



## **MATH - 100 - A Precalculus**

### **Fall 2025**

**Start Date:** August 27, 2025

**End Date:** December 12, 2025

#### **Class Meetings:**

Block 2, Monday, Wednesday, Friday, 9:40- 10:40 am, Bast Center 214

#### **Contacting your Instructor :** Naomi Clements

Office: Trexler 180

Office Hours: Mon., Wed., Fri., 11 am – 12 pm, Wed. 2 – 3 pm, and by appointment

Email: clements@roanoke.edu

The best way to contact me is by email. I will return your email within 24 hours.

**Math, Computer Science, Physics Department Office:** Trexler Hall, Room 270

**Campus Safety:** (540) 375-2310

**Course Description:** Math - 100 Precalculus will provide students with the background knowledge and skills they need to be successful in Calculus. Topics include fractions, factoring, solving equations, and various types of functions including polynomials, trigonometric functions, exponential functions, and logarithms.

**Intended Learning Outcomes** By the end of this course, students will be able to

- ♦ understand and manipulate various types of functions including lines, polynomials, trigonometric functions, exponential functions, and logarithms;
- ♦ understand and apply algebraic techniques including graphing, arithmetic involving fractions and exponents, factoring, and solving equations;
- ♦ understand and apply geometric shapes such as right spheres and circles.

#### **Course Materials**

**Course Textbook:** Title: Precalculus, 10<sup>th</sup> edition  
Author: Ron Larson Publisher: Cengage  
ISBN # 978 - 1 - 337 - 27107 - 3

*A link to a PDF is available on the class website.*

#### **Additional Suggested Materials:**

A notebook for taking notes and organizing handouts, grid paper, and **a TI-83 or TI-84 Scientific/Graphing calculator.**

**CAS calculators, computers, cell phones, math help websites and online calculators may not be used on proctored events such as quizzes, tests, and/or exams.**

**Teaching and Learning Methods:** The course material will be divided into 3 units with a test at the end of each unit. Class time will consist of explanation, a time for questions and answers, and working on assignments. Every effort will be made to answer all student questions. Students should prepare for class by reading the book and notes for each section before the material is presented in class. **If necessary, due to illness of the instructor, or an outbreak of a highly infectious illness, class may be conducted remotely.**

**Expected Student Work Policy:** It is highly recommended that students take notes in class and review those notes before completing assignments. Notes presented in class will be available on the class website on Inquire. Students are expected to spend at least 6 - 9 hours of work each week inside and outside of class, 3 hours in class, and 3 - 6 hours outside of class. This time should include completing In Class/Homework assignments, writing assignments, and reading the notes and chapter sections to be studied in the week ahead.

**Grading Policy:** The final course grade will be determined by a weighted average with the following values:

<b>In Class/Homework Assignments</b>	<b>50%</b>
<b>3 Unit Tests</b>	<b>36%</b>
<b>Final Exam</b>	<b>14%</b>

**Grading Scale**

<b>A 100 - 93</b>	<b>B + 89 - 87</b>	<b>C + 79 -77</b>	<b>D + 69 -67</b>	<b>F below 60</b>
<b>A - 92 -90</b>	<b>B 86 -83</b>	<b>C 76 - 73</b>	<b>D 66 - 63</b>	
	<b>B - 82 - 80</b>	<b>C - 72 - 70</b>	<b>D - 62 - 60</b>	

**In Class/Homework Assignments:** Practice is essential to learning new skills. In Class/Homework Assignments will help you practice what you are learning. There will be one or two In Class/Homework assignments each week. Due dates are included in the tentative schedule presented on pages 5 and 6. For you to keep up with the coursework assignments should be done on time. Late In Class/Homework will be accepted until the Unit test on the material included in the assignment. If several students are turning assignments in late, the acceptance of late assignments will be ended.

Part of every assignment will be done in class. To complete assignments, you may work with classmates, tutors in the Subject Tutoring Center, or with me during office hours

**To receive credit for In Class/Homework,** All work done to produce answers, including calculator entries, must be shown on In Class/Homework assignments. The work must be legible, must produce the answer given, and be done in pencil. The problems must be in numerical order, with a line skipped between each question, and with answers circled or put in a box. Homework pages should be stapled together. Assignments written on paper torn from a spiral notebook will not be accepted with ragged edges.

