## MATH 0006B – Precalculus: Trigonometric Functions and Complex Numbers – Winter 2018

School of Mathematics and Statistics, Carleton University

**Instructor:** Dr. Lucy Campbell **Office**: 4269 Herzberg Building

Office hours: To be decided

**Phone:** 520-2600 Ext. 1208

E-mail: campbell@math.carleton.ca

Web-page: http://www.math.carleton.ca/~campbell

**Course web-site:** http://www.math.carleton.ca/~campbell/MATH0006 Also on **cuLearn:** https://www.carleton.ca/culearn

Please only contact me through your Carleton email account or through cuLearn. Email from any other account runs the risk of being summarily deleted as spam.

Lectures: Wed/Fri 10:00–11:30, in Southam Hall 316, starting Jan 10.

Tutorials: Fri 11:30-12:30 in Southam Hall 406, starting Jan 19.

Prerequisites: Grade 11 Functions (University/College Preparation), or MATH 0005, or equivalent.

## **Topics:**

Angles and the unit circle, radian measure. Definitions of trigonometric functions. Fundamental relations, Law of Sines and Cosines. Analytic trigonometry, graphs, inverse functions. Trigonometric identities and equations. Applications in science and engineering. Complex numbers in polar form, de Moivre's Theorem, n-th roots of complex numbers.

**Textbook:** Trigonometry, Michael Corral (Download free from http://www.mecmath.net/trig) Additional reference: An introduction to complex analysis, R. P. Agarwal, K. Perera, S. Pinelas (Download free via the Carleton network from: http://link.springer.com/book/10.1007%2F978-1-4614-0195-7)

## Grading scheme:

10~%- Quizzes

40~% — Two 50-minutes tests during the tutorials on Fri, Feb 9 and Fri, Mar 16

50~% — A 3-hour final examination scheduled during the Winter Term exam period.

Students who wish to review their final examination paper must do so by May 15, 2018. This privilege is for educational purposes and not an opportunity to argue about the marking.

Winter Break: There will be no classes from Feb 19–23.

## Academic Accommodation:

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodation in this course, please contact the PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation for the formally-scheduled exam (if applicable).

For pregnancy or religious obligations, write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.