MATH MODELS I (201-171-92)
Dawson College - Math Department
FALL 08
PONDÉRATION: 3-2-3

PREREQUISITE:
Registration in Electrotechnology

OBJECTIVES:
This course is designed, in consultation with the Electrotechnology Department, to raise the mathematical abilities of students to the level required for study in the electrotech program. This course consists of a review and expansion of high school material (algebra, trigonometry, logs and exponential functions) with special reference to electronics applications, and with the addition of complex numbers. The sequence of topics is designed to mesh with the electonics courses offered concurrently by the Electrotechnology Department.

TEXTBOOK:
The official textbook for the course is:
Basic Technical Mathematics (With Calculus) SI Version (8th Edition), by Allyn J. Washington, Pearson, ISBN: 0-321-30689-9

COURSE TOPICS & HOMEWORK

REVIEW OF ALGEBRA (7 WEEKS)
Calculators (Appendix C)
Algebra and word problems (Chapter 1)
Functions and Graphs (Chapter 3)
Simultaneous Equations (Chapter 5, Sections 1-4,6)
Rational Equations (Chapter 6)
Quadratic Equations (Chapter 7, Sections 1,3,4)
TRIGONOMETRY (3 WEEKS)
Plane Trigonometry (Chapter 4)
Radians and Trigonometric equations (Chapter 8)
LOGS AND EXPONENTIAL FUNCTIONS (3 WEEKS)
Logarithms and exponential functions (Chapter 13, Sections 1-6)
COMPLEX NUMBERS (2 WEEKS)
Complex numbers (Chapter 12, Sections 1-6)

CALCULATOR:

A good scientific calculator, one with <u>algebraic entry, editing and complex number features</u> is required in class, on class tests and on the final exam. Mixed logic calculators (to be explained in class) are banned.

METHODOLOGY:

Explanatory presentations, followed by in class problem sessions and supplemented by take-home assignments. Should you have difficulties with a particular topic, then you should do extra problems from the textbook, when that topic is covered in class. Anything you can't do, bring to me in my office.

Problem solving is an essential component of this course. You will be expected to solve word problems, and to present your solutions to these and all other problems in a clear, logical and coherent fashion. Answers should be clearly stated, with appropriate units of measurement included. Marks may be deducted for work that is inadequate in these respects.

EVALUATION:

Grading will be based on:

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50% Final Exam
50% Term Work

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*A student with a term mark of 45/50 or higher will be exempted from writing the final exam

The final exam is a 3-hour comprehensive exam, held during the final exam period. A formula sheet will be provided for the final exam. Calculators with text storage should be cleared prior to the start of the exam . (Term work is detailed in the teacher specific supplement, appended)

PONDERATION (3-2-3):

These numbers refer to the minimum amount of time that you are expected to invest in the course each week. The first number refers to lectures; the second, to "labs", which in the math department generally means another lecture. The third number refers to the study time and homework assignments. If your math background is Math 536, Math 526 or the equivalent, this should be adequate to insure a good mark in the course. If your math background is Math 436, Math 512 or equivalent, then you should increase the homework to <u>at least 5 hours a week</u>.

POLICY AND PROCEDURES:

You should inform yourself of the college wide policies and procedures here at Dawson College. In particular, you should read the definitions of cheating and plagiarism, (appended), and the policies on students' rights and obligations, outlined below. In this regard, it must be emphasized that cheating and plagiarism are serious academic offences. Penalties for such offences up to failure in a course are within the jurisdiction of the teacher and could include expulsion from the college.

STUDENTS' OBLIGATIONS:

(a) Students have an obligation to remain informed about what takes place in their regularly scheduled classes. Absence from class does not excuse students from this responsibility.
(b) Students have an obligation to arrive on time and remain for the duration of scheduled classes and activities.
(c) Students have an obligation to write tests and final examinations at the times scheduled by the teacher or the College. Students have an obligation to inform themselves of, and respect, College examination procedures.
(d) Students have an obligation to show respectful behaviour and appropriate classroom deportment. Should a student be disruptive and/or disrespectful, the teacher has the right to exclude the disruptive student from learning activities (classes) and may refer the case to the Director of Student Services under the Student Code of Conduct.
(e) Cellular phones, pagers and musical listening devices have the effect of disturbing the teacher and other students. All these devices should be turned off. Students who do not observe these rules will be asked to leave the classroom.
(f) Cell phones must also be put away. Text messaging is not allowed in class.
Policy on Cheating and Plagiarism

RELIGIOUS HOLIDAYS:

Students who wish to observe religious holidays must inform each of their teachers in writing within the first two weeks of each semester of their intent to observe the holiday so that alternative arrangements convenient to both the student and the teacher can be made at the earliest opportunity. The written notice must be given even when the exact date of the holiday is not known until later. Students who make such arrangements will not be required to attend classes or take examinations on the designated days, nor be penalized for their absence. It must be emphasized, however, that this College policy should not be interpreted to mean that a student can receive credit for work not performed. It is the student's responsibility to fulfil the requirements of the alternative arrangement.

