

Calculus BC Syllabus

Instructor: Dr. Chuck Garner

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Texts:

1. Garner, Chuck. *The A.P. Calculus Problem Book*, 4th edition, revised and corrected, RMSST, 2007. \$15.00

Additional Resources:

1. Thomas, George B., Ross L. Finney, Maurice D. Weir, and Frank R. Giordano. *Thomas' Calculus, Early Transcendentals Part One: Single Variable*, Updated 10th edition, Addison-Wesley, 2003. ISBN 0321123565. \$102.96
2. Lederman, David. *Multiple-Choice and Free-Response Questions in Preparation for the A.P. Calculus BC Examination*, 6th edition, D & S Marketing Systems, 1999. \$21.95
3. Thomas, George B. and Ross L. Finney. *Student's Study Guide, Part One*, Addison-Wesley, 2001. ISBN 0201710080. \$28.80
4. Weir, Maurice D. and John Scharf. *Student's Solutions Guide, Part One*, Addison-Wesley, 2001. ISBN 0201662116. \$27.60
5. The *Visual Calculus* Web Page: <http://archives.math.utk.edu/visual.calculus>
6. The Magnet Math Website: <http://drgarnerjr.home.comcast.net>

Course Description: This course is designed to provide a college-level experience in mathematics. Students will be able to work with functions in numerical, graphical, and algebraic ways and will also understand the relationships between the different representations. Students will understand the concepts of limits, derivatives, and integrals. Students will be able to apply derivatives and integrals to real-world phenomena. Students will understand and apply differential equations, polar functions, vector functions, sequences, and series. Broad goals for the students include understanding the role of calculus concepts in science and technology; being more than adequately prepared for the A.P. Calculus exam; and, developing an interest and appreciation for mathematics itself, outside scientific and technological applications.

Materials:

You will need the following materials on a daily basis.

1. a notebook for notes
2. a binder with loose-leaf paper for homework
3. pencils (any assignment to be graded must be completed in pencil)
4. a graphing calculator (TI-83 or TI-84 is recommended)
5. the *Problem Book*

Requirements:

1. Bring all materials. *Note: I do not provide extra materials if you fail to bring your materials.*
2. Complete all assignments.
3. Use class time constructively.
4. Actively participate in class discussions.
5. A desire to learn and a determination to succeed.

Letter Grades: 90 to 100: A; 80 to 89: B; 75 to 79: C; 70 to 74: D; and below 70: F.

Grades are confidential and will only be discussed with the concerned student and the student's parents.

Evaluation:

<i>First Semester.</i>		<i>Second Semester.</i>	
3 Tests, each 100 pts	300	4 Tests, each 100 pts (drop 1)	300
10 Quizzes, each 20 pts (drop 1)	180	7 Quizzes, each 20 pts (drop 1)	120
6 Labs, each 40 pts (drop 1)	200	4 Labs, each 40 pts (drop 1)	120
5 TI-Labs, each 10 pts (drop 1)	40	2 TI-Labs, each 10 pts	20
39 Homeworks, each 10 pts (drop 4)	350	38 Homeworks, each 10 pts (drop 3)	350
Portfolio	130	Project	190
TOTALS:	1200		1000

The following formula is used to determine your grade in this class each Semester:

$$\frac{\text{Total points earned}}{\text{Total points possible}}$$

As always, the Final Grade for each semester is computed by

$$\text{Final grade} = 0.8(\text{Semester grade}) + 0.2(\text{Exam Grade})$$

Students are required to keep track of their own grades. You may compare your grade calculations with me after school; I will not discuss grades during the school day.

Practice AP Exam: EITHER Sunday, April 20 OR Sunday, April 27 at 1:00 PM.
AP EXAM: Wednesday, May 7 at 8:00 AM.

Make-Up Work:

Tests No make-up tests will be given unless arrangements are made prior to test day. If a test is missed first semester, the final exam will be used to replace the missed test. The final exam will not be used to replace any test grades second semester. There are no exam exemptions. If your test average over both semesters is an A, you are exempt from the second semester Project.

Quizzes No make-up quizzes will be given.

Homework No make-up homework assignments will be given.

Extra Credit No extra credit of any kind will be given.

Absences It is entirely the student's responsibility to obtain notes, handouts, and assignments when the student is absent.

Cheating of any kind on any assignment is considered the theft of someone else's diligence will result in zero points for that assignment for all persons involved and possibly a grade of "F" for the course.

This syllabus provides a general plan for the course; deviations may be necessary.

BC Schedule First Semester

Day	Assignment
1	1.1, TI-Lab 1
2	1.2, 1.3
3	1.4, 1.5
4	Quiz, 1.6, 1.7
5	1.8–1.10
6	1.11, 1.12, Calculus Lab 1 due
7	1.13, 1.14
8	Quiz, 1.15–1.17
9	1.18, 1.19 TEST 1
10	2.1, 2.2
11	Quiz, 2.3, Calculus Lab 2 due
12	2.4, 2.5
13	2.6, 2.7
14	2.8, TI-Lab 2 due
15	Quiz, 2.9, 2.10
16	2.11, 2.12
17	2.13, Calculus Lab 3 due
18	Quiz, 2.14
19	2.15, 2.16
20	2.17
21	2.18, 2.19 TEST 2
22	3.1, 3.2
23	3.3, 3.4, Calculus Lab 4 due
24	Quiz, 3.5, 3.6
25	3.7
26	3.8, TI-Lab 3 due
27	3.9, 3.10
28	3.11, 3.12
29	Quiz, 3.13, 3.14 TEST 3
30	4.1, 4.2
31	4.3
32	4.4, 4.5, Calculus Lab 5 and TI-Labs 4 and 5 due
33	4.6
34	Quiz, 4.7, 4.8
35	4.9, Portfolio due
36	4.10, 4.11
37	4.12, 4.13, Calculus Lab 6 and TI- Lab 6 due
38	Quiz, 4.14–4.16
39	Quiz, 4.17–4.19 EXAM

BC Schedule Second Semester

Day	Assignment		
		58	Quiz, 7.7, Calculus Lab 9 due
40	5.1	59	7.8
41	5.2	60	7.9
42	5.3	61	7.10
43	Quiz, 5.4	62	7.11, 7.12
44	5.5, 5.6	63	Quiz, 7.13, 7.14
45	5.7, 5.8, TI-Lab 8 due	64	7.15, 7.16
46	Quiz, 6.1		TEST 5
47	6.2	65	Exam II Section IIB
48	6.3, 6.4	66	Exam III Section IIA
49	Quiz, 6.5, Calculus Lab 7 due	67	Exam III Section IIB
50	6.6	68	Exam IV Section IIA
51	6.7, 6.8	69	Exam IV Section IIB
52	Quiz, 5.9, 5.10, 6.9, 6.10	70	Quiz, Exam V Section IIA
	TEST 4	71	Exam V Section IIB
53	7.1, 7.2, Calculus Lab 8 and TI-Lab 9 due		Tues. May 6: Project due
			Wed. May 7: AP EXAM, 8:00 AM
54	7.3	72	8.1
55	7.4	73	8.2
56	7.5	74	8.3
57	7.6		EXAM, Group Investigation due