Fall 2015

MATH 1116

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University of New Orleans

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Syllabus

MATH 1116-001  FALL 2015

Trigonometry

Classroom: Math 122  Days & Time: MWF, 1:00 p.m. – 1:50 p.m.
Instructor: Kewen Yao  Email: kyao@uno.edu
Office: Math 234     Office Phone: (504)280-7348

Office Hours: Tu, Th, Fr 3:00 p.m. – 5:00 p.m.

Student Learning Objectives
Upon successful completion of this course students should be able to:

- Determine the six trigonometric ratios for a given acute angle of a right triangle
- Compute the exact value of the trigonometric functions for key angles measured in both degrees and radians.
- Solve right triangles.
- Graph the trigonometric functions and their transformations.
- Use basic trigonometric identities to verify other trigonometric identities.
- Use Sum and Difference, Double-Angle, and Half-Angle Identities for Sine, Cosine and Tangent to find exact values of trigonometric expressions.
- Find values of the inverse trigonometric functions
- Solve trigonometric equations.
- Solve oblique triangles using the Law of Sines and Law of Cosines
- Graph complex numbers and convert complex numbers to trigonometric (polar) form.
- Find products and quotients of complex numbers in trigonometric form.
- Simplify complex numbers raised to a power using De Moivre’s Theorem.

Attendance
Attendance is required. Attendance will be taken daily. If you miss a class for any reason, it is your responsibility to copy additional notes/examples from a fellow classmate.

Prerequisite
ACT Math ≥26, SAT Math ≥590, Compass College Algebra ≥ 46, or C or better in Math 1115

Required Software: MyMathLab(packaged with textbook in bookstore)
Materials: 3 – Ring Binder and Loose leaf paper

Calculator
Only scientific, Non-Graphing calculators are allowed on the tests

Tentative Course Calendar

<table>
<thead>
<tr>
<th>WEEK OF</th>
<th>SECTIONS COVERED</th>
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<tbody>
<tr>
<td>August 19</td>
<td>Angles, Angles Relationships and Similar Triangles, (Ch. 1, Sect.1.1, 1.2)</td>
</tr>
</tbody>
</table>
Trigonometry

| September | | |
|-----------|-----------------------------|
| 24        | Trigonometric Functions, Using the Definitions of Trigonometric Functions (Sect. 1.3, 1.4), Trigonometric Functions of Acute Angles (Ch. 2, Sect. 2.1) |
| 31        | Trigonometric Function of Non-Acute Angles, Finding Trigonometric Function Values Using a Calculator, Solving Right Triangles (2.2, 2.3, 2.4) |
| 8         | Solving Right Triangles (Sect. 2.4), Test 1 |
| 14        | Radian Measures, Applications of Radian Measure (Ch. 3, Sect. 3.1, 3.2) |
| 21        | The Unit Circle and Circular Functions (Sect. 3.3) Graphs of the Sine and Cosine Functions (Ch. 4, Sect. 4.1) |
| 28        | Translations of the Graphs of the Sine and Cosine Functions, Graphs of the Tangent and Cotangent Functions (Sect. 4.2, 4.3) |
| October   | | |
| 5         | Graphs of the Secant and Cosecant Functions (Sect. 4.4), Test 2 |
| 12        | Fundamental Identities, Verifying Trigonometric Identities, (Ch. 5, Sect. 5.1, 5.2) |
| 19        | Sum and Difference Identities for Cosine, Sum and Difference Identities for Sine and Tangent, Double-Angle Identities (Sect. 5.3, 5.4, 5.5) |
| 26        | Half-Angle Identities (Sect. 5.6), Inverse Circular Functions, Trigonometric Equations I (Ch. 6, Sect. 6.1, 6.2) |
| November  | | |
| 2         | Trigonometric Equations I (Sect. 6.2), Test 3 |
| 9         | Oblique Triangles and the Law of Sines, The Ambiguous Case of the Law of Sines (Ch. 7, Sect. 7.1, 7.2) |
| 16        | The Law of Cosines (Sect. 7.3), Trigonometric (Polar) Form of Complex Numbers (Ch. 8, Sect. 8.2) |
| 23        | The Product and Quotient Theorems, De Moivre’s Theorem (Sect. 8.3, 8.4) |
| 30        | Test 4, Review for Final |

**FINAL EXAM:** Monday, December 7, 2015 10:00 AM – 12:00 PM

**Other Important Dates**

<table>
<thead>
<tr>
<th>September 7</th>
<th>Labor Day Holiday</th>
<th>November 26 – 27</th>
<th>Thanksgiving Holiday</th>
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<tbody>
<tr>
<td>October 14</td>
<td>Last day to Drop</td>
<td>December 4</td>
<td>Last day of Class</td>
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<tr>
<td>October 15 -16</td>
<td>Fall Break</td>
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**Notes:**
- Grading: Final Exam = 33% Tests = 52% HW Quizzes = 15%
- The final exam is comprehensive and departmental.
- This syllabus is subject to change

**Student Conduct**
The University of New Orleans (UNO) is a multicultural community composed of diverse students, faculty and staff. UNO will not tolerate discrimination or harassment of any person or group of persons based on race, color, religion, sex, disability, national origin, age, sexual orientation, marital or veteran status or any other status protected by law. Each member of the university is held accountable to this standard, which is strongly reflected in this code.
Academic Dishonesty
Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

Accommodations for Students with Disabilities
It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.

How Class Will Be Taught
This course is taught in a lecture format. Lecture notes will be posted on MyMathLab prior to class meetings. Students are expected to bring notes to class and fill in the examples worked by the instructor. If time permits, there may be in-class activities.

