

 HCC Houston Community College	Department of Drafting & Design Engineering Technology	Semester: Fall 2018
DFTG-1309 Basic Computer-Aided Drafting	<h1>Syllabus</h1>	Class (CRN) # 22529
Semester Credit Hours (SCH): 96 Credit Hours: 3 Format: Lecture: 1/3 Lab and/or Web: 2/3 Weekly class meetings and home assignments: For 16-wk regular semester: 6 hrs. (4-5 hrs. for WE class) For 2 nd Start 12-wk term: 8 hrs. (4.8-6 hrs. for WE class) For Summer 8wk term: 12 hrs. (7.2-9 hrs. for WE class) <u>Note:</u> Web Enhanced classes include online assignments.	Professor/Instructor: Trung Bui Contact phone number: 832-659-9800(texting only) Other phone number: Best times to call: Any time, please leave a message if no answer. Email: trung.bui@hccs.edu	Class meeting information: • Campus: Spring Branch • Date: Wednesday • Time: 8:30am-1:50pm
Any question or concern, please contact your instructor first. You can also contact Lead Faculty or department administration for further assistance. Thank you.	Acting Faculty Department Chair: Nelson Simpson Phones: 713 718-5234 Rowena Hubbard, Dept. Assistant: 713-718-8033 Email: nelson.simpson@hccs.edu	Office: 1265 Pinemont Dr., Suite 151, MC 1376 Houston, Texas 77018.

Revised 18-0924 tb

PREREQUISITE: DFTG 1305 or 1405 Technical Drafting or Department Chair approval based on documented working knowledge of drafting basics.

Message from the instructor:

Please contact me concerning any problems that you are experiencing in this course. Do not wait until a poor grade has been received before asking for assistance. Your performance in the course is very important to me. I am available to discuss the course materials either before or after class. Outside of class sessions you can contact me either by email, or office phone call. If the phone is not answered please leave a message and I'll contact as soon as possible

COURSE DESCRIPTION: An introduction to computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using levels, coordinate systems, and plot/print to scale.

TEXTBOOK: AutoCAD and its Applications: Comprehensive 2017 24th ed., Terence M. Schumaker, David A. Madsen and David P. Madsen. ISBN 978-1-63126-739-0. A textbook is required for this course. Students may check with the instructor to see if an earlier version of the textbook will be sufficient for doing the required course work.

MATERIALS REQUIRED: A jump drive at least 1GB, writing materials (notepad, #2 pencil: black)

SCANS SKILLS: The Department of Labor has identified skill sets that U.S. employers want most in entry level employees. It is our commitment to prepare every student with the knowledge and skills needed to succeed in today's dynamic environment. Toward this end, the following skills will be included in this course:

- **Selects technology:** Judges which procedures, tools, or machines, including computers and their programs, will produce desired results.
 - **Integrity/honesty:** Can be trusted. Recognizes when faced with making a decision or exhibiting behavior that may break with commonly-held personal or societal values, understands the impact of violating these beliefs and codes of an organization, self, and others: and chooses an ethical course of action.
 - **Individual responsibility:** Exerts a high level of effort and perseverance toward goals attainment. Works hard to become excellent at doing tasks by setting high standards, paying attention to details, working well and displaying a high level of concentration even when assigned unpleasant tasks.
- The student will be made aware of the components of the CAD software and the available options and tools therewith. The student will select methods for drawing creation in a timely manner. Integrity and honesty in the workplace will be stressed as a part of this program understanding the ease with which one can plagiarize computer-generated work.

Evaluation of the student's technology understanding will be reviewed and discussed with the class by the instructor to insure a clear understanding of technology by all students. Integrity/honesty will be evident in the instructor's evaluation of the student's work.

LEARNING OUTCOMES: Demonstrate the use of CAD hardware and software to create, display, and plot/print working drawings. The student will be responsible for managing time, organizing and processing symbols and interpreting and responding to verbal instruction in the development of the drawing assignments.

KNOWLEDGE:

- a. file maintenance and operation of a CAD system
- b. the principals of 2D drawing development in CAD
- c. basic commands related to drawing, editing, dimensioning geometry and text input and editing.
- d. time efficiency advantages of engineering drawing production with CAD.

