



**Math 180** **Precalculus**

**INSTRUCTOR:** Professor Linda Ho

**CLASS TIME:** 0872 MTWTH 10 – 11:10 AM at MCS 205

**OFFICE HOURS:** MTWTH 9:30 – 10 AM and MW 12:45 – 2:15 PM @MCS 104Q  
Office phone & Voice Mail (310) 660-3593 ext 6756  
**Email:** [lho@elcamino.edu](mailto:lho@elcamino.edu)  
**Webpage:** [www.elcamino.edu/faculty/lho](http://www.elcamino.edu/faculty/lho)

**TEXT:** *Precalculus, 5th Edition, Stewart/Redlin/Watson, 2009, Brooks/Cole*

**PREREQUISITE:** Math 170 or equivalent (Trigonometry)

**MATERIALS:** A scientific calculator or a graphing calculator.

**GRADING SCALE:** The grade you receive in this class will be based on:

5 Midterms	100 points each	<b>500 points</b>
Final Exam (comprehensive)		<b>200 points</b>

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**700 Points Total**

*You are assured at least the following grade for obtaining the total points in one of the following categories:*

630 - 700.....	<b>A</b> (at least 90%)
560 - 629.....	<b>B</b> (at least 80%)
490 - 559.....	<b>C</b> (at least 70%)
420 - 489.....	<b>D</b> (at least 60%)
0 - 419.....	<b>F</b> (59% or below)

**Note: Students with disabilities who believe they may need accommodations in this class are encouraged to contact the Special Resource Center on campus as soon as possible to better ensure such accommodations are implemented in a timely fashion.**

**EXTRA CREDIT OPPORTUNITY:**

- If you participate in 3 practice sessions of math contest at ECC and receive a positive score in the AMATYC Math Contest on **Friday, October 28<sup>th</sup>, 2011 @ 1:30 PM**, you will receive **10 extra credit points** (equivalent of one midterm grade up). For more information/practice problems/practice sessions, go to [www.elcamino.edu/faculty/gfry](http://www.elcamino.edu/faculty/gfry) or visit Professor Fry at MCS-104U

**ACADEMIC HONESTY:**

It's never a good policy to cross the GODFATHER. Cheating and plagiarism are serious offenses. For details on the El Camino's policies on these matters, see page 25 on the 2011-12 College Catalog.

**ATTENDANCE/PARTICIPATION:** Good Attendance and active participation are critical and highly encouraged in this class. Homework questions will be answered in the first 20 minutes of each class except on exam dates. All students will be expected to do problems in class when asked to.

*Students may be dropped because of the following:*

- *More than 4 absences*
- *Missing more than one exam*
- *Excessive tardy and leaving class early*
- *Disruptive Behavior (which includes but is not limited to talking, emotional outbursts, disrespectful behaviors, listening to i-pod/mp3, reading materials other than classroom text, and cheating of any means.)*

**STUDENT ABSENCE LOG:**

Absence 1: Date: \_\_\_\_\_ I notified the instructor by \_\_\_ phone \_\_\_ email \_\_\_ in-person

Absence 2: Date: \_\_\_\_\_ I notified the instructor by \_\_\_ phone \_\_\_ email \_\_\_ in-person

Absence 3: Date: \_\_\_\_\_ I notified the instructor by \_\_\_ phone \_\_\_ email \_\_\_ in-person

Absence 4: Date: \_\_\_\_\_ I have scheduled an appointment to meet with the instructor to discuss my status in the class on the following date: \_\_\_\_\_

**CLASS CONDUCT:**

- If you carry **a cell phone**, please turn the **audio off** or put in vibrating mode before entering class.
- Because of liability considerations, children of any age **may not** come to class with you.
- If you find the lecture boring and feel inclined to talk to a neighbor, please do it the old-school way **by surreptitiously passing notes!** (*smirk*)
- Seating will be assigned next time based on where you sit.
- If you disrupt class, you will lose 10 points on the next exam **and** be removed from the classroom. Consequences may also result in a drop from the course and additional disciplinary actions from the administration.
- I **do not** accommodate students' vacation plans, family visits, or business trips whatsoever!
- I **do not** deal with your parents!

**HOMEWORK POLICIES:**

- Homework will be assigned everyday but they will not be collected (*see dates on homework assignment/tentative course schedule.*). It is YOUR JOB as a student to do homework! Since most exam problems are *similar* to homework problems, not doing homework on a regular basis will result in getting a bad grade in this class!

