Precalculus II
MTH 130-002
Fall 2020
Aurora Downtown Campus, DWNTN 316
MW 2pm-3:15pm

Instructor Contact Information and Availability

Name and Title:	Dr. Steve Kifowit, Instructor of Mathematics (Pronouns: He/Him/His)
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Preferred Contact Method:	Email or in-person
Response Time:	During weekdays, please allow for up to 24 hours for email response.

Course Description

This course in trigonometry of the plane concentrates on trigonometric, exponential, and logarithmic functions and their applications. Topics covered include the trigonometric functions, solution of right triangles, radian measure, fundamental identities, angular measure, graphs, logarithms, functions of composite angles, oblique triangles, trigonometric equations, inverse trigonometric functions, and complex numbers (including powers and roots).

Prerequisite(s)

MTH 072 (Intermediate Algebra II) and MTH 075 (Elementary Geometry), both with C's or better, or placement by appropriate measures.

Illinois Articulation Initiative (IAI) Code

None

Disclaimer: This course syllabus and schedule are subject to change. Updates and other revisions to course policies will be communicated via college (waubonsee.edu) email.

Course Materials

Textbook

Abramson (2017). *Algebra and Trigonometry*. OpenStax, ISBN: 978-1-50669-800-7

(A print copy of the textbook is not required for the class, but you must have access to the ebook, which is freely available online at https://openstax.org/details/books/algebra-and-trigonometry*.)*

Class Materials and Resources

The TI-83/84 Graphing Calculator is required for the course.

Important Course Notes

This course does not fulfill the mathematics requirement for some Associate's Degree programs. Please check with your counselor.

Recommended Corequisite: MTH 129 (Precalculus I)

Course Delivery Mode: Face-to-face

Credit Hours: 3.0

Course Objectives

Throughout this course, the student will learn to:

1. define the trigonometric functions;
2. solve right triangles given various parts;
3. recall and apply fundamental identities;
4. explain the relationship between radian measure and degree measure;
5. graph all trigonometric functions;
6. manipulate functions of composite angles;
7. apply the law of sines to the solution of oblique triangles;
8. apply the law of cosines to the solution of oblique triangles;
9. solve elementary trigonometric equations;
10. graph inverse trigonometric functions;
11. solve algebraic manipulations on complex numbers;
12. graph algebraic manipulations on complex numbers;
13. apply DeMoivre's theorem in the solution of equations;
14. explain logarithms of base 10 and natural logarithms as functions;
15. explain exponential functions;
16. graph logarithmic and exponential functions.

Student Learning Outcomes

Course Learning Outcomes

Upon successful completion of this course, the student will be able to:

1. apply trigonometric functions to a variety of real-world applications;
2. apply the trigonometric identities analytically in the solution of trigonometric equations; and
3. explain the concepts of logarithmic and exponential functions.

College Learning Outcomes

This course contributes to the following college learning outcomes:

☒ Critical Thinking
Examine information in order to propose or develop solutions or construct arguments.

☐ Communication
Use clear language to communicate meaning appropriate to various contexts and audiences.

☒ Quantitative Literacy
Make judgments or draw appropriate conclusions based on the quantitative analysis of data.

☐ Global Awareness
Describe the interconnectedness of issues, trends or systems using diverse perspectives.

☐ Information Literacy
Use technology to ethically research, evaluate or create information.

Methods of Evaluation of Student Learning, Grading Criteria, and Scale

Your performance in this course will be evaluated based on the following components:

Grading Criteria

Total points: 500

Grading Components	Score	Quantity	Subtotal	Percent
Tests	100	3	300 points	60%
Quizzes and Homework	10	10	100 points	20%
Comprehensive Final Exam	100	1	100 points	20%

Grading Scale

A ≥ 89.50% B ≥ 79.50% C ≥ 69.50% D ≥ 59.50% F < 59.50%

You can estimate your current grade at any time during the semester by computing the following percentage: 100% * (Total points accumulated) / (Total points possible). Please feel free to discuss your grade at any time during the semester. Throughout the semester, current grades will be available in our Canvas course shell.

Attendance, late work, and make-up policy

Regular class attendance is an essential component of successful learning. Students are responsible for prompt attendance and participation in all class meetings. If you miss class, you will not be allowed to make up any tests, quizzes, or assignments that you may have missed (**but you may reschedule a test or quiz, or submit an assignment, in advance of a missed class period**). All material covered in class is the student's responsibility.

Description and Details of Assignments

Homework

Suggested homework problems from the online textbook will be assigned daily and posted to the class website. Most of these will not be collected for grading, but they should be considered mandatory. On five Mondays during the semester (see course schedule), a subset of ten (or fewer) suggested problems will be announced for submission on the following Wednesday. These assignments will be posted on the class website. Each collected homework assignment is worth a possible 10 points. At the end of the semester, a combination of only your top ten (10) homework assignments and quizzes will count toward your overall grade.

Quizzes

Be prepared for a10-point, in-class quiz on Wednesday, according to the course schedule. No make-up quizzes will be given (unless scheduled prior to the quiz). Quizzes may have take-home portions. At the end of the semester, a combination of only your top ten (10) homework assignments and quizzes will count toward your overall grade.

Tests

Test problems will be similar to class examples, textbook problems, and quiz problems. In addition to computational problems, tests may include multiple choice, true/false, short answer, and/or writing problems. You must show all work (showing how you got your answer) on all tests to receive full credit. **You must work individually on all tests.** No make-up tests will be given (unless scheduled prior to the test). At the end of the semester, your lowest test score will be replaced by your final exam score (if this helps you).