SKILLS:

- a. creation, annotation and dimensioning of a standard 2-D engineering drawing
- b. creation, insertion and scaling of geometric symbols.
- c. organization and processing of symbols and other information.
- d. efficient use of CAD tools to insure drawing accuracy.

ATTITUDE/BEHAVIORS:

- a. demonstrate an understanding of a micro-computer operations and inherent efficiency of CAD.
- b. demonstrates ability to set goals, rank them and to apportion time for their completion.
- c. demonstrates patience, skills, integrity and honesty in the process of timely completion of assignments.

COURSE CONTENT:

- Introduction to the AutoCAD user interface
- Drawing set up procedure
- Cartesian and Polar coordinate systems
- 2-Dimensional drawing and editing commands
- Drawing aids; object snap and tracking tools
- Creating and using Construction lines
- Layer creation and control; assigning colors and line types
- Creating Blocks and Groups
- Text and text editing commands
- Dimensioning, dimension styles and editing techniques
- Display control and inquiry commands
- Scaling and Printing /Plotting basics

COURSE EVALUATION PROCEDURE: The student will be evaluated and receive a final grade based upon the following criteria:

- Laboratory work consisting of assigned technical drawing problems.
- A minimum of 2 tests: (a mid-term and a final examination): *NOTE: - Individual instructors may schedule more tests if desired*
- Class and laboratory attendance, active participation in class, professional attitude and growth in terms of technical skill development and teamwork within the laboratory environment shall be taken into consideration.

Final Grade Based On: Attendance=20% Drawings=30% Chapter Test/Quiz=20% Final Project=10% Mid-Term=10% Final=10%

GRADING PROCEDURE:

A = 90 –100 B = 80 – 89 C = 70 – 79 D = 60 – 69 F = below 59 Fx = Student stopped attending

The drawing portion of the above evaluation criteria shall be based on the layout, dimensional accuracy, neatness, and timely completion.

HCC POLICIES

LATE ASSIGNMENT POLICY - Students are encouraged to turn assignments in on time if at all possible. This allows the instructor to grade the work, return it to the student and the student use the feedback as a learning tool.

MAKE-UP TEST/PROJECT POLICY - The student must request a make-up test and it should be scheduled at the earliest possible date following the quiz (or mid-term) missed. NO make-up test is given for the final examination.

EXTRA CREDIT: Extra credit work is offered only to assist students that that have a grade range of “D” or “F” at the mid-term break. This work cannot be substituted for regular assignments and can only raise the final grade to a maximum of a “C”.

STUDENTS WITH DISABILITIES - Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations for the classroom and/or testing must contact the appropriate HCC Disability Support Service (DSS) Counselor at the beginning of each semester. Faculty is authorized to provide only the

accommodations requested by the Disability Support Services Office. Students who are requesting classroom and/or testing accommodations must first contact the DSS office for assistance prior to the beginning of each semester. At Northwest college, please call 713.718.5422.

CLASS ATTENDANCE - You are expected to attend all lecture classes and labs. You are also responsible for all materials covered in either lecture or lab. In the case of your absence, you must contact the instructor to obtain make-up assignments or arrange make-up testing, either of which can be distributed at the instructor's discretion. Class attendance is checked daily.

The instructor has the authority to drop you from the class for excessive absence. You may be dropped from the class and get an F grade if you are absent more than 12.5% of the instruction hours (lecture and lab). For example: A 12.5% of 96-hour course, meeting twice per week for 3 hours per class meeting equals 12 hours. If you are absent more than 4 class meetings, you may drop.

WITHDRAWAL - It is your responsibility to withdraw from the class if you cannot complete it. Failure to do so will result in an F grade. Check the calendar for official last day to withdraw.

Note: *Although it is your responsibility to officially withdraw from a class, please discuss with your instructor first. Consistent class attendance is very important. However, if you have to miss a class for a valid reason, your instructor may be able to help you catch up with the class. Please let your instructor know as soon as possible if you have to miss a class. Valid reason is decided on a case by case basis. Departments and programs governed by accreditation or certification standards may have different attendance policies.*

REPEAT COURSE - Students who repeat a course three or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test-taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available."

RELIGIOUS HOLIDAYS - If you observe a religious holiday and miss class, you must notify your instructor in writing two weeks in advance to arrange to take a test or make up an assignment. A religious holiday is "a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code."