**EXAM POLICIES:**

- Exam guides will be distributed the weekend before each test.
- There will be *no make-up exams and no retakes*. *Your LOWEST midterm score, however, could be dropped AND replaced by the corresponding final exam score*. For example, if you score a 60 on midterm #1 and you end up scoring a 90 on final exam part II, then the score of 90 will replace 60 for midterm #1. Therefore, if you fail to show up on any exam dates, you will receive 0 on that exam--**NO EXCEPTIONS!**
- Students must **SHOW ALL WORK** on every exam. Answers with supporting work will receive full credit (if correct) and partial credit (if incorrect). Answers without supporting work will receive **NO CREDIT**.
- We will have a midterm every 2 to 3 weeks. Each midterm will be timed at 70 minutes.
- A two-part comprehensive final exam will be given. Final exam part I will include content from Midterm #4, Midterm #5 and new material. Final exam part II will include content from Midterm #1, Midterm #2 and Midterm #3. *Please see exam dates on course schedule next page.*

**WORDS OF WISDOM:**

- Mathematics is *not* a spectator's sport. If you cannot commit to 5 hours of class time weekly and at least 10 hours per week doing homework, reviewing lectures and getting tutorial help outside the classroom, please drop this course immediately.
- FREE Tutorial is available at MESA CENTER MCS-100F and MCS-106!

**Reminder:** All exam dates and assignment dates on the syllabus are subject to change depending upon the class progress. Hence, *you are responsible* for all the announcements and materials covered during your absence. **It is ultimately the students' responsibility to withdraw themselves from the class if they wish to be withdrawn.** Don't just stop coming to class and assume the instructor will drop you. She/he may not and you will receive an "F" for the semester.

## Math 180

### Catalog Description:

This course is preparation for Calculus. Topics of study include polynomial, rational, exponential, logarithmic and trigonometric functions as well as their inverses. An introduction to matrices, analytic geometry, and sequences and series are also included. The application of these topics is stressed to enhance conceptual understanding of the material.

### Course Objectives

- 1) Analyze functions (including polynomial, algebraic, rational, exponential, logarithmic, trigonometric) for critical features, including: intercepts, asymptotes, domain, range, and average rate of change.
- 2) Determine the inverse of a function (polynomial, algebraic, rational, exponential, logarithmic, trigonometric) and analyze it in terms of critical features.
- 3) Graph relations (including polynomial, rational, exponential, logarithmic, trigonometric functions and conics), using transformations (shifting, stretching, reflection).
- 4) Determine functions (including polynomial, rational, exponential, logarithmic, trigonometric) that model data.
- 5) Solve equations involving polynomial, rational, exponential, logarithmic, trigonometric functions.
- 6) Use polar and parametric functions to solve a variety of problems.
- 7) Use arithmetic and geometric series and sequences to solve a variety of problems.
- 8) Use matrices and systems of equations to solve a variety of problems.
- 9) Solve application problems using the topics of the course.
- 10) Use technology (graphing, scientific calculators or computer software) to solve problems.

### SLO Statements

- 1) Students will find zeros of polynomial functions by factoring polynomials using polynomial division and the factor theorem.
- 2) Students will solve algebraic, exponential, logarithmic, trigonometric, absolute value equations, and systems of equations using matrices.
- 3) Solve problems involving arithmetic and geometric sequence and series.
- 4) Students will graph algebraic, exponential, logarithmic, and trigonometric functions, and sketch functions in polar and parametric forms.
- 5) Students will prove trigonometric identities using the sum, difference, double-angle, and half-angle formulas.
- 6) Students will solve application problems at the pre-calculus level and use mathematical induction to write proofs.
- 7) Students will solve quadratic and rational inequalities and inequalities with absolute values.



# Math 180 Precalculus

## TENTATIVE COURSE SCHEDULE

<u>Day</u>	<u>Date</u>	<u>Description</u>	<u>Day</u>	<u>Date</u>	<u>Description</u>
Mon	8/29	Intro/1.3	Mon	10/24	7.1
Tue	8/30	1.3-1.4	Tue	10/25	7.2-7.3
Wed	8/31	1.5	Wed	10/26	7.4
Thur	9/1	1.6	Thur	10/27	7.5
Mon	9/5	<b>Holiday</b>	Mon	10/31	<b>Q &amp; A</b>
Tue	9/6	1.7	Tue	11/1	<b>Midterm 3</b>
Wed	9/7	1.8	Wed	11/2	8.1
Thur	9/8	1.10	Thur	11/3	8.2
Mon	9/12	2.1-2.2	Mon	11/7	9.4
Tue	9/13	2.3-2.4	Tue	11/8	9.4
Wed	9/14	2.4-2.5	Wed	11/9	9.5
Thur	9/15	<b>Q &amp; A</b>	Thur	11/10	9.8
Mon	9/19	<b>Midterm 1</b>	Mon	11/14	<b>Q &amp; A</b>
Tue	9/20	2.6	Tue	11/15	<b>Midterm 4</b>
Wed	9/21	2.7	Wed	11/16	10.1
Thur	9/22	2.8	Thur	11/17	10.2
Mon	9/26	3.1	Mon	11/21	10.3
Tue	9/27	3.2-3.3	Tue	11/22	10.4
Wed	9/28	3.3, 3.5	Wed	11/23	10.7
Thur	9/29	3.5-3.6	Thur	11/24	<b>Holiday</b>
Mon	10/3	3.6	Mon	11/28	11.1
Tue	10/4	4.1-4.2	Tue	11/29	11.2
Wed	10/5	4.3-4.4	Wed	11/30	11.3
Thur	10/6	4.4-4.5	Thur	12/1	<b>Q &amp; A</b>
Mon	10/10	<b>Q &amp; A</b>	Mon	12/5	<b>Midterm 5</b>
Tue	10/11	<b>Midterm 2</b>	Tue	12/6	11.5
Wed	10/12	5.1	Wed	12/7	11.6
Thur	10/13	5.2	Thur	12/8	<b>Q &amp; A</b>
Mon	10/17	5.3	Mon	12/12	<b>Final Exam Part 1</b>
Tue	10/18	5.3-5.4	Tue	12/13	<b>Q &amp; A</b>
Wed	10/19	6.1-6.2	Wed	12/14	<b>Final Exam Part 2</b>
Thur	10/20	<b>California Drill Day</b>	Thur	12/15	<b>Final Exam Results</b>

