Gannon University
Math 304-01, Fall 2008
Differential Equations 1
MWF 11:15am – 12:10pm
Morosky 059/060

Instructor:	Dr. Geoffrey D. Dietz
Department:	Mathematics
E-Mail:	dietz005@gannon.edu
Office:	Zurn 408
Office Phone:	871-7595
Office Hours:	MWF 9am–11am or by appointment
Text:	**Elementary Differential Equations, 6th Edition.** Edwards & Penney, 2008
Web Site:	http://www.gannon.edu/faculty_staff/faculty/dietz005/teaching/F08-304.html

1. **Credits and Prerequisites.** Math 304 is worth 3 credits. The prerequisite is Math 242: Calculus 3.

2. **Course Content.** Ordinary differential equations with applications to science and engineering. Solution methods for first-order equations, linear equations, and systems of equations, including Laplace transforms. Other topics may include power series methods, numerical methods, or nonlinear phenomena. We will cover Chapters 1, 2, 4, and 5, as well as parts of 6 and 7 from the text listed above. You are expected to read the assigned sections before every class and be prepared to answer questions.

3. **Course Outcomes.** State and identify analytical, graphical, and numerical methods for solving differential equations. Determine which method of solution is appropriate for a given differential equation. Solve differential equations using methods from integral and differential calculus. Solve differential equations approximately using technology. Apply these concepts to problem solving in various scientific fields. Develop differential equations that model verbally described events.

4. **Evaluation.** Three exams will be held during regular class time, and the dates may be subject to change. Homework problems will be collected regularly throughout the semester. Additional practice problems will also be assigned in class. Although practice problems will not be collected or graded, correctly solving these additional problems will be an excellent way to prepare for the exams.

5. **Grading.** Final grades will be based on

   A: 90–100 B+: 85–89 B: 80–84 C+: 75–79 C: 70–74 D: 60–69 F: 0–59.

   The ranges may be widened at my discretion. The grades are weighted as follows:

Exam 1 (Wed. 9/24):	18%
Exam 2 (Wed. 10/22):	18%
Exam 3 (Mon. 11/17):	18%
Final Exam (Mon. 12/15, 11:00am–1:00pm):	30%
Homework:	16%

6. **Attendance.** Attending every class is necessary to maximize your success in this course. Regular attendance of scheduled office hours is also recommended if you have additional questions or concerns about any aspect of the course. You are responsible for obtaining any information missed due to absence.

7. **Excused Absences.** An excused absence from an exam will only be given when the absence is truly unavoidable and beyond your control. If you have advanced warning of a situation that will cause you to miss an exam, you must arrange to take a make-up exam before your absence. An exam missed due to illness must be made up the following day unless excused by a doctor.

8. **Technology.** A graphing calculator may be useful during the course. It is your responsibility to understand how to operate your calculator. We will also make use of a Java Applet to graph slope fields and to numerically solve differential equations.

9. **Academic Integrity.** Students are assumed to be familiar with the Academic Integrity Policy found in the current edition of the student handbook. Cheating or dishonesty may result in a failing course grade or even expulsion from the University.

10. **Student Disabilities.** Gannon University is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with me as early in the semester as possible. You must also be registered with The Program for Students with Learning Disabilities prior to receiving accommodations in this course.

11. **Homework Guidelines.**
    - Graded homework in this course must consist of complete, neatly written solutions to the assigned problems. I am more interested in seeing the method of solution than the final answer. If a final answer is given without a sufficient amount of work, then you may receive little or no credit for the problem.
    - If a problem submission ends with an answer (possibly from the back of the text) that does not match the work for the problem, a score of **zero** may be assigned for that problem.
    - Assignments are due at the beginning of class.
    - Print your name and "Math 304" at the top of the first page.
    - Staple all pages of your homework before submission.
    - Label each problem by section and number. The problems should be written out in the proper order when submitted.
    - Start each problem with a *brief* summary.
    - Discussing the solutions to problems with others is permitted and encouraged. You must, however, turn in your own copy of the homework with your own written solutions. Word-for-word copies constitute academic misconduct.
    - Failure to follow these guidelines may result in the loss of points on assignments.

Math 304-01 Tentative Schedule for Fall 2008

Date	Day	Sect.	Practice	HW	Due
8/27	W	1.1	4, 14, 21, 33, 47	7, 15	
8/29	F	1.2/1.3	**1.2**: 3, 8, 13, 31; **1.3**: 7, 20, 21, 23	**1.2**: 10; **1.3**: 12, 24	
9/1	M	**No Class**			#1
9/3	W	1.4	6, 26, 27, 43, 44, 64*	7, 25, 47	9/10
9/5	F	1.5	19, 20, 28, 30, 33	21, 22	
9/8	M	1.6	2, 10, 20, 33, 34	5, 9, 19, 35	
9/10	W				
9/12	F	1.7	1, 3, 9, 12, 39	4, 10	#2
9/15	M	7.1	4, 5, 18, 19, 29	9, 12	9/19
9/17	W	1.8	3, 9, 12	10*	
9/19	F	2.1/2.2	**2.1**: 2, 3, 9, 27, 35, 40, 41, 48	**2.1**: 5, 15, 39	
9/22	M	Review			
9/24	W	**Exam #1**			
9/26	F	2.3	1, 3, 5, 21, 25, 27, 28, 31, 32	2, 7, 23, 29	#3
9/29	M		22, 30, 44, 45		10/8
10/1	W				
10/3	F	2.4	13-19	3, 15, 17	
10/6	M	2.5	1, 2, 3, 6, 9, 10,	4, 11, 13, 32, 56, 61	
10/8	W		31, 33, 35, 43, 48, 49, 51, 59, 60		#4
10/10	F	2.6	1, 3, 4, 11, 15, 18, 19	2, 12, 17	10/20
10/13	M	5.1			
Fall Break 10/15 – 10/17					
10/20	M	Review			
10/22	W	**Exam #2**			
10/24	F	5.1	3, 5, 8, 15, 17, 18	6, 9, 14, 16, 19	
10/27	M	5.2	1, 3, 5, 6, 15, 16, 19, 26	2, 4, 7	#5
10/29	W	5.3	1, 6, 9, 13, 15, 16, 22	2, 8, 10, 17, 26	11/5
10/31	F				
11/3	M	5.4	1, 4, 9, 11, 16, 17, 19, 24, 25	2, 3, 12, 15	
11/5	W		26, 27, 29, 38		#6
11/7	F	5.5	3, 4, 5, 11(a)	2, 6	11/13
11/10	M	7.2	1, 2, 8, 13, 15, 16, 19	14, 20	noon
11/12	W	7.3	1–10		
11/14	F	Review			
11/17	M	**Exam #3**			
11/19	W	4.1	1, 3, 7, 9, 10, 13, 18, 23, 27	11, 16, 20	
11/21	F				
11/24	M	4.2	1-15	2, 7, 10	#7
Thanksgiving Break 11/26 – 11/28					12/5
12/1	M	4.3	3, 5, 13, 19, 30, 38	2, 6, 15	
12/3	W	4.4	1, 3, 5, 7, 8, 29, 32, 34	8, 30, 33	#8
12/5	F	4.5	3, 7, 8, 21, 29, 31	6, 20	12/11
12/8	M	4.6	2, 3, 5, 7, 14	1, 4	noon
12/10	W	6.1/6.4	**6.1**: 1, 3, 14; **6.4**: 1(a), 4(a)		
12/12	F	Review			
12/15	M	**Final Exam**, 11:00am – 1:00pm			