



Course Syllabus Math A152 Section: 491



Math A152, Trigonometry – Summer 2017

Instructor: Mr. Russ Frith

E-mail: rfrith@uaa.alaska.edu

Times: Monday 6:00 pm – 8:00 pm

Wednesday 6:00 pm – 8:00 pm

Location: ER 222

Office Hours: By Appointment

Phone: 907-223-9657 (C)

Best way of contact: Email.

Special Note: I usually check my email several times during the day.

Provisional Class Lecture Notes: <http://rfrith.uaa.alaska.edu/Trigonometry/Trigonometry.html>

Note: The class website has not been peer reviewed and the reliability of the server is dubious. Thus, there could be periodic outages. In addition, there are likely technical errors with content. If you spot any problems, please let me know and I will endeavor to fix any problem. Also, if you are stuck on a homework problem and would like to have a detailed solution, I will use this site to post a solution. Access to this website is optional. If you do not have internet access, then your textbook will be a sufficient substitute.

Prerequisites: Undergraduate – UAA level MATH A151; Minimum grade of C or appropriate SAT or ACT scores or approved UAA placement test required.

Course Description: This course will cover: graphing algebraic and trigonometric functions, transcendental function theory, and fundamental topics in analytic trigonometry.

Technology Usage: I do not rely on graphing calculators or other advanced forms of technology for this class. If you wish to solve homework problems using a personal computer or a graphing calculator and need assistance from me, that's fine with me. I will try to help you with those issues. Ultimately, you will need to solve problems independent of technological assists because my emphasis is on students' mastering the procedures and techniques to solve problems. Test questions will be fashioned so that you will not need to crunch numbers. You will need to apply mathematical reasoning to solve problems. Partial credit will be given if you don't get the correct answer but you demonstrate the correct methods for solving a particular problem.

Addendum: I have installed polar and rectangular graphing calculators on the class web site.

Special Note: For those of you who possess TI series graphing calculators, I have complete programming guides on my website: <http://rfrith.uaa.alaska.edu>.

Required Material: Trigonometry by Stewart, Redlin, and Watson; This is the one sold in the main campus bookstore.

Optional Material: Solutions Manual, graphing calculator (TI-84), graph paper (four or five squares/inch)

Course Objectives:

1. Study the characteristics of functions,
2. Apply algebra and trigonometry skills to model and to analyze real world problems,
3. Communicate effectively using mathematical terminology,
4. Analyze and defend plausible solutions.

Instructional Strategies: Lecture, tests, and homework

Testing Methods: The tests will consist of short answer, application and modeling problems. Tests will be given at the last 60 minutes of the period and when a student has turned in the test s/he may leave. There will be no makeup tests. Your final exam percentage score will substitute for your first missed test. If you miss two or more tests, then a grade of zero will be given for each missed test. Each test is worth 100 points, and the final is worth 200 points. Points are accumulative. Partial credit will be given for relevant responses to test questions. The minimum score you can receive for a problem is zero points.

Homework: Homework is assigned intermittently at the instructor's discretion. Each question is worth ten points and there will be between three to ten questions per assignment. Homework assignments must be stapled and answers must be documented in the correct sequence. **Unstapled homework will not be accepted.** Answers submitted using illegible writing will receive no credit. **You may not email your homework** unless permission is granted. Homework is due the next class period unless otherwise stated. Homework is due at the start of class. Homework that is turned in one week after it is due will be worth 50% of the original score. Homework cannot be submitted two or more weeks late. You may work in groups of at most three on each homework assignment.

Responsibility: If you miss a class then it is your responsibility to find out what you missed for that day's class. **I will not provide missed lecture notes.** You are encouraged to make arrangements with one of your classmates who can supply you with missed lecture notes. Video lectures are available on the class web site. Remember to turn cell phones on vibrate during class.

Attendance: Attendance is recommended. You are expected to attend all lectures and you are responsible for information covered during the classes. Copies of sample lecture notes will be found on the class website.

Grade Formula: $0.2 * (\text{homework average}) + 0.6 * (\text{test average}) + 0.2 * (\text{final score})$

100% - 90% A

79% - 70% C

Below 60% F

89% - 80% B

69% - 60% D

Incomplete grades for the semester will not be given.