Final Exam

The final exam is comprehensive and will be worth 100 points toward your final grade. The final exam is scheduled for our last class period.

Calculators

The TI-83/84 graphing calculator is required for this course. There are graphing calculator emulators available for smart phones and tablets--you may you these during class periods, but not during tests. If you would like to use a graphing calculator other than the TI-83/84, please discuss your options with your instructor.

Phones/Tablets/Laptops

Electronic devices may be used for taking notes and computing during lectures, but they may not be used on in-class tests. These devices must be silenced and put away during tests. Students in special circumstances who require their phones to be readily available must discuss their situations with the instructor.

Institutional Policy

Withdrawal

Waubonsee Community College reserves the right to administratively withdraw students who are not actively attending.

Students may withdraw themselves from this course until the date noted on the Tuition Refunds page.

*** Please see the Student Handbook for other course policies and procedures.

Institutional Statements

Academic Integrity

Waubonsee Community College believes that all members of the community (students, faculty, staff, and administrators) have a responsibility to participate in learning with honesty, respect, and integrity. We must commit to engage in learning both in and out of the classroom, value each member in our learning community, demonstrate original thought, and help foster ethical, open, safe learning environments for all. For more information, please see the Waubonsee Community College Plagiarism Statement section in the Student Handbook.

Accessibility and Disability Statement

Accessibility is a value of our institution. We are committed to creating environments that are welcoming and that support all students' learning. If you experience barriers to your learning in this course please notify the instructor as soon as possible to discuss options. Students who experience barriers due to disability may contact the Access Center for Disability Resources to begin this conversation or establish accommodations.

Plagiarism

Waubonsee firmly upholds sound principles of academic integrity and responsibility. Plagiarism and cheating are serious infractions of academic integrity, and, as such, are considered breaches of the Code of Student Conduct. If a student has violated this policy, I will report the infraction to the Dean for Student Success and Retention and the student may fail the assignment or the course, depending on the severity or the number of infractions.

Student Support Services and Resources

Waubonsee Community College is committed to your success, and has many free supports, services, and resources available to you. Please see the Student Experience page for more information and to get connected with Academic Support, Career Development, Counseling and Advising, Disability Resources, Student Life, Student Services, Technical Assistance Center, the Veterans Program, and many more! If you're not sure what type of assistance you need, please talk to me and I will help get you connected.

Course Schedule

Week (Date)	Sections	Topics & Assignments
Week 1 Aug 24 & Aug 26	Course Information, Sections 7.1 & 7.2	Angles, Right triangle trig (Quiz on 8/26)
Week 2 Aug 31 & Sep 2	Sections 7.3 & 7.4	Unit circle trig (Quiz on 9/2)
Week 3 Sep 9	Section 8.1	Graphs of sine and cosine functions (HW due 9/9) **No class on Sep 7.**
Week 4 Sep 14 & Sep 16	Section 8.2, **Test 1**	Graphs of other trig functions, Test 1 covers sections 7.1-7.4 & 8.1.
Week 5 Sep 21 & Sep 23	Sections 8.3 & 9.1	Inverse trig functions, Using trig identities (HW due 9/23)
Week 6 Sep 28 & Sep 30	Sections 9.2 & 9.3	Sum and difference formulas, Double-angle formulas (Quiz on 9/30)
Week 7 Oct 5 & Oct 7	Sections 9.4 & 9.5	Other trig identities, Trig equations (HW due 10/7)
Week 8 Oct 12 & Oct 14	Review, **Test 2**	Test 2 covers sections 8.2, 8.3, & 9.1-9.5.
Week 9 Oct 19 & Oct 21	Sections 10.1 & 10.2	Laws of sines and cosines (Quiz on 10/21)
Week 10 Oct 26 & Oct 28	Sections 10.3, 10.4, & 10.5	Polar coordinates (HW due 10/28)
Week 11 Nov 2 & Nov 4	Sections 10.5, 6.1, & 6.2	Polar coordinates, Exponential functions (Quiz on 11/4)
Week 12 Nov 9 & Nov 11	Review, **Test 3**	Test 3 covers sections 10.1-10.5 & 6.1-6.2.
Week 13 Nov 16 & Nov 18	Sections 6.3 & 6.4	Logarithmic functions (Quiz on 11/18)
Nov 23 & Nov 25	Thanksgiving Break	**No class**
Week 14 Nov 30 & Dec 2	Sections 6.5 & 6.6	Properties of logs, Log and exponential equations (HW due 12/2)

Week (Date)	Sections	Topics & Assignments
Week 15 Dec 7 & Dec 9	Sections 6.7 & 6.8	Applications of log and exp functions (Quiz on 12/9)
Week 16 Dec 14 & Dec 16	Review, **Final Exam**	Final exam is comprehensive with emphasis on course learning outcomes.

November 13 is the last day for students to withdraw themselves. Please check the current Waubonsee Academic Calendar for important dates.

Class Website

Course information, including tests, quizzes, answer keys and homework problems, can be found on the class website at http://stevekifowit.com/classes/m130.htm.

Grades will be posted in our Canvas course shell. All other course information will be available on the class website.

Change of Delivery Mode

In the unlikely event that we must permanently discontinue our face-to-face class meetings, we will automatically transition to a synchronous online delivery mode. In this case, we will meet electronically at our scheduled days and times, and assignments will be submitted online.