

## Math 1508 Syllabus (Short print version)

Course Number: MATH 1508: CRN 25170  
Course Title: Pre-Calculus  
Credit Hours: 5  
Term: Spring 2024  
Prerequisite Courses: M0311 or TSI score between 350 – 390 or placement by testing services  
Meetings & Location: LART 101 MW: 12:00 – 1:20pm; LART 106 T: 12:30 – 1:20; Online Workshop R: 12:00 – 13:50  
Instructor: Dr. Yin Lin  
Workshop: Online R: 12:00 – 13:50 on Zoom. TA: Nathaniel Sakyi will 100% in charge for workshop  
Office hours: Monday and Tuesday at 1:45pm -- 3:15pm on Zoom  
Instructor email: ylin4@utep.edu  
Course coordinator: Julio Urenda, Ph. D. at [jcurenda@utep.edu](mailto:jcurenda@utep.edu)

Emails will be answered between 9:00am -5:00pm Monday to Friday. Emails received outside of these windows will be addressed during the next time period or at my discretion, whichever is sooner. **Email:** UTEP e-mail is the best way to contact me. I will make every attempt to respond to your e-mail within 24-48 hours of receipt. When e-mailing me, be sure to email from your UTEP student account and please put the CRN in the subject line. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name. (No student ID# needed)

### Textbook

Pre-Calculus by Larson, 11th Edition (available as e-book and hardcover) with the WebAssign access card.  
ISBN-13: 9780357457207 (*This is the ISBN for the WebAssign code for Larson/Precalculus 11e.*)

*Required: You must have the WebAssign access code. This gives you full access to both the assignments and the e-book.*

### WebAssign

Use the instructions below to access and register for WebAssign using your **UTEP email**. You will have a 14-day free trial so that you may access your coursework immediately.

#### Instructions to access and register for WebAssign:

I linked WebAssign to Blackboard, so you don't need a class key. Go to Blackboard and select our class. Before enrolling the class on WebAssign, please watch the video on Blackboard.

**Please use your UTEP miners e-mail**

**You are required to purchase an access code** to log in as soon as possible and before the grace period ends. If you purchased a new book from the UTEP bookstore, the code should have come with it. When entering the code, enter all the words and characters in the boxes appropriately.

### Activities and Assignments:

You will find all assignments on [www.webassign.net](http://www.webassign.net). Please use Mozilla Firefox, Google Chrome, or Safari since WebAssign works best with these browsers. All work, including homework, quizzes, exams, and workshops, will take place through WebAssign.

Three exams, with retake options, will be given.

Mini-master and Test Out:

If students receive a "D" or "F," they may register for the Mini-master workshop or take a comprehensive Test Out exam. A 70% or better rate in the Mini-semester course or 70% on the complete Test Out exam will replace a failing course grade with a grade of "C."

Resources:

You will have course PowerPoint and video access through the Resources section of WebAssign and Blackboard. You can click on resources at the bottom of your WebAssign homepage and access PowerPoint lectures from the publisher and the Cengage lecture videos for each section we cover. In Blackboard, I will provide Worksheets for each team, including notes and practice problems with solutions.

### *Tutoring*

The MaRCS tutoring center offers free tutoring for math classes; their website has more information: <https://www.utep.edu/science/math/marcs/>. **If you use the tutoring center OR other person(s) to help you take an exam. We will report you to the Office of Student Conduct and Conflict Resolution to investigate academic cheating if we find any evidence that you used any of them.**

There are several valuable features in WebAssign designed to give extra help. These include “Watch it” and “Master it” links.

**The Ask Your Teacher feature of WebAssign is the best way to ask questions about your homework, as it shows me the entire problem. You are encouraged to use this as your first contact method whenever you have homework questions.**

## Class Activity Settings

### Homework Assignments

All homework will be completed on WebAssign. Each question has five attempts. I recommend you get help after the 3rd incorrect submission rather than waiting until you are out of attempts to get help.

**Quizzes:** After a few homework sections, you will have a 60-minute timed quiz on that material. These questionnaires may contain problems you have yet to see, but they will be based on the concepts developed in the course. Each question has three attempts. If you choose to start a quiz less than 60 minutes before the due date, the quiz will conclude at the due date, and your answers will be auto-submitted.

