**Syllabus** **(Tentative. Could be modified with notice)**
**Math 2412 - 2005**
**Precalculus**
**Fall 2025**
**Face-to-Face**
**MW 8:30-10:50, CLA 205**

**Instructor Name**: Loris Zucca
**Office**: CLA 201-J
**Office Hours for Students:**
**MW 7:45 - 8:15 am**
**TuTh 9 - 10 am**
And by appointment
**E-mail:** loris.i.zucca@lonestar.edu
**Office Phone**: 281-312-1619 (email is better)

**Division Dean:** Anthony Carreras, APA 109C, 281-312-1763,
Anthony.E.Carreras@lonestar.edu
**Department Chair:** Amy Hoherz, LIB 206D, 281-312-1789,
Amy.J.Hoherz@lonestar.edu
**Department Assistant:** Angela Reyna, CLB 100A, 281-312-1412,
Angela.M.Reyna@lonestar.edu
**Department Advisor:** Nicole Foley, CLB 100P, 281-312-1761,
Nicole.D.Foley@lonestar.edu
**Kingwood Counseling Services:**
24/7 Emotional Support Hotline: 844-844-4007
E-mail: KC-Counselors@lonestar.edu

**Grade Distribution**

| **Grades:** | **TTL pts** | | **Grade Scale:** |
|---|---|---|---|
| 5 Quizzes: | 150 pts | | 540 A |
| 3 Tests | 300 pts | | 480 B |
| Final Exam: | 150 pts | | 420 C |
| **Total:** | **600 pts** | | 360 D |
| | | | <360 F |

**Attendance and Participation:**

Attendance is not taken after the drop date ("official day") but is noted via the graded assessments (quizzes and tests). If you plan on withdrawing from the course you must do so by the "W" date (see below) or risk getting an F in the course. **Missing 4 graded assessments in a row *may* result in you being dropped from the course without notice. Email me if you are going to miss an extended period of time so you don't risk being dropped.**

An institution of higher education may not permit a student to drop more than SIX (6) courses, including any course a transfer student has dropped at another Texas public institution of higher education. Eligible criteria for a waiver include a) change of work schedule prohibiting attendance, b) active military, c) severe illness or debilitating condition, d) death of a family member, e) class cancellation, and f) complete withdrawal. Developmental Studies courses do not apply to this rule.

**Last Day to Drop (Official Day): 09/08/25**

**Last Day to Withdraw: 11/10/25**

**Late and Make-up Work:**

A total of 5 quizzes will be given. If you miss a test or the Final Exam, you need a valid, verifiable excuse. The Final Exam will replace a missed quiz or test. Missing more than one test will incur a grade of 0 for the subsequently missed ones. The MyLabMath homework will not be counted toward your grade but should be done in order to do well in the course -- see bonus info below.

## Tentative Schedule

**Last Day to Withdraw**: November 10, 2025

| Monday | Sections Covered | | Wednesday | Sections Covered |
|---|---|---|---|---|
| **Aug 25** | 2.1-2.3 | | **Aug 27** | 2.4-3.4 |
| **Sep 1** | **No Class** | | **Sep 3** | 5.3-5.6 |
| **Sep 8** | 6.1-6.3 | | **Sep 10** | **Review, Q** |
| **Sep 15** | **Test 1** | | **Sep 17** | 6.4-6.6 |
| **Sep 22** | 7.1-7.2 | | **Sep 24** | 7.3 |
| **Sep 29** | 7.4 | | **Oct 1** | 7.5-7.7 |
| **Oct 6** | 8.1-8.4 | | **Oct 8** | **Review, Q** |
| **Oct 13** | **Test 2** | | **Oct 15** | 9.1, 9.2 |
| **Oct 20** | 9.4, 9.5 | | **Oct 22** | 9.6, 9.7 |
| **Oct 27** | 10.2, **Q** | | **Oct 29** | 1.4, 10.3 |
| **Nov 3** | 10.4 | | **Nov 5** | **Review, Q** |
| **Nov 10** | **Test 3** | | **Nov 12** | 10.7 |
| **Nov 17** | 11.5 | | **Nov 19** | 12.1-12.3 |
| **Nov 24** | **No Class** | | **Nov 26** | **No Class** |
| **Dec 1** | 12.4, 12.5 | | **Dec 3** | **Review, Q** |
| **Dec 8** | **Final 8 - 12:20** | | **Dec 10** | |

