

### Basic Course Information

Semester	<b>Fall 2015</b>	Instructor Name	<b>Allyn Leon</b>
Course Title & #	<b>Discrete Mathematics, Math 240</b>	Email	<b>allyn.leon@imperial.edu</b>
CRN #	<b>10139</b>	Webpage	<a href="http://imperial.blackboard.com">http://imperial.blackboard.com</a>
Room	<b>2727</b>	Office	<b>2760</b>
Class Dates	<b>08/17/2015 - 12/11/2015</b>	Office Hours	<b>Mon/Wed from 10:30 - 12:00 Tues/Thurs from 9:35 - 10:05</b>
Class Days	<b>Tuesday and Thursday</b>	Office Phone #	<b>760-355-6523</b>
Class Times	<b>8:00 am - 9:25 am</b>	Office contact if student will be out or emergency	<b>Send me an email OR leave a message on my office phone.</b>
Units	<b>3</b>		

### 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 division 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.

### 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) use a truth table to test the validity of an argument, (2) construct proofs of mathematical statements using standard techniques, including induction, and (3) apply graph theory to real world situations.

### Course Objectives

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

1. Use proof techniques in logic to determine the validity of logic statements.
2. Solve problems in which the number of possibilities is finite using basic counting techniques, permutations and combinations.
3. Demonstrate an understanding of the concept of sets and the ability to carry out set operations.
4. Solve recurrence relations.
5. Demonstrate an understanding of introductory graph theory with its application to real-life problems.

### Textbooks & Other Resources or Links

#### 1. Textbooks

- a. **Option 1:** Discrete Math w/Graph Theory, 3E by Goodaire & Parmenter, Pearson Publisher (bookstore)
- b. **Option 2:** Discrete Math w/Apps, 4E by Epp, Brooks/Cole Publisher (pdf download)

2. **Calculator:** At this stage in your mathematical careers you will likely already have a graphing calculator; if not, you might want to invest in one.

### Important Dates

Last day to add the class: **Saturday 08/29/2015**

Last day to withdraw from the class with a "W": **Saturday 11/07/2015**

See the schedule on the last page for important homework and test dates!

### Course Requirements and Instructional Methods

Homework: There will be exercises assigned from every section. This homework can be completed out of the textbook using separate sheets of paper (stapled together and in order, please). Homework will be due on test days.

Projects: There will be two (2) projects given throughout the semester at 50 points each. .

Tests: There will be four (4) tests during the semester. Tests 1, 2, & 3 will take place at the end of short clusters of topics. See the schedule below. Test 4 is the final. **There will be no make-up exams. If you miss any exam, it will be recorded as a zero, and the final exam percentage will be used to replace that score at the end of the semester. If you miss the final, it will be recorded as a zero.**

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. WASC has adopted a similar requirement.

Imperial Valley College Course Syllabus  
Discrete Mathematics - Math 240

**Course Grading Based on Course Objectives**

Your grade will be calculated based on the following items:

10 Homework Assignments @ 10 points each	100 points	~10%
2 Projects @ 50 points each	100 points	~10%
Test 1, Test 2, & Test 3 @ 200 points each	600 points	~60%
Test 4 (Final) @ 200 points	200 points	~20%
<i>Total</i>	<i>1000 points</i>	<i>100%</i>

Your final grade will be based on the following points and percentages:

90% to 100%	900-1000 points	A
80% to 89%	800-899 points	B
70% to 79%	700-799 points	C
60% to 69%	600-699 points	D
Below 60%	Below 600 points	F

After each exam, the test and homework scores will be entered into Blackboard. The **Blackboard gradebook** is where you want to go to check your grades and progress. You can do this at any time to get an idea of how you are doing in the class.

**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.
- 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: Please keep your cell phones on silent and/or vibrate while we're in class.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Water only, please.
- 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**

- 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, 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](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/>

### Anticipated Class Schedule / Calendar

Week #	Date	Readings & Assignments	Tests/Homework Due Dates
1	08/18	Introduction	
	08/20	Chapter 1	
2	08/25	Chapter 1	
	08/27	Chapter 2	
3	09/01	Chapter 2	
	09/03	Chapter 3	
4	09/08	Chapter 3	
	09/10	Chapter 3	
5	09/15	Test 1	<b>Test 1 on Chapters 1-3, Homework for Chapters 1-3 Due</b>
	09/17	Chapter 4	
6	09/22	Chapter 4	
	09/24	Chapter 4	
7	09/29	Chapter 4	
	10/01	Chapter 5	
8	10/06	Chapter 5	
	10/08	Chapter 5	
9	10/13	Chapter 5	<b>Project 1 Due</b>
	10/15	Chapter 6	
10	10/20	Chapter 6	
	10/22	Test 2	<b>Test 2 on Chapters 4-6, Homework for Chapters 4-6 Due</b>
11	10/27	Chapter 7	
	10/29	Chapter 7	
12	11/03	Chapter 8	
	11/05	Chapter 8	
13	11/10	Chapter 9	
	11/12	Chapter 9	
14	11/17	Test 3	<b>Test 3 on Chapters 7-9, Homework for Chapters 7-9 Due</b>
	11/19	Chapter 10	
15	11/24	<b>Thanksgiving Break</b>	
	11/26	<b>Thanksgiving Break</b>	
16	12/01	Chapter 10	<b>Project 2 Due</b>
	12/03	Review for Final	<b>Homework for Chapter 10 Due</b>
17	12/08	<b>Test 4/Final Exam</b>	<b>Test 4/Final Exam</b>