COURSE: Mathematics 141 – Trigonometry

INSTRUCTOR: Nedjla Ougouag, PhD

SEMESTER: Fall 2013

Section H – Tuesday-Thursday 12:30 to 1:50 – Room 722
Section LQ – Tuesday-Thursday 3:30 to 4:50 – Room 723

CREDIT HOURS 3

OFFICE 702H

OFFICE HOURS:
- Monday 11:00-12:30 and 3:00-5:30
- Tuesday 11:00-12:30 and 2:00-3:30
- Wednesday 11:00-12:30 and 3:00-5:30
- Thursday 11:00-12:30 and 2:00-3:30

PHONE: 553-5935 (Math department)

EMAIL: nougouag@ccc.edu

BLACKBOARD: https://ccc.blackboard.com

COURSE WEBSITE: http://faculty.ccc.edu/colleges/hwashington/math/Ougouag

About the Course

Course Description:
Trigonometric functions and application of trigonometry to the sciences, including definitions, properties and graphical characteristics of trigonometric functions; radian measure; trigonometric identities and equations; Law of Sines and Law of Cosines; inverse trigonometric functions; DeMoivre’s Theorem; and vectors, and applications involving problem-solving skills will be emphasized throughout the course. Writing assignments, as appropriate to the discipline, are part of the course.

Prerequisite: Math 140 with a grade of C or better, or Placement Test, or Consent of Department Chairperson.

Required Texts and Materials:
Textbook:
Title: Trigonometry, 8th Edition (Gray Cover)

Here is a list of affordable vendors online:

ISBN: 0-13-239279-8
Author: Michael Sullivan
Publisher: Prentice Hall Publishing
Online Tutorial

Materials: You must bring a pencil, notebook paper, and the textbook to each class session. Calculators will not always be allowed.

Please bring the following items to every class session:

1) A pencil or pen
2) Your math notebook
3) Your textbook
4) Your calculator
5) An assignment book to record when homework is due.

Course Objectives:
1. Demonstrate an understanding of trigonometric functions and their behaviors.
2. Apply trigonometric concepts to solve contextual (real-world) scenarios.
3. Use technology to explore trigonometric concepts.

Learning Outcomes:
By the end of the semester, students will be able to:

a. Define the sine, cosine, secant, cosecant, tangent, and cotangent functions and their inverses, including the unit circle and right-triangle definitions of these functions.
b. Compute the exact values of trigonometric functions whose reference angle measures are 0°, 30°, 45°, 60° and 90°.
c. Apply right-angle trigonometry to a contextual (real-world) scenario.
d. Apply circular motion to a contextual (real-world) scenario.
e. Graph a trigonometric function using its properties (e.g., periodicity, amplitude, phase shifts, etc.).
f. Verify trigonometric identities.
g. Solve trigonometric equations.
h. Apply the sum, difference, double-angle, and half-angle identities to calculating exact values of trigonometric functions, verifying identities, and solving equations.

i. Apply the Law of Sines and the Law of Cosines to a contextual (real-world) scenario.

j. Apply trigonometric functions to vectors and other basic concepts of physics (e.g., force, velocity, pendulum movement, basic current).

k. Determine roots and powers of complex numbers by applying DeMoivre's Theorem.

Methods of Instruction:

I. Independent study (homework assignments, individual projects).

O - Online activities (Blackboard use including forum, Internet research for Statistics projects and for for Consumer math projects to find best mortgage rates.)

G - Groupwork: Regular in class practice sessions after new material has been introduced and completed.

L - Lecture

D - Discussion/Lecture.

Active Pursuit:

This is a fancy term to say simply the following: To succeed in this course, you are required to complete assignments, participate in class projects and activities, and maintain regular attendance to class sessions. Each student must show that they are attending class regularly and turning in acceptable (passing) work regularly. A student will be withdrawn from the class at midterm if EITHER of the following are true: (1) the student has missed a total of six or more class periods by the mid-point in the semester, OR (2) the student has received fewer than 50% of the points assigned by the mid-point in the semester. If either (1) or (2) is true, it is the student’s responsibility to meet with me outside of class to discuss the possibility of remaining enrolled in the course.

Attendance:

Regular and punctual attendance is strongly encouraged. All Harold Washington College policies on attendance will be observed. Poor attendance can translate into a point deduction at the end of the semester. Refer to “Grading Policy” below.

