

Course outline for MATH 0006 B  
School of Mathematics and Statistics  
Carleton University

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Winter 2021

## 1 Topics to be covered

Angles and the unit circle; Radian measures; Definitions of trigonometric functions; Analytic trigonometry; Graphs, inverse trigonometric functions; Trigonometric equations; Complex numbers; Polar coordinates

## 2 Prerequisites

Grade 11 Functions, or MATH 0005, or equivalent. **It is essential to meet the requirements.**

## 3 Textbook

there is no particular textbook. In addition to online lectures, the following free book is a good reference:  
Trigonometry, by Michael Corral (downloadable at <http://www.mecmath.net/trig>)

## 4 Course structure & schedule

We will have two lectures each week that are Monday and Wednesday from **13:05** to **14:25**. The Monday lectures are going to be live sessions and for Wednesdays you will have prerecorded lectures that are going to be uploaded. For the live sessions we will meet on Zoom and the invitation link will be provided each time.

**Tutorials** sessions are on Wednesday **16:35-17:25**—, [starting Jan 27](#). Tutorial sessions are live and through Culearn using BBB (It may changes depending on preference of TAs).

**Office hours** of TAs and myself will be announce later but they will be using BBB or Zoom depending on preferences of TAs.

## 5 Course garde policy

The grade is composed of term performance and final exam as follows:

- **Assignments (11 assignments and the best 8 grades will be considered)**—————40%
- **Tests (4 tests and the best 3 grades will be considered)**—————30%
- **Final**—————30%

**Assignments** are going to be uploaded each week on Wednesday, starting week 2 and they are due on Sunday at 11 : 59. So the due dates are Jan 24, Jan 31, Feb 7, Feb 14, Feb 28, March 7, March 14, March 21, March 28, April 4, April 11.

**Tests** are going to be on Wednesdays at your tutorial time and the dates are Jan 27, Feb 10, March 10, March 31. They are multiple choice questions and are done through Culearn for 50 minutes each.

**The final exam** date and time will be determined by the university but the format is like other tests in multiple choice questions and it will be a test for 3 hours through Culearn.

## 6 For your attention

- Students must respect the principles of academic integrity. For the university policy see <https://carleton.ca/secretariat/wp-content/uploads/Academic-Integrity-Policy.pdf>.
- Only basic (no smartphones, no-programmable, etc.) calculators are allowed for tests and for the final exam.
- It is each student's responsibility to be available at the time of the examination. In particular, no travel plans should be made until the examination schedule is published. It is each student's responsibility to find out the correct date and time of the exam.
- Students who miss the examination may be eligible for a deferred exam. Application for a deferral must be made, with appropriate documentation, to the Registrar's Office.
- Students with disabilities requiring academic accommodations in this course are encouraged to contact the [Paul Menton Center](#) to complete the necessary forms.
- Students with religious or pregnancy needs are welcome to contact me directly.

### Course outline for Winter 2021

Week	Tests	Sections	Tentative list of topics
1		1.1-1.2, 4.1	Angles; Radian and Degree measure; Trigonometric functions of acute angles; Multiplies of 30, 45
2		1.3,1.4	Solving right triangles; Trigonometric functions of any angle;
3	Test 1-Jan 27	1.5,3.1	, Basic trigonometric identities; Rotations and reflections of angles; Verification of identities;
4		3.2	Sum and difference identities
5	Test 2-Feb 10	3.3	Double-angle and half-angle
6		No classes	Hoooooray!
7		3.4,5.1	Other identities, product-to-sum, sum-to-product; Graphing the trigonometric functions;
8		5.2	Properties of graphs
9	Test 3-March 10	5.3	Inverse trigonometric functions
10		6.1	Trigonometric equations,
11		6.1, 6.2	Trigonometric equations(cont), Numerical methods
12	Test4-March 31	6..3	Complex Numbers
13		6.4	Polar Coordinates, Review