Basic Course Information

Semester:	**Spring 2016**	Instructor Name:	**Jill Nelipovich**
Course Title & #:	**Math 220**	Email:	**jill.nelipovich@imperial.edu**
CRN #:	**20804**	Webpage (optional):	**Blackboard site**
Classroom:	**2725**	Office #:	**2768**
Class Dates:	**2/16/16 – 6/10/16**	Office Hours:	**M: 11:30- 12:45** **T/Th: 3:30 – 4:15** **W: 7:00 – 8:00**
Class Days:	**T/Th**	Office Phone #:	**760-355-6297**
Class Times:	**2:00 – 3:25**	Emergency Contact:	**760-355-6155**
Units:	**3**		

Course Description

The course is an introduction to ordinary differential equations including both quantitative and qualitative methods as well as applications from a variety of disciplines. Introduces the theoretical aspects of differential equations, including first, second, and higherorder differential equations and their applications, establishing when solution(s) exist, and techniques for obtaining solutions, including, series solutions, and singular points, Laplace transforms and linear systems. (CSU, UC)

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Demonstrate the ability to solve a first order differential equation. ILO2, ILO4)
2. Demonstrate the ability to use a differential equation to model a real world phenomena. (ILO2, ILO5)
3. Demonstrate the ability to find a series solution to a differential equation. (ILO2, ILO4)

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Create and analyze mathematical models using ordinary differential equations.
2. Identify the type of a given differential equation and select and apply the appropriate analytical technique for finding the solution of first order and selected higher order ordinary differential equations.
3. Apply the existence and uniqueness theorems for ordinary differential equations.
4. Find power series solutions to ordinary differential equations.
5. Determine the Laplace Transform and inverse Laplace Transform of functions.
6. Solve Linear Systems of ordinary differential equations..

Textbooks & Other Resources or Links

1. Fundamentals of Differential Equations, Nagle, Saff and Snider, 8th ed, Pearson, ISBN: 0321745399
2. Calculator

Course Requirements and Instructional Methods

Out of Class Assignments:

The Department of Education policy states that one (1) credit hour is the amount of studentwork that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester.

At this level, it is recommended to spend 3 hours outside of class for every hour in class (yes, that is 6 hours).

This class is driven by techniques and applications. There will be problems partially completed in class – and it is expected that you will take incomplete problems home and work through the calculus! Yes, I do expect you remember how to find derivative and anti-derivatives.

This course is not super "proofie". There will be new concepts learned and you will solve problems using multiple techniques. One difficult aspect of solving the problems is determining which technique works for a particular course.

Having a strong foundation in Differential Equations is important in many fields of science.
It is your responsibility to engage in the material regularly as this class will require discipline.

Course Grading Based on Course Objectives

- Homework
- Projects
- Exams: 3 Exams
- Final Exam

Homework	8%
Projects	7%
Exams (3): (20% each)	60%
Final Exam	25%

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms.   Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Online Netiquette

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Additional Student Services

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- **Blackboard Support Site.** The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
- **Learning Services.** There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your Campus Map for the Math Lab; Reading, Writing & Language Labs; and the Study Skills Center.
- **Library Services.** There is more to our library than just books. You have access to tutors in the Study Skills Center, study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee.
- **Student Health Center.** A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC Student Health Center at 760-355-6128 in Room 1536 for more information.
- **Mental Health Counseling Services.** Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC Mental Health Counseling Services at 760-355-6196 in Room 2109 for more information.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC General Catalog.

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC Library Department provides numerous Information Literacy Tutorials to assist students in this endeavor.

Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic
Week 1 2/15 – 2/19	Chapter 1.1
Week 2 2/22 – 2/26	Chapter 1.2, 1.3, 1.4
Week 3 2/29 – 3/4	2.2, 2.3, 2.4
Week 4 3/7 – 3/11	2.5, 2.6, 3.2
Week 5 3/14 – 3/18	3.3, 3.4 **Exam 1**
Week 6 3/21 – 3/25	Chapters 4.1, 4.2
Spring Break 3/28 – 4/2	
Week 7 4/4 – 4/8	Chapters 4.2, 4.4, 4.5
Week 8 4/11 – 4/15	4.6, 4.7, 4.8
Week 9 4/18 – 4/22	5.1, 5.2, 5.3, 5.4
Week 10 4/25 – 4/29	5.5, 5.6 **Exam 2**
Week 11 5/2 – 5/6	5.7, 5.8, 6.1, 6.2
Week 12 5/9 – 5/13	6.3, 7.2, 7.3, 7.4,
Week 13 5/16 – 5/20	7.5, 7.6, 7.7, 7.9
Week 14 5/23 – 5/27	8.1, 8.2 **Exam 3**
Week 15 5/30 – 6/3	8.4, 8.6 Review
Week 16 6/6 – 6/10	**Final Exam** **6/9/2016**

Tentative, subject to change without prior notice