

**HOUSTON COMMUNITY COLLEGE SYSTEM**  
**NW\_ALIEF CAMPUS**

**ENGR 1204 Engineering Graphics 1 CRN : 81427 Spring 2014**

**Time:** 9:30 am- 11:00 am: MW (16 weeks Semester course)

Lecture (room B-141) at Alief Campus

Course Semester Credit Hours: 2 (2 lecture, 1 lab); **MATH 1314-** College Algebra

Instructor: Olatunde (Tunde) Amosu; Phone: 832-359-8414;

email address: olatunde.amosu@hccs.edu

Office Hour: before and after class on MW or by appointment

Textbooks: **AutoCad and its Applications - Basic, 2012-** 19<sup>th</sup> edition. By Terence M. Shumaker, David A. Madsen, David P. Madsen. Goodheart - Wilcox Publishing Company (**ISBN 978-1-160525-561-3**).

Link to Companion Site: <http://www.g-wlearning.com>

Link to Autocad site: [www.autodesk.com/education/free-software/autocad](http://www.autodesk.com/education/free-software/autocad)

- Choose the version
- Autocad2012

**Course Description: ACGM or WECM**

Through a combination of lecture, hands-on exercises, home works assignments, drawing problems and examinations, this course introduces the student to computer-aided design/drafting with the AutoCAD software. The AutoCAD topics covered in this course include an introduction to AutoCAD features, starting and setting up drawings, point coordinate entry methods, creation of 2D objects, layer management, line types and colors, selection sets, object snap modes, editing geometry, display control and drawing inquiry methods.

**Course Objectives**

After completing this course, the student will be able to do the following:

1. Use AutoCAD's precision drawing tools and methods to construct accurate 2D drawings.
2. Create and manage drawing layers, and control object colors and linetypes
3. Create, edit and modify text styles and text objects in AutoCAD.
4. Control the drawing display and utilize named drawing views.
5. Construct and edit polylines, multilines and splines.
6. Creating shapes and symbols
7. Special editing operations that increase productivity
8. Drawing geometric shapes and constructions.

**Attendance policy**

Students are encouraged to attend all classes.

**Attendance:** HCCS Attendance Policy is stated in the **2007-2008** Student Handbook

**page 2** as follows: “You are expected to attend all lecture classes and labs regularly. You are also responsible for materials covered during your absences. Instructors may be willing to consult with you for make-up assignments, but it is your responsibility to contact the instructor. Class attendance is checked daily. Although it is your responsibility to drop a course for nonattendance, the instructor has the authority to drop you for excessive absences. You may be dropped from a course after accumulating absences in excess of 12.5 percent of the total hours of instruction (lecture and lab). For example:

- For a three credit-hour lecture class meeting three hours per week (48 hours of instruction), you can be dropped after six hours of absence.
- For a four credit-hour lecture/lab course meeting six hours per week (96 hours of instruction), you can be dropped after 12 hours of absence.”

If circumstances significantly prevent you from attending classes, please inform the instructor.

[http://www.hccs.edu/hcc/System%20Home/Departments/Student\\_Handbook/academic\\_info.pdf](http://www.hccs.edu/hcc/System%20Home/Departments/Student_Handbook/academic_info.pdf)

If circumstances significantly prevent you from attending classes, please inform me. I realize that sometimes outside circumstances can interfere with school and I will try to be as accommodating as possible, but please be aware of the attendance policy.

### **Students with Disabilities**

HCCS is committed to compliance with the American with Disabilities Act and the Rehabilitation Act of 1973 (section 504). “Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing etc.) who needs to arrange reasonable accommodation must contact the appropriate HCC Disability Support Service (DSS) Counselor at the beginning of each semester. Instructors are authorized to provide only the HCC DSSO approved accommodations but must do so in a timely manner. Students who are requesting special testing accommodations must first contact the appropriate (most convenient) DSS office for assistance each semester.

Disability Support Services Offices:

System: 713.718.5165

Central: 713.718.6164 - also for Deaf and Hard of Hearing Services and Students

Outside of the HCC District service areas.

Northwest: 713.718.5422

Northeast: 713.718.8420

Southeast: 713.718.7218

Southwest: 713.718.7909

The student must request an accommodation before the start of each semester (as applicable) and should indicate to the DSS counselor when he/she is enrolled in a class. After student accommodation letters have been approved by the DSS office an email confirmation informing them of the Instructional Support Specialist assigned to their professor and that the accommodation letter has been processed. Upon consultation and documentation, you will be provided with reasonable accommodations and/ or modifications.

