

**Instructor** : Aaron Montgomery

**Class** : MTR @ 2 pm in Bouillon 210

**Office Hours** : MR @ 9 am and 1 pm, and by appt. in Bouillon 107F

**Email** : montgoaa@cwu.edu **Phone** : 963-1906

**Text** : **Ordinary Differential Equations** by Noonburg

**Web** : <http://webwork.math.cwu.edu/~montgomery/183/376/>

### **Course Outcomes:**

The goal of the course is to introduce you to the ideas of differential equations: how to use analytic, graphical and/or numerical methods to investigate the solutions of differential equations, as well as how to derive differential equations to describe phenomena in different sciences. More precisely, we will study first and second order equations. Topics for first order equations include slope fields, bifurcation diagrams and how they describe qualitative behavior. In addition, we will learn some analytic solution techniques including separation of variables and integrating factors. For second order equations, we shall look at the relation between the phase plane and qualitative behavior of solutions, as well as analytic techniques of solution such as the method of undetermined coefficients. In terms of our text, we will cover most of Chapters 1, 2, and 3.

### **Accommodations**

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

**Graded Coursework:**

**Homework (120 points):** Seven (7) weekly homework assignments will be assigned and are due in my mailbox by 3 pm on Friday. Each homework assignment will be worth 20 points and the top six (6) will count toward your grade. You may submit one (1) homework assignment by email over the course of the quarter. You will need to hand in all other homework as hard-copy at the Math Department mailboxes. No late homework will be accepted.

**Exams (100 points):** There will be two exams over the quarter, each exam will be worth 50 points. Tentative dates are April 24 and May 15.

**Final (80 points):** There will be a comprehensive final exam covering all content in the course. It will be worth 80 points and will be during the scheduled time on finals week (I believe this exam is schedule for Thursday of finals week).

$\geq 87\%$	B+		$\geq 93\%$	A		$\geq 90\%$	A-
$\geq 77\%$	C+		$\geq 83\%$	B		$\geq 80\%$	B-
$\geq 67\%$	D+		$\geq 73\%$	C		$\geq 70\%$	C-
			$\geq 63\%$	D		$\geq 60\%$	D-