

THE UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
 Department of Mathematics and Statistics
COURSE INFORMATION SHEET

1. **Course: AMAT 307 - Differential Equations for Engineers**

Fall 2004

| <u>Lecture</u> | <u>Days</u> | <u>Time</u> | <u>Location</u> | <u>Instructor</u> | <u>Office</u> |
|----------------|-------------|-------------|----------------------------------|-------------------|---------------|
| L01 | MWF | 10:00 | ENA 101 | L. Bos | MS 320 |
| | | | email: lpbos@math.ucalgary.ca | | |
| T01 | R | 09:30 | ENA101 | | |
| L02 | MWF | 09:00 | ICT 102 | K.W. Chang | MS 426 |
| | | | email: kchang@math.ucalgary.ca | | |
| T02 | T | 09:30 | ENA 101 | K.W. Chang | |
| L03/05 | MWF | 15:00 | ENA 101 | B. Brenken | MS 372 |
| | | | email: bbrenken@math.ucalgary.ca | | |
| T03/05 | T | 14:00 | ICT 121 | B. Brenken | |
| L04/06 | MWF | 14:00 | ENA 103 | D. Holland | MS 374 |
| | | | email: dholland@math.ucalgary.ca | | |
| T04/06 | R | 09:30 | ICT 121 | D. Holland | |

2. **Prerequisite(s): Amat 219 and Math 221** **Corequisite: None**

NOTE: The Faculty of Science policy on pre- and co-requisite checking is outlined in the current University Calendar (see www.ucalgary.ca/pubs/calendar), *Faculty of Science, Section 5C*. **It is the student's responsibility to ensure that they have the pre- and/or co-requisites for the course, and if they do not they will be withdrawn from the course without further notice.**

3. **Fee Policy:** After the last day to drop/add courses, there will be no refund of tuition fees if a student withdraws from a course, courses or the session.

4. **The University policy on grading and related matters** is described in the current University Calendar, *Academic Standings*. In determining the overall grade in the course, the following weights will be used:

| | |
|------------------------------------|------------|
| Webwork Homework (10) | 10% |
| Mid-term Test (1 1/2 hours) | 25% |
| Quizzes (5) | 15% |
| Final Exam | 50% |

There will be a final examination scheduled by the Registrar's Office. Students must obtain at least a grade "D" on the final examination in order to obtain an overall final grade of D or better.

5. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are outlined in the current University Calendar, *Faculty of Science, Section 6A*. It is the student's responsibility to familiarize herself/himself with these regulations.

6. **Academic misconduct** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the current University Calendar under the heading "Student Misconduct", page 53.

7. There will be **one** out-of-class common mid-term examination scheduled by the Faculty of Engineering. **Regularly scheduled classes have precedence over any out-of-class- time-activity.** If you have a conflict with this out of class time activity, please inform your instructor at least one week in advance of the activity so that other arrangements may be made for you.

8. **Text:** *Elementary Differential Equations* by W. Kohler and L. Johnson, Addison-Wesley.
9. **Calculators:** The use of calculators in tutorials, test, or final examination is **not** permitted.
10. **Homework & Quizzes:** Homework problems will be assigned (approximately) weekly. These are to be completed using the computer homework system WEBWORK which can be accessed at <http://www.math.ucalgary.ca/webwork>. Each student will have an account and the assignments can be done from any computer with web access. Your answers to the assignment questions will be checked and marked (by the computer) on a right/wrong basis. We will give more details about the system and how to use it during the term.

The weekly tutorials are each of 75 minute duration. If you have problems with any questions you can ask your tutorial instructor for help during this time. In addition, during five of these tutorials (roughly every other week; see the course schedule) there will be a *written* quiz of 50 minutes duration. The emphasis in these quizzes will be on *how* you got your solutions. You will be asked to show all your work, in a clear, organized manner and this is what you will be graded on.

The Midterm and Final Exam will be a combination of the two types of questions; there will be a section of “short answer” questions where you will get full marks for a correct answer and a section of “long answer” questions where you must explain your solution, step by step.

11. There is a webpage for this course:

www.math.ucalgary.ca/~lpbos/amat307/f04/f04.html.

Information about the course (including this outline!) will be posted there.

SCHEDULE

| WEEK NUMBER | DATE | SECTIONS OF TEXT | TEST/QUIZ |
|----------------|-------------|---|-----------|
| 1 | S 08 - S 10 | 1.1, 1.2, 2.1 | |
| 2 | S 13 - S 17 | 2.1, 2.2, 2.3 | |
| 3 | S 20 - S 24 | 2.4, 2.5 | Quiz |
| 4 | S 27 - O 01 | 3.2, 3.3, 3.5 | |
| 5 | O 04 - O 08 | 4.1, 4.2, 4.3, 5.3 | Quiz |
| 6 | O 11 - O 15 | Thanksgiving Day: Monday, Oct 11, 4.4, 4.5, 4.6 | |
| 7 | O 18 - O 22 | 5.4, 4.8, 4.9 | Quiz |
| 8 | O 25 - O 29 | 4.10, 5.5 | MIDTERM |
| 9 | N 01 - N 05 | 6.1, 6.3, 6.4, 6.5 | |
| 10 | N 08 - N 12 | 6.6, 6.7, 6.8, Reading Days: Nov 11 – 12 | |
| 11 | N 15 - N 19 | 7.1, 7.2 | Quiz |
| 12 | N 22 - N 26 | 7.3, 10.1 | |
| 13 | N 29 - D 03 | 10.1, 10.2, 10.3 | Quiz |
| 14 | D 06 - D 09 | 10.3, 10.4 | |

NOTES:

1. The section numbers refer to the text by Kohler and Johnson. Some departures from this schedule may take place.
2. The Midterm is scheduled for Tuesday, October 26, 6:30pm–8:00pm. No Calculators will be allowed.
3. By the end of each week you should have mastered the sections of the text indicated on the course schedule and the corresponding assignment. You should prepare for each lecture by reading the text and for each tutorial by attempting to do as many exercises as possible in advance. Math is like weight-lifting – the more reps you do, the stronger you get! In addition to the assigned WEBWORK problems there are many problems in the textbook that you can try. The answers to the odd-numbered exercises are given in the back of the book, so we recommend that you try these first. Your lectures will not necessarily cover everything in detail; they should guide you in your study of the text. Similarly, your tutorial instructor should help you diagnose your difficulties and teach you how to overcome them.

Department Approval: _____ Date: _____

Assoc. Dean's Approval for out of regular class time activity: _____ Date: _____