Also visit the ADA web site at:

<http://www.hccs.edu/students/disability/index.htm>. Faculty Handbook / faculty Orientation is also available at <http://www.hccs.edu/sudnts/disability/faculty.htm>

### **Academic Honesty**

Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. A student who submits the work of another student as her/his own deliberately

fails to properly credit words or ideas borrow from another source is guilty of plagiarism. A student who takes an exam for another student, copies answer from another student's exam, copies drawings in any manner, or engages in any other similar conduct aimed at making false representation with respect to student's academic performance is guilty of cheating. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of 'O' or 'F' on the particular assignment, failure in the course, academic probation or even dismissal from the college. Scholastic dishonesty includes but is not limited to cheating on a test, plagiarism and collusion.

### **Administrative and Student Withdrawals**

For 16 week Spring '14 classes, this date is **March 31<sup>st</sup> (4:30pm)**. In order to withdraw from a class, students **MUST** request to be withdrawn by notifying the professor. This must be done **PRIOR** to the withdrawal deadline to receive a "W" grade. If a student does not request to withdraw before the deadline, the student must be assigned a letter grade that is earned by the end of the semester (A, B, C, D, and F). I urge any student who is contemplating of withdrawing from the class to see me first. You may be doing better than you think. Either way, I want to be accessible and supportive. I don't believe in "weed out" classes, and I consider you to be much more than just a name or number. If you need assistance, do not hesitate to contact me (my phone number and e-mail address are listed above). I am here to help you.

### **Course Withdrawals - First Time Freshman Students - Fall 2007 and Later**

Under Section 51.907 of the Texas Education Code "an institution of higher education may not permit a student to drop more than six courses, including any course a transfer student has dropped at another institution of higher education." This statute was enacted by the State of Texas in the spring 2007 and applies to students who enroll in a public institution of higher education as a first - time freshman in fall 2007 or later. Any course that a student drops is counted toward the six - course limit if "(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student's transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution." Policies and procedures for implementation of this statute are being developed and will be published as soon as they are available. HCC students affected by this statute that have attended or plan to attend another institution of higher education should become familiar with that institution's policies on dropping courses.

[Web link to this information](#)

### **Exercises**

There will be exercises assigned after each class. In general, student who fail to do these assigned exercises do not do well in the course. All the exercises will be graded for credit. Students are strongly encouraged to attempt all exercises. The effort spent will enable you to perform better in tests and exams. All your exercises must be turned in as an attachment on

Eagle On Line and also the hard copy printed out must be turned in. Maximum of **10 points deduction** for each exercise turn in late after the due date.

### Exams and Make-up Policy

Examinations consist of three regular exams and a compulsory final will be administered during the semester. Make-up exams **will not** be given, so make every effort to take the exams on their scheduled dates.

Please note: 1) All students are required to take the final (no student can be exempted).

2) After the withdrawal date, no "W" can be given, and you **must** receive a regular grade (A-F) in the course.

**Grading Policy:** The final grade is based on the score out of 100% that the student accumulated from the three exams, Exercises and the final exam. Below is the weighting of the categories:

60% (20% for each Exam => 3x 20%)

15% Home works \_Exercises

25% Final exam

100% Total

The *overall score* is based on the following:

**Overall score = 0.60 (Average of three regular exams) + 0.15 (Homework) + 0.25 (Final Exams)**

The course grade is then obtained from the overall score:

<i>Final Average</i>	90 - 100	80 - 89	70 - 79	60 - 69	< 60
<i>Letter Grade</i>	A	B	C	D	F

### Tentative outline for ENGR 1204

**NB. This outline is subject to change as the semester progresses**

#### Chap 1-INTRODUCTION TO AutoCAD

1. The AutoCAD software structure
- 2 Dialog boxes, selcting commands,
3. starting & exiting AutoCAD

#### Chap 2\_ Drawings and Templates.

1. Starting & opening a drawing, drawing file names,
  2. working with multiple drawings, setting up a drawing template, working with grid and snap modes and changing units.
- Commands: QNEW, SAVEAS, QSAVE, OPEN, CLOSE, CLOSEALL, DWGPROPS, LIMITS, UNITS

#### Chap 3\_Introduction to Drawing and Editing

Point entry methods, drawing lines, cood display, editing functions, dynamic input, undoing

the effects of commands, redoing undone operations

Commands: Line, GRID, DSETTINGS, SNAP, ORTHO, ERASE, OOPS, UNDO, REDO.

#### **Chap 4\_ Basic Objects Commands.**

Drawing circles, arcs, ellipses, polygons, rectangles, polylines, splines and donuts. Drawing rectangles with chamfered corners and rounded corners

Commands: CIRCLES, ARC, ELLIPSE, PLINE, POLYGON, DONUT, SPLINE

## **TEST 01**

#### **Chap 5\_Line Standards and Layers Line**

Standards, drawing objects on separate layers, Creating & managing layers, assigning line types and line weights, changing object properties, using Design Center.

