Mathematics IB-01230
Fundamentals of Integral Calculus
Winter Quarter 2015
De Anza College

Instructor: Robert Ramsey

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Office Hours: Mon thru Thu, 12:30 pm to 1:30 pm
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Room 1220

Lecture: Tue and Thu; 1:30 pm to 3:45 pm
De Anza College, Main Campus
Rm. G5

Text: **Calculus: Early Transcendentals, 7th Edition**
Author: James Stewart

ISBN-13: 9780538497909
Publisher: Cengage Learning

Prerequisites: Mathematics IA.

Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.

About the Course: This is the second of the three quarter series of Calculus courses taught at De Anza College. This course emphasizes the fundamental concepts of integral calculus. Students are encouraged to focus on the student learning outcomes and course objectives to garner a greater understanding of this course and of differential calculus.

Student Learning Outcomes:

A. Analyze the definite integral from a graphical, numerical, analytical and verbal approach, using correct notation and mathematical precision.
B. Formulate and use the Fundamental Theorem of Calculus.
C. Apply the definite integral in solving problems in analytical geometry and the sciences.

Course Objectives:

A. Analyze the concept of the definite integral as a limit of a Riemann sum and examine its properties.
B. Examine the Fundamental Theorem of Calculus
C. Find definite and indefinite integrals using various techniques
D. Examine applications of the definite integral in Mathematics
E. Examine some applications of the definite integral to other subjects, such as, physics, economics and biology. Required applications include probability and center of mass.
F. Analyze hyperbolic functions.
G. Examine differential equations

Study Group Information: Every student will be required to form a study group of two or three students. These groups will work together to complete their group projects.

Projects: The purpose of the in class projects is to place an emphasis on critical thinking, problem solving, and to expand every students understanding beyond the mere mechanical aspects of mathematics. The projects will place an emphasis on expository writing, making logical connections between algebraic, formulaic, tabular and graphical presentations of mathematical concepts.

Tests: We will cover selected section 3.11, chapters five through nine and section 10.2 of the Stewart Calculus: Early Transcendentals textbook. There will be three (ninety minutes each) exams, after the completion of chapter five, six and seven. There will be no make-up exams unless arrangements are made prior to the date of said exam, and said exam is taken before the regularly scheduled exam.

Use of Technology: Students will use technology, computers and graphing calculators, to explore mathematical concepts graphically and numerically; therefore, the use of technology in this course is encouraged. The calculator of choice is the Texas Instruments TI-84 or TI-83 graphing calculator. The Texas Instruments TI-89 is also an acceptable calculator.

Homework: Homework is intended as a means of increasing every students understanding, and as a means of mastering the course material. Every student is required to register at www.webassign.net with the use of our class' course key, to be given out the first day of class. All homework is assigned and completed online. Successful completion of every homework assignment should not be interpreted, in and of itself, as sufficient effort to pass Math 1B. In addition to the homework assignments online, the handouts passed out in class, and any in-class assignments not completed, should be considered additional home work.

Quizzes: There will be a minimum of four quizzes assigned during the upcoming quarter. Quizzes completed in class will be used to determine every students quiz grade.

Class Participation: Attendance during lecture is mandatory and students are expected to be on-time without leaving early. Students are responsible for all announcements made in class, whether they are present or not. Successful performance in this course requires classroom attendance, completion of all in-class assignments, and homework; as well as, serious effort on the exams, the project(s), and the final.

Final: There will be a comprehensive final exam which will contain material from all chapters covered over the course of this fall quarter. The date of our Final Exam is Thursday, March 26 at 1:45 pm to 3:45 pm in Rm. G5.

Grading:	3 Exams (@ 10% each)	30 %
	Homework	20 %
	In-Class Quizzes	10 %
	Group Project(s)	20 %
	Final	20 %
TOTAL		100 %

Grades will be as follows:

A	=	90.00 to 100.00%
B	=	80.00 to 89.99%
C	=	70.00 to 79.99%
D	=	55.00 to 69.99%
F	=	less than 55.00%

Academic Integrity: Any credible accusation of academic dishonesty, no matter how minor, will be investigated, and if found to be meritorious, will be dealt with severely. Students caught cheating will receive an F for that assignment and notice of the offense will be forwarded to the chairman of the department of mathematics and the Vice President for Academic Affairs for further punitive action.

Disruptive Behavior: Unruly or disruptive behavior to include incessant talking, rude, profane, or vulgar language, threatening or violent behavior, and\or any form of disrespect, directed at the instructor or fellow classmates will not be tolerated. Such behavior will result in the immediate and permanent removal of the offending individual from this course.

In addition, there has been an increasing problem of student's texting during class. All Math 1B students are requested to refrain from such behavior.

Important Dates:

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Monday, Jan. 5 :: First day of Winter Quarter 2015**.**

Saturday, Jan. 17 :: Last day to add quarter-length classes. *Add date is enforced.*

Sunday, Jan. 18 :: Last day to drop for a full refund or credit (quarter-length classes)**.** *Drop date is enforced.*

Monday, Jan. 19 :: Last day to drop a class with no record of grade. *Drop date is enforced.*

Friday, Jan. 30 :: Last day to request pass/no pass grade. *Request date is enforced.*

Friday, Feb. 27 :: Last day to drop with a "W." *Withdraw date is enforced.*

Monday, Jan. 19 :: Holiday: Observance of Martin Luther King's Birthday

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Friday, Feb. 13 :: Holiday: Observance of Abraham Lincoln's Birthday

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Saturday-Sunday, Feb. 14-15 :: Holiday: Presidents' Day Weekend (no classes)

Monday, Feb. 16 :: Holiday: Observance of George Washington's Birthday

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March 24-27 :: Final Exams

Friday, March 27 :: Last day to file for a winter degree or certificate**.**

Friday, March 27 :: Last day of Winter Quarter

Monday, April 6 :: First day of Spring Quarter
