## Basic Course Information

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|---|---|---|---|
| Semester | **Spring 2015** | Instructor Name | **Jill Nelipovich** |
| Course Title & # | **Math 220** | Email | **jill.nelipovich@imperial.edu** |
| CRN # | **20395** | Webpage | **Blackboard site** |
| Room | **2722** | Office | **Room 2768** |
| Class Dates | **Feb 17 – June 12, 2015** | Office Hours | **Monday: 2:15 – 3:00 p.m.**<br>**5:15 – 6:30 p.m.**<br>**Tuesday: 7:30 – 8:30 a.m.**<br>**Wednesday: 8:00 – 8:30 a.m.**<br>**Thursday: 8:00 - 8:30 a.m.**<br>***** AND BY APPOINTMENT** |
| Class Days | **Tues/Thurs** | Office Phone # | **760-355-6297** |
| Class Times<br><br>Units | **8:35 – 10:00 a.m.**<br><br>**3 units** | Office contact if student will be out or emergency | **760-355-6155** |

## Course Description

An elementary differential equations course covering: First, second, and higher order differential equations and their applications. Methods include variation of parameters, Laplace transforms, and series solutions. (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. Solve first order differential equations.
2. Solve application problems involving first order differential equations.
3. Solve differential equations of order greater than one.
4. Solve application problems involving second order differential equations.
5. Solve differential equations using power series.
6. Solve application problems using Laplace transform.

## Textbooks & Other Resources or Links

1. Fundamentals of Differential Equations, Nagle, Saff and Snider, 8th ed, Pearson, ISBN: 03217453997

## Course Requirements and Instructional Methods

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work 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

GRADING (point totals subject to change)

| | |
|---|---|
| Homework | 10% |
| Projects | 5% |
| Exams (3): (20% each) | 60% |
| Final Exam (25%) | 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 during class.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception.
- 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.

## Academic Honesty

- Plagiarism is to take and present 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 correctly 'cite a source', 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, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

  Anyone caught cheating or 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 School 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) use of a commercial term paper service

## Additional Help – Discretionary Section and Language

- Blackboard support center: http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the **Math Lab (Room 2500),** Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- Library Services: There is more to our library than just books. You have access to tutors in the learning 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 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. We now also have a fulltime mental health counselor. For information see http://www.imperial.edu/students/student-health-center/. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

## Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

## Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/

**Math 220 – Tentative Schedule**

| WEEK | DATES | ASSIGNMENTS |
|---|---|---|
| 1 | Feb 16 – 21 | Introduction, Chapter 1.1<br>Chapter 1.2, 1.3 |
| 2 | Feb 23 – Feb 27 | Chapter 1.4<br>Chapter 2.2 |
| 3 | Mar 2 – Mar 6 | Chapter 2.3, 2.4<br>Chapter 3.2, 3.4 |
| 4 | Mar 9 – 13 | Chapter 3.5, 3.6<br>**Exam 1 – Chapters 1, 2, 3.2, 3.4** |
| 5 | Mar 16 – 20 | Chapter 3.7, 4.1<br>Chapters 4.2, 4.3 |
| 6 | Mar 23 – 27 | Chapter 4.4, 4.5<br>Chapter 4.6, 4.7 |
| 7 | Mar 30 – Apr3 | Chapters 4.8, 4.9<br>**Exam 2 – Chapters 3.5, 3.6, 3.7, 4.1 – 4.7** |
| | Apr 6 – 10<br>(Spring Break) | |
| 8 | Apr 13 - 17 | Chapters 4.10, 5.1<br>Chapters 5.2 |
| 9 | Apr 20 - 24 | Chapters 5.3, 5.4<br>Chapters 5.5, 5.6 |
| 10 | Apr 27 – May 1 | Chapters 5.6, 5.7<br>Chapters 7.2 |
| 11 | May 4 – 8 | Chapters 7.3, 7.4<br>Chapter 7.5 |
| 12 | May 11 – 15 | **Exam 3 – Chapters 4.8 – 4.10, 5.1 – 5.7, 7.2 – 7.4**<br>Chapter 7.6, 7.7 |
| 13 | May 18 – 22 | Chapter 8.1, 8.2<br>Chapter 8.3 |
| 14 | May 25 – 29 | Chapter 8.4, 8.6 |
| 15 | June 1 - 5 | Work on project or catch up |
| 16 | June 8 – 12 | **Final Exam Tuesday or Thursday, June 9 or 11** |

**Note: Instructor reserves the right to modify syllabus with notification to students.