Pre-Calculus 15-Math-1026-004

Spring Semester, 2015 Time: 2:30 – 3:25 P.M. Room: 702 Old Chemistry

Instructor: Roger Chalkley

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Email: roger.chalkley@uc.edu Office Hours: 1:30 to 2:15 P.M. Monday through Friday

Text: WebAssign with eBook for <u>Pre-Calculus</u>, <u>Mathematics for Calculus</u>, 6th edition by Stewart, Redlin and Watson.

Cell phone use: Cell phone use during class is not permitted. Please turn off your cell phones during class.

Prerequisite: A minimum score of 550 on the Math Placement Test or 26 on the ACT-Math.

Exit criteria: You must have at least a C- grade in Pre-Calculus to take Calculus 1.

Course Description: Study of functions and equations, including linear systems of equations, trigonometry and assumes prior exposure to these topics. This course helps prepare students for the 4 credit hour calculus sequence (Math-1061 and 1062). Content from chapters 1 through 7 and section 10.1 of your textbook (eBook) will be covered.

Learning Outcomes: At the completion of this course successful students will be able to:

- 1. apply the properties of fractions for the real number system.
- 2. choose and apply the appropriate technique or techniques necessary to simplify an expression, solve an equation or solve an inequality.
- 3. create and describe graphs of basic equations, such as a circle, and functions, such as lines, logarithms or the sine function.
- 4. use properties of exponents and logarithms to simplify expressions or solve equations.
- 5. simplify and manipulate trigonometric expressions involving a variety of trigonometric identities.
- 6. solve a variety of trigonometric and inverse trigonometric equations.

Withdrawals: The last date to withdraw, without academic penalty, is Friday March 20.

Attendance: For your success in this course, it is extremely important not to miss classes. I will pass out an attendance sheet at each class for you to sign.

Math and Science Support (MASS) Center: The MASS center, located in room 2133 French Hall West, provides drop-in support (Study Tables) and one-on-one tutoring. Starting January 14, you can participate in a Study Table for Math-1026 on Mondays 1:00 to 4:00 P.M. and Fridays 9:00 to 11:00 A.M.. You can schedule an appointment for one-on-one tutoring through https://lacscheduling.uc.edu.

Special Review Sessions (SRS): In order to promote student success within your pre-calculus course, the department has organized a Supplemental Review Session (SRS) program. Students who attend a full session on 4 different weeks will earn 4 bonus points, which will be added to their overall points at the end of the semester. You can find sign up information on the **meta** Pre-Calculus Blackboard site through the left-side menu link.

Exams & Grades: There will be four 60-minute comprehensive common semester tests, one common final exam, quizzes, and assignments. You can earn up to 700 points in this class in the following ways:

- 60-minute common exams: 100 points each, a total of 400 points
- Common final exam: 200 points
- Quizzes: 50 points
- Homework assignments: 40 points
- ALEKS summer homework: 10 points

Make-up policy: There will be no make-ups for missed homework, or quizzes. However, your three lowest WebAssign weekly homework grades and your two lowest quiz grades will be dropped.

Grades: Although the conversions from numerical grades to letter grades will be posted on Blackboard after each test and at the

• A final score of 90% will assure a grade of at least A-

end of the semester, you can assume a typical grading scale, given below, for guaranteed grade values.

- A final score of 80% will assure a grade of at least B-
- A final score of 70% will assure a grade of at least C-

Common Test Dates: There will be four tests, taken by all Uptown Campus Math-1026 students at the same time and on the same day, during the semester. The dates and times for these tests, which will all take place in Zimmer Auditorium, are:

- Test #1: January 29, 5:10 to 6:10 P.M.
- Test #2: February 19, 5:10 to 6:10 P.M
- Test #3: March 12, 5:10 to 6:10 P.M
- Test #4: April 16, 5:10 to 6:10 P.M

Final Exam: The final exam will be given during exam week, and not necessarily during the time posted by the Registrar, for our class meeting time or in the same room as our common tests. We will be notified by Scheduling sometime after the seventh week. You should not book an early travel before the exam date is announced as this is not going to be considered an acceptable excuse.

Homework Assignments: Your graded homework assignments consists, primarily, of weekly WebAssign problems The due dates for the WebAssign homework, which are all due 11:59 P.M. Wednesday, can be found on the Course Schedule. Any additional graded homework assignments will be announced in class and also posted on our course Blackboard site.

Special Needs: If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should meet with the instructor to arrange for reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services.

General Education: This course was designed following the guidelines of the University of Cincinnati General Education Program. It satisfies, or partially satisfies the Quantitative Reasoning distribution requirement.

Academic Integrity: The University Rules, including the Student Code of Conduct, and other documented policies of the department, college, and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct.

Testing Policies:

- Participation in the four common tests and the final is mandatory.
- No technology/calculators will be required or permitted in the common tests and final.
- Cell-phones and other communication devices are prohibited.
- Students need to bring their University of Cincinnati identification card.
- Exceptions to the mandatory attendance to the common tests and final will be granted, provided that the appropriate evidence/documentation is brought to the instructor as soon as possible, for the following reasons:
 - (1) Documented health or serious family problems.
 - (2) Documented University business (like sport engagements).
 - (3) Documented conflict with other UC classes.
 - (4) Serious and unavoidable work conflict, documented by a written statement from the employer.

The statement must assert explicitly unwillingness to give leave to the student for that specific test and must be dated at least 10 days before the Test 1 and one month before successive tests. A copy of the regular working schedule is not enough. You can present to the employer a copy of this syllabus or you can ask me to write a statement for you to the employer.

