



University at Buffalo *The State University of New York*

Thomas J. Edwards Learning Center

## ULC 148 – Precalculus Algebra & Trigonometry – 4cr – Winter 2018

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Instructor: Mrs. Erica Demler  
Email: [ericadem@buffalo.edu](mailto:ericadem@buffalo.edu)

Office Hours: Tuesdays & Thursdays, 3:00-3:45 p.m. (via Zoom)

### Class Time(s)

ULC 148-VW1 (Reg.10295)

Start Date: Thursday, January 4, 2018

End Date: Wednesday, January 24, 21018

Location: Virtual (in-person exams)

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**Pre-Requisite:** ULC 147 or equivalent

**Credit:** ULC 148 satisfies the Mathematical Skills requirement of the General Education Program.

***If you have taken a more advanced math course for credit (e.g. MTH 121, 141) or MTH 115, you are not eligible to take this course***

### **Course Description**

This course reviews pre-calculus algebra and trigonometry, emphasizing functions (transformations, combinations, and composite functions). Topics include graphing and applications of linear, inverse, quadratic, polynomial and rational functions; limits and the derivatives; exponential and logarithmic functions and applications; and trigonometric functions emphasizing sine and cosine.

### **Core Learning Outcomes**

Upon completion of this course, students will be able to master the algebraic and trigonometric tools and higher-order thinking skills necessary for success in future mathematics courses while building confidence in their mathematical abilities. Students will gain an increased knowledge of the topics of algebra and trigonometry and learn how these can be applied to solve problems.

By the end of this course students should be able to:

- Understand how to graph polynomials (including quadratics), rational, exponential, logarithmic and trigonometric functions by determining roots, end behavior, x-intercept, y-intercept, asymptotes etc. where appropriate
- Apply the appropriate properties of logarithmic expressions to simplify expressions and solve equations.
- Model data sets to predict future outcomes
- Evaluate trigonometric function of any angle (exact value where applicable) in radians and degrees by applying appropriate identities and/or formulas
- Verify trigonometric identities by applying appropriate identities
- Solve trigonometric equations by using appropriate identities and/or formulas
- Find limits using tables, graphs, and properties of limits
- Determine the continuity of a function at a point using limits

Students will be assessed through ALEKS and exams.

### **Course Materials**

**ALEKS** student access code \*For further information, see ALEKS registration directions on UBLeads.

**Calculators:** A non-programmable, non-graphing calculator is a **required purchase** for this course. Its use will be allowed and encouraged throughout all aspects of this course. ***Any calculators more advanced, will not be allowed.*** It is the responsibility of the students to check with the instructor that the calculator they have is appropriate for the course. (Recommended: **TI-30Xa, TI-30X IIS, Casio FX-300**)

*Additional resources, including handouts and instructional videos, can be found on UBLeads.*

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## Course Requirements

**Attendance:** Students are expected to access recommended materials according to the calendar provided and to report in-person for scheduled exams. Students may be justifiably absent from classes due to religious observances, illness documented by a physician or other appropriate health care professional, conflicts with university-sanctioned activities documented by an appropriate university administrator, public emergencies, and documented personal or family emergencies. The student is responsible for notifying the instructor in writing with as much advance notice as possible. Due to the condensed timeline for winter courses, the instructor will determine a reasonable timeframe in which a missed exam must be completed.

**Grading Policy:** Each exam is worth 20% of your final grade. There will be three (3) exams. ALEKS will be worth 40% of your final grade.

Final course grades will be determined by the following breakdown:

A	93.0-100.0	B+	87.0-89.9	C+	77.0-79.9	D+	67.0-69.9
A-	90.0-92.9	B	83.0-86.9	C	73.0-76.9	D	60.0-66.9
		B-	80.0-82.9	C-	70.0-72.9	F	0-59.9

**Examination:** There will be three one-hour, seated exams. The material that will be tested on the exams will be taken from class notes, ALEKS, and the practice tests. A grade of zero (0) will be assigned for any examination missed unless suitable documentation is provided to the instructor **within one class day** of the exam.

**\*\*\*All exams must be taken in-person**, either: (1) on campus at the announced location; or (2) at a certified testing center (more information can be found on UBLearn). Students will be allotted a maximum of 75 minutes in which to complete each exam. Students are responsible for bringing their own approved calculator to the testing site.

**Homework:** You will be expected to work on the ALEKS computerized software program throughout the entire semester. Your grade will be based on both your learning and assessment modes in the program and will equal the portion of the pie chart completed. You can check your completion progress throughout the semester. Suggested topics to be completed each day will be available on UBLearn.

You will probably need to spend around 6 hours per day working on ALEKS, watching videos, and working through handouts. Intensive studying just before an exam (cramming) will not compensate for daily preparation. If you are unable to devote at least 6 hours per day, you are advised not to take the course. Unless otherwise noted by your instructor, you are encouraged to work with others as frequently as possible on material for this class. \*All ALEKS assessments must be completed independently without the use of notes, handouts, or any other references.

**Incomplete Grades:** A grade of incomplete means that an event has occurred that is preventing the student from completing the coursework needed to earn a grade. There are two conditions for receiving an incomplete. First, there must be some extreme circumstance that justifies the "I" grade, and second, **the student must be passing the course**. It should be understood that if a student meets these two conditions, they will only be allowed to finish the coursework that they were unable to complete. An "I" grade does not erase grades on exams, quizzes, homework, etc. that were completed before the "I" grade is issued. Students have only one semester to complete the course. Final arrangements must be made with the Department's Director.

**Participation:** You will be expected to access UBLearn and ALEKS daily. Learning is an active, not passive endeavor.

**Office Hours:** The instructor will be available virtually during the scheduled office hours listed above. If additional assistance is needed, students may request an appointment.

**Use of CELL PHONES and SMART WATCHES are strictly prohibited during exams.**

## Academic Integrity

As defined in the Undergraduate Catalog, academic dishonesty consists of cheating, fabrication, facilitating academic dishonesty, and plagiarism. Instances of this include submitting someone else's work as your own, submitting your own work completed for another class without permission, or failing to properly cite information other than your own. The list above is not all inclusive. Any form of academic dishonesty will not be tolerated, and any sign of academic dishonesty will be reported to the appropriate University officials.

The University has a responsibility to promote academic integrity and develop procedures to effectively deal with academic dishonesty. Any form of academic dishonesty will be handled in accordance with the UB Undergraduate Policy regarding academic integrity. The Academic Integrity policy can be viewed here: <http://undergrad-catalog.buffalo.edu/policies/course/integrity.shtml>

Any form of plagiarism will result in a grade of "F" for that assignment. Any second form of plagiarism will result in a grade of "<F>" in the course.

## Reasonable Accommodation

If you have a disability and may require some type of instructional and/or examination accommodation, please inform Instructor early in the semester so that we can coordinate the accommodations you may need. If you have not already done so, please contact the Accessibility Resources office. The office is located at 60 Capen Hall and the telephone number is (716) 645-2608.

(<http://policy.business.buffalo.edu/Policy%20Library/Reasonable%20Accommodation.pdf>)

## Important Dates: WINTER 2018 Semester

Thursday, January 4

Winter 2018 *classes begin*

**Friday, January 5**

**LAST DAY TO DROP/ADD COURSES**

Monday, January 15

Martin Luther King, Jr. Day, observed

**Thursday, January 18**

**LAST DAY TO RESIGN WITH "R" GRADE**

**Wednesday, January 24**

**Last Day of Classes**