

Vincent DeGeorge, PhD vdegeorge@wju.edu Office: DON 104

Lecture: TR 9:30-10:45 AM (75min), DON 108

Office Hours: W 5:00—7:50 PM; or by appointment

Final: Tues., Apr 30, 8:00-10:30 AM

Add/Drop: Friday, 1/11/19

Withdraw: Tuesday, 3/26/19

Catalog Course Description: MAT 212 Ordinary Differential Equations (4 crs)

ODEs of first order: linear, homogeneous, separable and exact, with applications; orthogonal trajectories; those of second order: reducible to first order, general and particular solutions by the methods of undetermined coefficients, variations of parameters and power series; and an introduction to numerical methods and Laplace Transforms. *Prerequisite:* MAT 112.

Text: Edwards & Penney “Differential Equations and Boundary Value Problems: Computing and Modeling.” 4th Ed. *Prentice Hall*. ISBN: 9780131561076. (International & Digital Versions Available)

Student Learning Objectives: The goal of this class is to be able to use differential equations.

A successful student in this course will be able to...

1. State important definitions and theorems. (Understanding)
2. Use appropriate techniques to solve differential equations. (Applying)
3. Use differential equations to model problems. (Applying)
4. Determine the appropriate techniques to solve problems (Evaluating)

Tentative Outline:

Wk 1: First Order Differential Equations

Wk 2:

Wk 3: Exam 1

Wk 4: 2nd & Higher Order Diff Eqs

Wk 5:

Wk 6:

Wk 7: Exam 2

Wk 8: Series Sols. of 2nd Order Linear Eqs

Wk 9:

Wk 10: Exam 3

Wk 11: Laplace Transforms, Systems

Wk 12:

Wk 13:

Wk 14: Exam

Evaluation Methods: Your grade will be based on the following:

Exam 1	15%	Exam 2	15%
Exam 3	15%	Exam 4	15%
HW	15%	Final Exam	20%
Professionalism	5%		

Exam grades can be counted as homework grade, and the final exam (cumulative) can be counted as your final grade. E.g. If your exam or final exam grades are higher than any of your homework or exam grades, respectively.

Homework: Homework sets will be assigned on Tuesdays to cover the material covered that week and are due to be handed-in the following Tuesday. Students will have the opportunity to do a problem from the homework set on the board for the class, having already confirmed the solution with the professor, and receive 100% for that problem.

Exams: Exams will evaluate your understanding of the course material.

Grading: Your grade should be an indicator of your understanding of the course material. The following scale will guide our grading:

93.0-100.0 %	A	77.0-79.9 %	C+
90.0-92.9 %	A-	70.0-76.9 %	C
87.0-89.9 %	B+	67.0-69.9 %	C-
83.0-86.9 %	B	64.0-66.9 %	D+
80.0-82.9 %	B-	55.0-63.9 %	D

Professionalism Policy: (Addentence, Cheating, Cell Phone/Screens, Eating, Dress, etc.)

I'll treat you as adults; act professionally accordingly. If you are doing something unprofessional, i.e. distracting or inappropriate, to yourself or especially others it will be addressed accordingly. You'll be evaluated on this for the rest of your life, and graded on it in this course.

Academic Honesty: When you cheat you are devaluing the the educational experience of yourself, your classmates, your teachers, and Wheeling Jesuit University and depriving yourself and anyone you are cheating with, including off of you, of the opportunity to learn. You will be subjected to WJU's student policies accordingly, and are setting yourself up for every failure in which a dishonest life results.

Attendance: Come to class. You are paying more money than you have paid for anything else in your life for this education. I support students' being involved in all the things in which WJU students are involved. And I support learning Math & Science. Talk to me about how to do both(all) of these things. Note: You will not get less busy in life, start managing what you're doing well now.

Learning Ability, Title IX, & Resources:

I and Wheeling Jesuit University support (with resources) the education of all people now matter how easy or hard that may be for someone due to internal (learning ability) or external (unfair treatment) reasons.

Learning Ability: A lot of people discover their mental health situation, including learning abilities, in college and I support coming to know ourselves like this. Some of the people I respect most I do so because of how they live given their mental health state. If your learning ability or mental health situation is different than others know that I respect you too and thank you for being at WJU and in my class. Feel free to talk to our "Disability Services Director," Kathy Tagg (ktagg@wju.edu, 304-243-4484) and let me know how I can best help you learn.

Title IX: The world and WJU are not yet free of unfair treatment (discrimination, bias, harassment, abuse), but I and WJU are committed to trying our best to prevent it and to respond to it accordingly when it is practiced. Some of the people I respect most I do so because of how they live given their experience with unfair treatment. If your experience is or has been unfair know that I respect you too and thank you for being at WJU and in my class. Feel free to talk to our Title IX coordinators: David Hacker, Carrie Hanna, MaryLu Adams (dhacker@wju.edu, channa@wju.edu, mladams@wju.edu). <http://wju.edu/titleix/>

Resources: You have more resources - for tutoring, mental health, advocacy - freely available to you now while you are in college than you probably will for the rest of your life. Use them. [ARC](#)

Nothing in this or any other class is more important than your mental, physical, or spiritual health. I want to help you learn, let me know how I can best do this.