- (5) In exceptional cases other reasons may be considered.
- Students registered with Disability Services, as needing special testing facilities or extended time, can take the test in the testing center at the same time as the other students or start the test early. Students will not be able to leave the testing center prior to ten minutes after the official start time of the test, if the test is taken prior to the official start time of the test (Students may not leave the testing center before 5:10, for example, if the official start time is 5:00.). Arrangements must be made in advance and I should be notified by email at least 3 days before the test.
- Many conflicts can be accommodated with some flexibility in the testing time. However, I should be notified, by email, at least 3
 days before the test.
- Final exam: The final exam will **not** necessarily be on the day, time and location listed by the Registrar. We will be notified sometime after the seventh week. Students should not book an early travel before the exam date is announced as this will not be considered an acceptable excuse for missing the final.
- If you miss, and are excused from one test, that test will be dropped from your average without penalty (the other tests and final will count more).
- If you miss, and are excused from more than one test or from the final, I will give you a make-up.
- If you believe that a grading error has occurred in a test or in a quiz, you must request the test or quiz to be re-graded within the next week after it was returned.

Note: All Semester Block Tests are 5:10 to 6:10 P.M. in Zimmer Auditorium

Week	Dates	Sections and Topics	Important Dates/Assignments
		1.1: Real Numbers	
		1.2 Exponents and Radicals	
1	January 12 - 16	1.3 Algebraic Expressions	
		1.4 Rational Expressions	Quiz 1 Friday January 16
2		Martin Luther King JR Day - No Class January 19	WebAssign Homework 1 (1.1-1.4)
	January 19 - 23	1.7 Inequalities	Due 11:59 P.M. Wednesday January 21
		1.8 Coordinate Geometry	
		1.10 Lines	Quiz 2 Friday January 23
3		1.10 Lines	WebAssign Homework 2 (1.7, 1.8, 1.10, 10.1)
	January 26 –	10.1 Systems of Linear Equations in Two Variables	Due 11:59 P.M. Wednesday January 28
	January 30	Review Test 1	
		2.1 What is a Function?	Common Block Test 1: January 29
4		2.2 Graphs of Functions	WebAssign Homework 3 (2.1, 2.2, 2.5)
	February 2 –	2.5 Transformations of Functions	Due 11:59 P.M. Wednesday February 4
	February 6	2.6 Combining Functions	
		2.7 One-to-One Functions and Their Inverses	Quiz 3 Friday February 6
		2.7 One-to-One Functions and Their Inverses	WebAssign Homework 4 (2.6, 2.7)
	February 9 –	3.1 Quadratic Functions	Due 11:59 P.M. Wednesday February 11
5	February 13	3.3 Dividing Polynomials	
		3.7 Rational Functions	Quiz 4 Friday February 13
		3.7 Rational Functions	WebAssign Homework 5 (3.1, 3.3, 3.7)
6	February 16 –	4.1 Exponential Functions	Due 11:59 P.M. Wednesday February 18
	February 20	Review Test 2	
		4.2 The Natural Exponential Function	Common Block Test 2: February 19
		4.3 Logarithmic Functions	WebAssign Homework 6 (4.1 – 4.3)
	February 23 –	4.4 Laws of Logarithms	Due 11:59 P.M. Wednesday February 25
7	February 27	4.5 Exponential and Logarithmic Equations	Quiz 5 Friday February 27
		4.5 Exponential and Logarithmic Equations	WebAssign Homework 7 (4.4, 4.5)
8	March 2 – March 6	5.1 The Unit Circle	Due 11:59 P.M. Wednesday March 4
		5.2 Trigonometric Functions of Real Numbers	
		5.3 Trigonometric Graphs	Quiz 6 Friday March 6
9		5.4 More Trigonometric Graphs	WebAssign Homework 8 (5.1-5.3)
	March 9 – March 13	Review Test 3	Due11:59 P.M. Wednesday March 11
		5.5 Inverse Trigonometric Functions and Their Graphs	
			Common Block Test 3: March 12
10	March 16–March 20	Spring Break – No Class March 16 through March 20	Last day to withdraw: March 20
		5.5 Inverse Trigonometric Functions and Their Graphs	WebAssign Homework 9 (5.4, 5.5, 6.1)
11	March 23–March 27	6.1 Angle Measure	Due 11:59 P.M. Wednesday March 25
		6.2 Trigonometry of Right Triangles	
		6.3 Trigonometric Functions of Angles	Quiz 7 Friday March 27
12		6.4 Inverse Trigonometric Functions and Right Triangles	WebAssign Homework 10 (6.2 – 6.4)
	March 30 – April 3	7.1 Trigonometric Identities	Due11:59 P.M. Wednesday April 1
		7.2 Addition and Subtraction Formulas	
		7.3 Double-Angle, Half-Angle and Product-Sum Formulas	Quiz 8 Friday April 3
		7.3 Double-Angle, Half-Angle and Product-Sum Formulas	WebAssign Homework 11 (7.1-7.3)
		7.4 Basic Trigonometric Equations	Due 11:59 P.M. Wednesday April 8
13	April 6 – April 10	7.5 More Trigonometric Equations	Quiz 9 Friday April 10
		7.5 More Trigonometric Equations	WebAssign Homework 12 (7.4, 7.5)
14	April 13 – April 17	Review Test 4	Due 11:59 P.M. Wednesday April 15
		Special Topics	Common Block Test 4: April 16
		Special Topics	WebAssign Homework 13 (Final Exam Review)
15	April 20 – April 24	Review for Final Exam	Due 11:59 P.M. Wednesday April 22
16	April 27 – May 1	Final Exam Week	Day and Time of Comprehensive Final Exam TBA

The instructor reserves the right to amend or correct this course schedule as necessary.