

**Math 260**

**Precalculus**

**5 Units**

**MTWTh 11:10-12:25**

**Room: MSA 109**

**Section: 1501**

**Spring 2015**

**Instructor: William J. Bucher**

**Office MSB 207**

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**Office Hrs: 7:30-8:00 AM MTWTh in room MSB 207 and 12:30-3:30 MW in MSB 207; or by appointment**

**Office Phone: (310) 287-4211 Note: It is better to e-mail so there is a written record.**

### **Course Description:**

This course in pre-calculus combines the traditional course of college algebra and analytic geometry and covers such topics as inequalities, functions, matrices and determinants, properties of the straight line, conic, algebraic and transcendental functions and parametric equations.

### **Math Program SLO—Student Learning Objectives**

- 1.) Apply quantitative thinking processes using basic mathematical operations (addition, subtraction, multiplication, division) to solve common academic, workplace and family problems. (Theme: Mathematical Operations)
- 3.) Use mathematical tools essential for analyzing quantitative problems and for producing solutions. (Theme: Mathematical Tools)
- 5.) Select appropriate math strategies for solving and handling real life problems involving finance, economics, and family issues. (Theme: Mathematical Problem-Solving)

### **Math 260 SLO—Student Learning Outcomes**

1. Choose an appropriate basic function (e.g. linear, piecewise, exponential, trigonometric, power, etc.) to model an applied situation and formulate conclusions about the original situation.

2. Recognize and evaluate functions, including inverse, polynomial and rational functions, and demonstrate knowledge of transformations and compositions of functions

### **Specific Learning Objectives:**

Upon satisfactory completion of the course, a student will be able to:

1. Perform operations on functions.
2. Determine bounds for the real zeros of a polynomial.
3. Solve exponential and logarithmic functions.
4. Prove trigonometric identities and solve trigonometric equations.
5. Find the  $n$ th roots of a complex number.
6. Perform operations on matrices.
7. Find the sum of the arithmetic and geometric sequences.
8. Use Mathematical induction to prove formulas.
9. Graph conic sections in cartesian and polar coordinates.
10. Use the binomial theorem.

**Textbook:** PRECALCULUS; Cohen, David; 6<sup>th</sup> edition; Thompson/Brooks & Cole.

Schedule: See Tentative Schedule page.

### **Homework, Quizzes, Tests & Grading:**

1.) Homework assignments from the text and/or in the form of supplements will be given every day. We shall discuss the assigned problems at the beginning of each class period. Not all of the homework will be collected. Certain of designated problems will be collected at the end of each week. I will spot check 4 randomly chosen problems. A simple score of 1-10 will be given on these chosen problems. Collectively, they will make up 6 % of your final course grade. **Doing all the assigned exercises and solving problems outside of class is where you learn the most!** Some effort should be made to keep this “done” homework in an organized fashion. It is very useful when studying for tests and quizzes

2.) There will be a short quiz every week. These will really be short, i.e., 10-15 minute duration. The purpose of these quizzes is to guarantee that the student stays current with the class lectures and activities. There will be approximately 14-15 of these quizzes. I will throw out your 3 worst quizzes in computing your average quiz score. The remaining quizzes will make up 13% of your final course grade. **There will absolutely be no makeup quizzes!**

3.) *There will be 4 tests. These will be of full period duration. See schedule for approximate dates. Makeup examinations will be given only to those students possessing **documented valid excuses. Advanced notice is mandatory.** Don't miss an examination and then show up. Call or write me ahead of time and make an arrangement to take the test. In order to be fair to the students who took the exam as scheduled, makeup examinations will always be substantially more difficult than the original. *Each of the four examinations will be worth 12% of your final course grade, making a total of 48% for all four exams.**

4.) The final examination will be a departmentally designed, comprehensive examination. This exam will be worth the remaining 33% of your final course grade. This is heavily weighted so it is extremely important that the student do well on this examination in order to do well in the course.

### **Summary**

Collected Homework	6%
Quizzes (approx 15, throw out worst 3)	13%
Tests ( 4 at 12% each)	48%
Final Examination	<u>33%</u>
Total	100%

**Note about Attendance:** If you miss more than 4 meetings (a week) of the course, the instructor has the option of excluding you from the course. I generally will contact you, if you reach this limit, but be aware of the fact that I will utilize this option at the earliest possible date. Once you have been excluded, there will be no reinstatement.

### **Note about Grading Scale:**

I use a straight scale:	100-90% A
	89-80% B
	79-68% C
	67-55% D
	54-00% F

In very unusual circumstances, some norming will be done, but usually my quizzes and tests are straightforward and there is no need to norm.

### **Calculators:**

In this and future courses, the use of calculators is permitted and encouraged. I advise you to buy a scientific graphing calculator with statistical capabilities. **You may not use your cell phones as calculators during quizzes or examinations!!! REPEAT: No cell phone will be allow on tests or quizzes. Get a calculator!! No symbolic manipulating devices are allowed (stored programs for algebraic manipulation— software, laptops, etc.**

**Cell Phones:**

**Cell phone use is strictly forbidden in the classroom.** If you possess a cell phone, it must be set on silent vibrate mode. If you absolutely must take an emergency call, please exit the classroom quietly and do so outside.

**Academic Dishonesty**

Cheating or plagiarism will not be tolerated. Any cases of either will be referred to the Dean of Students for disciplinary action. For more on acceptable behavior, read *Standards of Student Conduct* on page 119 of the Schedule of Classes.

### Tentative Schedule for Math 260 Spring 2015

Month	Mon.	Tues.	Wed.	Thu.	Sections Covered
Feb.	9	10	11	12	Chapters 1-2
	H	17	18	19	Chapter 3
	23	24	25	26	4.1-4.6
March	2	3	4	5	4.7, 5.1-5.3 Exam 1 Chapters 1-4
	9	10	11	12	5.4-5.7, 6.1-6.3
	16	17	18	19	6.4-6.5, 7.1-7.2
	23	24	25	26	7.3-7.7
April	30	31	1	2	8.1-8.3. Exam 2, Chapters 5-7
	SPRING BREAK SPRING BREAK APRIL 4-10				
	13	14	15	16	8.4-8.5, 9.1-9.3
	20	21	22	23	9.4-9.6, 10.1, 10.6
May	27	28	29	30	11.1-11.7, Test 3 Chapters 8, 9, 10
	4	5	6	7	12.1-12.6
	11	12	13	14	12.7-12.8, 13.1-13.3
	18	19	20	21	13.4-13.5, Test 4, Chapters 11, 12
	H	26	27	28	Review--overlap
	June	1		F	Final

Final Examination: June 4, 2015, 11:30 -1:30 AM/PM

Last date to drop without a fee—Feb. 12

Last day to drop without a W—Feb. 12

Last day to drop with a W—March 20

