
- ii. Work with graphs of exponential, logarithmic and trigonometric functions. (Meets UCC Program SLO 2)
- iii. Demonstrate the ability to think critically when solving exponential, logarithmic and trigonometric equations. (Meets UCC Program SLO 2, 5)
- iv. Organize information from applied problems and use the relevant information to solve the problems. (Meets UCC Program SLO 2, 5)
- v. Effectively express precalculus concepts in presenting solutions to problems involving algebraic and transcendental functions. (Meets UCC Program SLO 1)

### **Topical Outline of the Course Content:**

#### I. Review of Functions

- Domain and Range of a Function
- Even and Odd Functions
- One-to-one Functions and the Horizontal Line Test
- Inverse Functions
- Graphs of One-to-one Functions and their Inverses

#### II. Exponential and Logarithmic Functions

- Exponential Functions
- Graphs of Exponential Functions and their Properties
- The Natural Base  $e$
- Logarithmic Functions
- Graphs of Logarithmic Functions and their Properties
- Solving Exponential and Logarithmic Equations
- Exponential and Logarithmic Models

### III. Trigonometric Functions

- Angles and their Measurement
- Trigonometric Functions (using the unit circle)
- Graphs of Trigonometric Functions
- Domain and Range of Trigonometric Functions
- Inverse Trigonometric Functions
- Applications of Trigonometry

### IV. Trigonometric Identities and Equations

- Elementary Trigonometric Identities
- Sum and Difference Formulas
- Double-Angle and Half-Angle Formulas
- The Laws of Sine and Cosine
- Trigonometric Equations

#### **Teaching Methods and Student Learning Activities:**

This is an intensive **online** course and lecture slides with carefully selected examples will be provided. Other learning aids, as suitable, will also be posted. MyMathLab homework assignments are used to strengthen skills and understanding and are ESSENTIAL. Strong emphasis is given to business applications, developing mathematical models and interpretation of results.

- 1) Lecture Slides to illustrate concepts.
- 2) Assignments to enhance concepts and skills.
- 3) Web-based resources for independent learning and practice.
- 4) Web-based assignments to enhance problem solving skills.

#### **Methods of Student Assessment (Student Learning Outcomes)**

- 1) This course has a **required** online homework component (**MyMathLab**)
- 2) Assessments will also be given to follow-up student understanding and provide assistance.
- 3) In addition to the homework, this course has **two tests** and a **cumulative final examination** (see the grading section for details).

#### **Course Expectations:**

- Since this is an intensive online course, students are expected to be self-learners to a large extent and have a good background knowledge of the prerequisite material which is Algebra.
- Students are expected to log into Blackboard, learn the materials posted for each chapter and complete the homework assignments on MyMathLab by their due dates.
- **All assessments**, homework, tests and final exam, will be done using **MyMathLab**. You are expected to have an access code and be able to log in the first day of classes, on January 03, 2022. This is an intense 3 week course (only 19 days in total!) so it is **crucial** that you begin your reading and assignments the first day of classes.  
On **January 4<sup>th</sup>, 2022** **MyMathLab registration for this class will close**. Please make sure you have an access code and have registered on MyMathLab for this class by this date!

- You are expected to do homework problems regularly and on time. It is important to stay on track with your assignments as they will prepare you for upcoming exams. It is also an important career and life skill to be able to juggle many assignments and tasks and meet deadlines. There will be a **10% per day penalty for online homework that it submitted late**. (see MyMathlab homework for additional information).
- This course has 2 Chapter tests and a final examination. You will have a 2-day window (48 hour period) during which you can take each test and the final exam. The tests and final are timed exams. You will be given **1 hour and 15 minutes for each test** and **2 hours and 30 minutes for the final exam**. Once you start a test you must complete it within the time period allotted. **Do not wait until the last minute to take the exam**. You will have 48 hours so if you decide to take it during the last few hours and lose access or connection, or you find out it was too late and you cannot take or complete the exam, you will get a "0". The exam should be taken the **first day** it is offered whenever possible. The second day is a make-up day and should be reserved for emergencies only. If you plan ahead this way, you should not experience any problems!

