

**Mathematics 3410 3.0 Complex Variables**  
**Winter 2020**  
**Tuesdays and Thursdays**  
Time: 1:00 p.m.–2:20 p.m.  
Place: HNE 037

**Course Coordinator:** Professor M. W. Wong  
**Office:** N530 Ross Building  
**Office Hours:** Tuesdays and Thursdays: 2:30 p.m. - 4:00 p.m  
**Telephone:** (416) 736-2100 Ext: 33946  
**Website:** <http://mwwong.info.yorku.ca>

**Textbook:** M. W. Wong, Complex Analysis, World Scientific, 2008

**Syllabus:** Chapters 1–18

**Course Objectives:** This is a first undergraduate course in complex analysis. The prerequisites are 3-semester undergraduate courses in calculus such as the sequence MATH1300-1310-2310 or the sequence MATH1013-1014-2015. We start with complex numbers and aim at evaluating definite integrals of a more complex nature than those in first-year calculus using the Cauchy integral formulas and the Cauchy residue theorem. Taylor series and Laurent series are means to an end in residues and are studied carefully. Students are expected that by the completion of the course to understand the concepts of and solve problems on holomorphic functions, Cauchy-Riemann equations, Cauchy's integral formula, power series, Taylor series and Laurent series, the calculus of residues with applications in evaluating more sophisticated definite integrals in higher mathematics.

Assignments (20%); Two 75-minute term tests (20% each); Final Exam (40%)

**Important Dates:**

First Day of Class: Tuesday, January 7, 2020

Last Day of Class: Thursday, April 5, 2020

Test 1: Thursday, February 13, 2020

Test 2: Thursday, March 19, 2020

Final Exam: To be announced

- There will be no make-up tests. Students missing a test with a good reason can request that the weight of the test be transferred to the final exam.
- No extensions on assignments will be allowed. Students are required to submit each assignment at the beginning of class on the due date.
- No aids of any sort are allowed in class tests and in the final exam.