Math 240
Discrete Mathematics
Fall 2011

Instructor: Jill Nelipovich	**Text/Author:** *Discrete Mathematics with Applications, 4th edition*
Office: We'll find a meeting place! **Phone:** (760) 355 – 6297; 619-733-6942	**Chapters Covered:** 1 – 10
Office Hours: By appointment only You can text me if you want a same day appointment **I probably will not meet students in my current office.	**Class Days/Times: T/R 10:15 – 11:40 a.m.** **Section 10463** **Credit Hours:** 3 Lecture **Prerequisites:** Math 192 with a grade of "C" or better **Grading Criteria:** Letter
Email: jill.nelipovich@imperial.edu	**Room:** 2722

The mission of Imperial Valley College is to foster excellence in education that challenges students of every background to develop their intellect, character, and abilities; to assist students in achieving their educational and career goals; and to be responsive to the greater community.
The Institutional Learning Outcomes (SLOs) are:

- *Communication Skills*
- *Critical Thinking Skills*
- *Personal Responsibility*
- *Information Literacy*
- *Global Awareness*

Course Goals:
Discrete Mathematics is a fundamental course for advanced mathematics and computer science. A primary goal of this course is for students to develop an understanding of what it means to prove in mathematics. A second goal of the course is for students to advance in mathematical sophistication through the creation of personally meaningful solutions to problems and by expanding their ways of communicating mathematical thinking and activity to others, both verbally and in writing. Finally, and most important, have fun!

Course Description
This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, graph theory, number theory and combinatorics. This forms a basis for upper divison courses in mathematics and computer science, and is intended for the transfer student planning to major in these disciplines. The topics covered in this course include methods of proof, sets and relations, number theory, induction, recursion, counting principles, permutations, combinations and graph theory.

Required Textbooks and Electronic Resources:
1. *Discrete Mathematics with Applications, Susanna Epp, 4th Edition*

Course Layout
- ❑ 3 Exams (20% each)…………………………………………………………………………60%
- ❑ Homework ……………………………………………………………………………………5%
- ❑ Projects ……………………………………………………………………………………10%
- ❑ Final Exam …………………………………………………………………………………25%

Grades will be assigned as follows:

A	B	C	D	F
90% and above	80% - 89%	70%-79%	60% - 69%	59% and below

Course Objectives:
1. The student will use proof techniques in logic to determine the validity of logic statements.
2. The student will solve problems in which the number of possibilities is finite using basic counting techniques, permutations and combinations.
3. The student will demonstrate an understanding of the concept of sets and the ability to carry out set operations.
4. The student will demonstrate an understanding of number theory as it applies to finite sets.
5. The student will solve recurrence relations.
6. The student will demonstrate an understanding of introductory graph theory with its application to real-life problems.

Student Learning Outcomes
1. The student will use a truth table to test the validity of an argument
2. Students will construct proofs of mathematical statements using standard techniques, including induction
3. Students will apply graph theory to real world situations

Class participation and attendance:
By signing up for this class, you are entering an agreement with me and everybody else here that you will be here on time every day. Attendance for this class is MANDATORY. You can miss 2 days in the semester without penalty. This does not mean you choose a "ditch day". If you miss 3 days, you will be dropped from the class.

Tardiness and leaving class early:
Tardies count as half of an absence. It is your responsibility to notify me after class that you were tardy to remove your absence. Leaving class early unannounced is extremely disrespectful. Leaving class early without letting me know ahead of time also counts as an absence.

Homework:
The homework is the single most important thing you must do to succeed in this course. You cannot do well on the exams if you do not do well on the homework.

Extra Credit: *Making baskets!*

DSP&S
Student Disability Services is the campus office responsible for determining and providing appropriate academic accommodations for students with disabilities. Any student with a documented disability who many need educational accommodations should notify the instructor or Disabled Student Programs and Services (DSP&S) office as soon as possible. Students needing these services should visit the DSP & S office as soon as possible.

Health Science Building Room 2117
(760) 355-6312

Disclaimer: I reserve the right to alter this syllabus at any time during the semester.

How to Be Successful in This Course:

❑ Take an interest in your grade from **DAY 1.** Waiting until the end of the semester to improve your grade will not work.
❑ Spend 2 – 3 hours outside of class for every hour in class.
❑ Please get help in a timely manner! When you do not understanding the material, please make an effort to get help IMMEDIATELY! Please come to my office hours prepared with specific questions.
❑ Study effectively: Within 24 hours, review the material presented in lecture
❑ Do a little bit of work every night. Not only will this assure you will most likely get the work done, it also helps you internalize the material. If you follow this practice, I almost guarantee you, studying for exams will be "Oh yeah, I remember this" *as opposed to* "I never saw this before in my life".

General Guidelines:
- Late assignments will not be accepted
- No make-up test are given. If you miss an exam with a documented absence, the final exam will be counted twice.
- Bring your book, binder, pen, pencil and calculator to class everyday.
- It is your responsibility to drop before the W deadline.
- **School policy:** No food or drink in the classroom.
- **School policy:** No children in the classroom.
- It is your responsibility to take notes and make copies of the notes from the days you have been absent.
- **Maximum number of absences allowed**: **2** - being tardy or leaving class early will count as half absence. The instructor can drop you from the class if the number of absences exceeds the number allowed!

Academic Dishonesty:
Academic misconduct will not be tolerated. The following steps are usually taken with a student caught cheating: The instructor will normally record a zero or an "F" for that exam, quiz, homework or project; although the instructor may decide to give an "F" grade for the course.
All cases of academic dishonesty will be reported to the appropriate administration.

⌣ **Good manners are very important!** ⌣

- **Cell phones – please turn them off (not on vibrate) – you will simply be kicked out of class and marked absent!**
- Please no text messaging! – you will be dismissed from class and marked absent
- If you are waiting for an emergency call – just let me know ahead of time!
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Fall 2012 Tentative Course Outline Math 240

	Date	Topics
1	Aug 20 - 24	Welcome, Chapter 1 .1 – 1.2
2	Aug 27 – Aug 31	Chapter 1.2 – 1.3 Chapter 2.1 – 2.3
3	Sep 3 – Sep 7 Holiday: Sept 3	Chapter 2.3 – 2.5 Chapter 3.1
4	Sep 10 – sep 14	Chapter 3.2 – 3.4, 4.1
5	Sep 17 - 21	Review, 4.2 **Exam I: Chapter 1 - 3**
6	Sep 24 - 28	Chapter 4.3 – 4.5
7	Oct 1 – Oct 5 Outside assign oct 4	Chapter 4.6 – 4.8 Chapter 5.1
8	Oct 8 - 12	Chapter 5.2 – 5.7
9	Oct 15- 19	Chapter 5.8 – 5.9 Chapter 6.1 – 6.2
10	Oct 22 - 26	Chapter 6.3 – 6.4 Chapter 7.1 Review
11	Oct 29 – Nov 2	**Exam II: Chapter 4 – 6** Chapters 7.2 – 7.4 Chapter 8.1
12	Nov 5 - 9	Chapter 8.1 – 8.5
13	Nov 12 - 16	Chapter 9.1 – 9.6
14	Nov 19 - 23 Holiday: 11/22	Chapter 9.6 – 9.9
15	Nov 26- Nov 30	Review, 10.1 – 10.2 **Exam III: Chapter 7 – 9**
16	Dec 3 - 7	10.4 – 10.7, Review Take-home final questions due)**Final Exam: December 7th, 2012**

**Note: New material covered the day before the final will not be tested on. It is intended to familiarize yourselves with a topic.