Academic Success and Support Services:

If you need disability-related accommodations, please notify Disability Support Services at 786-4530.

Cheating, Plagiarism, or Other Forms of Academic Dishonesty:

Disciplinary action may be initiated by the university and disciplinary sanctions imposed against any student found responsible for committing, attempting to commit, or intentionally assisting in the commission of academic dishonesty. Academic dishonesty applies to examinations, assignments, laboratory reports, fieldwork, practicums, creative projects, or other academic activities.

The following examples constitute forms of academic dishonesty prohibited by the Student Code of Conduct and are not intended to define prohibited conduct in exhaustive terms, but rather to set forth examples to serve as guidelines for acceptable and unacceptable behavior:

- a. presenting as their own the ideas or works of others without proper citation of sources;
- b. utilizing devices not authorized by the faculty member;
- c. using sources (including but not limited to text, images, computer code, and audio/video files) not authorized by the faculty member;
- d. providing assistance without the faculty member's permission to another student, or receiving assistance not authorized by the faculty member from anyone (with or without their knowledge);

- e. submitting work done for academic credit in previous classes, without the knowledge and advance permission of the current faculty member;
- f. acting as a substitute or utilizing a substitute;
- g. deceiving faculty members or other representatives of the university to affect a grade or to gain admission to a program or course;
- h. fabricating or misrepresenting data;
- i. possessing, buying, selling, obtaining, or using a copy of any material intended to be used as an instrument of assessment in advance of its administration;
- j. altering grade records of their own or another student's work;
- k. offering a monetary payment or other remuneration in exchange for a grade; or
- l. violating the ethical guidelines or professional standards of a given program.

Smoking:

Please don't smoke (anything). If you need to then go home. Here's a link to U.A.A.'s smoking policy: <http://www.uas.alaska.edu/policies/tobacco.html>. This applies to marijuana too.

Drop Policy: I will not drop students from the class. It is incumbent upon you to manage this class. If you do not complete the work, I will report a failing grade. Generally, this is the only time anyone ever receives an F in my class.

Academic Success and Support Services:

If you need disability-related accommodations, please notify Disability Support Services at 786-4530.

Tentative Class Schedule for Summer 2017

DATE	LECTURE	TESTS/HOMEWORK
May 22,24	Review: coordinate system, plane, lines, functions, graphs, transformations of functions, combining functions, 1-1 functions and their inverses	Homework due dates announced in class HW #1 {1,2,7,9}
May 24,31	Chapter 2: Unit circle, trigonometric functions of real numbers, trigonometric graphs	HW #2 {1,2,5}
June 5-19	Chapter 2: Trigonometric graphs, harmonic motion Chapter 3: Angle measure, trigonometry of right angles, trig functions of angles	Test: Chapter 1 HW #3 {2,3,7}
June 19,21	Chapter 3: Law of Sines, Law of Cosines Chapter 4: Trig Identities, Addition and Subtraction Formulae	Test: Chapter 2 HW #4 {evens}
June 21 – July 10	Chapter 4: Double Angle, Half-Angle, Product-Sum Formulae, Inverse Trig Formulae, Trig Equations	HW #5 {5,7,8,9,15} (Chapter 3)
July 10 – July 17	Chapter 5: Polar Coordinates, Graphs of Polar Equations, DeMoivre's Theorem, Vectors, Dot Product	Test: Chapter 3 HW #6 {2 – 8} (Chapter 4)
July 17	Catch Up	Test: Chapter 4 HW #7 {3,4,5,6} (Chapter 4) HW #8 {evens} (Chapter 4)
July 17,19	Chapter 6: Parabolas, Ellipses, Hyperbolas Note: We may opt out of this Chapter if we are behind.	HW #9 {evens} (Chapter 5) HW #10 {evens} (Chapter 5)
July 24,31	More topics on Chapter 6; Review for Final	Test: Chapter 5 HW #11 {2,4,5} (Chapter 5) HW #12 {evens} (Chapter 5)
August 2		Final Exam: TBD

Bonus problems are available upon request. I will determine which problems, how much extra credit, and which exam they will be applied.