**SECTIONS COVERED ON EACH TEST:**

**Test 1**: 2.1 - 6.3

**Test 2**: 6.4-6.6, 7.1 – 8.4

**Test 3**: 9.1 – 10.4, except 9.3

**Final**: 10.7, 11.5 – 12.5, plus some previous material

**Other Class Policies:**

**BASICS**

Since this is a face-to-face course we will meet in the classroom for all lectures. The homework is all online and thus not physically turned in, but the quizzes and tests are given in class. Office hours are posted but you can also request a 15 minute meeting via Zoom – send a request by email.

**HOMEWORK**

To access the homework, go to my Math 2412 D2L course and click on Course Materials.

Once there click on the yellow button: Open MyLab & Mastering.

If you are part of the Star Bundle system, you should not have to pay.

If you are not part of the Star Bundle system, you'll see options for how to pay.

Once you've gone through D2L the first time, you need not go through it again --

you can go directly to the Pearson site:

https://www.pearsonmylabandmastering.com/northamerica/

***Register with an email address that you check regularly!!!!***

There is a two-week grace period to pay for it so DO NOT wait to register. **Note**: Pay for the product before the grace period ends or you will need to go through a laborious process with tech support to get reinstated.

**Required Text:**

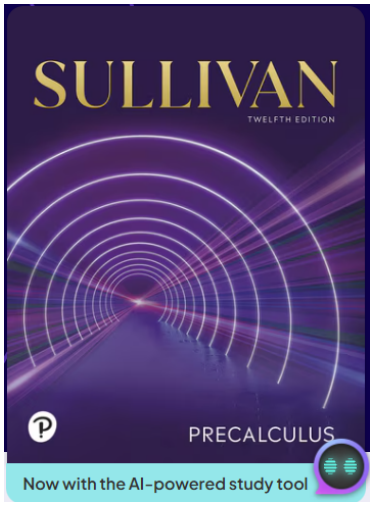
*Precalculus*, 12th edition, Michael Sullivan, Addison-Wesley.

ISBN 9780138279257

You may use the eBook in MML instead of buying the physical text.

The bookstore has physical texts whose price includes the access code which is a cheaper option than buying them separately.

https://www.lonestar.edu/bookstore.htm




Basically you'll do the homework in MML with the aid of videos and ebook within that website. The MyLabMath homework will not be counted toward your grade but should be done to do well in the course. Bonus points granted to final course grade for doing the MyLabMath homework:

MLM Grade - points granted

90-100% - 3pts

80-89% - 2pts

70-79% - 1pt

## ACADEMIC INTEGRITY

Any student caught cheating in any manner on a test will receive a 0 for that grade and possibly dropped from the course.

## TESTING

The Quizzes, Tests and Final Exam will be given in the classroom on the dates listed in this syllabus. The 30-pt quizzes will be based on the MyLabMath homework and given at the start of class on the dates noted in the schedule. Once the quiz starts, no one will be let in the classroom until the quiz is over, so make sure you are in class on time to avoid getting a 0. The quizzes and tests will be mostly non-calculator so try most of the homework without one. They will be done on paper.

## ACADEMIC EXPECTATIONS

I teach this course as a college-level class, and I expect my students to have a good grasp of the material presented in prerequisite courses. If you do not have the prerequisites or do not intend to study diligently for this course, please consider dropping it now and signing up for another class. A well-rounded knowledge of Algebra and Trigonometry is needed to do well so please do the optional assignments in MyLabMath if you need a refresher at any time during the course. Expect to see a few problems on the exams which are unfamiliar but are solvable using the methods and theory learned by diligently reading the book and doing the homework with the theory in mind. These "challenge" problems are designed to help you learn the material fully, not just how to do the specific problems in the homework. **I do not give sympathy grades. If you need a certain grade to satisfy a degree or personal requirements, the time to start working is now. I will do everything within reason to help you make a certain grade in this course, but you must do most of the work.**

## CALCULATORS

We will use calculators for a few sections in the book. A simple scientific calculator is all that is needed -- NO graphing calculators higher than a TI-89 are allowed. All smartwatches MUST be put out of sight and reach during assessments.

