

PURE MATH 352
Fall, 2009
MWF 8:30-9:20 (sorry!)

INSTRUCTOR: Nico Spronk OFFICE HOURS: Monday 3:30-5:30pm
EMAIL: nspronk@uwaterloo.ca Wednesday 3:30-5:30pm
PHONE: 519-888-4567, ext. 35559 (or by appointment)
OFFICE: MC 5078
URL: <http://www.math.uwaterloo.ca/~nspronk/math352/math352.html>

TEXTBOOK: *Complex Made Simple*, David C. Ullrich, Graduate Studies in Mathematics, Vol. 97, American Mathematical Society, Providence RI, USA

COURSE OUTLINE: Structure of the complex numbers; differentiable functions: Cauchy-Riemann equations; theorems of Cauchy, Goursat, Morera: power series/analyticity; Liouville's theorem; maximum modulus principle, singularities; logarithms, winding numbers, generalised Cauchy theorem, Laurent series, calculus of residues; open mapping theorem; conformal maps, Schwarz's lemma. Time permitting, we will touch upon the Riemann mapping theorem and/or analytic continuation.

GRADING:

Homework	20%	given about every 5 lectures, with due dates indicated on each assignment
Midterm Exam	30%	(tentatively) Friday, October 30, 4-6pm
Final Exam	50%	

Assignments will be handed out in class, and also made available through the website (URL above). Though the assignments will be graded by graduate teaching assistants, the instructor will personally deal with questions about the assignments, including questions about grading. The instructor will grade the exams.

ACADEMIC INTEGRITY: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.

[Check www.uwaterloo.ca/academicintegrity/ for more information.]

GRIEVANCE: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

DISCIPLINE: A student is expected to know what constitutes academic integrity to avoid committing academic offenses and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the undergraduate associate dean. For information on categories of offenses and types of penalties, students should refer to Policy 71, Student Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>. For typical penalties check Guidelines for the Assessment of Penalties, <http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm>.

APPEALS: A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72, Student Appeals, <http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>.

NOTE FOR STUDENTS WITH DISABILITIES: The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.