Math 1323-001         Spring XXXX
Precalculus II          MWF 10-10:50 am

This course satisfies the University of Texas at Arlington core curriculum requirement in mathematics.

Instructor: [Name]
Office: [Address]
Phone: [Number]
Office Hours: [Times]
Email: [Email]

From the undergraduate catalog: E-mail is a prime means for communication. Therefore, the University has the right to send communications to students via e-mail and the right to expect that those communications will be received and read in a timely fashion. The Office of Information Technology (OIT) will assign all students an official University e-mail address. It is to this official address that the University will send e-mail communications. Students are expected to check their official e-mail account on a frequent and consistent basis to stay current with University communications. The University recommends checking e-mail daily in recognition that certain communications may be time-critical.

Textbook: Precalculus Custom Edition for the University of Texas at Arlington by Aufmann, Barker and Nation

Course Prerequisite: A grade of C or above in Math 1322 (Precalculus I) or a sufficient score on the Math Aptitude Test or sufficient SAT/ACT math scores.

Core objectives/signature assignment This course will address three core objectives:

- Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication.
- Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

In order to assess these objectives, each student will complete a signature homework assignment (described at the end of the syllabus) which will count the same and be weighted as a quiz.

Course Objectives and Learning Outcomes: Upon completion of Math 1323:
1. Students will be able to interpret and define the six trigonometric functions, in terms of both right triangles and the unit circle.
2. Students will be able to graph trigonometric and inverse trigonometric functions, without the aid of a graphing calculator, by applying the concepts of amplitude, periods and phase shifts. Mastery of graphing techniques will require application of previously learned methods of graphing functions, including translations and scaling. Students will be required to learn accepted methods of presenting graphs.
3. Students will be able to verify trigonometric identities. They will learn to determine which algebraic method and which previously developed formulas can best be applied to verify these identities.
4. Students will learn to derive additional trigonometric formulas based on those derived in class. This skill will minimize the role of memorization and emphasize the importance of the basic identities.
5. Students will learn to apply the methods of algebra to solve trigonometric equations and to solve word problems. Students will be required to communicate their written solutions in an organized manner, illustrated with sketches and graphs as appropriate.
6. Students will be able to sketch, without the aid of a graphing calculator, the graphs of conic sections; and to identify the vertices, covertices, foci, and directrices. Emphasis will be placed on conics in standard position. Then the techniques of translation and scaling will be used to identify the important features of conics in nonstandard position.

Grading Scale: 

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
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<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>0-59</td>
<td>F</td>
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To earn a C or better in the course will require at least 10 focused hours per week outside the classroom. You are expected to read each section in the text, preferably before we cover that section in class. Read the section again after it is covered in class, review your class notes, and attempt the assigned problems before the next class meeting. If you cannot work all the problems, do not let that prevent you from working as many as you have time to do.

Grade Components: 

Midterm 1 20%
  Friday, February 8, 2013 from 6-8 pm
Midterm 2 25%
  Friday, March 22, 2013 from 6-8 pm
Final Exam 35%
  Saturday, May 4, 2013 from 12:30 - 3 pm
Quizzes & worksheets 20%

Midterms and Finals: These exams are departmental, i.e., all sections of Math 1322 will take the same exams and the grades will have the same weight in each section. All of these exams are comprehensive. Each exam will be a mix of multiple choice problems and show-your-work problems.

Recent exams can be found online at http://www.uta.edu/faculty/dsmith/precalculus/.
Older exams can be found at https://mavspace.uta.edu/xythoswfs/webview/_xy-695774_1.
They are also available in the Science Education and Career Center, 106 Life Sciences building. The solutions to the multiple choice questions are available at https://mavspace.uta.edu/xythoswfs/webui/_xy-1083521_1-t_xKczEnpM.
Any student who scores below 50 on the final exam cannot receive a grade higher than D in the course.

**Make-up Policy:** If you have a conflict with either midterm or final, you must contact the course coordinator no later than Census Date (January 30), by using a form attached to the coordinator's office door (PKH 448) & submitting it together with necessary documentation as indicated on the form. If a conflict arises after January 30, contact the coordinator immediately. **Delays in submitting a make-up request may mean that your request cannot be approved.**

**Homework:** You are expected to work all problems on the departmental assignment sheet; these problems will not be turned in for grading. Problems similar to those on the assignment sheet will be available in your online homework.

**Quizzes:** Unless otherwise announced, all work on all quizzes is to be yours and yours alone – that means no help from any source except your textbook, your own notes and an allowed calculator (see below). You will have three types of quizzes:

- **In-class quizzes:** In-class quizzes will not be announced in advance and may be given during any lecture or lab period. Students who arrive late will not be allowed to take in-class quizzes. In most cases, calculators will not be allowed.
- **Take-home quizzes:** These quizzes will be announced in class but you will complete the work outside of class. Take-home quizzes will generally be due at the beginning of the next class period and will not be accepted after class begins.
- **Online quizzes:** Online quizzes will be announced via email (to your University email address). You will be allowed several days to complete the quiz and I will indicate the deadline in my email to you. In order to access the online quiz, you must complete the required online homework with a grade of 70% or better. Because I allow several days for you to complete each online quiz, there will be no deadline extensions given because of technical problems.

**Worksheets:** During some class periods, you will work on problem sets that are designed to help you better understand recent lectures. You will generally be allowed to use your text, your notes, and your calculator. You can also work with other students and ask me for hints. These worksheets will be collected at the end of the period for grading. Students who are tardy will receive a grade deduction on their worksheets. Students who leave early will receive a grade of zero on the worksheets.

**Quiz/Worksheet Make-up Policy:** No makeup quizzes of any kind will be given. No makeup worksheets will be given. I will drop your 2 lowest online quiz grades. I will drop the lowest of grade among your in-class quizzes, take-home quizzes, or worksheets.

