Math 310 **Fall 2020**
Engineering Outreach

Course:	**Ordinary Differential Equations**
Professor:	Lyudmyla Barannyk
Office:	317 Brink Hall
Phone:	(208) 885-6719
e-mail:	barannyk@uidaho.edu
Book:	*Differential Equations and Boundary Value Problems: Computing and Modeling* by C. Henry Edwards, David E. Penney & David T. Calvis, 5th Edition

Course web site: http://www.webpages.uidaho.edu/∼barannyk/Teaching/Math310.html

Topics

- First-Order Differential Equations (Chapter 1)
- Mathematical Models and Numerical Methods (Chapter 2)
- Linear Equations of Higher Order (Chapter 3)
- Introduction to Systems of Differential Equations (Chapter 4)
- Linear Systems of Differential Equations (Chapter 5)
- Laplace Transform Methods (Chapter 7)
- Power Series Methods (Chapter 8)

Written lecture notes are available on the course website:
http://www.webpages.uidaho.edu/∼barannyk/Teaching/Math310.html

Exams: *Exam 1*: due by Friday, September 18
Exam 2: due by Friday, October 16
Exam 3: due by Friday, November 13
Final Exam: due by Thursday, December 17

Homework: There are assigned and suggested homework problems chosen from the textbook. Written homework assignments are available on the course website. The assigned problems will be collected for grading. A random selection of problems will be graded. Homework assignments and Matlab projects should be submitted by email to barannyk@uidaho.edu by the end of the due day. There is a 3 business day grace period. Late homework will not be accepted. Students are required to solve all homework problems after each lecture in order to gain a better understanding of the course material and prepare for exams.

Matlab assignments: There are two Matlab assignments. Matlab software is available through VLAB at http://vlab.uidaho.edu. Students are encouraged to contact IT help desk at http://www.uidaho.edu/its/ as soon as possible if help is needed to find where to store files and if there are any problems with installing or running Matlab. Some Matlab tutorials are available on the course web site.

ITS HELP DESK

Phone: 208-885-4357 (HELP); Email: helpdesk@uidaho.edu
Physical Address: Teaching Learning Center Room 128

Course Grade:

Exam 1:	15%
Exam 2:	20%
Exam 3:	25%
Final Exam:	30%
Homework and Matlab assignments:	10%

Learning Outcomes for Math 310

- The student will learn how to model a dynamic physical phenomenon as a differential equation.
- The student will gain mastery of standard methods for solving initial value problems, both analytically and numerically.
- The student will be able to analyze and interpret qualitative aspects of solutions to ODEs.