Differential Equations

(MATH-2073-006)

Fall Semester, 2012

Class Room and Class Times: Room 3210 of the Campus Recreation Center
On Tuesdays and Thursdays at 12:30 a.m. – 1:50 p.m.
except for Monday, September 3, Labor Day, and
Thursday, November 22, Thanksgiving Day

From Tuesday, August 28, through Thursday, December 6,
and the Final Examination on Thursday, December 13, at 1:30-3:30 p.m. in Room 3210

Teacher: Roger Chalkley
Office: Room 4504, French Hall West
Office Hours: 11:15-12:30 a.m. on Mondays, Wednesdays, and Fridays
Phone: (513) 556-4074

Textbook: Lectures on Differential Equations,
by Philip Korman
downloadable from: http://math.uc.edu/~kormanp/

Syllabus: **See the next page for topics from Chapters 1 through 4**

Testing and Grading Policy: There will be three class-period examinations and a 2-hour final examination. Each class-period examination will be graded on a basis of 100 points and will count as 1/5 of your final grade. The final examination will count as 2/5 of your grade.

Examination 1 – Thursday, September 13, 12:30-1:50 p.m.
Examination 2 -- Thursday, October 11, 12:30–1:50 p.m.
Examination 3 – Thursday, November 8, 12:30–1:50 p.m.
Final Exam: Thursday, December 13, at 1:30 – 3:30 p.m. in Room 3210 of the Campus Recreation Center

Partial credit on tests is awarded only for work that is mostly correct except for one on two minor errors. You will not be given partial credit for attempting to solve a problem by an incorrect method. You must show your work on the tests. A correct answer without the accompanying correct work will receive no credit; an incorrect final answer accompanied by mostly correct work will receive substantial credit. Also, it is the responsibility of each student to arrange the work in a logical manner and to write legibly. Remember, when your paper is graded, the grade is based on the work shown, not what was intended or implied.

Grade of W: Friday, November 2, is the last day to withdraw from the class and receive a grade of W.

The Mathematics Learning Center is located in French Hall West, Room 2133. It is a free, walk-in, mathematics tutoring center for all University of Cincinnati students. The tutoring hours are: Monday - Thursday 9am -8pm; Friday 9am-4pm; Saturday Noon - 4pm.
Students can get help at the Mathematics Learning Center for all basic mathematics courses through Differential Equations.
http://www.artsci.uc.edu/collegedepts/math/learning_center/

Differential Equations (MATH-2073, Section 006)

Lectures on Differential Equations by Philip Korman

Subject	**Problems**
Chapter 1.	
Linear First-Order (1.2.1, 1.2.2)	pp. 18-19; II. 1-7; III. 1-7.
Separable (1.3.1, 1.3.2)	p. I9; IV. 1-7.
Homogeneous (1.4.1)	p. 37; I. 1-7.
Bernoulli (1.4.3)	pp. 37-38; II. 1-4.
Exact (1.5)	p. 38; III. 1-7.

For the preceding sections and for Theorem 2 on page 35,
supplementary exercises are given in Course Documents on Blackboard.

Chapter 2.	
Special Second-Order (y missing)	p. 51; I. 1-4.
Special Second-Order (x missing)	pp. 51-52; II. 1-4.
Homogeneous Linear Second-Order	
Constant Coefficients (2.2)	p. 52; III. 1-11; IV. 1-4; VI. 1-8.
General (2.4, 2.5)	pp. 60-61; I. 1-4; II. 1-3; IV. 1-3.
Nonhomogeneous Linear (2.6, 2.7)	pp. 72-73; I. 1-7; II. 1-6; III. 1-2.
Variation of Parameters (2.8)	p. 74; IV. 1-5; V. 1-2.
Discontinuous Forcing Term (2.11.2)	p. 95; I. 1-2.
Euler-Type Equations (2.13)	p. 95; II. 1-6; III. 1-4; IV. 1-4.
Higher-Order Linear (2.14)	pp. 96-97; V. 1-8; VI. 1-9; VII. 1-2.
Chapter 3.	
Power-Series Solutions (3.1)	pp. 115-116; III. 1-3; IV. 1-2.
Complications (3.2, 3.3)	pp. V. 1-2; VI. 1-2.
Chapter 4.	
Laplace Transform (4.1)	pp. 133-134; I. 1-6; II. 1-11.
Initial-Value Problem (4.2)	pp. 134-137; III. 1-6; V. 1-10.
Convolution (4.4)	p. 138; VI. 1, 3-7.