Expectations of Students
Students are expected to arrive on time and remain in class until the end of class. Students are expected to bring lecture notes to each class, copy examples, do practice problems, and graded quizzes by the assigned due date. Students are expected to conduct themselves in a mature manner with respect and courtesy to all.

Advice on How to Study for Tests and Exams
The best way to study and prepare for tests and exams will be different for every student. Here are some recommended guidelines for successfully preparing for tests and exams:

- Print lecture notes from MyMathLab and fill them out in class. Keep these notes organized in a binder for easy reference.
- Work all homework and quiz problems out completely, showing all work, and keep this organized in a binder for easy reference. Use all allowed attempts for homework and quizzes to ensure the best grade and best understanding of the material.
- Before each test, time will be taken in class to review the test material. Before this test review, complete the test review posted on MyMathLab. Use the in-class review time to ask questions about any problems on the review that you may have had trouble with.
- For any problems on the review that you may have struggled with, go back to the homework and find similar problems. Use the unlimited attempts on the homework problems to practice these problems until you are able to complete them without any outside help (i.e. book, notes, etc.).
- Before the test, you should be able to complete each problem set of the test review without any outside help in approximately one hour.

Tests
There will be 4 semester tests as listed on the syllabus which will be worth a total of 52% of your final grade. NO TEST GRADES WILL BE DROPPED. NO TEST GRADES WILL BE CURVED.
Assignments/Homework
The homework for this course will be completed in the “Homework” section of MyMathLab. You may do each assignment more than once to increase your score by selecting “Similar Exercise” to get a new problem. Homework is for practice. You will be required to score a minimum of 80% accuracy on section homework before you can attempt the quiz for that section.

Quizzes
The quizzes for this course will be completed in the “Quizzes & Tests” section of MyMathLab. The quiz problems are similar to the homework problems on MyMathLab and those in the textbook. Quizzes are worth 15% of your overall average in the course. Each quiz can be taken up to 5 times before its deadline. Only the highest quiz grade for any quiz that you take more than once will be recorded in the gradebook. Five quizzes will be dropped at the end of the semester to accommodate any missed quizzes.

Final Exam
There is a departmental, cumulative final exam, which will be worth 33% of your final grade.

Grading Scale
The grading scale for this course is
90% - 100% A
80% - 89% B
70% - 79% C
60% - 69% D
59% and below F

Tentative Exam Dates (Select dates based on MWF or TTh classes)
Test 1: September 11
Test 2: October 9
Test 2: November 6
Test 4: December 2

Criteria for Graded Assignments
Assignments must be completed by the due date. Assignments, tests and exams that will be graded for partial credit must adhere to the following guidelines: All answers must be supported by work. No work = No credit. The final answer must be clearly marked. All answers must be exact and simplified completely.

Make-up Test Policy
It is in your best interest to not miss a test. If you know you will miss a test ahead of time, contact me to set up a time to take the test before the regular test is given. If you miss a test for any other reason, the final exam grade will replace the zero for the missed test. Only one missed test will be replaced with the final exam grade. Any additional missed tests will be counted as a zero.

Resources
Your instructor is your first resource, so come to my office hours if you have a question. However, there is also free tutoring in the Math Tutor Center (Math 105). Based on availability of tutors, the math department may offer free one-on-one tutoring.
Important Dates*
Last day to adjust schedule w/out fee .......... 08/18/2015
Semester Classes Begin ......................... 08/19/2015
Last day to adjust schedule w/fee, or withdraw with 100% refund .......... 08/25/2015
Last day to apply for December commencement .... 09/25/2015
Final day to drop a course or resign ............... 10/14/2015
Mid-semester examinations ...................... 10/05-10/09/2015
Final examinations ...................... 12/07-12/11/2015
Commencement ...................... 12/18/2015
*Note: check Registrar’s website for Saturday and A/B sessions, and for items not listed here: http://www.registrar.uno.edu

Fall Semester Holidays
Labor Day .............................................. 09/07/2015
Mid-semester break .................................. 10/15-10/16/2015
Thanksgiving ......................................... 11/26-11/27/2015

Withdrawal Policy – Undergraduate only
Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates on the Registrar’s website, http://www.registrar.uno.edu. Please consult The Bulletin for charges associated with dropping and adding courses.

Incomplete Policy – Undergraduate only
The grade of I means incomplete and is given for work of passing quality but which, because of circumstances beyond the student’s control, is not complete. The issuance of the grade of I is at the discretion of the faculty member teaching the course. For all graduate and undergraduate students, a grade of I becomes a grade of F if it is not converted before the deadline for adding courses for credit (as printed in the Important Dates Calendar) of the next regular semester including summer semester.

Repeat Policy
When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student’s Dean gives prior approval for documented extenuating circumstances.

Graduate Policies
Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook: http://www.uno.edu/grad/documents/GraduateStudentHandbook2014.pdf

Academic Dishonesty Policy

Safety Awareness Facts and Education
Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: http://www.uno.edu/student-affairs-enrollment-management/

UNO Counseling Services and UNO Cares
UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at http://www.uno.edu/counseling-services/

First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through http://www.uno.edu/fye/uno-cares.aspx.
Emergency Procedures
Sign up for emergency notifications via text and/or email at E2Campus Notification: http://www.uno.edu/ehso/emergency-communications/index.aspx. All emergency and safety procedures are explained at the Emergency Health and Safety Office: http://www.uno.edu/ehso/.

Diversity at UNO
As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university's efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities. http://diversity.uno.edu/index.cfm

Learning and Support Services
Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at http://www.uno.edu/lrc/.

Affirmative Action and Equal Opportunity
UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO’s compliance with federal and state regulations regarding EEOC in its Policies and Resources website: http://www.uno.edu/human-resource-management/policies.aspx