**Tests:** You may make up one Unit Test missed due to illness if you notify me of your absence before the test, and if the test is made up within one week of the original test date. The Final Exam may not be made up. If your Final Exam score is higher than a previous test score, it will replace that test score. If you miss a test, the grade on that test will be zero and our Final Exam will replace that test score.

Students should make every effort to take care of personal needs before a test begins so they don't need to leave the classroom during a test. Athletes who will miss a test due to an out of town game or meet must make arrangements to take the test before the test day.

You may not use your own books, notes, scratch paper or other aids during Unit Tests or the Final Exam. The instructor may provide formulas for the Unit Tests and the Final Exam. Approved calculators may be used but not shared between students. Also, please note that arrangements for extended time or testing in a distraction-reduced environment must be made at least one week *before every test*.

One extra credit point may be earned for each unit test by volunteering to read in class at least once a week every week we are studying that unit.

**Attendance:** Attendance will be taken during every class. Your attendance in all class sessions is **essential** for your success in this course. It is your responsibility to read the text, study the notes I provide, and complete assignments for any class you miss. You are responsible for the material covered as well as all announcements or changes in the schedule made in your absence.

**Classroom Policies:** Open and mutually respectful communication of varied opinions, beliefs, and perspectives during classroom or online discussion encourages the free exchange of ideas that is essential to higher learning and to the ability to learn from each other. I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

**Cell phones should be turned off prior to entering the classroom. Laptops should not be used during class sessions unless you have an academic accommodation. The use of laptops or any other electronic device during an exam is not allowed. Any use of such devices during a quiz or exam will be considered a breach of academic integrity.**

**Academic Integrity** is a foundational value of Roanoke College and students are expected to behave as responsible members of the college community and to be honest and ethical in their academic work. Guidelines for academic integrity, as well as forms of academic dishonesty are detailed in the handbook *Academic Integrity at Roanoke College*. Since a central goal of this subject is to help you become independent and critical thinkers, all work submitted for a grade should be entirely your own work. Using artificial intelligence, equation solving software or apps is a violation of academic integrity. You may talk with other students about how to do the work but there is a difference between copying someone's work and asking for help to learn how to do something. If assisting a classmate, there is a difference between telling someone an answer and showing them how to generate it on their own. If you are ever uncertain as to how the College's policy pertains to any assignment or exam in this course, please ask me for clarification.

**Additional Information:** Each student is responsible for being aware of the information contained in the [Roanoke College Catalog](#), the [Student Handbook](#), and the [Academic Calendar](#). All information may be viewed on the [Roanoke College website](#).

**Course Withdrawal:** The last day to submit a Pass/Fail or Audit form is Wednesday, September 3, 2025. The last day to drop a course before a “W” will be recorded on your transcript is Tuesday, September 9, 2025 at 4 pm. The last day to drop a course unless withdrawing from the college is Friday, November 21, 2025. A course is considered officially dropped only if the DROP form is accepted by the Registrar’s office.

**Syllabus Changes:** Occasionally, changes to the syllabus may be necessary. Students will be notified of any changes to the syllabus in writing. The Grading Policy will not be changed.

**College Services:**

The Dr. Sandee McGlaun Writing Center and Subject Tutoring, located in the lower level of the Fintel Library (Room 5), offers free one-on-one support in writing, oral presentations, and course content such as Business, Economics, Mathematics, INQ 240, Modern Languages, Lab Sciences, and Social Sciences. Open Sunday–Thursday from 4–9 PM, students can stop by or schedule through Navigate by selecting “Schedule an Appointment” → “Writing Center and Subject Tutoring” → “Writing Support” or “Course Tutoring” → preferred date and tutor. Contact [subject\\_tutoring@roanoke.edu](mailto:subject_tutoring@roanoke.edu) or 540-375-2590 for more information.

**Accessible Education Services (AES)** is located on the first floor of the **Bank Building**. AES provides reasonable accommodations to students with documented disabilities. To register for services, students must self-identify to AES, complete the registration process, and provide current documentation of a disability along with recommendations from the qualified specialist. Please contact Dustin Persinger, Assistant Director of Academic Services for Accessible Education, at 540-375-2248 or by e-mail at [aes@roanoke.edu](mailto:aes@roanoke.edu) to schedule an appointment. If you have registered with AES in the past and would like to receive academic accommodations for this semester, please contact Dustin Persinger at your earliest convenience to schedule an appointment and/or obtain your accommodation letter for the current semester. The testing center, also located on the first floor of the Bank Building, can be reached at 540-375-2247.