CHEATING IN EXAMINATIONS, TESTS, QUIZZES:

Cheating includes any dishonest or deceptive practice relative to formal final examinations, in-class tests, or quizzes. Such cheating is discoverable during or after the exercise in the evaluation process by the instructor. Such cheating includes, but is not limited to
a. copying or attempting to copy another's work.
b. obtaining or attempting to obtain unauthorized assistance of any kind.
c. providing or attempting to provide unauthorized assistance of any kind.
d. using or possessing any unauthorized material or instruments which can be used as information storage and retrieval devices.
e. taking an examination, test, or quiz for someone else.

f. having someone take an examination, test, or quiz in one's place.

UNAUTHORIZED COMMUNICATION:

Unauthorized communication of any kind during an examination, test, or quiz is forbidden and subject to the same penalties as cheating.

PLAGIARISM ON ASSIGNMENTS AND THE COMPREHENSIVE ASSESSMENT:

a.Plagiarism is the presentation or submission by a student of another person's assignments or Comprehensive Assessment as his or her own. Students who permit their work to be copied are considered to be as guilty as the plagiarizer.

b. Falsifying lab reports or any facts or sources in any assignment is considered to be cheating.

c. Preparing an assignment for someone else or having someone else prepare an assignment is considered to be cheating

d. The dishonest claim to have submitted work which in fact was never submitted to the instructor is considered to be cheating.

e. Making false representation which may affect a grade (e.g. submitting a false medical certificate), is considered to be cheating.

SPECIAL QUALIFICATIONS FOR MATH 171 AND 271

1- Programmable and graphing calculators are permissible in Math 171 and Math 271, despite the college policy on information storage and retrieval devices.

2- You may ask me, other teachers, and other students for help on your weekly assignments. BUT this does not mean copying their work. Remember, the assignments are designed to give you and me feedback on how you are doing; a copied assignment subverts that intention.

3- My assistance to you during a class test or final exam will be confined to two things:

- Clarification of a symbol (e.g. "is this symbol a small case "L" or a number 1?)
- Translation of an English word of phrase for a student whose mother tongue is not English

I WILL NOT answer questions such as "Is this right?"

MATH MODELS I (201-171-92)

Fall 2008
IMPORTANT INFORMATION

INSTRUCTOR:
Emilie RICHER, ericher@dawsoncollege.qc.ca
OFFICE 7.B.13
Phone: 514-931-8731 EXT 1719

CLASS SCHEDULE:
Mondays: 12-2 PM (room 7.B.2)
Wednesdays: 10-11:30 AM (room 4.H.10)
Fridays: 11:30AM - 1 PM (room 4.H.10)

WEBSITE:
The course outline as well as announcements, office hours, assignments and updates will be posted at **WWW.OBEYMATH.ORG.** You should check the website on a regular basis for any information pertaining to the course.

OFFICE HOURS:OFFICE HOURS/EXTRA HELP:
Held either in my office 7B.13 or in the math tutorial room 7B.1
Tuesdays 2:30pm - 4pm
Wednesdays 11:30am - 2pm
Thursdays 3pm - 4pm
Fridays 1pm - 2pm & 2:30pm - 4pm

TERM WORK:
There will be 3 class tests (1.5 hours in duration) worth 13% of the final mark each and 11 take home assignments worth 1% of the final mark each.

The assignments will consist of a set of problems distributed each week in class (also available on the course website). You are to submit your written solutions to these assigned problems no later than the beginning of class, one week later.

NOTE: TEST DATES ARE FIXED (SEE DATES BELOW) . THERE WILL BE NO RETESTS. UPON PRESENTATION OF A VALID MEDICAL NOTE THE WEIGHT OF THE MISSED TEST/QUIZ WILL BE TRANSFERRED TO THE WEIGHT OF THE FINAL EXAM

CLASS TEST DATES (Fixed):

TEST 1: Friday Oct. 3rd
TEST 2: Friday Nov. 7th
TEST 3: Friday Dec. 5th

CELL PHONES

DO NOT use your cell phone while you are in class. Turn your cell phone off when you arrive to class. If your phone rings while you are in class, please turn it off as quickly as possible (don't answer it!). If you are caught text messaging or talking on the phone you will be asked to leave the classroom for the duration of the lecture.

CHEATING

If you are caught cheating or if you are suspected of cheating you will be reported to the Dean. During tests, you should avoid any suspicious behaviour. This means absolutely no talking, eyes on your test at all times, no sharing erasers or calculators etc.

FALLING BEHIND

If for any reason you miss class, it is imperative that you do not fall behind. It is YOUR RESPONSIBILITY to make up any missed material, whether you have a valid reason for missing class or not. You should get the class notes from a fellow student, then you should attempt to learn the missed material. This includes reading the notes and attempting related homework exercises. Once you have done these two things, if you are still having trouble understanding the material you should come to my office hours where we can work together. Do not come to office hours however, expecting me to reteach the lecture that you missed.