

	<b>Drafting &amp; Design Engineering Technology</b>	<b>Northwest College</b>
<b>Spring 2012</b>	<b>Syllabus</b>	<b>DFTG-2338 Final Project</b>
Semester Credit Hours (SCH): <b>96</b> Credit Hours: <b>3</b> Format: Lecture: <b>1/3</b> Lab/Web/Research: <b>2/3</b> Weekly: <b>6 hrs</b> (include Web Enhanced class) (8 hrs for 2 <sup>nd</sup> Start term, 9.6 hrs for Summer term) For Web-enhanced (WE) class, please see your instructor	<b>Professor/Instructor:</b> <b>Francis Ha, BS, MA</b> <b>Phone number: 713-718-5544</b> <b>Email: <a href="mailto:francis.ha@hccs.edu">francis.ha@hccs.edu</a></b> <b><a href="mailto:francisha@yahoo.com">francisha@yahoo.com</a></b>	<b>Office:</b> <input type="checkbox"/> Spring Branch campus, Suite 200 Visit <a href="http://learning.hccs.edu">learning.hccs.edu</a> for more info.

11-1104

**PREREQUISITE:** Completion of at least 3 semesters: Final Semester or Drafting & Design Engineering Technology Department Chair's approval.

**COURSE DESCRIPTION:** *A drafting course in which students participate in a comprehensive project from conception to conclusion by attending individual meetings, instead of regular weekly class meetings, with the instructor at the times that is convenient for both. Students are required to prepare his/her project and present it, via media software (i.e. MS Power Point) to the whole class at the end of the semester.*

**COURSE LEVEL:** Advanced

**TEXTBOOKS:** None.

**STUDY MATERIALS:** Online and handouts

**REQUIRED COURSE MATERIALS:** A flash drive, 1GB min.

**JUSTIFICATION OF COURSE:** Students are trained to join today's highly technical workforce by learning basic computer and software operations. Students are able produce drawings using AutoCAD software in an actual work environment. The students interact with other employees and contribute to the overall business/ industry production. They adhere to business standards and operating procedures and learn to be part of a team in the real world.

**COURSE OBJECTIVES:** Demonstrate the ability to visualize spatial relationships; develop sequential thinking; set patterns of analysis; and spatial visualization through problem solving.

**IN-CLASS PRESENTATION:**

Students are required to complete the following tasks:

1. Prepare his/her assigned research (library or online).
2. Meet the instructor at a scheduled appointments
3. In-class presentation of the Final Project at the end of the term.

Details with be elaborated by the instructor.

**LEARNING OUTCOMES:**

- Identify the problem
- Integrate problem solving and related technologies into the process
- Use industry standard research techniques
- Demonstrate proper documentation procedures
- Use industry standards and codes
- Prepare documentation relating to the design problem: conceptualization sketches, calculations, working drawing(s)

**SCANS SKILLS:**

- Demonstrate knowledge of drafting industry standards
- Demonstrate knowledge of the use of computers.
- Use of a Computer and Computer Aided Drafting & Design software to produce, save, and plot various types of drawings
- Solve Business Problems and build employability skills such as Time Management, Planning and Organizing, Listening, and using Initiative.-
- Apply principles of good grooming and business etiquette by displaying a professional image.

**PERFORMANCE OBJECTIVES**

**A. Demonstrate knowledge of Drafting Industry Standards**

Performance Objectives:

The student will:

- Use drawing media and related drafting materials
- List the elements of English/Imperial and metric systems
- Identify notes, symbols, and the placement of notes and symbols
- Identify “Alphabet of Lines”
- Identify the components of a title block
- Prepare Title blocks for various formats
- Identify and use various appropriate industry standard symbols
- Identify methods for reproduction of originals
- Identify the purpose of a freehand sketch
- Identify, create, and place appropriate orthographic views
- Identify, create, and place appropriate auxiliary views
- Identify, create, and place appropriate section views
- Identify, and create axonometric drawings
- Identify, and create oblique drawings
- Apply dimensioning rules correctly
- Use various dimensioning styles

