

# Math 376: Differential Equations I — Winter 2020

## Instructor Information

*Name:* Dr. Saud Hussein  
*Office:* Samuelson Hall – Room 228B  
*Email:* Saud.Hussein@cwu.edu  
*Office Phone:* (509) 963 – 1759  
*Office Hours:* 2 – 4 PM daily  
*Scheduling website:* saudhussein.youcanbook.me



## Class Information

*Dates:* 01/07/20 – 03/13/20  
*Time:* TuWeFr 10 – 10:50 AM  
*Final Exam:* 03/20/20, 10 AM – noon  
*Classroom:* Samuelson Hall – Room 245  
*Lab Classroom:* Samuelson Hall – Room 138  
*Textbook:* **Differential Equations (Classic Version)**, 2nd edition, by Polking and Boggess

## Course Description

This course is an introduction to differential equations: how to use analytic, graphical and/or numerical methods to investigate the solutions of differential equations, as well as how to use differential equations to model physical situations such as population growth and projectile motion. More precisely, we will study first and second order equations. We will learn some analytic solution techniques to solving first order equations like separation of variables and integrating factors. For second order equations, we shall look at techniques such as the method of undetermined coefficients.

We will cover most of the following chapters of the textbook:

- Chapter 1 – Introduction to Differential Equations
- Chapter 2 – First–Order Equations
- Chapter 3 – Modeling and Applications
- Chapter 4 – Second–Order Equations
- Chapter 6 – Numerical Methods

## Grading

Your final grade will be based on the following:

Homework	Exams	Final
40%	35%	25%

93–100%	90–92%	88–89%	83–87%	80–82%	78–79%	73–77%	70–72%	Below 70%
A	A-	B+	B	B-	C+	C	C-	D or F

## Homework

Homework will be assigned every week and solutions posted on Canvas. The top six homework scores will make up 40% of your total course grade. You may work with others but the solutions must be in your own words.

## Exams

There are two regular exams worth 35% total. If you miss an exam, you can make it up with a valid excuse or with prior permission.

The exams will cover the following chapters in the textbook:

- Exam 1 – Chapters 1, 2, and 3 (Introduction, First-Order Equations, Modeling)
- Exam 2 – Chapters 4 and 6 (Second-Order Equations, Numerical Methods)

The final exam is comprehensive and worth 25% of your final grade.

## Lab Days

On some Wednesday's, we will meet in the computer lab classroom, Samuelson Hall room 138. It will be announced ahead of time when we do meet there.

## Important Dates

The two regular exams are tentatively scheduled for the weeks shown below:

- **January 13, 2020** – Last day to add or drop the class
- **February 10–14, 2020** – Exam 1
- **February 21, 2020** – Uncontested withdrawal deadline
- **March 9–13, 2020** – Exam 2
- **March 20, 2020** – Final exam

## Academic Honesty and Inclusiveness

Consult university policies CWUP 5-90-040(22), CWUR 2-90-040(22), and WAC 106-125-020 for student conduct, cheating, plagiarism, and other academic expectations. CWU's

policies and recommendations for academic misconduct will be followed, leading to disciplinary action up to and including failing the course.

CWU expects every member of the university community to contribute to an inclusive and respectful classroom culture.

### **Students with Disabilities**

Central Washington University is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning, discuss your concerns with your instructor. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations. Student Disability Services is located in Hogue 126. Call (509) 963 – 2214 or email [ds@cwu.edu](mailto:ds@cwu.edu) for more information.

### **Faith/Tradition Observances Policy**

In compliance with RCW 28B.137.010, Central Washington University makes every effort to deal reasonably and fairly with students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Students must present written notice to their instructor within the first two weeks of class listing the specific dates on which accommodations are required. Contact the Dean of Student Success at (509) 963 – 1515 for further information or questions.