**Reminder:** Tests **MUST** be taken on the dates listed on the schedule which is posted on Blackboard and are also available directly on MyMathLab, but they can be taken at any time during that 48 hour period. In the event of an emergency, contact me as soon as possible. (More information on this is provided below.)

- There will be **no makeup tests without a valid and documented excuse** such as a medical reason, traveling for the University, etc., along with appropriate documentation. (For more info see Make-Up tests and the grading policy listed below.)
- A schedule document "**Math1160 Schedule Winter 2022**", (calendar which includes the due dates for each of the chapter assignments and the test dates) will be posted on Blackboard. These due dates are also be available directly in MyMathLab.

It is important to stay on track with your assignments as they will prepare you for upcoming exams. It is also an important career and life skill to be able to juggle many assignments and tasks and meet deadlines. Due dates for assignments and tests will not be extended and you are expected to complete all assigned work on time. There will be a penalty for homework that is submitted late. Additional details are provided below.

## **Some More Really Important Information!!!**

If you send me an email asking me about this, I will redirect you to this page in the syllabus!

### **Mymathlab Homework**

You are expected to do homework problems **regularly** and complete them by the **due dates** provided. This is an intense 3-week course so you are expected to register with a Mymathlab account by the first day of classes. On January 4<sup>th</sup> registration will close. You should complete the assigned problems on MyMathLab after you read through the corresponding section of the Lecture Slides.

It is important to stay on track with your assignments as they will prepare you for upcoming tests. It is also an important career and life skill to be able to juggle many assignments and tasks and meet deadlines. There will be a **10% per day penalty for online homework that it submitted late**. Please note that this penalty only applies to the specific homework problems you completed after the due date NOT to the entire assignment. This is a small deduction, and

given the number of homework assignments and percent that they count towards your total grade, submitting a few problems, or even a homework or two, a couple days late is very unlikely to affect your grade. But be very careful! If you are not regularly completing your assignments by the due dates provided or are not completing them at all your grade **WILL** be negatively affected!

Sometimes Mymathlab goes down or is slow due to high traffic online. While this is a rare circumstance, it does happen so plan accordingly. It is better to be penalized on a small percent on problems you could not complete on time than on an entire assignment!

**You can redo the homework problems as many times as you like, up to their due date, to try to improve your grade!** I also have the homework set to lock in your correct answers. You will know which problems you got wrong so you can go back and try them again. Hopefully this will encourage you to work on the problems you did not get correctly the first time which will help prepare you for the tests!

Instructions for registering for Mymathlab have been posted on Blackboard. Online homework will be **25%** of your grade so please take it seriously!

### Tests and Make-up Tests:

There will be absolutely **NO makeup tests without a valid and documented excuse**.

If you have a **valid and documented excuse** (such as an illness, death in the family, accident) for not taking an exam you must contact me immediately, or as soon as possible.

In all cases, you must provide a valid excuse and proof\* for missing the test to the **Dean of Students, Dr. Lubeck and her office will be notifying me.**

\* Acceptable forms of proof are doctor's notes, police reports, funeral home announcements etc., & these should clearly state the date and time and are to be submitted directly to Dean Lubeck's Office.

### Grading and other Assessment Methods:

a. Homework (Online MyMathLab)	25%
b. Chapter tests	50%
➤ Test 1 - Chapter 2 and 4	
➤ Test 2 - Chapter 5 and 7	
c. Cumulative Final Examination	
with a focus on the new material in Chapter 6	25%

Your final grade will be determined as follows:

90-100 A, 88-89 A-, 86-87 B+, 81-85 B, 79-80 B- 75-78 C+, 65-74 C, 60-65 C-, 55-60 D, 0-55 F.

**\* Final Exam Date:** Two-Day Window, **Thursday January 20<sup>th</sup> and Friday January 21<sup>st</sup> online.**