

### Basic Course Information

Semester	<b>Spring 2014</b>	Instructor Name	<b>Mr. Voldman</b>
Course Title & #	<b>Math 192(Calculus I)</b>	Email	<b>alex.voldman@imperial.edu</b>
CRN #	<b>20158</b>	Webpage (optional)	
Room	<b>2725</b>	Office	<b>Room 2764</b>
Class Dates	<b>01/21/14-05/16/14</b>	Office Hours	<b>MW 11:40-13:10, TTH12:45-1:15</b>
Class Days	<b>TTH</b>	Office Phone #	<b>760-355-6299</b>
Class Times	<b>7:30-10:00</b>	Office contact if student will be out or emergency	<b>760-355-6155, 760-355-6201</b>
Units	<b>5</b>		

### Course Description

Concepts dealing with limits, continuity, differentiation and applications, integration and applications, exponential and logarithmic functions, and other transcendental functions will be covered.

### Student Learning Outcomes

1. Be able to use substitution to find the anti-derivative of a composite function. (ILO2)
2. Demonstrate ability to anti-differentiate simple functions (ILO2)
3. Be able to set up and solve optimization problems of a single variable. (ILO1, ILO2, ILO4)
4. Be able to compute limits for simple functions. (ILO2)
5. Be able to apply the chain rule for a function of a single variable. (ILO2)

### Course Objectives

1. Demonstrate skills in understanding the concept of limit and be knowledgeable in finding limits.
2. Demonstrate an understanding and a working knowledge of the derivative.
3. Demonstrate proficiency in problem solving when dealing with applications of differentiation.
4. Demonstrate knowledge in anti-differentiation.
5. Demonstrate an understanding and a working knowledge of the definite integral.
6. Demonstrate a thorough understanding of logarithmic and exponential functions, and their use in applications dealing primarily with growth and decay phenomena.
7. Demonstrate the ability to deal with trigonometric, inverse trigonometric and hyperbolic functions and many common applications thereof.

### Textbooks & Other Resources or Links

Stewart, James (2011). *Single Variable Calculus: Early Transcednetals* (7th/e). Brooks/Cole. ISBN: 978-0538498678

### Course Requirements and Instructional Methods

**Homework (Online Assignments):** You will need to log into <https://imperial.blackboard.com/>; there, you will find the homework problems, along with projects and project tutorial assignments.

### **Project**

Purpose: To introduce technology (MATLAB)

Place to work on the project: MATHLAB (Building 2500)

**No late project will be accepted!**

### **Exams**

Purpose: To review the material introduced in class and to evaluate your understanding of the material covered in the course. There will be no make-up exams given. Zeros will be given for all missed tests.

**Final Exam** (comprehensive)

### **Office Hours**

Your professor urges you to avail yourself of his/hers individual instruction during office hours. Do not wait until you are in trouble. If you have been absent or late to class, please read the lesson you missed and come to his/her office prepared with questions.

## **Course Grading Based on Course Objectives**

### **Grade Distribution**

<b>Project</b>	<b>Exams</b>	<b>Final</b>
<b>100 points</b>	<b>400 points</b>	<b>200 points</b>

<b>Project</b>	<b>10%</b>
<b>Exams</b>	<b>60%</b>
<b>Final</b>	<b>30%</b>

## **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. If you are 10 minutes late you will be marked absent. Do not make doctor, counseling, or any appointments during class time. Leaving during lecture will be considered an unexcused absence. If you have to leave anytime during class, other than established break times, you must inform your instructor.
- 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.

- 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. Disruptive and inconsiderate behavior will not be tolerated! Absolutely no talking during lecture unless you have questions! Respect your classmates and your instructor.
- 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

- Me: Office Hours; just walk-in and get help.
- Study Guides: The bookstore has textbooks for sale
- 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

Date or Week	Activity, and/or Assignment	Material, and/or Topic
Week 1 January 21-25	Syllabus & Orientation MATLAB Orientation Chapter 2, Sections 2.1-2.3	Introduction to limits, limit laws
Week 2 January 27-31	Chapter 2 Sections 2.5-2.6, 2.7-2.8	Continuity, Limits at infinity, Derivative of a function
Week 3 February 3-8	Chapter 3 Sections 3.1-3.2	Derivatives of polynomial and exponential functions, The product and quotient rule
Week 4 February 10-16	Chapter 3 Section 3.3 <b>Exam I - Thursday</b>	Derivatives of trigonometric functions
Week 5 February 17-22	Chapter 3 Sections 3.4-3.5	The Chain rule, Implicit differentiation and derivatives of inverse trigonometric functions
Week 6 February 24-28	Chapter 3 Sections 3.6-3.7	Derivatives of logarithmic functions, Applications (rates of change)
Week 7 March 3-8	Chapter 3 Section 3.7-3.8	Applications (rates of change, exponential growth and decay)
Week 8 March 10-15	<b>Exam II - Tuesday</b> Chapter 3 continued Section 3.9	Applications (related rates)
Week 9 March 17-22	Chapter 3 Sections 3.10-3.11	Linear approximations and differentials, Hyperbolic functions
Week 10 March 24-28	Chapter 4 Sections 4.1-4.2	Maximum and minimum values, The Mean Value Theorem

Imperial Valley College Course Syllabus – Course Title and number

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Week 11 April 1-4	Chapter 4 Section 4.3-4.4	Derivatives and graphs, L'hospital's rule
Week 12 April 7-12	Chapter 4 Section 4.7 Sections 4.8-4.9	Optimization problems Newton's method and antiderivatives,
Week 13 April 14-19	Chapter 5 Sections 5.1-5.1 <b>Exam III-Thursday</b>	Area problem and definite integral
April 21-26	<b>Spring Break</b>	
Week 14 April 28-May 3	Chapter 5 Sections 5.3-5.4	The fundamental theorem of calculus, Indefinite Integrals
Week 15 May 5-10	Chapter 5 Section 5.5 <b>Exam IV-Thursday</b> <b>Project submission - May 8 (Thursday)</b>	The substitution rule
Week 16 May 12-16	<b>Final Exam (To be announced)</b>	

Note: I reserve the right to change this schedule with notification to students