Course Website:

This semester, I will be complementing your course material with a specific Math 141 Course Website. You will find on it, in addition to this Syllabus, the Homework assignment list, various Handouts, “Cheat Sheets”, Links to Tutorials and other helpful Calculus Tools from the web. Refer to this website often as I will be updating it regularly throughout the semester! (See the address on this Syllabus header).

Use of Blackboard:

We will make use of Blackboard in this course: http://ccc.blackboard.com/ for display of your grades only. Scores of our various Tests and Quizzes will be posted on Blackboard.

A few tips to succeed in this class:
Most people who succeed in math do so because they are willing to put in the time and effort necessary.
Expect to spend at least 2-3 hours studying outside of class for each hour you spend in the classroom. Don’t be afraid to ask for help if you are having problems.
  - Ask questions in class,
  - form study groups,
  - get a tutor,
  - or see me during office hours,
  - but above all, be willing to put in whatever amount of time you need to spend outside of class studying for this class.

Start studying for the test a week or so before the test is to be given in class. Review your class notes, reread the text sections and do the example problems in the book. Above all, spend at least 2 hours a night doing problems. Find a quiet place to study and do many problems similar to the ones that will be on the test.

Both attendance and homework are very important for success in the course. Come to class every day, come to class on time, and stay in class until the class session is over.

**Important dates:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Last day for withdrawal with tuition refund</td>
<td>Seven calendar days from start of class.</td>
</tr>
<tr>
<td>Labor Day Holiday</td>
<td>September 02</td>
</tr>
<tr>
<td>Last day to withdraw without &quot;F&quot;</td>
<td>November 18</td>
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<tr>
<td>Thanksgiving Break</td>
<td>November 28-29</td>
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<tr>
<td><strong>Final Exam</strong></td>
<td>December 12</td>
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<tr>
<td>End of Fall semester</td>
<td>December 14</td>
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**Grading Policy:**

*** Important! *** Please read this section before asking me questions about your grades!

**Grading scheme:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Description</th>
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<tbody>
<tr>
<td>Regular <strong>unannounced</strong> quizzes about the topics in the homework assignments.</td>
<td><strong>90 points</strong></td>
<td>Each quiz is worth 10 points. The more quizzes we do the better, since only your best 9 will count.</td>
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<tr>
<td>Test 1 (September)</td>
<td><strong>100 points</strong></td>
<td>Covers topics from start of semester</td>
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<tr>
<td>Test 2 (October)</td>
<td><strong>100 points</strong></td>
<td>Covers topics studied after Test 1</td>
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<tr>
<td>Test 3 (November)</td>
<td><strong>100 points</strong></td>
<td>Covers topics studied after Test 2</td>
</tr>
<tr>
<td>Final Exam (December)</td>
<td><strong>200 points</strong></td>
<td>Cumulative – Covers ALL topics studied this semester</td>
</tr>
<tr>
<td>Attendance</td>
<td><strong>10 points</strong></td>
<td>You automatically have 10 points in your “account”. You will lose 1 point for every two class sessions missed.</td>
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</tbody>
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Grading scale:

<table>
<thead>
<tr>
<th>0</th>
<th>360pts</th>
<th>420pts</th>
<th>480pts</th>
<th>540pts</th>
<th>600pts</th>
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<tr>
<td>F</td>
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Grading rules:

- There is **absolutely no make-up** for quizzes, if you miss one, focus on the next!
- If you cannot make it to a test, you must make arrangements with me in advance to reschedule a test for a different time or day **ONLY if you have a valid reason for the change.** In such a situation, you can take the test up to two days before or after the date scheduled for all students.
- A "curve" is **not** used in the class. Keep in mind that **incompletes are not given** unless there is a verifiable emergency. The possibility of getting a low grade does not count as a verifiable emergency. Count on getting your work done during the semester.
- Extra credit work will be included in some quizzes and exams **only**.

**Important note:** Work done to solve quiz or test problems must be completely and clearly shown. A correct answer in itself is not sufficient. The burden is on the student to show that he or she understands the course material.

**Homework Assignments:**

Homework will be due regularly. **Please note that each homework assignment will be recorded as submitted but will not be graded.** There will be regular in-class short quizzes with questions from the topics on the homework. Late homework will not be recorded as submitted. **Homework Assignments have an important point value attached to them,** which will depend on the percentage of your assignments turned in by the end of the semester. This can make a difference between two grades especially if your total score is borderline between two grades.

