MATHEMATICS 201 Section [A03 CRN 27803]
COURSE OUTLINE January, 2012

INSTRUCTOR

Dr. Frederick H. Willeboordse (fhw@uvic.ca) SSM A438. Phone: 721-6332. Please note that the phone does not have a "message waiting" feature, so if you are asked to leave a message please send an e-mail instead. Time of office hours to be decided.

TEXT

A First Course in Differential Equations by Dennis G. Zill (Eighth edition, 2005, or Ninth edition, 2009). Used copies of either edition may be available from the U.Vic Bookstore (at 75% of the new price), or from SubText, the student-run bookstore in the Student Union Building (where the person offering their book for sale sets their own price). Copies of the complete solutions manual, for both the Eighth and Ninth editions, have been placed in the Reserve Reading Room of the Library. They are available on a two-hour loan basis.

PREREQUISITES

Math 101. Note: Credit will be granted for only one of 201, 202. If all three of 200, 201 and 202 are taken, credit will be given only for 200 and 201.

TOPICS COVERED

First order equations; linear second order equations, and two-dimensional systems of linear equations with constant coefficients; elementary qualitative methods; numerical Euler and Runge-Kutta methods; Laplace transform; power series solutions about ordinary points; applications.

In cases where the use of a calculator is allowed on a test in a Mathematics or Statistics course, the standard, and only, calculator that may be used is the Sharp EL-510R. It may be purchased at the Bookstore (for example) for about $10, plus taxes.

TEXT SECTIONS

Chapter	Sections
1	1 - 2
2	1 - 5
3	1 - 2
4	1 - 4, 6 - 7, 9 (Example 1 and 2 only)
5	1
7	1 - 5
6	1
8	1, 2
9	1,2

LECTURES

There are three hours of lectures each week. This course, in particular, will require several more hours each week outside of classroom time.

TUTORIALS

Math 201 has a one-hour weekly tutorial component, which you should regard as the fourth hour of instruction for which you have paid. The first tutorial session takes place in the second week of class. You will hand in homework at the tutorials, and write both of the midterms there as well. Students in tutorials will be divided up into small problem-solving groups. The problem-solving techniques and methods presented in the tutorial will be precisely the same type that will be required for the final examination.The topics to be discussed in each tutorial are indicated on the COURSE SCHEDULE. It is important that you have attempted the related REQUIRED PROBLEMS for the sections to be discussed BEFORE you go to the tutorial, so that you can take part in the group discussions. It is also important that you participate in the tutorial discussions as some topics and techniques may ONLY be discussed in the tutorial. Many students find Math 201 to be a difficult course. You should plan on 100% attendance at the lectures and the tutorials, as well as completing all homework, to maximize your likelihood of passing the course.

EXAMINATIONS

There will be a three hour final examination scheduled by the University and two midterms held in your tutorial in the weeks of February 6 - 10 and March 5 - 9, 2012. Each midterm counts toward 15% of your final grade.

Assignments will be handed in regularly, as indicated on the Course Schedule, and graded. There will be a list of Required Problems from the textbook which you work through, checking your answers, but do not hand in. Off-schedule Final Examinations are not given except in accordance with the regulations on *Illness, Accident or Family Affliction at Exam Time* in the U.Vic. Calendar. Deferred status is granted only for Final Examinations. If you have a legitimate reason for missing a midterm (with documentation), then your performance on the rest of the term's work, not including the final examination, will be used to compute a numerical score for the missed midterm. There will be no make-up midterms. Your grade will be determined by assigning 30% credit to the midterms, 10% to the assignments and 60% credit to the final examination

FINAL GRADE

Math 201 is a multi-section course. In order to ensure fairness to students, all sections of the course will be using the same method of evaluation described above. In addition, consistent testing standards across sections will be maintained. All sections will write the same final examination, and all sections will have the same assignments.

Final Examination:

Off-schedule final examinations (i.e., deferred examinations) are given only in accordance with the university policy as outlined in the Calendar. If you are unable to write a final examination due to illness, accident or family affliction, please refer to the following webpages for detailed instructions how to proceed: http://web.uvic.ca/calendar2011/FACS/UnIn/UARe/AcCo.html and http://web.uvic.ca/calendar2011/FACS/UnIn/UARe/DeSt.html..

