MATH 251 Section S15N01
Differential Equations
Jan – Apr 2015

VANCOUVER ISLAND
U N I V E R S I T Y

Time & Location:	Tue 2:30-4:00, Wed 1:30-2:30 & Fri 2:30-4:00 all in Bldg 370 Rm 111
Instructor:	Glen Pugh glen.pugh@viu.ca (This is <u>by far</u> the best way to reach me!) Bldg 359 Rm 201 (250)753-3245 ext. 2752
Office Hours:	Mon 11:30-1:00, Tue 1:00-2:30, Fri 11:30-12:30, or by appointment
	I am available at office hours to answer questions and help with homework. Come prepared to show me your attempted homework, and have your class notes organized.
webpage:	http://web.viu.ca/pughg/Spring2015/math251S15N01
	This page will be updated weekly with announcements, handouts, homework assignments and test solutions.
Prerequisite:	Min. "C+" in MATH 101 or MATH 122 and min. "C+" in MATH 141 or MATH 241.
Text:	***A First Course in Differential Equations with Modeling Applicaions, 10th Edition*** by Dennis G. Zill, available at the Bookstore for $202.95, or as an eBook from the publisher starting at $110.95 (go to www.nelsonbrain.com and search 9781111827052.)
Course Outline:	This course covers the theory and application of differential equations with an emphasis on modeling problems arising in engineering and the physical sciences.. Topics covered and corresponding sections from the text are

- Introduction: 1.1–1.3
- First Order Differential Equations: 2.1–2.5
- Modeling with First Order Differential Equations: 3.1–3.2
- Higher Order Differential Equations: 4.1–4.4, 4.6, 4.7
- Modeling with Higher Order Differential Equations: 5.1–5.3
- The Laplace Transform: 7.1–7.6
- Systems of Linear First Order Differential Equations: 8.1–8.3
- Numerical Solutions of Ordinary Differential Equations: 9.1–9.2

Homework: Approximately eight problem sets will be assigned and collected for grading. These problem sets are worth 20% of your final grade. In addition, from the textbook I will assign supplementary practice exercises which should be completed to refine your understanding. The supplementary problems will not be graded, however they may appear on the term tests or final exam. Answers to odd numbered textbook problems can be found in the back of the text.

Collaborative problem solving on homework assignments is permitted (encouraged even!), however your handed-in solutions must be written up independently. Evidence of plagiarism on an assignment will result in a zero grade or other measures (see **Academic Misconduct** below).

Math 251 – Differential Equations

Tests: There will be two 75 minute class tests given on the following **Fridays: Feb 6** and **Mar 20**. Class tests are comprehensive, covering all material since the beginning of the course. Each test is worth 20% of your final grade.

No make-up tests will be given, but if you miss a class test for a good reason allowances may be made. Documentation <u>must</u> be provided to explain your absence: doctor's note in the case of illness, death certificate in the case of death in the family, police report in the case of car accident, etc. <u>No exceptions</u>.

If you are ill on test day and you elect to write the test anyway, your grade will stand.

Final Exam: There will be a comprehensive final exam in April worth 40% of your grade. The exam period is Apr 16-27 2015. Travel plans should not be made until the final exam schedule is released, which is at least one month before exams begin. **In no event will the final exam be rescheduled to accommodate travel plans.**

Grading Summary:
Class Tests (2):	40%
Homework(8):	20%
Final Exam:	40%

Grade Review: If you do not agree with the grade received on a test, you may submit your paper for regrading within three days of the date it was returned to you. In such cases, the entire paper will be regraded.

There is no possibility of end-of-term extra credit assignments or supplemental exams to improve final grades.

Grading Scale:
A+ : 90-100%	B+ : 76-79%	C+ : 64-67%	D : 50-54%
A : 85-89%	B : 72-75%	C : 60-63%	F : 0-49%
A- : 80-84%	B- : 68-71%	C- : 55-59%	

Attendance: Attendance will not be taken, however you are encouraged to attend all lectures. If you miss class, read the textbook sections covered and borrow notes from a classmate. I do not lend my class notes nor will I reteach material during office hours.

Student email: Ensure that you have an active email address listed in your student record and that you check it regularly. I occasionally email the class with reminders or notices.

Classroom Environment: I like the classroom environment to be relaxed yet respectful. I encourage you to ask questions, discuss the topics at hand, and quietly listen while your colleagues ask questions or offer comments. Please don't sit and chat if you don't feel like being in class on a particular day. Arrive on time, and if you must leave class early for an appointment, please advise me ahead of time so that disruption is minimized. During class, texting, listening to music , surfing the web, etc is rude: please don't do it.

Academic Misconduct: Incidents of cheating or other academic misconduct carry severe consequences and will be dealt with seriously. Refer to VIU Policy 99.01 and Procedure 99.01.001.

Calculators & Translators: A basic scientific <u>non-programmable</u>, <u>non-graphing</u> calculator may be used for class tests and the final exam. (The Canon F502G, available at Staples for about $10, is plenty). Sharing calculators during tests is not permitted.

Electronic translators may be used for tests and the final exam.

Phones & music players: Turn off and put away before class. Cell phones may NOT be used as clocks or calculators during tests.

Formula Sheets: Formula sheets may be used for tests and the final exam. I will say more on this later.