Commands: Layers, LINETYPE, LINEWEIGHT, LAYERSTATE, ADCENTER

#### **Chap 6\_View Tools & Basic Plotting**

Using commands transparently, real time zooming and panning, using the navigation bar and navigation wheels; creating views; model space and tiled viewports; making a print.

Commands: Zoom, PAN, REGEN, REGENALL, VIEW POINTS, NAVBAR, NAVSWHEEL, NAVCUBE, ISOLATEOBJECTS, VIEW< VPORTS

#### **Chap 7\_ Object Snap & AutoTrack**

modes, using Object Snap, AutoTrack, temporary tracking

#### **Chapter 8\_ Construction Tools and Multiview Drawings**

Parallel Offsets , Drawing Points and using construction lines to assist in creating multiview drawings & auxiliary views

Commands: OFFSET, POINT, DDPTYPE, DIVIDE, MEASURE, XLINE, RAY

## **TEST 02**

#### **Chapter 9\_ Text Styles and Multiline Text**

Text Standards and Composition, annotative styles, drawing scale factors, developing and using text styles drawing scale factors, developing and using text styles, forming columns; placing multiple-line text on a drawing

Commands: SCALELISTEDIT, STYLE, RENAME, MTEXT

#### **Chapter 10\_Single-Line Text and Additional Text Tools**

Placing single-line text on a drawing, creating special text characters, inserting fields and checking spelling.

Commands: TEXT, FIELDS, UPDATEFIELD, SPELL, FIND, SCALETEXT, JUSTIFYTEXT, PROPERTIES

### **Chapter 11\_Modifying Objects**

Drawing chamfers and fillets using editing commands joining, scaling and exploding objects.  
Commands: FILLET, CHAMFER, BREAK, JOIN, EXTEND, TRIM, STRETCH, LENGTHEN, SCALE, EXPLODE

### **Chapter 12\_ Arranging and Patterning Objects**

Moving & copying objects, creating mirror images, aligning objects, arraying objects.  
Commands: MOVE, ROTATE, ALIGN, COPY, MIRROR, REVERSE, ARRAY

## **TEST 03**

### **Chapter 13\_ Grips, Properties and Additional Selection Techniques**

Using grips to edit objects, using the Properties palette, copying objects between drawings, matching properties, selection techniques.  
Commands: PROPERTIES, MATCHPROP, ADDSELECTED, ADDSIMILAR, QSELECT

### **Chapter 14\_Polyline and Spline Editing Tools**

Editing polylines and splines, creating a polyline boundary.  
Commands: BOUNDARY, PEDIT, SPLINEDIT

### **Chapter 15\_ Obtaining Drawing Information**

Obtaining information about the drawing, displaying information with fields, using the AutoCAD calculators to make mathematical calculations on numeric values.  
Commands: MEASUREGEOM, LIST, DBLIST, TIME, STATUS, QUICKCALC

### **Chapter 16\_Dimension Standards and Styles.**

Drawing scale and dimensions, creating and using dimension styles, inserting conventional breaks, dimensioning practices and standards  
Commands: SCALELISTEDIT, DIMSTYLE

### **Chapter 17\_ Linear and Angular Dimensioning**

Dimensioning lines and angles, drawing datum and Chain dimensions with QDIM  
Commands: DIMLINEAR, DIMALIGNED, DIMJOGLINE, DIMANGULAR, DIMBASELINE, DIMCONTINUE, QDIM

## **FINAL EXAM**

### **Success in this course depends solely on the individual student**

The following are strongly recommended for each student:

- Read and understand all elements of the Syllabus, Distance Education and Student handbooks.
- Give your professor evening (after 9pm or week-ends) phone calls and e-mail.
- Read and comprehend the required chapters in the textbook prior to the exams.
- Successfully complete all requirements of this course as outlined in this document.
- Contact your professor if you have any questions regarding any element of the course you do not understand.

- HINT: Work hard from the beginning of the semester rather than playing a "catch-up game during the second half of the semester.
- Plan to attend all class review sessions to clarify your concerns about the course content/tests.

### **Important dates**

Jan 12:	Last day for Drop/Add/Swap/Registration Ends (Online only)
Jan 13:	Regular classes' begin- Drop/Add/Swap
Jan 21:	Offices Closed - Martin Luther King Jr Observance
Feb 17:	Offices Closed _ Presidents day Holiday
March 10-16:	Office Closed - Spring Break
March 31:	Last day for student withdrawals- 4:30pm
April 18 - 21:	Offices closed- Spring Holiday
May 4:	Instruction ends
May 5-11:	Final exam begins on HCCS regular class schedule
May 11:	Semester Ends
May 12:	Grades Due by 12:00 noon
May 16:	Grades available to students