

Instructor: Chuck Stevens
Office Hours: 11:30 Daily

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Course Description

This course covers trigonometric functions, complex numbers, the solution of triangles, and conic sections. A graphing calculator may be required. Prerequisite: Math 141 with a grade of C or higher, or appropriate math placement score.

Text

Pre-Calculus: Mathematics for Calculus, 5th Ed. Stewart/Redlin/Watson, ISBN: 0-495-55750-1

Calculator

A graphing calculator will be useful throughout the course. I recommend the TI-84. Calculators may be rented through the math department for \$20 per quarter. **Note: Any calculator with CAS is not allowed. This includes the TI-89, TI-Nspires, HP-50, etc.**

Course Content

Math 142 covers content from selected sections from chapters 5, 6, 7, 8, and 10. After completing the course you will be able to:

1. Evaluate trigonometric functions with tables or a calculator.
2. Graph trigonometric functions.
3. Graph conic sections.
4. Prove identities.
5. Use addition and subtraction, multiple angle, and half-angle formulas.
6. Solve right triangles.
7. Use the law of sines and cosines in the solution of oblique triangles.
8. Demonstrate understanding and the use of the trigonometric form of complex numbers.
9. Use DeMoivre's Theorem.
10. Use trigonometry to solve vector problems.

Coursework

Homework Homework is expected to be done daily, but is generally not collected or graded. Homework is the most important part of any math course. This is the course component where you actually learn the content. Everything else is simply an assessment on what you've learned. In addition to the exercises out of the text there will be a daily set of exercises, usually around 3 to 5 that are to be done using **WAMAP** (an online application). These exercises will make up 15% of your total grade.

Worksheets There will be several take-home worksheets throughout the quarter worth 15 points each. These are due at the beginning of class on the due dates **and are not accepted late**. Only your five highest worksheet scores count toward your final grade.

Chapter Exams There are five chapter exams, one for each chapter 5, 6, 7, 8 and 10. Each chapter exam is worth 50 points. Exams cannot be taken late. Please contact me one week in advance if you need to reschedule the test due to a scheduling conflict or emergency. *Anyone found cheating on an exam will receive a 0 for that exam. Caught a second time will result in failing the course.*

Final Exam There is a comprehensive final exam covering material from the entire course. The final accounts for ~20% of your overall grade. You must receive at least a 60% on the final to pass the course.

Your final grade will be given based on a final percentage according to the following scale:

Grading scale:

A	93%-100%	B+	87%-89%	C+	77%-79%	D+	63%-66%
A-	90%-92%	B	83%-86%	C	70%-76%	D	60%-62%
		B-	80%-82%	C-	67%-69%	F	<60%

Daily Schedule (Very Tentative)

Monday	Tuesday	Wednesday	Thursday	Friday
1/1	1/2	1/3 Intro	1/4 5.1	1/5 5.2
1/8 5.3	1/9 5.3/5.4	1/10 5.4	1/11 5.5	1/12 Review
1/15 MLK DAY	1/16 Exam 1	1/17 6.1	1/18 6.2	1/19 6.3
1/22 6.4	1/23 6.5	1/24 6.5	1/25 Review	1/26 Exam 2
1/29 7.1	1/30 7.2	1/31 7.3	2/1 7.3	2/2 7.4
2/5 7.4	2/6 7.5	2/7 7.5	2/8 Review	2/9 Exam 3
2/12 8.1	2/13 8.2	2/14 8.2	2/15 8.3	2/16 8.4
2/19 Presidents Day	2/20 8.4	2/21 8.4	2/22 8.4	2/23 8.5
2/26 Review	2/27 Exam 4	2/28 10.1	3/1 10.2/10.3	3/2 10.4
3/5 10.5	3/6 Review	3/7 Exam 5	3/8	3/9
3/12 Finals 8:30, 11:30	3/13 Finals 9:30, 12:30	3/14 Finals 7:30, 10:30	3/15	3/16

Other Important Information

- Arrive to class on time. Arriving consistently late is an inconsiderate disruption to the entire class.
- **Turn off AND put away all cell phones.** You should be able to concentrate for 50 minutes without glancing at text messages.
- Please do not eat meals in class. Drinks are okay.
- Be considerate to others during class.
- Take advantage of tutoring in the Math Center in L-221. as well as one-on-one tutoring in room L203.
- Don't get behind!!!! Come see me immediately if you are struggling with material. Don't wait until the day before a test to tell me you're lost.
- Keep up on your homework DAILY. Math is exactly like music, sports, cooking, learning a foreign language, etc.; to be good you need to practice, practice, practice.
- Read the text. Actually, read the text a few times. And work the examples with paper and pencil. Most concepts you may have questions on from the homework probably have examples in the text to help explain the concept. Read the text!!
- Take good in-class notes and review those notes immediately after class as well as that evening. Fine-tune them when necessary.
- Be sure to use my office hours if you have questions, and email me if you get stuck at home.

DISABILITY AND SPECIAL NEEDS If you are a student with a disability and need academic accommodations, please contact Disability Access Services in the Counseling and Career Services center or call 360-416-7654.

Recommended Homework (tentative)

It is recommended you do as many of the problems in each section as possible. This is a bare minimum.

5.1	The Unit Circle	p406	#1-53 odd
5.2	Trig Functions of Real Numbers	p416	#1-79 odd
5.3	Graphs of Sine and Cosine	p429	#1-25 odd, 41, 43, 49 / #27-39, 45, 47, 59, 65
5.4	More Trigonometric Graphs	p441	#1-6, 7-55 every 4th
5.5	Modeling Harmonic Motion	p451	#5, 9, 11, 13, 15, 19, 25, 31, 33, 37
6.1	Angle Measurement	p474	#1-65 odd, 71, 76, 79, 81, 84
6.2	Trigonometry of Right Angles	p484	#1-61 odd
6.3	Trigonometric Functions of Angles	p495	#1-65 odd, 68
6.4	Law of Sines	p506	#1-41 odd
6.5	Law of Cosines	p513	#1-49 odd (try #33 for a general θ)
7.1	Trigonometric Identities	p533	#1-99 every 4th
7.2	Addition and Subtraction Formulas	p539	#1-55 odd
7.3	Double Angle, Half-Angle, Product-Sum	p548	#1-81 every 4th, 83, 87, 91, 92
7.4	Inverse Trigonometric Functions	p557	#1-55 odd
7.5	Trigonometric Equations	p568	#1-77 odd
8.1	Polar Coordinates	p586	#1-57 odd
8.2	Graphs of Polar Functions	p594	#1-51 odd
8.3	Polar Form of Complex Numbers	p603	#1-55 odd / 57-91 odd
8.4	Vectors	p615	#1-37 odd / 41-57 odd
8.5	The Dot Product	p624	#1-45 odd
10.1	Parabolas	p751	#1-51 odd
10.2	Ellipses	p759	#1-43 odd
10.3	Hyperbolas	p768	#1-31 odd
10.4	Shifted Conics	p781	#1-37 odd
10.5	Rotation of Axes	p790	#1-11 odd, 15, 17, 19, 25, 27, 29
10.6	Polar Form of Conics	p799	#1-21 odd

WAMAP Login

1. Go to the website wamap.org
2. Click on **register as a new student**. You can choose any username and password.
3. After entering in your name and password, use the following course ID and enrollment key:

course ID: 15875
enrollment key: 2018

Going back to the main page you should now see that you are enrolled in Math 142. This is where the daily graded assignments can be found. Click on the course and complete the *Syllabus Review Assignment*.

Typically, each set of questions should be completed the day we complete that particular section, however you do have until the following day to do the exercises without penalty.