MATH1060Q – Precalculus

Section 24 (1065) - Winter Session 2024 - Online Asynchronous

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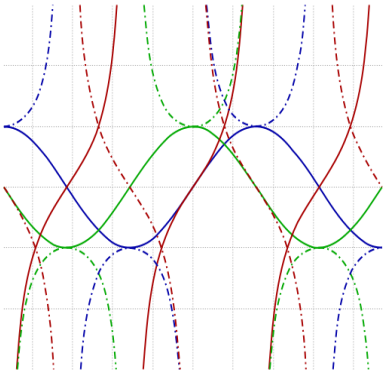
Instructor: Ben Lantz

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Office: Webex

Office Hours

By appointment



Course Description

Precalculus is a preparation for calculus which includes a thorough review of algebra. Emphasis will be on functions and their applications; in particular, polynomials, rational functions, exponentials, logarithms, and trigonometric functions.

Prerequisites

A qualifying score of 17 on the mathematics placement exam (MPE), unless you began attending UConn prior to Fall 2016 (in which case it is still recommended). Students who fail to achieve this minimum score are required to spend time on the preparatory and learning modules before re-taking the MPE or register for a lower level Mathematics course. Not open for credit to students who have passed MATH 1120, 1125Q, or 1131Q. Students may not receive credit for this course and MATH 1040Q

Topics Covered/Outline

Date	Sections Covered	Homework Due
Day 1: Tues Dec 26th	A.1: Real Numbers and Their Properties A.2: Exponents and Radicals	WS01 due on Thurs Dec 28th at 11:59 pm
Day 2: Wed Dec 27th	A.3: Polynomials and Factoring A.4: Rational Expressions A.5: Solving Equations	WS02 due on Fri Dec 29th at 11:59 pm Digested Notes (A.1-A.5) due Fri Dec 29th at 11:59 pm
Day 3: Thurs Dec 28th	1.1: Rectangular Coordinates 1.2: Graphs of Functions 1.3: Linear Equations in Two Variables	WS03 due on Tues Jan 2nd at 11:59 pm
Day 4: Fri Dec 29th	1.4: Functions 1.5: Analyzing Graphs of Functions 1.6: A Library of Parent Functions	WS04 due on Wed Jan 3rd at 11:59 pm
Day 5: Tues Jan 2nd	1.7: Transformations of Functions 1.8: Combinations of Functions: Composite Functions 1.9: Inverse Functions	WS05 due on Thurs Jan 4th at 11:59 pm Digested Notes (1.1-1.9) due Thurs Jan 4th at 11:59 pm
Day 6: Wed Jan 3rd	2.1 Quadratic Functions and Models 2.2: Polynomial Functions of Higher Degree 2.6: Rational Functions	WS06 due on Fri Jan 5th at 11:59 pm
Day 7: Thurs Jan 4th	3.1: Exponential Functions and Their Graphs 3.2: Logarithmic Functions and Their Graphs 3.3: Properties of Logarithms	WS07 due on Mon Jan 8th at 11:59 pm
Day 8: Fri Jan 5th	3.4: Exponential and Logarithmic Equations 4.1: Radian and Degree Measure	WS08 due on Tues Jan 9th at 11:59 pm Digested Notes (2.1-2.6, 3.1-3.4) due on Tues Jan 9th at 11:59 pm
Day 9: Mon Jan 8th	4.2: Trigonometric Functions: The Unit Circle 4.3: Right Triangle Trigonometry 4.4: Trigonometric Functions of Any Angle	WS09 due on Wed Jan 10th at 11:59 pm
Day 10: Tues Jan 9th	4.5: Graphs of Sine and Cosine Functions 4.6: Graphs of Other Trigonometric Functions 4.7: Inverse Trigonometric Functions	WS10 due on Thurs Jan 11th at 11:59 pm
Day 11: Wed Jan 10th	5.1: Using Fundamental Identities 5.2: Verifying Trigonometric Identities 5.3: Solving Trigonometric Identities	WS11 due on Fri Jan 12th at 11:59 pm Digested Notes (4.1-4.7, 5.1-5.3) due on Fri Jan 12th at 11:59 pm.
Day 12: Thurs Jan 11th	Flex Day	No Worksheet
Day 13: Fri Jan 12th	Final Exam	Final Exam

Textbook

Textbook: Precalculus *10e*, by Larson (ISBN 978-1-337-27107-3)

This textbook is **NOT** required but we will be following the text closely and will be a very useful resource to have.