SCHOLASTIC DISHONESTY - Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. College System Officials may initiate penalties and/or disciplinary proceedings against a student accused of scholastic dishonesty.

- "Scholastic dishonesty" includes, but is not limited to, cheating on a test, plagiarism, and collusion.
- "Cheating" on a test includes:
 - Copying from another student's test paper;
 - Using materials during a test that are not authorized by the person giving the test;
 - Collaborating with another student during a test without authority;
 - Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of an un-administered test;
 - Bribing another person to obtain a test that is administered.
- "Plagiarism" means the misuse of another's work and the deliberate incorporation of that work into work you offer for credit.
- "Collusion" means the unauthorized collaboration with another person in preparing work offered for credit.

Determination of scholastic dishonesty will be at the discretion of the instructor.

Reference the following web link for additional information: <http://www.hccs.com>

ADVISING - A senior advisor is connected to this class section and will meet with the class within the first two weeks of instruction. The senior advisor will review the advising syllabus and the ways in which you can communicate with him/her. Students are required to meet with their senior advisor at least twice within the semester. Participation in these advising sessions is required and will be a part of the grade in this success class.

EGLS3 – (Evaluation for Greater Learning Student Survey System) Click [here](#) or visit www.hccs.edu/EGLS3

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.

HCC PUBLIC EMERGENCY PLAN – Click [here](#) or log into

<http://www.hccs.edu/district/departments/police/crime-prevention--safety/hcc-public-emergency-plan/>

Every member of the Houston Community College community should understand his or her role in emergency situations. All faculty, staff, and students should review this plan so they can support their colleagues should an emergency arise.

Evacuation routes and assembly areas are posted throughout the campus(s). If you are faced with a situation that requires evacuation, proceed in an orderly fashion to the designated assembly area. If a situation arises that requires you to shelter-in-place, you will be given instructions to proceed to a designated area - do not leave the building. **In Case of Emergency** Dial 911 or call HCC Police at **713-718-8888**. To update your emergency contact information,

log into PeopleSoft on the Student Sign-Ins page. The "[Run.Hide.Fight.](#)" video provide the information you need to survive an active shooter event. (Fall 2015).

DISCRIMINATION

Students should be aware that discrimination and/or other harassment based on race, sex, gender identity and gender expression, national origin, religion, age, disability, sexual orientation, color or veteran status is prohibited by HCC Policy G.1 Discrimination and Harassment and D.1.1 Equal Educational Opportunities. Any student who feels they have been discriminated against or harassed on the basis of race, sex, gender identity, gender expression, national origin, religion, age, disability, sexual orientation, color or veteran status including sexual harassment, has the opportunity to seek informal or formal resolution of the matter. All complaints/concerns should be directed to the Office of Institutional Equity, Telephone: **713 718-8271**, click [here](#) or visit oie@hccs.edu. Additional information may be obtained online. Click [here](#) or visit: <http://www.hccs.edu/district/departments/institutionalequity/>. Complaints involving sexual misconduct to include but not limited to: sexual assault, stalking, dating violence, sexual harassment or domestic violence should be directed to the HCC Title IX Coordinator, Ms. Renée Mack at **713 718-8272** or renee.mack@hccs.edu (Fall 2015).

TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, 20 U.S.C. A§ 1681 ET. SEQ.

Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' rights with regard to sex/gender discrimination. Information regarding these rights are on the HCC website under Students-Anti-discrimination. Students who are pregnant and require accommodations should contact any of the ADA Counselors for assistance.

It is important that every student understands and conforms to respectful behavior while at HCC. Sexual misconduct is not condoned and will be addressed promptly. Know your rights and how to avoid these difficult situations. Click [here](#) or log into: www.edurisksolutions.org. Sign in using your HCC student e-mail account, then go to the button at the top right that says **Login** and enter your student number. (Fall 2016)

CAMPUS CARRY LAW

Fall 2017

"At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at <http://www.hccs.edu/district/departments/police/campus-carry/>."

BASIC NEEDS

Fall 2018

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable her to provide any resources that she may possess.

COURSE SCHEDULE

Basic Computer-Aided Drafting (AutoCAD) - DFTG-1309

Note: This is a Tentative Weekly schedule for lectures/assignments and maybe modified as needed.

Week 1 - Class Meeting 01

Review Windows - Windows Explorer:

Create a Folder; Create a Shortcut; Copy, Move, Delete and Rename a file.