**Exams:** To review for each exam, an exam review will be available one week before the exam date on WebAssign. The review assignment is part of your **mandatory** homework.

Workshop:

**The workshop is 5% of your overall grade.**

**You must score an 80% on a quiz for it to count toward your workshop grade.**

*Timed Assignments:*

For all timed assignments, the clock begins once you open the assignment. **This clock will not stop for any reason**, not even if you log out. For this reason, checking for any updates on your computer before beginning the timed assignments is essential. The due date will change to reflect the time limit for timed tasks once you start the quiz or exam.

## Grading Policy

You will be graded on homework, quizzes, workshop, and exams.

<b>Assessment</b>	<b>Percentage</b>
Homework	10%
Quizzes	10%
Workshop	5%
Exams (three in total)	25% each

## Drop Policy

*The Drop Date for this semester is Thursday, March 28<sup>th</sup>, 2024, before 5:00 PM Mountain Time. No drops will be approved after this date or time.*

## COURSE COMMUNICATION:

- **Office Hours:** We will not be able to meet on campus, but I will still have office hours for your questions and comments about the course.
- **Email:** UTEP e-mail is the best way to contact me personal question other than classwork. I will make every attempt to respond to your e-mail within 24-48 hours of receipt.
- **Announcements:** Check the Blackboard and WebAssign announcements frequently for updates, deadlines, or other important messages.

## Make-up Policy

Homework: **An automatic homework extension can be requested within 7 days after the due date. You may not view the answer key to a homework assignment prior to requesting the automatic extension for it.**

Quiz: **No automatic homework extension can be requested**. Quizzes are available before their due date. Please make plans to take the quiz early.

Exams: A make-up exam will only be given in extraordinary circumstances such as, severe illness or death in immediate family, and with appropriate documentation (e.g. doctor's note).

Please contact me **immediately** if you fall ill during the semester so that we can work together to formulate a strategy to help you get caught up as soon as you are physically able. So you won't get any extensions if you contact me after **10 days of the due dates**. I believe you can have 5 minutes to send me a short note within 10 days. **Personal reasons won't be considered after 7 days of the due dates! Note: no last week to improve grade request will be approved.**

## Workshop (Any questions about workshop, please ask your workshop TA)

**Exams:** To review for each exam, an exam review will be available one week before the exam date on WebAssign. The review assignment is part of your mandatory homework.

The exam will be available for the entirety of the day listed below, but once you start it, you have 120 minutes to finish it. However, if you choose to start an exam less than 120 minutes before the due date, the exam will conclude at the due date, and your answers will be auto-submitted regardless of your progress. You will have access to a scientific calculator and a maximum of two attempts per problem.

**Exam 1 Friday, February 16, 2024**

**Exam 2 Friday, March 27, 2024**

**Exam 3 Friday, May 3, 2024**

## Retake Exams

A retake exam, for improvement, will appear on WebAssign after the initial exam according to the class calendar and listed below. The best grade of the two will be recorded. You do not have to retake the exam if satisfied with your original score. The rules for exams and retake exams are identical. Their due dates are listed below:

**Exam Retake 1 Wednesday, February 21, 2024**

**Exam Retake 2 Wednesday, April 3, 2024**

**Exam Retake 3 Wednesday, May 8, 2024**

The password for all exams and retake exams is the word ready.

Subject To Change			
Week	Dates	Sections Covered	Assignments Due
1	1/16 - 1/21	Getting Started with WebAssign	1/18 at 11:59pmMST
		1.1 Rectangular Coordinates	1/20 at 11:59pmMST
		1.2 Graphs of Equations	1/21 at 11:59pmMST
		1.3 Linear Equations in Two Variables	1/21 at 11:59pmMST
2	1/22-1/28	Quiz 1	1/22 at 11:59pmMST
		1.4 Functions	1/25 at 11:59pmMST
		1.5 Analyzing Graphs of Functions	1/26 at 11:59pmMST
		1.6 Library of Parent Functions	1/28 at 11:59pmMST
		1.7 Transformations of Functions	1/28 at 11:59pmMST

