

Syllabus for MATH 1060

Section W31

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Textbook: PreCalculus 5th edition, by Faires and DeFranza.

Course Website: <http://nibel.org/sflood/teaching.html>

Check your email! It is essential that you regularly check your UConn email at <http://gmail.uconn.edu>

Grades

Your grade will be earned out of 400 total points as follows. There is no extra credit.

Exam I	100 points (25%)
Exam II	100 points (25%)
Quiz Average	80 points (20%)
Final Exam	120 points (30%)
Total	400 points (100%)

Exams, worksheets and quizzes will be graded for correctness, completeness, and clarity. The more clear your explanation and organization, the more points you will earn! This also means that points may be deducted for confusing organization and poor handwriting, as well as for incomplete or incorrect work.

Exams

There will be two in-class exams and one final exam. The final exam will be cumulative: anything we've studied is fair game. The in-class exams generally cover the material since the last exam. No calculators will be permitted on any exam.

No makeup exams will be given. If you miss an exam for a valid reason (documented illness, documented family emergency, etc.), your exam grade will be determined by averaging the other exams.

Tentative dates are given in the Approximate Calendar of Study, below. *Please contact me before the exam* if you will need to miss it. It is much harder to document "valid reasons" after you have missed the exam.

Quizzes

There will be occasional quizzes and/or graded worksheets. These may be in-class or take-home assignments. The only difference is that you are allowed to work together and use calculators on a graded worksheet, but you cannot work with another person or calculator on a quiz. These will be short assignments, and their main purpose is to give you a chance to use, practice, and explore the concepts and tools that we are learning.

The Quiz grade will be the average of the assignment scores. In class quizzes and graded worksheets will be announced in advance. You cannot make them up, but the lowest 2 or 3 scores will be dropped.

Homework

The best way to learn Calculus is to get a lot of practice solving problems correctly and to learn to explain your solutions clearly to another person. Simply doing the graded quizzes and worksheets will *not* give you enough practice to learn the material.

To help you learn, you will have assigned homework. This will not be graded, but you should complete the problems within about a week of the material being covered. Don't think of this as "optional" homework. Think about it as homework with a "flexible due date."

Group Work and Free Tutoring

While group work can be helpful, I strongly encourage you to *work on problems yourself first*, before discussing them with your peers. Probably the best way to check that you understand a problem is to ask this question: "Can I reproduce the solution and explain it to a classmate a whole 10 minutes after I finished the problem?" Try this with the people you are studying with, and have them check your reasoning.

You have many excellent resources available to aid you as you work. For example, you can ask me any questions you might have during office hours! You also have access to free tutoring through the Math Resource Center, which is located in Room 227G of the Library. This resource center is open from Monday to Thursday, for several hours each day. You can learn more about the center, including their exact hours, online at http://www.waterbury.uconn.edu/student_resources/math_resources.html

But please remember: you will benefit the most if you *make a serious effort to solve the problems on your own* before you obtain other assistance.

Calculator policy

The goal of this course is to help you develop your analytical, visual, and problem solving skills. Because of this, **no calculators** are allowed on the exams or quizzes. On the other hand, a graphing calculator is a very useful **learning** tool, and you should have access to some sort of graphing calculator.

Using a graphing calculator:

Remember that our goal is for *you* to be able to make the graph. These 3 steps should help:

1. Read the problem carefully, and be sure you understand it.
2. Use your knowledge of pre-calculus to sketch the graph using pen and paper.
3. Make a graph using the calculator. Ask yourself "how does the graph compare to my sketch?"
If they are different, try to understand why!

You should also use your graphing calculator to help you **understand** functions. E.g. once you have graphed $f(x) = x^2 + 3x + 1$, you should try changing the numbers. Ask yourself "how does this change the graph?"

Obtaining a graphing calculator:

A dedicated graphing calculator is convenient and easy to use, but it does cost money. If you are trying to save money, there are many free tools available. Using a computer, you can find a free graphing calculator online at <http://fooplot.com/>. Using an android phone, you can use an app such as "Algeo Calculator". On an iOS device, you might try the app "Free Graphing Calculator".

But always **remember**: you will need to be able to solve most problems *without* a calculator.

Approximate Calendar of Study

This schedule is a preliminary outline, and you should expect it to change from time to time. For example, it is likely that the days marked “review” will include some amount of new material.

Lesson	Date	Section	Topic	Homework
1. 1	8/26		Algebra Review	Finish worksheets
2	8/28	1.2-4	Intervals, Solving inequalities, and Graphing review	pg 12 #1-19 odd, 31-71 odd pg 28 #9-24 (x and y intercepts only)
2.	9/02		Labor Day – No classes	
3	9/04	1.6	Functions	pg 50 #1-4, 15-22, 27-31 odd, 42-47
3. 4	9/09	1.7	Linear Functions and Quadratic Functions I	pg 62 #1-17 odd, 19-20, 21-35 odd
5	9/11	1.8,2.2	Quadratic Functions II and other common functions	pg 73 #1-27, 29-32 and pg 91 #1-17 odd, 18
4. 6	9/16	5.2	Exponential functions	pg 292 #1-12, 19, 35, 36, 42
7	9/18	2.3,4	Combining functions: arithmetic and composing	pg 100 #1-8 and pg 109 #1-19 odd
5. 8	9/23	3.1-3	Polynomial functions and Factoring polynomials I	pg 142 #1-2, 13-21 odd
9	9/25	3.3-4	Factoring Polynomials II and Rational Functions I	pg 154 #1-6, 19-27 odd
6. 10	9/30	3.4	Rational Functions II and Applications	pg 168 #11-29 odd
11	10/02		Review for Exam I	
7. 12	10/07		Exam I	
13	10/09	4.2	Measuring angles	pg 200 #1-14, 21-27 odd, 29-40
8. 14	10/14	4.3	Right-angle Trigonometry	pg 206 #1-11 odd, 21-23
15	10/16	4.4	Sine & Cosine	pg 219 #1-37 odd, 39-46
9. 16	10/21	4.5	Graphing Sine & Cosine	pg 229 #1-15 odd, 23-24
17	10/23	4.6	Other Trig Functions	pg 237 #9-16, 17-18, 21-22, 25-27

Lesson	Date	Section	Topic	Homework	
10.	18	10/28	4.7	Trig Identites	pg 250 #1-11 odd, 31-43 odd
	19	10/30	4.9	Additional Trig Applications	pg 271 #1-11 odd, 19-25 odd
11.	20	11/04		Exam II Review	
	21	11/06		Exam II	
12.	22	11/11	2.5	Inverse functions	pg 119 #1-35 odd
	23	11/13	4.8	Inverse Trigonometry	pg 259 #1-13 odd
13.	24	11/18	5.3	Logarithmic functions	pg 303 #1-15 odd, 27-32, 33-55 odd, 64
	25	11/20	5.3	Solving equations of e^x and $\ln(x)$	
14.		11/25		Thanksgiving break – No classes	
		11/27		Thanksgiving break – No classes	
15.	26	12/02	5.4	Exponential growth and decay	pg 310 #1-10
	27	12/04		Final Exam Review	
16.				Final Exam	12:00-2:00pm on 12/11