The following scale is customarily used to convert numerical scores to final grades: (The Department reserves the right to modify this conversion scale.)

90 – 100 A+	85 – 89 A	80 – 84 A-	75 – 79 B+
70 – 74 B	65 – 69 B-	60 – 64 C+	55 – 59 C
50 – 54 D	0 – 49 F		

Release of Grades: This topic is covered in detail on p. 37 of the 2011 - 2012 U.Vic Calendar.

Students are strongly advised not to make plans for travel or employment during the final examination period (Tuesday, April 10, 2012, to Wednesday, April 25, 2012, inclusive) as special arrangements will not be made for examinations that conflict with such plans. Please note that low cost airline tickets, family reunions, weddings and vacations definitely DO NOT fall under the Calendar regulations for obtaining a deferred final examination.

Guidelines on Religious Observances

Where classes or examinations are scheduled on the holy days of a religion, students may notify their instructors, at least two weeks in advance, of their intention to observe the holy day(s) by absenting themselves from classes or examinations. Instructors will provide reasonable opportunities for such students to make up work or missed examinations.

Commitment to Inclusivity and Diversity

The University of Victoria is committed to promoting, providing and protecting a positive, supportive and safe learning and working environment for all its members.

Academic Integrity

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. The University's policy on academic integrity can be found at http://web.uvic.ca/calendar2011/FACS/UnIn/UARe/PoAcI.html

Attendance:

Students are expected to attend classes and the course is conducted on that basis. If you miss an announcement (information concerning midterms, corrections to assignment, etc.) because you did not attend class, you must accept the consequences of not having learned of the change.

Mathematics Assistance

The Mathematics Assistance Centre is a large space where students can go to work, on their own or in groups, and to discuss mathematics problems. The Centre is staffed with talented mathematics students who are happy to discuss primarily first and second year course material with you. Please see http://www.math.uvic.ca/~msassist/index.html for more information.

Calculators:

If a calculator is allowed in tests and examinations in a course offered by the Department, then the only acceptable calculator is the Sharp EL-510R. It may be purchased at the UVic Bookstore or elsewhere for about $10. In some courses, calculators are not allowed.

MATHEMATICS 201 COURSE SCHEDULE

Department of Mathematics and Statistics
University of Victoria
January, 2012

Week	**From - To**	**Hol?**	**Lecture** (Zill **8^{th}/9^{th} ed.**)	**Hwk Due?**	**Tutorial**
1	Jan. 4 - 6		1.1-2	No	None
2	Jan. 9 - 13		2.1-3	No	1.1-2
3	Jan. 16 - 20		2.4-5	Yes	2.1-3
4	Jan. 23 - 27		3.1-2	No	2.4-5
5	Jan. 30 - Feb. 3		4.1-2	Yes	3.1-2
6	Feb. 6 - 10		4.3-4	No	**TEST #1**
7	Feb. 13 - 17	M - F	**READING BREAK**	No	None
8	Feb. 20 - 24		4.6-7	No	4.1-4
9	Feb. 27 - Mar. 2		4.9, 5.1	Yes	4.6-7
10	Mar. 5 - 9		7.1-2	No	**TEST #2**
11	Mar. 12 - 16		7.3-4	Yes	4.9, 5.1
12	Mar. 19 - 23		7.5, 6.1	Yes	7.1-5
13	Mar. 26 - 30		8.1-2	No	6.1
14	Apr. 2 - 5	F	9.1-2	No	8.1-2

Notes

1. Two 50 minute midterm tests in tutorial sessions indicated.

2. Material to be covered in midterms will be announced one week before the date of the midterm.

3. No tutorials in Week 1, or during Reading Break week.

4. Due to Friday, April 6, 2012 being a Statutory Holiday, the last day of class in Spring 2012 is a Thursday (this is unusual).