**Drop Policy:** Any student who drops the course on or before Friday, March 29 at 5 PM will receive a W. **Students must consult with their major advisor to drop a course.**

**Calculators:** The only calculators allowed for the midterms and final are TI-30XA and TI-30XIIS. **If you wish to use a different calculator, then you must get permission to do so BEFORE an exam.** Only nonprogrammable calculators with basic computational features, such as arithmetic and transcendental functions will be allowed. Calculators with the following features are **NOT** allowed: graphing, equation solving, differentiation and integration. Any device that has
internet or e-mail capabilities – **this means NO cell phones** - and any device with a QWERTY keyboard are also not permitted.

**Student Support Services Available:** The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit [www.uta.edu/resources](http://www.uta.edu/resources) for more information.

The Math Department operates the **Math Clinic**, a tutoring service staffed by upper level undergraduate students. The Math Clinic is on the 3rd floor of Pickard Hall; the phone number is 817-272-5674; and the hours of operation for fall and spring are

- **Monday – Thursday**: 8am to 9pm
- **Friday**: 8am to 1pm
- **Saturday**: 1pm to 6pm
- **Sunday**: 1pm to 9pm

Go to the Math Clinic webpage [http://www.uta.edu/math/clinic/](http://www.uta.edu/math/clinic/) to get more information or to access assignment sheets for the courses for which tutoring is offered.

All previous midterm exams and some previous final exams are available to students in the **Science Education and Career Center (SECC)**, 106 Life Science Building. The fall and spring hours of operation are

- **Monday-Thursday**: 8am - 8pm
- **Friday**: 8am - 5pm
- **Saturday**: 12pm - 5pm
- **Sunday**: Closed

You need a Mav ID Card to check out these exams. A copy machine is available for you to make copies. There are also video tapes of lectures on precalculus topics that can be viewed in the SECC. For more information, go to [https://www.uta.edu/cos/SECC/login.php](https://www.uta.edu/cos/SECC/login.php).

The Math Department maintains a list of people who have expressed an interest in tutoring. These persons are not necessarily recommended by the Math Department and they set their own fees. You may obtain a copy of the tutor list in the Math Office, 478 PKH.

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 - The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As a faculty member, I am required by law to provide "reasonable accommodation" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with **informing faculty at the beginning of the semester** and in providing **authorized documentation** through designated administrative channels.
If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first week of the semester, to make sure you are appropriately accommodated.

**Academic Integrity:** At UT Arlington, academic dishonesty is completely unacceptable and will not be tolerated in any form, including (but not limited to) “cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts” (UT System Regents’ Rule 50101, §2.2). Suspected violations of academic integrity standards will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

**UT Arlington Honor Code**

I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will only submit work that I personally create or contribute to group collaborations, and reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

**Grade Replacement and Grade Exclusion Policies:** These policies are described in detail in the University catalog and can also be found online at http://wweb.uta.edu/catalog/content/general/academic_regulations.aspx#10 (scroll about half way down the page).

**Student Disruption:** The University reserves the right to impose disciplinary action for an infraction of University policies. For example, engagement in conduct, alone or with others, intended to obstruct, disrupt, or interfere with, or which in fact obstructs, disrupts, or interferes with, any function or activity sponsored, authorized by or participated in by the University.

**Drop for Non-Payment of Tuition:** If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar’s Office.

**Important Dates:**

- **January 21**  
  MLK Holiday  
- **January 30**  
  Census Date  
- **Friday, February 8**  
  Deadline for makeup requests for all exams  
- **March 11-15**  
  Midterm 1, 6 – 8 pm  
- **Friday, March 22**  
  Spring Break  
- **Friday, March 29**  
  Midterm 2, 6 - 8 pm  
- **Friday, May 3**  
  Last day to drop a class  
- **Saturday, May 4**  
  Last day of classes  
- **Friday, May 3**  
  Final Exam, 12:30 - 3 pm

See [https://mavsquare.uta.edu/xythowsfsws/webview/ xy-3229038_1](https://mavsquare.uta.edu/xythowsfsws/webview/ xy-3229038_1) for
- Instructions for creating your online WebAssign account.
- Assignment sheet for the course.
Math 1323
Signature Assignment

Trigonometric Equations (Section 6.6 in current text: Precalculus 7th Ed Custom Edition for University of Texas at Arlington by Aufmann, Barker & Nation)

Problems: 6, 9, 16, 17, 20, 25, 49, 53, 59, 61, 69, 77, 91, 99, 100

Students will be assigned a selection of three problems from the above list. Upon completion of the problems, the students will respond to the following prompt: For each of problem, describe three fundamental mathematical concepts that were crucial to the solution of the problem, and explain why they were key to the solution of the problem.

Each of the above listed problems requires the student to solve a trigonometric equation. These problems require application of the equation-solving techniques previously learned, i.e., isolating the unknown by adding to both sides of an equation, or by multiplying both sides by a nonzero constant.

Some of the problems require the application of previously learned identities (e.g., fundamental Pythagorean identities, double-angle identities, and half-angle identities) before algebra techniques can be applied.

Some solutions are familiar angles; the student should be able to recognize those by inspection. However, some will not be familiar angles and thus the student will have to first use his calculator to find a reference angle. Then he will have to derive other solutions, using that reference angle and his knowledge of unit circle trigonometry.

Some of the problems request solutions in degree measure and others in radians.

Some of the problems require all solutions and some problems request solutions in a specific interval. In the latter case, the graphing techniques previously learned can often be applied to solve the equation. Specifically, he should be able to use the period and phase shift of the graph of the corresponding function to determine its zeros.