## SUGGESTIONS ON HOW TO DO WELL

Get tutoring or email me if you need help; don't get behind; do all the homework; work together with other students in the class; don't overload yourself with school or work; study at least 12 hours outside of class for this course; Kill your TV, video-game console, Facebook, Instagram, Snapchat, Discord, or Tik-Tok addiction!

### Office Hours for Students:

Engaging in content discussion, asking questions, and proactively getting help increases student learning and success. To facilitate this, I may be available to meet outside of class. Since we all have different schedules, I encourage you to meet with me at a time that is mutually convenient. Please email or speak with me before/after class to make an appointment.

### Catalog Description:

An integrated treatment of the concepts necessary for calculus beginning with a review of algebraic and transcendental functions including trigonometric functions. Topics also include the binomial theorem, analytic geometry, vector algebra, polar and parametric equations, mathematical induction and sequences and series.

http://www.lonestar.edu/lscs-catalog.htm 4 CREDITS (4 HRS. LEC., 1 HR. LAB.)

**Prerequisites:**

1) College Level Readiness in Reading AND Writing
2) Complete one of the following
    Math 1314 - College Algebra
    Math 1316 - Trigonometry
    Or placement by testing

**Learning Outcomes** *Upon successful completion of this course, students will…*

- Demonstrate and apply knowledge of properties of functions.
- Recognize and apply algebraic and transcendental functions and solve related equations.
- Apply graphing techniques to algebraic and transcendental functions.
- Compute the values of trig functions for key angles in all quadrants measured in both degrees and radians.
- Prove trigonometric identities.
- Solve right and oblique triangles.
- Apply the binomial theorem.

Determine equations of conic sections, and graph conics, including translation and identification of vertices, foci and asymptotes.

- Perform basic operations and solve applications using vector algebra.
- Perform operations and graph equations using polar and parametric equations.
- Prove statements using mathematical induction.

Use properties of arithmetic and geometric sequences and series to identify terms, find sums and solve applications.

https://www.lonestar.edu/catalog/#/courses

**Communication Policy:**

Communication is best directed to *loris.i.zucca@lonestar.edu* or through the course located in D2L and a response will be given within 24 hours Monday through Friday. Every effort will be made for a timely response for emails sent on weekends, holidays, and institutional breaks when offices are closed.

**Lone Star College System Policies:**

Please use the following link to find ALL LSC policies, procedures, and student success information. It is your personal, academic, and legal responsibility to know and adhere to the information provided.

**http://www.lonestar.edu/syllabus-policies**

**Veteran Statement**:

For more information on Veterans' Affairs click here Veterans' Affairs Office or visit the Veteran's Office on campus.

**Kingwood Diversity, Equity, and Inclusion Statement:**

Lone Star College-Kingwood is committed to offering a learning environment that promotes the study of varied perspectives. The topics that are covered in college courses are often challenging, academically and emotionally; this allows students to assess basic assumptions, take agency over learning, and engage in dialogue with empathy for classmates. We will talk about differing ideas without being confrontational, respect all experiences and cultures, and maintain respect for others and their perspectives. We embrace diversity, we advance equity, and we cultivate inclusion.

**AI Not Allowed on Graded Assessments**

In this course, artificial intelligence (AI) tools such as ChatGPT, Google Gemini, and Microsoft Copilot may be used in a limited and guided capacity with instructor permission.

The following guidelines must be followed: All online homework should first be tried without the use of AI, but such use is not prohibited. However, AI use is strictly prohibited for all work that is graded, such quizzes, tests, and the Final Exam. View additional information at <https://www.lonestar.edu/instructional-resources.htm

**Behavior Intervention Team:**

The overall goal of the Behavioral Intervention Team is to promote a safe college environment for all students and staff focused on student learning and student development. By encouraging all members of the campus community to communicate behaviors that are concerning and provide support and connect students with resources that can assist them.

If a community member (student, faculty or staff) behaves in a way that is disruptive or poses a threat to any aspect of the LSCS community, such behaviors should be reported to the Behavior Intervention Team. If you see something, say something….