**B. Demonstrate knowledge of the use of computers.**

Performance Objectives:

The student will:

- Identify the generally accepted practices for care of computer components
- Operate and adjust input devices
- Identify different types of storage media and proper operating methods and protection capabilities for each type.
- Demonstrate turning on and exiting a computer system
- Demonstrate an understanding of computer safety
- Start and exit software programs
- Demonstrate proper file management techniques
- Demonstrate proper file maintenance and backup procedures
- Translate, import and export data files between formats
- Use on line help
- Save drawings to files and storage devices

**C. Use of a Computer and Computer Aided Drafting & Design software to produce, save, and plot various types of drawings.**

Performance Objectives:

The student will:

- Demonstrate the ability to open a drawing file, create a drawing, and save a drawing
- Demonstrate the ability to perform a drawing setup
- Demonstrate multiple construction techniques to create a drawing
- Create appropriate text style and size to annotate a drawing
- Use and control accuracy enhancement tools
- Identify, create, store, and use appropriate symbols/ libraries
- Create accurate and properly represented 3D solid models
- Extract and create accurate 2-D profile from a 3-D wire frame
- Revolve a 2-D profile on a rotational axis to create a 3-D model
- Extrude a 2-D profile onto a rotational axis to create a 3-D model
- Utilize geometry editing commands.
- Utilize non-geometric commands
- Identify coordinate type; origin, scale, axis orientation, origin locations
- Demonstrate the modification and selection of origin, scale, and axis orientation
- Demonstrate the modification of entity properties
- Demonstrate the use of viewing commands
- Define and understand the various purposes and usage of layers
- Demonstrate various grouping techniques
- Apply the use of the query commands
- Use associate dimensioning correctly
- Plot drawings created using various printers, plotters
- Set up and plot 2-D and 3-D drawings to various engineering and architectural scales

**D. Solve Business Problems and build employability skills such as Time Management, Planning and Organizing, Listening, and using Initiative. Apply principles of good grooming and business etiquette by displaying a professional image.**

Performance Objectives:

The student will:

- Use time management to complete a project on time within schedule
- Use planning and organizing in working with others to complete projects in a timely manner to prevent delays
- Develop listening skills that will enable the student to complete a project with few questions and prevent rework of drawings
- Use initiative to learn office methods, office requirements and office standards to enhance productivity
- Exhibit professional principals by dressing appropriately for work
- Exhibit professional principals by showing up on time for work and calling in as required when they can't go in to work.

**ATTITUDES/BEHAVIORS**

- a. The student will learn to follow instructions as presented in classroom.
- b. The student will demonstrate patient.
- c. The student will show respect for others.

**COURSE WORK** - The course will consist of Study Guide and textbook reading assignments, lectures, class exercises, and drafting lab assignments. The student is expected to read and study the text before the lecture on the unit. Study Guide units will be assigned either as homework or class work, at the instructor's option.

**Note:** Refer to the "Course Outline & Assignment" document for scheduled weekly activities - Refer to the "Drafting Equipment & Supplies" list for drafting equipment requirements.) The student should bring the Study Guide, textbook, and drafting instruments every day, unless otherwise instructed.

**GRADE CRITERIA**

Attendance	20%
Final Project Presentation	80%
Total	100%

**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). *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.

**GRADING PROCEDURE:**

A = 90-100	B = 80-89
C = 70-79	D = 60-69
F = 59 and below.	I = Incomplete (*)

(\*) Fail to submit Final project or not show up at the Final Exam.

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

**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: Disability Support Services Offices: Northwest: 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 calendar for the 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.

**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>

**"Notice:** 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."

### **EGLS<sub>3</sub> -- Evaluation for Greater Learning Student Survey System**

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.