A copy of the homework schedule is posted on the class website. **You are responsible for referring to that page regularly!** Please complete these assignments as indicated. We will review the previously assigned homework questions at the beginning of the next class period if you feel that a problem or problems need further examination.

**The following rules apply to homework submission:**
1) You must be present in class to turn in your homework
2) You cannot have your friend turn in your homework and skip class.
3) I will not count homework placed in my mailbox or under my office door.
4) You must show the work you did to solve each problem in order for your homework to be counted.
General Rules for this Course

**Academic Integrity:**

The City Colleges of Chicago is committed to the ideals of truth and honesty. In view of this, students are expected to adhere to high standards of honesty in their academic endeavor. Plagiarism and cheating of any kind are serious violations of these standards and will result, minimally, in the grade of “F” by the instructor.

Students who are found to have plagiarized any work may be subject to serious disciplinary actions including a failing grade on the assignment, failure of the course, and possible disciplinary measures (including expulsion) from the college. I have no fear of confrontation if I suspect that you have plagiarized, and evidence will be submitted to the Dean if my suspicion is confirmed.

**Cellular Phones, iPods, etc.:**

The policy for all students attending Harold Washington College is that cellular telephones are not permitted in the classrooms. Cellular telephones are considered intrusive in the teacher-student learning process and the teacher must deal appropriately with students, whose cellular telephones are in use during classroom periods. If you should need to use your cell phone during class time due to an emergency, leave the classroom to take care of this matter and then return. Likewise, listening to music or using any other electronic device in class is absolutely not allowed.

**Bottom line: NO CELL PHONES, iPods, etc.**

**BRING A REAL CALCULATOR FOR YOUR EXAMS!**

**Tardiness**

There is no excuse for constantly being late. Change your schedule so you arrive on time for every class session.

**Leaving During Class**

Students should not walk out of class before the end of the class session. If you have an obligation to leave before the end of the class session, please notify me at the beginning that you will have to leave and turn in your homework at that time.

**Children in Class**

Do not bring your children to class. It is disrupting to not only you but also your classmates and myself.

**Disrupting the Class**

During my lectures and our discussions I expect your complete attention. Please ask questions whenever you do not understand what I am trying to explain, show, or tell you. However, if you constantly talk with your classmates and cause a disruption I will expect you, or ask you, to leave the class so that the other students can concentrate on their Math.

**Special Needs information:**

It is Harold Washington College’s 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 are
required to obtain the appropriate documentation from the Special Needs Department. They are also required to contact their instructors to discuss their individual needs for accommodations.

**Student Support Services**

**Tutoring**

*Free tutoring is available at the math department in 702, normally between 9 am and 6 pm Monday through Thursday.*

Tutoring is also provided free of charge at the Students Learning Center in room 409. The hours are:

- M-Thu 8:00Am-8:00PM
- Fri 9:00AM-5:00PM
- Sat 10:00AM-3:00PM

Make sure you use these services!

**Further Student Support Services**

**Wellness Center:** [http://www.ccc.edu/colleges/washington/departments/Pages/Wellness-Center.aspx](http://www.ccc.edu/colleges/washington/departments/Pages/Wellness-Center.aspx)

The Harold Washington College Wellness Center provides mental health and other social services to support your personal well-being and academic success.

**Writing Lab:** [http://www.ccc.edu/colleges/washington/departments/Pages/Writing-Lab.aspx](http://www.ccc.edu/colleges/washington/departments/Pages/Writing-Lab.aspx)

The Writing Lab provided tutoring support in writing specifically, or provides students with the opportunity to make an appointment with their classroom tutor.

**Tutoring Services:** [http://www.ccc.edu/colleges/washington/departments/Pages/Tutoring.aspx](http://www.ccc.edu/colleges/washington/departments/Pages/Tutoring.aspx)

Tutoring Services supports student success through peer, professional, and embedded tutoring.

**Chicago Legal Clinic:** [http://www.ccc.edu/colleges/washington/departments/Pages/Chicago-Legal-Clinic.aspx](http://www.ccc.edu/colleges/washington/departments/Pages/Chicago-Legal-Clinic.aspx)

The Chicago Legal Clinic works directly with students to identify their legal needs and provide community based quality services.