**Student Health & Counseling Services** supports students through in-person health appointments, in-person counseling, 24/7 telehealth (TimelyCare), Therapy Assistance Online, as well as resources related to general wellness, LGBTQ+, sexual assault, substance abuse, and suicide prevention. Unmet health needs can negatively impact your performance in this course. Student Health & Counseling Services can help. Please see <https://www.roanoke.edu/shcs> for more information and to access services.

## **Tentative Schedule    MATH – 100 – A   Precalculus**

<b>Week</b>	<b>Dates</b>	<b>Chapter Sections to be Studied</b>
<b>Unit 1 Algebra Review</b>		
1	Aug 27, 29	Introduction to the Course, Course Syllabus and Class Website Fraction Concepts and Computation A.1 Real Numbers and Their Properties  Assignment 1, Fraction Practice   due Monday, Sept 1.
2	Sept 1 – 5	A.1 Real Numbers and Their Properties A.2 Exponents and Radicals A.3 Polynomial Arithmetic and Factoring Polynomials  Assignment 2, Sections A.1, A.2 and A.3   due Monday, Sept 8.
3	Sept 8 – 12	A.4 Rational Expressions A.5 Solving Equations  Assignment 3, Sections A.4 and A.5   due Monday, Sept 15.
4	Sept 15 - 19	1.1 Rectangular Coordinates and Distance 1.2 Graphs of Equations, Plotting Points, Intercepts and Symmetry 1.3 Graphs of Lines, Slope as a Rate of Change  Assignment 4, Sections 1.1, 1.2 and 1.3   due Monday, Sept 22.
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5	Sept 22 – 26	Test on Unit 1  <b>Unit 2 Functions</b> 1.4 Introduction to Functions 1.5 Graphs of Functions 1.6 The Library of Functions  Assignment 5, Sections 1.4, 1.5 and 1.6   due Mon, Sept 29
6	Sept 29 – Oct 3	1.7 Transformations of Functions 1.8 Combining Functions 1.9 Inverse Functions  Assignment 6, Sections 1.7, 1.8 and 1.9   due Monday, Oct 6.
7	October 6 – 10	2.1 Quadratic Functions 2.2 Polynomial Functions of Higher Degree 2.3 Polynomial and Synthetic Division  Assignment 7, Sections 2.1, 2.2 and 2.3   due Monday, Oct 20
8	October 13 – 17	Fall Break

<b>Week</b>	<b>Dates</b>	<b>Chapter Sections to be Studied</b>
9	October 20 – 24	2.4 Complex Numbers 2.5 Zeros of a Polynomial Functions 2.6 Rational Functions  Assignment 8, Sections 2.4, 2.5 and 2.6 due Monday, October 27.
10	October 27 – 31	3.1 Exponential Functions and Their Graphs 3.2 Logarithmic Functions and Their Graphs 3.3 Properties of Logarithms  Assignment 9, Sections 3.1, 3.2 and 3.3 due on Monday, November 3.
11	November 3 – 7	3.4 Exponential and Logarithmic Equations Review Unit 2 Test on Unit 2  Assignment 10, Section 3.4 and Review of Unit 2 due Friday, November 7.
<b>Unit 3 Trigonometry</b>		
12	Nov 10 – 14	4.1 Radian and Degree Measure 4.3 Right Triangle Trigonometry 4.2 Trigonometric Functions and the Unit Circle  Assignment 11, Section 4.1, 4.2 and 4.3 due Monday, November 17.
13	Nov 17 - 21	4.4 Trigonometric Functions of Any Angle 4.5, 4.6 Graphs of Sine Cosine and Tangent Functions 4.7 Inverse Trig Functions  Assignment 12, Section 4.4, 4.5, 4.6 and 4.7 due Monday, November 24
14	November 24	5.1 Using Fundamental Identities 5.3 Solving Linear Trig Equations 5.4 Solving Quadratic Trig Equations  Assignment 13, Section 5.1, 5.3, and 5.4 due Monday, December 1 Assignment 14, Review of Unit 3 due Wednesday, December 3
15	Dec 1 - 5	Review Unit 3 Test on Unit 3 Review for the Final Exam  Assignment 15, Review for the Final Exam due Friday, December 12.
16	December 8 – 12	Final Exam Week

**Final Exam for MATH 100-A** Block 2 Exam, Wednesday, December 10, 8:30 - 11:30 am