Academic Integrity

Cheating is prohibited in all aspects of the course. Cheating includes but is not limited to communication with other students during an exam, asking other students to complete your coursework, and copying or soliciting solutions from the internet. UCONN and I both take academic dishonesty very seriously; any academic dishonesty will result in severe consequences.

Please see the university policy at the end of the syllabus for more information on Academic Integrity.

Lecture Notes/Videos

For each section of this course there is an accompanying lecture video (found on HuskyCT under "Course Materials"). Furthermore there are guided blank and filled in lecture notes over those same sections. It is expected that you watch each lecture video, go over the guided notes, and seek additional help via other resources for each section of this course.

Communication

Please communicate with me often. I am available for questions about material at any time and I am very good at responding to emails quickly.

Communication is KEY! Please reach out early and often with any questions or concerns.

Late Policy

The worksheets will be accepted for late credit at a 10% penalty. Completion of the homework is particularly important, and I want to incentivize doing the homework as much as possible. That being said, falling behind with homework can be very difficult to come back from, especially in such an accelerated course. Please do not rely on the late policy, but rather use it as a safety net in case anything were to happen throughout the session.

Assessment and Grading

The course grade will be based on homework via Worksheets (50%), Digested Notes (20%), and a Final Exam (30%). Grades will be consistently maintained in the HuskyCT gradebook (you should always have a general idea of what your grade is in the course).

All assignments will be done through Gradescope. To access this, go to gradescope.com (or follow the link in Husky CT) and use the course entry code XX7EN2.

Weekly Worksheets (50% of total grade)

Each day there will be a worksheet due two class days later at 11:59 pm on Gradescope going over the material from that day. A pdf (renamed with your last name first (e.g., LantzWS01.pdf) should be uploaded to Gradescope before the deadline. These worksheets should be the central focus of time spent outside of class. They represent a mixture of easier and more difficult problems and you should fully expect to have to struggle with some problems. I will grade the worksheets on correctness as I would with exam problems. Feedback will be given directly on Gradescope in a timely manner. Late worksheets will always be accepted for a 10% penalty after the due date up until the final exam.

Digested Notes (20% of total grade)

For every chapter of the course, I will expect a sheet of digested notes, meaning taking what you think is most important out of that chapter and displaying it nicely in a way that you can access later.

You will be uploading a copy of these digested notes to Gradescope due two days after the completion of that material and will be graded mostly on completion but also on usefulness of the notes and care and attention that went into creating the notes.

I would expect no more than a page for each chapter (and possibly less). The notes should be your own and you may organize them in any way that you see fit.

Final Exam (30% of total grade)

On Friday January 12th there will be a final exam that will cover all material in this session. The exam will be made available on Thursday evening and will be due on Friday January 13th at 11:59 pm in Gradescope. This is basically a take-home exam and you are able to work on the exam throughout that whole time period. You will be asked to write out solutions to problems as you were for worksheet problems. You will be able to use your notes fully as you would for homework problems but you should not be communicating with any other person other than me (whether another student, someone online, or finding similar solutions online).

The goal is to see what you have learned throughout the session.

Grading Scale

Letter grades will be assigned using the following scale:

A	:	93.00% and above
A-	:	90.00% - 92.99%
B+	:	87.00% - 89.99%

B	:	83.00% - 86.99%
B-	:	80.00% - 82.99%
C+	:	77.00% - 79.99%
C	:	73.00% - 76.99%
C-	:	70.00% - 72.99%
D	:	63.00% - 69.99%
D-	:	60.00% - 62.99%
F	:	59.99% and below

Letter grade cutoffs may be lowered if deemed necessary (although this is not likely and should not be expected).

Policy on Academic, Scholarly, and Professional Integrity and Misconduct (ASPIM)

https://policy.uconn.edu/2023/07/11/academic-scholarly-and-professional-integrity-and-misconduct-aspim-policy-on/