MATHEMATICS 201 REQUIRED EXERCISES 2011-2012

(Zill, Differential Equations with Modeling Applications, 8th Edition)

Chapter 1

1.1 3, 5, 9, 13, 15, 19, 27(a, b), 35, 37, 43, 45, 53, 54

1.2 1, 3, 9, 13 – 31(odd-numbered)

Chapter 2

2.1 15(a, b), 19, 21, 23, 27, 38, 39

2.2 5, 9, 19, 23, 27, 45

2.3 3, 5, 7, 9, 15, 17, 27, 29, 33, 45, 47

2.4 3, 7, 11, 17, 21, 23, 27, 31, 33, 37, 43

2.5 3, 5, 13, 17, 23, 31, 34

Chapter 3

3.1 5, 9, 11, 13, 19, 27, 31, 33, 41

3.2 1, 3, 9, 15

Chapter 4

4.1 3, 5, 7, 9, 13 (b, c, d), 15, 17, 23, 25, 29, 31, 35, 39

4.2 1, 7, 9, 11, 17, 19

4.3 3, 5, 11, 17, 19, 23, 25, 29, 37, 43, 45, 47, 49

4.4 5, 7, 11, 13, 19, 33, 41, 43

4.6 3, 7, 15, 21

4.7 1, 3, 5, 7, 11, 15, 29, 31, 33

4.9 1, 3, 7, 11, 19

Chapter 5

5.1 23, 29, 31, 33, 39, 41, 47, 49, 53, Challenge problem: 57

Chapter 7

7.1 3, 7, 11, 17 – 37(odd), Challenge problem: 46

7.2 5. 9, 13 – 19(odd), 25, 33, 35, 37

7.3 15, 17, 21, 23, 27, 31, 41, 47, 59

7.4 5, 11, 17, 41, 49, 57

7.5 5, 13

Chapter 6

6.1 13,15, 17, 29

Chapter 8

8.1 11, 16, 21, 25

8.2 1, 4, 6, 19, 21, 33, 37

Chapter 9

9.1 1, 3, 11, 13, 17

9.2 1, 17

MATHEMATICS 201 REQUIRED EXERCISES 2011-2012

(Zill, Differential Equations with Modeling Applications, 9th Edition)

Chapter 1

1.1 3, 5, 9, 13, 15, 19, 27, 29, 39, 41, 47, 49, 57, 58

1.2 1, 3, 9, 13 – 31(odd-numbered)

Chapter 2

2.1 15(a)(b), 19, 21, 23, 27, 38, 40, 41

2.2 5, 9, 19, 23, 27, 47

2.3 3, 5, 7, 9, 15, 17, 27, 29, 33, 45, 47

2.4 3, 7, 11, 17, 21, 23, 27, 31, 33, 37, 43

2.5 3, 5, 13, 17, 23, 31, 34

Chapter 3

3.1 5, 9, 11, 13, 21, 29, 33, 35, 43

3.2 1, 3, 9, 15

Chapter 4

4.1 3, 5, 7, 9, 13 (b)(c)(d), 15, 17, 23, 25, 29, 31, 35, 39

4.2 1, 7, 9, 11, 17, 19

4.3 3, 5, 11, 17, 19, 23, 25, 29, 37, 43, 45, 47, 49

4.4 5, 7, 11, 13, 19, 33, 41, 43

4.6 3, 7, 15, 21

4.7 1, 3, 5, 7, 11, 15, 29, 31, 33

4.9 1, 3, 7, 11, 19

Chapter 5

5.1 23, 29, 31, 33, 39, 41, 47, 49, 53, Challenge problem: 57

Chapter 7

7.1 3, 7, 11, 17 – 37(odd), Challenge problem: 46

7.2 5. 9, 13 – 19(odd), 25, 33, 35, 37

7.3 15, 17, 21, 23, 27, 31, 41, 47, 59

7.4 5, 11, 17, 41, 49, 57

7.5 5, 13

Chapter 6

6.1 13,15, 17, 29

Chapter 8

8.1 11, 16, 21, 25

8.2 1, 4, 6, 19, 21, 33, 37

Chapter 9

9.1 1, 3, 11, 13, 17

9.2 1, 17