MATH 1200 Elements of Discrete Mathematics Winter 2011

Instructor: Dr. M. Davidson 431 Machray Hall 474 8090 davidsom@cc.umanitoba.ca

Lectures: 12:30 - 1:20 MWF: 408 Tier

Tutorials: Beginning January 11.

Office Hours: 9:30 - 10:30 Monday, Wednesday 3:00 - 4:00 Tuesday

Textbook: Elements of Applied Mathematics, by D.W. Trim

Course Outline:

- 1.1–1.2: Mathematical Induction and Sigma Notation
- 2.1–2.6: Recursively defined sequences, monotonic and oscillating sequences, first-order difference equations, limits of sequences.
- **3.1–3.4**: Complex numbers, roots of polynomial equations.
- 4.1–4.4: Approximating roots, bisection, linear interpolation, successive substitutions.
- 5.1–5.4: Trigonometric functions and identities.
- 5.9–5.12:

Numerical solutions of trigonometric equations, polar representation of complex numbers, second-order linear difference equations and applications.

Course Website:

 $http://home.cc.umanitoba.ca/{\sim}davidsom$

| Evaluation of Student Performance: | Tutorial Tests | 15% |
|---|---------------------|-----|
| | Midterm Examination | 25% |
| | Final Examination | 60% |
| | Final Examination | 60% |

Tutorial Tests:

There will be five (5) tests written during the tutorials. They will be scheduled appoximately every other week. The best four (4) of five (5) will be worth 15 % of your grade. There will be NO MAKE-UP TESTS given.

Midterm Examination:

A midterm test is scheduled in class for Friday March 4^{th} . NO MAKE-UP MIDTERM WILL BE GIVEN

Notes:

- The Voluntary Withdrawal Deadline is Friday, March 18th
- If you miss a tutorial test or midterm examination, you will be assigned a grade of 'zero' unless reasons and acceptable supporting evidence are provided.

Calculators:

You must own an electronic calculator (single line display only) that has trigonometric and inverse trigonometric functions. Programmable and graphing calculators will not be allowed during any of the tests and examinations.

Note on Academic Honesty

The Department of Mathematics, the Faculty of Science and the University of Manitoba regard acts of academic dishonesty in quizzes, tests, examinations or assignments as serious offenses and may assess a variety of penalties depending on the nature of the offense.

Acts of academic dishonesty include bringing unauthorized materials into a test or exam, copying from another student, plagiarism and examination personation. Students are advised to read section 7 (Academic Integrity) and section 4.2.8 (Examinations: Personations) in the "General Academic Regulations and Requirements" of the current Undergraduate Calendar. Note, in particular that cell phones and pagers are explicitly listed as unauthorized materials, and hence may not be present during tests or examinations.

Penalties for violation include being assigned a grade of zero on a test or assignment, being assigned a grade of "F" in a course, compulsory withdrawal from a course or program, suspension from a course/program/faculty or even expulsion from the University. For specific details about the nature of penalties that may be assessed upon conviction of an act of academic dishonesty, students are referred to University Policy 1202 (Student Discipline Bylaw) and to the Department of Mathematics policy concerning minimum penalties for acts of academic dishonesty.

The Student Discipline Bylaw is printed in its entirety in the Student Guide, and is also available on-line or through the Office of the University Secretary. Minimum penalties assessed by the Department of Mathematics for acts of academic dishonesty are available on the Department of Mathematics web-page.

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All Faculty members (and their teaching assistants) have been instructed to be vigilant and report incidents of academic dishonesty to the Head of the Department.