## Exponents and Radicals

$$a^0 = 1, a \neq 0$$

$$\frac{a^x}{a^y} = a^{x-y}$$

$$\left(\frac{a}{b}\right)^x = \frac{a^x}{b^x}$$

$$\sqrt[n]{a^m} = a^{m/n} = (\sqrt[n]{a})^m$$

$$a^{-x} = \frac{1}{a^x}$$

$$(a^x)^y = a^{xy}$$

$$\sqrt{a} = a^{1/2}$$

$$\sqrt[n]{ab} = \sqrt[n]{a}\sqrt[n]{b}$$

$$a^x a^y = a^{x+y}$$

$$(ab)^x = a^x b^x$$

$$\sqrt[n]{a} = a^{1/n}$$

$$\sqrt[n]{\left(\frac{a}{b}\right)} = \frac{\sqrt[n]{a}}{\sqrt[n]{b}}$$

## Quadratic Formula

If  $p(x) = ax^2 + bx + c$ ,  $a \neq 0$  and  $b^2 - 4ac \geq 0$ , then the real zeros of  $p$  are  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ .

## Special Factors

$$x^2 - a^2 = (x - a)(x + a)$$

### Examples

$$x^2 - 9 = (x - 3)(x + 3)$$

$$x^3 - a^3 = (x - a)(x^2 + ax + a^2)$$

$$x^3 - 8 = (x - 2)(x^2 + 2x + 4)$$

$$x^3 + a^3 = (x + a)(x^2 - ax + a^2)$$

$$x^3 + 4 = (x + \sqrt[3]{4})(x^2 - \sqrt[3]{4}x + \sqrt[3]{16})$$

$$x^4 - a^4 = (x - a)(x + a)(x^2 + a^2)$$

$$x^4 - 4 = (x - \sqrt{2})(x + \sqrt{2})(x^2 + 2)$$

$$x^4 + a^4 = (x^2 + \sqrt{2}ax + a^2)(x^2 - \sqrt{2}ax + a^2)$$

$$x^4 + 4 = (x^2 + 2x + 2)(x^2 - 2x + 2)$$

$$x^n - a^n = (x - a)(x^{n-1} + ax^{n-2} + \dots + a^{n-1})$$

$$x^5 - 1 = (x - 1)(x^4 + x^3 + x^2 + x + 1)$$

$$x^n + a^n = (x + a)(x^{n-1} - ax^{n-2} + \dots + a^{n-1}), \text{ for } n \text{ odd}$$

$$x^7 + 1 = (x + 1)(x^6 - x^5 + x^4 - x^3 + x^2 - x + 1)$$

$$x^{2n} - a^{2n} = (x^n - a^n)(x^n + a^n)$$

$$x^6 - 1 = (x^3 - 1)(x^3 + 1)$$

## Binomial Theorem

$$(x + a)^2 = x^2 + 2ax + a^2$$

### Examples

$$(x + 3)^2 = x^2 + 6x + 9$$

$$(x - a)^2 = x^2 - 2ax + a^2$$

$$(x^2 - 5)^2 = x^4 - 10x^2 + 25$$

$$(x + a)^3 = x^3 + 3ax^2 + 3a^2x + a^3$$

$$(x + 2)^3 = x^3 + 6x^2 + 12x + 8$$

$$(x - a)^3 = x^3 - 3ax^2 + 3a^2x - a^3$$

$$(x - 1)^3 = x^3 - 3x^2 + 3x - 1$$

$$(x + a)^4 = x^4 + 4ax^3 + 6a^2x^2 + 4a^3x + a^4$$

$$(x + \sqrt{2})^4 = x^4 + 4\sqrt{2}x^3 + 12x^2 + 8\sqrt{2}x + 4$$

$$(x - a)^4 = x^4 - 4ax^3 + 6a^2x^2 - 4a^3x + a^4$$

$$(x - 4)^4 = x^4 - 16x^3 + 96x^2 - 256x + 256$$

$$(x + a)^n = x^n + na^{n-1}x^{n-1} + \frac{n(n-1)}{2!}a^2x^{n-2} + \dots + na^{n-1}x + a^n$$

$$(x + 1)^5 = x^5 + 5x^4 + 10x^3 + 10x^2 + 5x + 1$$

$$(x - a)^n = x^n - na^{n-1}x^{n-1} + \frac{n(n-1)}{2!}a^2x^{n-2} - \dots \pm na^{n-1}x \mp a^n$$

$$(x - 1)^6 = x^6 - 6x^5 + 15x^4 - 20x^3 + 15x^2 - 6x + 1$$