

Imperial Valley College Course Syllabus  
Finite Mathematics - Math 122

### Basic Course Information

|                  |                                     |                  |   |
|------------------|-------------------------------------|------------------|---|
| Semester         | <b>Spring 2017</b>                  | Instructor Name  | <b>Allyn Leon</b>   |
| Course Title & # | <b>Finite Mathematics, Math 122</b> | Email            | <a href="mailto:allyn.leon@imperial.edu">allyn.leon@imperial.edu</a>          |
| CRN #            | <b>20707</b>                        | Webpage (Canvas) | <a href="http://imperial.instructure.com">http://imperial.instructure.com</a> |
| Room             | <b>2732</b>                         | Office           | <b>2760.2</b>   |
| Class Dates      | <b>02/16/2016 - 06/08/2016</b>      | Office Hours     | <b>M/W from 10:45 am - 12:00 pm<br/>Tu/Th from 3:30 pm to 4:00 pm</b>         |
| Class Days       | <b>Tuesday &amp; Thursday</b>       | Office Phone #   | <b>760-355-6523</b>   |
| Class Times      | <b>2:00 pm to 3:25 pm</b>           |                  |   |
| Units            | <b>3</b>                            |                  |   |

### Course Description

Finite Mathematics satisfies the mathematics general education requirement and is transferable. Topics included in this course are: mathematics of finance, linear processes, combinatorics, probability, matrices, linear programming. Additional topics that may be selected by the instructor include: statistics, logic, game theory, Markov Chains.

### Student Learning Outcomes

Given a problem or set of problems, the student will demonstrate problem solving strategies by identifying an appropriate method to solve a problem, correctly set up the problem, perform the appropriate analysis and computation, and share their interpretation of the conclusion or the outcome, using correct grammar or in an oral presentation. This outcome will be assessed through selected exercises on exams throughout the semester.

### Course Objectives

Through various activities and assessments, students will:

1. Students will demonstrate an understanding of basic ideas of linear equations and inequalities and their graphs.
2. Students will demonstrate an understanding of systems of equations, methods of solution, and elementary matrix algebra.
3. Students will demonstrate an understanding of the basics of the linear programming problem and its graphical solution.
4. Students will demonstrate an understanding of set theory and the principles of combinatorics.
5. Students will demonstrate an understanding of the application of counting to compute probabilities.
6. Students will demonstrate an understanding of introductory descriptive statistics.
7. Students will demonstrate an ability to use the concepts of the mathematics of finance.
8. Students will demonstrate an ability to use the concepts taught in the additional topics.

### Textbooks & Other Resources or Links

- **Textbook:** Applied Finite Mathematics by Rupinder Sekhon, OpenStax Publisher.
  - a. **Online:** You can view the book online at this url  
<http://cnx.org/contents/8c-1jjEY@5.1:DjaX961v@2/Linear-Equations>
  - b. **Download PDF:** The book will also be available as a PDF download (in Canvas).
- **Calculator:** A basic calculator, like a TI-30 (costs around \$10) is recommended, or you can go with a graphing calculator, like the TI-83 or TI-84; it really depends on what other math or science classes you plan on taking later on. You **NEED** a calculator of some sort to do the work on the tests. You will **NOT** be allowed to use Cell Phone calculators on the Midterm or the Final.

### Important Dates

Last day to add the class: **Saturday 02/27/2016**

Last day to withdraw from the class with a "W": **Saturday 05/14/2016**

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

**Course Requirements and Instructional Methods**

Homework: There will be **exercises** assigned from every topic that we cover **FOR PRACTICE ONLY**. You will not turn these in. These homework exercises will be available for view/download/print from Canvas.

Quizzes: There will be eleven (11) short quizzes in Canvas throughout the semester. Only the top ten (10) will count. Most will cover a few topics and will have 10-20 exercises for you to complete. Make sure you take note of the due dates (in Canvas); if you miss the deadline **there will be no make-up quizzes**.