You are encouraged to identify yourself because this may assist the BIT if clarification or additional information is needed. Submitting your name also gives your report more credence. Anonymous entries will be evaluated on a case-by-case basis. File a report: https://www.lonestar.edu/16834.htm

**Counseling Services:**

https://www.lonestar.edu/CIS.htm
Phone: 281.312.8422
24/7 Emotional Support Hotline: 844-844-4007
E-mail: KC-Counselors@lonestar.edu

**Infectious Disease Reporting:**

Lone Star College is required to report student and employee cases of notifiable conditions to the Texas Department of State Health Services (DSHS) in a timely manner. College employees and students shall report a confirmed diagnosis of an infectious disease to LSC's Compliance Management Infectious Disease Reporting System. The Texas Department of State Health Services maintains a list of Notifiable Conditions that indicates the conditions and illnesses that must be reported. These include influenza, COVID-19, tuberculosis, mpox, hepatitis A, and chickenpox. Help control and prevent the spread of infectious diseases by privately reporting a confirmed medical diagnosis of a notifiable condition by emailing LSC-ReportVirus@lonestar.edu or calling 832-246-0019. Also inform your instructor(s).

**Learning Commons** *On-Campus and Virtual Services Available*

**D2L & Office Apps Help**

How to Use D2L (YouTube)
Website: kwlibguides.lonestar.edu/LC-technology/technology-in-LC
Phone: 281-312-1693 Email: Kingwood.Library@LoneStar.edu

**Tutoring & Study Skills**

Math, Sciences, and Writing
Website: www.lonestar.edu/lsc-kingwood-tutoring
Phone: 281-312-1439 Email: Jenny.R.Keller@LoneStar.edu

- Student IDs
- Technology in the LC

Website: www.lonestar.edu/kw-learning-commons
Phone: 281-312-1691
**LC Operating Hours: Mon-Thurs: 8 – 7, Fri: 9 – 3, Sat: 10 – 2**
**Make an Appointment in WC Online!** lonestar.mywconline.com/

# BOOK SECTIONS COVERED

## REVIEW SECTIONS

**Chapter 1**
1.4 Circles
**Chapter 2**
2.1 Functions
2.2 The Graph of a Function
2.3 Properties of Functions
2.4 Library of Functions; Piecewise-defined Functions
**Chapter 3**
3.3 Quadratic Functions and Their Properties
3.4 Build Quadratic models from Verbal Descriptions and from Data
**Chapter 5**
5.3 Exponential Functions
5.4 Logarithmic Functions
5.5 Properties of Logarithms
5.6 Logarithmic and Exponential Equations
**Chapter 6**
6.1 Angles and Their Measure
6.2 Trigonometric Functions: Unit Circle Approach
6.3 Properties of the Trigonometric Functions
6.4 Graphs of the Sine and Cosine Functions
6.5 Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
6.6 Phase Shift; Sinusoidal Curve Fitting
**Chapter 7**
7.1 The Inverse Sine, Cosine, and Tangent Functions
7.2 The Inverse Trigonometric Functions (continued)
7.3 Trigonometric Equations
7.4 Trigonometric Identities
7.5 Sum and Difference Formulas
7.6 Double-angle and Half-Angle Formulas
7.7 Product-to-Sum and Sum-to-Product Formulas
**Chapter 8**
8.1 Applications Involving Right Triangles
8.2 Law of Sines
8.3 Law of Cosines
8.4 Area of a Triangle
**Chapter 9**
9.1 Polar Coordinates
9.2 Polar Equations and Graphs

## PRECALCULUS SECTIONS

9.4 Vectors
9.5 The Dot Product
9.6 Vectors in Space
9.7 The Cross Product
**Chapter 10**
10.2 The Parabola
10.3 The Ellipse
10.4 The Hyperbola
10.7 Parametric Equations
**Chapter 11**
11.5 Partial Fraction Decomposition
**Chapter 12**
12.1 Sequences
12.2 Arithmetic Sequences
12.3 Geometric Sequences; Geometric Series
12.4 Mathematical Induction
12.5 The Binomial Theorem