Reclaiming a file from the Recycle Bin.

Introduction to AutoCAD - The Drawing Editor: The layout Wizard; the command prompt; the Object properties toolbar; Popup (or Pull down) menus.

AutoCAD commands: SAVE, SAVEAS, CLOSE, OPEN

Renaming and Deleting files from within the AutoCAD Open Dialog Box.

File name Syntax for files in this class = XXFL1234

XX=Assignment Designation FL= Your First and Last Initial

1234= Last 4 numbers of your Social Security Number.

Drawing Setup

AutoCAD commands: LIMITS, UNITS, HELP

Introduction to the Cartesian Coordinate Systems - Data Input

Read about the Cartesian Coordinate System, Absolute and Relative Coordinates

Week 2 - Class Meeting 02

Data Input - Review - The Cartesian Coordinate System

Introduce - The Polar Coordinate System

Drawing Commands: POINT, DDPTYPE, LINE, XLINE, RAY

Editing Commands: ERASE, OOPS, U, REDO

Drawing Aids: ORTHO, Orthographic Projection, OSNAP

Direct distance entry

Display Commands: ZOOM, PAN

Exercise - Create a line drawing using per the provided distances and angles using Absolute, Relative and Polar Coordinates. Offset lines per instructions

Assignment 1

Week 3 - Class Meeting 03

Drawing Commands: CIRCLE

Editing Commands: COPY, MOVE, ROTATE

Drawing Aids: LAYER, LTSCALE

Data related Commands: DIST, LIST, ID

Display Commands: OPTIONS (Aperture, Pickbox),

DSETTINGS, GRAPHSCR

Data Management: Object Snaps, Object Properties Toolbar

Function (Toggle) Keys: F1,F2,F3,F6,F7,F8,F9

Assignment 2

*** Quiz #1***

Week 4 - Class Meeting 04

Drawing Commands: ARC, ELLIPSE

Editing Commands: BREAK, MIRROR, CHPROP, OFFSET

Drawing Aids: COLOR [144, 160-161], LINETYPE

Display Controls: BLIPMODE, DRAGMODE, REDRAW

AutoCAD Toolbars: Loading, positioning and unloading.

Assignment 3

Week 5 - Class Meeting 05

Drawing Commands: BOUNDARY, PLINE

Editing Commands: PEDIT, EXPLODE, XPLODE

Display Commands: REGEN, COPYBASE

Drawing Aids: DDGRIPS (Grip size, Grip color)

AutoCAD Command: TIME

Assignment 4

****Quiz #2****

Week 6 - Class Meeting 06

Drawing Commands: RECTANG, POLYGON, DIVIDE, MEASURE

Editing Commands: TRIM/EXTEND, FILLET, ARRAY

Display Commands: VIEW, FILL, ZOOM (Center, Left, Dynamic)

Data related commands: AREA

Assignment 5

Week 7- Class Meeting 07

Drawing Commands: BHATCH

Dimensioning Commands: Dim/Dim1

Editing Commands: HATCHEDIT, SCALE, STRETCH

Dimension variables: dimasz, dimadec, dimdec, dimtxt, dimunit, dimlunit, dimaunit

Assignment 6

MIDTERM EXAMINATION

Week 8 - Class Meeting 08

Drawing Commands: TEXT (DTEXT), MTEXT

Dimensioning Commands: LEADER/QLEADER

Editing Commands: CHANGE, DDEDIT, FIND, and SPELL

Dimension variables: dimcen, dimexe, dimexo, dimgap, dimscale, dimlfac, dimrnd

Assignment 7 - Final Project Hand-Out

Week 9 - Class Meeting 9

Drawing Commands: STYLE, DIMSTYLE (DDIM)

Editing Commands: SCALETEXT, JUSTIFYTEXT

Display Commands: QTEXT

Data Management: BLOCK, WBLOCK, INSERT, MININSERT

Dimension variables: dimse1, dimse2, dimsd1, dimsd2, dimtih, dimtoh, dimtix

Special Characters: Degrees ($^{\circ}$), Diameter (\varnothing), Plus/Minus (\pm)

Assignment 8 - Final Project

Quiz #3

Week 10 - Class Meeting 10

Dimensioning Commands: DIMLINEAR, DIMALIGNED, DIMANGULAR, DIMBASELINE, DIMCONTINUE