Project: There will be one (1) project that involves applying knowledge of matrix mathematics using technology, probability and statistics, and/or mathematical finance (from the student learning outcome). Projects will be completed in groups of 3 or 4 students, and will also involve a short presentation (5-10 minutes or so) towards the end of the semester. More information will be provided through Canvas.

Tests: There will be three (3) tests during the semester. Tests 1 and 2 will take place at the end of short clusters of topics. See the schedule below. Test 3 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.

**Course Grading Based on Course Objectives**

Your grade will be calculated based on the following items:

|  |                    |             |
|--|--------------------|-------------|
| 10 Quizzes @ 20 points each (take 11, keep the top 10) | 200 points         | ~20%        |
| Project @ 100 points                                   | 100 points         | ~10%        |
| Test 1 and Test 2 @ 200 points each                    | 400 points         | ~40%        |
| Test 3 (Final) @ 300 points                            | 300 points         | ~30%        |
| <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 |

The **Canvas 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. 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: 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, only students who are enrolled in the class may attend.

### 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 full time 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/>

### Tips for Success

1. **Pace yourself, and keep up.** Take a look at the anticipated class schedule of topics, readings, assignments, and tests above. This is a guide to help you keep pace with course materials. Come to class, take notes, and do the homework.
2. **Watch the videos** that are available for each topic that is supposed to be covered. I will be posting videos from youtube for various topics that we cover, and I strongly recommend that you watch these prior to and after coming to class. These will be in Blackboard.
3. **Practice.** Start the homework as early as possible during the week. Reading ahead and trying the problems before class will increase your exposure to the material.
4. **Form a study group.** Having a group of people that you discuss and work out problems with is a great way to learn.
5. **Ask questions.** Part of learning anything, including math, is not understanding, and asking questions so that the material makes sense. If something in class does not make sense, ask.

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**Anticipated Class Schedule / Calendar**

| <b>Week #</b> | <b>Dates</b> | <b>Readings &amp; Assignments</b>                           | <b>Test Dates</b>   |
|---------------|--------------|---|---|
| 1             | 02/13        | Introduction to the course<br>Review of Algebra Topics      | <b>Quiz 1 (Syllabus)</b>                                    |
| 2             | 02/20        | Review of Algebra Topics<br>Sets, Probability, & Statistics | <b>Quiz 2 (Algebra)</b>                                     |
| 3             | 02/27        | Sets, Probability, & Statistics                             | <b>Quiz 3 (Sets)</b>  |
| 4             | 03/06        | Sets, Probability, & Statistics                             | <b>Quiz 4 (Probability)</b>                                 |
| 5             | 03/13        | Sets, Probability, & Statistics                             | <b>Quiz 5 (Statistics)</b>                                  |
| 6             | 03/20        | Sets, Probability, & Statistics<br><b>Test 1</b>            | <b>Test 1 (Sets, Probability, &amp; Statistics)</b>         |
| 7             | 03/27        | Systems, Matrices, & Linear Programming                     | <b>Quiz 6 (Systems)</b>                                     |
| 8             | 04/03        | Systems, Matrices, & Linear Programming                     | <b>Quiz 7 (Matrices)</b>                                    |
| 9             | 04/10        | Systems, Matrices, & Linear Programming                     | <b>Quiz 8 (Linear Programming)</b>                          |
| 10            | 04/17        | <b>SPRING BREAK</b>   |   |
| 11            | 04/24        | Systems, Matrices, & Linear Programming<br><b>Test 2</b>    | <b>Test 2 (Systems, Matrices, &amp; Linear Programming)</b> |
| 12            | 05/01        | Mathematics of Finance                                      | <b>Quiz 9 (Mathematics of Finance)</b>                      |
| 13            | 05/08        | Mathematics of Finance                                      | <b>Quiz 10 (Mathematics of Finance)</b>                     |
| 14            | 05/15        | Mathematics of Finance                                      | <b>Quiz 11 (Mathematics of Finance)</b>                     |
| 15            | 05/22        | Project   |   |
| 16            | 05/29        | <b>Review for Final</b>                                     |   |
| 17            | 06/05        | <b>Test 3/Final</b>   | <b>Test 3/Final</b>   |