DEPARTMENT OF MATHEMATICS

MATH 2132   ENGINEERING MATHEMATICAL ANALYSIS

September – December   2007

A01: **Instructor:** G.I. Moghaddam,429 Machray Hall, 474-6849, e-mail: moghadm@cc.umanitoba.ca

Office hours: Mondays 11:30 AM - 12:30 PM, Wednesdays 11:30 AM - 12:30 PM, and Fridays 10:30 AM - 11:30 AM

Lecture: E2-350, Slot 1 (8:30–9:20 AM) Mon., Wed., and Fri.

Tutorial B01: E2-350, Slot 9 (11:30–12:45) Thurs.

Textbook: *Calculus for Engineers* third or fourth edition, Donald Trim, Prentice-Hall

Course Outline:

Infinite series: Power series, Taylor and Maclaurin series with application. (Trim, Chapter 11 in edition 3, Chapter 10 in edition 4)

Differential Equations: Separable, linear first order and linear n^{th}-order differential equations with applications. (Trim, Chapter 16 in edition 3, Chapter 15 in edition 4)

Laplace Transforms: Properties of Laplace Transforms and solutions of differential equations (Supplementary notes in the library)

Information about which sections/topics in the text are required material will be given in lectures. Students are advised to do as many of the exercises (in assigned sections) as possible. Difficulties will be addressed in the tutorial sessions.

Tests: Two 60-minute tests will be administered in the tutorial sessions on the following dates:
October 4 and November 8

Calculators and/or reference material will NOT be allowed on tests or final examination.

Evaluation:

The two tests will each count 20% of the final grade.

A three hour final examination, to be scheduled by the Student Records Office, will count for the remaining 60% of the final grade.

Students with a grade of less than 40% on the final examination will be assigned a final grade of F irrespective of term work.

Notes:

(1) If you miss a test, you will be assigned a mark of "zero" unless reasons and acceptable supporting evidence are provided. Make-up tests will not be scheduled for missing tests.

(2) Students are advised to familiarize themselves with the General Academic Regulations of the University contained in the Undergraduate calendar. All forms of academic dishonesty are treated very seriously by the Department of Mathematics, the Faculty of Science, and the Faculty of Engineering. Submitting another person's work as your own, copying from another person at an exam, or bringing unauthorized information into a test or examination is a serious offense. For further information, please see reverse.

(3) Voluntary Withdrawal Deadline is November 14, 2007.

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.

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.