DONUT, SKETCH, RENAME, PLOT

Editing Commands: LENGTHEN

Data Control Commands: PURGE

Dimension variables: dimupt, dimatfit, dimtmove, dimjust, dimzin, dimfrac, dimsoxd

Final Project

Week 11 - Class Meeting 11

Drawing Commands: SPLINE, DIMRADIUS, DIMDIAMETER, DIMCENTER, DIMROTATED, QDIM

Editing Commands: SPLINEDIT

Data Management: UNDO

Dimension variables: dimsho, dimdli, dimdle, dimtad, dimaso, dimtsz, dimtofl, dimtvp

Bonus Assignment, if any (per instructor's discretion).

NOTE: No assignments will be accepted after this date.

Final Project

Quiz #4 and REVIEW FOR FINAL EXAM

Week 12 -Class Meeting 12

Instructor will notify Final Exam date and time.

This exam will be limited to 2 hours per the College requirements.

FINAL EXAMINATION

DFTG-1309 Basic AutoCAD

ADDITIONAL INFORMATION FOR THIS CLASS

1. DFTG-1309 PREREQUISITE: DFTG 1305 Technical Drafting or a pre-approved working knowledge of drafting basics. You must take DFTG-1305 before enrolling 1309 or any drafting course; however, you can take both DFTG-1305 and DFTG-1309 at the same time provided that you will not drop DFTG-1309 at any time during the semester.

1. BASIC COMPUTER SKILL REQUIREMENTS

Before taking this class, student must be familiar with the basic functions of MS Windows. If you are not comfortable using a computer and working with MS Windows, you should not take this class. Basic functions include the use of keyboard, mouse, and printer. You must also be able to perform the following tasks:

- **Windows Operating System:** Use the Start menu, create folders, use desktop icons, work with MyComputer, Copy or Move files/folders to another location, use Search to locate files and folders, Minimize/Restore Windows.
- **Applications:** Cut, Copy, and Paste texts, Rename, use Save / SaveAs functions.

2. TEXT and HAND-OUTS

- Textbook are typically available at one of the HCC bookstores.
- Handouts on specific topics will be provided as needed. If a student missed a class, it is his/her responsibility to make copy.

3. REQUIRED CLASS SUPPLIES include:

- A **Jump Drive** (1GB or larger recommended) with USB connector. This device used to store assignment data.
- A 3-ring **binder** (size 8.5"x11" or 5.5"x8.5") for holding handouts.
- Writing tool for taking notes and completing exams.
- Small stapler, small 3-ring punch (optional).

4. COMPUTER USE

- If you need to use the lab outside your designated class meeting day/time, please get the permission of the instructor who is teaching during those hours. However, the instructor does not have to answer questions that you may have regarding of the assignments of your class.
- You may use computer with AutoCAD software loaded at some locations within the HCC system. Check with campus office for opening hours. Lab assistant may be available at some locations.

5. CLASS RULES

- a. **All cellualars and pagers must be turned off during the class meeting.**
- b. **You must initial the Sign-In Blue Form for every class meeting** (not available until the second week)
- c. If you are not be able to make the class, please notify your instructor as early as possible.
- d. Do not change computer's current Windows settings, including the screen saver, AutoCAD display.
- e. It is recommended that students save assignments to the jump drive before leaving.
- f. At the last day of the semester, all drawing files must be deleted from the hard drive.
- g. Unless otherwise instructed, please shut down your computer before leaving.
- h. Scholastic dishonesty strictly applied – Please read the Syllabus

6. COURSE EVALUATION PROCEDURES:

- a. **Assignments:** Unless otherwise specified, each assignment must be completed and *turned in within the following week* for full credit. Points will be deducted if assignments are turned in late.
- b. **Exams/Quizzes:** Two or more exams will be given during the semester.
- c. **Final Project & Final Examination:** Students will be given a final project and a final exam.

7. STUDENT EVALUATION: *(Instructor may modify the ratio)*

Attendance	20%
Drawing assignments	30%
Chapter Exams	20%
Mid-Term	10%
Final Exam	10%
Final Project	10%
Total:	100%

8. GRADE PROCEDURE:

A = 90-100	B = 80-89
C = 70-79	D = 60-69
F = 59 and below.	FX=Student stopped attending