**Test 1-** (1.3-1.8, 1.10, 2.1-2.5)  
**Test 2-** (2.6-2.8, 3.1-3.6, 4.1-4.5)  
**Test 3-** (5.1-5.4, 6.1-6.2, 7.1-7.5)  
**Test 4-** (8.1-8.2, 9.4-9.6, 9.8)  
**Test 5-** (10.1-10.4, 10.7, 11.1-11.3)  
**Final I** -(11.5-11.6, Test 4-Test5)  
**Final II** -(Test 1 – Test3)

**Last day to drop without a "W"**  
**Friday September 23**  
**Last day to drop with a "w"**  
**Friday November 18**

## Math 180 Homework Assignments

Section	Exercises
1.3	35, 57, 67-70(all), 97, 101-104(all)
1.4	1, 3, 5, 6, 49, 51-71(odd), 77, 93
1.5	24, 25, 33, 35, 55, 61,79, 83, 89, 91, 97, 99, 101, 105
1.6	19, 21, 25, 29, 31, 41, 49, 51, 55, 57, 59, 61, 63, 67, 71,75
1.7	27, 37, 45, 47, 49, 55, 61, 65, 67, 77-85(odd), 95, 97, 99, 101
1.8	7, 17, 21, 23, 25, 37, 51, 55, 61, 63, 64, 68, 69, 71-95(odd), 96
1.10	19, 27, 31, 35, 53, 60, 61, 63, 65
2.1	15, 21-59 (odd), 62, 63-71(odd)
2.2	7-23(odd), 33, 34, 37-49(odd), 53, 54, 55-71(odd), 81-89(odd), 82
2.3	1-27(odd), 31, 33, 39
2.4	1-49(odd), 53, 55, 57, 61-71(odd)
2.5	1-37(odd), 41, 43, 47, 49, 59, 61, 65
	<b>Midterm #1</b>
2.6	1-17(odd), 21, 23, 25, 27, 30
2.7	1-11(odd), 12, 17-45(odd), 53, 57, 59, 61, 63
2.8	1-6(all), 7-27(odd), 37, 39, 43, 51, 53, 61-75(odd), 80
3.1	3, 11-21(odd), 23-35(EOO), 43, 45, 71, 72, 73
3.2	13-41(odd), 51, 53, 55, 57, 61, 63, 65
3.3	41-57(odd), 79
3.5	1-29(EOO), 31-39(odd), 41-57(EOO), 59, 61
3.6	5-31(odd), 33-53(EOO), 57-63(odd)
4.1	11, 25-41(odd), 45, 46, 55, 65, 67, 77, 81
4.2	3-35(odd), 47-63(odd), 75, 79
4.3	1-61(odd), 65, 66
4.4	1-53(odd), 63-71(odd), 77, 79
4.5	5, 9, 11, 15, 17, 33, 35,37
	<b>Midterm #2</b>
5.1	1-49 odd
5.2	3-25 odd; 63-77 odd
5.3	1-47 odd; 75-77
5.4	1,4,7,9,17,25,27,33,37,39
6.1	1-65 odd
6.2	1-29 odd;43,45,49,51,53, 59,61
7.1	25-85 EOO
7.2	1-17 odd; 19-37 EOO; 49
7.3	1-39 odd; 59, 61, 63
7.4	1-7 odd; 13-45 EOO
7.5	1-45 EOO; 65, 67
	<b>Midterm #3</b>
8.1	1-59 odd
8.2	1-6 all; 15-33 odd
9.4	1-6 all; 15-23 odd; 47,48

9.5	1-45 odd
9.8	1-37 odd
	<b>Midterm #4</b>
10.1	1-43 odd
10.2	1-39 odd
10.3	1-37 odd
10.4	1-29 odd
10.7	1-27 odd
11.1	1-15 odd; 23-45 odd; 53-67 odd
11.2	1-49 odd
11.3	1-59 odd
	<b>Midterm #5</b>
11.5	1-23 odd
11.6	1-9 odd; 25-37 odd