HOUSTON COMMUNITY COLLEGE

ENGR 1201: Introduction to Engineering, 2014 (Summer Term I)

Class: MoTuWe, 5:30 PM – 7:40 PM, Alief-Hayes B224 (CRN 13614)
Instructor: Charisma D. Edwards, Ph.D.
Office Hours: **By Appointment Only**
Phone: (832) 527-8404
Email: charisma.edwards@hccs.edu

Description

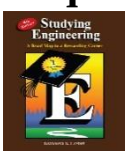
This course is intended for those students who are planning to major in any branch of engineering and for those planning a career in engineering. It may also be taken by any student entering college for the first time as the materials covered in the course may help lead any student to success in college irrespective of the student's major. The materials covered in the course will include Keys to Success in Engineering Study, Engineering Professions, Academic Success Strategies, Personal Growth and Development, Broadening your Education, and Orientation to Engineering Education. The delivery format will include lectures, video presentations, guest speakers, student projects, student presentations, homework assignments, and examinations.

Course Objectives

After successful completion of the course, the following objectives should be attained:

1. Students will begin to develop basic skills (problem solving skills, critical thinking skills, evaluation skills), all of which are essential for success in an engineering discipline, and in any academic discipline for that matter.
2. Students will begin to develop team work skills for solving problems and completing projects by completing a short paper and small projects in teams, in which all of the team members are required to participate.
3. Students will be able to understand ethical codes and possibly refine them. They will learn that professional engineers have ethical and professional responsibilities which are related to the results of their actions.
4. Students will learn about some contemporary issues related to engineering and engage in discussions about these issues.
5. Students will form a supportive learning community by meeting fellow classmates, learning collaborative study techniques, and becoming aware of the numerous student organizations.
6. Students will acquire and demonstrate positive attitudes, good study habits, goal setting, goal attainment, hard work, dedication, commitment, and productive behaviors which can result in academic and career success.
7. Students will learn to access and use numerous resources, including counseling, student organizations, faculty advising, web-based information, etc.

Required Textbook & Supplies



Landis, Raymond B. *Studying Engineering, A Road Map to a Rewarding Career, 4th Edition*. Discovery Press, Los Angeles, 2013.
In addition, students are responsible for purchasing a composition notebook and supplies for design project/presentation.

Grading

Grading will be based on the following with the grading scale provided and is subject to change:

Class Participation/Homework/Quiz		28%	
	Class Participation		**150**
	Journal Entries		**40**
	Time Sheets		**40**
Exams		25%	
	Exam 1		**100**
	Exam 2		**100**
Design Project		25%	
	Written Report		**50**
	Oral Team Presentation		**50**
	Team Grade		**50**
	Prototype		**50**
Personal Development		10%	
	Campus Organizations		**20**
	Instructor Meetings		**20**
	College Counselors		**20**
	Department (Major) Advisors		**20**
Professional Development		12%	
	Resume		**50**
	Informational Interview		**50**
TOTAL		**100%**	**810**

Final Score	100% - 90%	89% - 80%	79% - 70%	69% - 60%	Below 60%
Letter Grade	A	B	C	D	F

Student Services Policies

Access Studet Services Policies on their website:
http://www.hccs.edu/district/students/student-handbook

- Attendance Policy: Page 3
- Academic or Scholastic Dishonesty: Page 18
- Repeating Courses (3-peaters): Page 5
- Withdrawal Deadline: Page 4

Class Participation

1. Completed assignments (reading and written)
2. Participation in class discussions
3. Quizzes

Journal

All journal entries are due each Monday (at the beginning of class).

Purpose: To track your perceptions as you begin your college career. This activity will allow you to reflect on what is happening and develop written communication skills.

Method:

A. Journal entries must be done weekly.
B. They are to be submitted to the instructor and must be at least one full page typed, double-spaced with 12-point font and 1 inch margins.
C. Always keep a copy of your journal entry.

Grading Rubric:

	Value	*Description*
Submission	5	Submitted on or before due date
Length	1	Must be 1 full page or 500 words (whichever is greater)
Grammar/Spelling	1	Not more than 5 grammar or spelling errors
Structure	1	Format of paper, i.e. introduction, body, conclusion, etc.
Content	2	Topic adequately discussed
TOTAL	10	

Timesheets

All timesheets are due each Monday (at the beginning of class).

Purpose: To develop time management skills. This activity will allow you to reflect on how time is spent.

Grading Rubric:

	Value	*Description*
Submission	5	Submitted on or before due date
Academic Specificity	2	Included specifics for academic information
Completion	2	Every half-hour scheduled
Reflection/Actuality	1	Included actual schedule as compared to ideal schedule
TOTAL	10	

Personal/Professional Development

Personal and professional development exercises will be assigned throughout the course and must be completed as homework. Please refer to worksheet provided.

Design Project

The purpose of the Design Project is to develop a plan that will result in the enhancement of an already existing product (i.e. a waterproof notebook cover). The design project must be submitted in three forms. The most important part of the design project is the model itself. The model must be a working model; therefore, your group is responsible for developing an idea that can be presented properly to the judges, the instructor, and the class. Your group is responsible for the purchase of all design project materials.
Secondly, the technical paper must be submitted to the instructor in the following format.

1. A title page, which includes the names of the members of the group
2. An abstract
3. Introduction of the project, which describes the need for your particular object
4. A discussion of the project, including the supplies needed
5. A conclusion, which includes the results of the project
6. Reference page, which must include at least two properly, cited references. Examples will be given. References must be taken from engineering journals, which can be found in a library (not Woman Engineer or NSBE).

The technical paper will be graded for grammatical accuracy. The report should be detailed so the reader (the instructor) can visualize the project based on the information given. Charts are suggested. The paper should also show the originality of the group's insight and research through the use of references.

Lastly, your group (a lone spokesperson is not acceptable) will present your final project to a panel of judges and the class (10 minutes) during the day indicated on the syllabus. The day of the presentation your group should have a copy of the abstract for the judges and be prepared to answer questions (i.e. how much does it cost to produce a project of this caliber?).

The final grades will be based on the model, the technical paper, the oral presentation, and team evaluation.

Schedule

NOTE: Please be mindful that dates and schedules are subject to change.

Class 1:	**Monday, June 2, 2014**
Topic(s)/Discussion:	Introductions Review of Syllabus and Expectations
Pre-Reading Assignment:	Prologue
Homework Due:	None
Handouts:	Pre-course Survey Syllabus Personal & Professional Development Worksheet Timesheet
Class 2:	**Tuesday, June 3, 2014**
Topic(s)/Discussion:	Keys to Success in Engineering Study
Pre-Reading Assignment:	Chapter 1
Homework Due:	None
Handouts:	None
Class 3:	**Wednesday, June 4, 2014**
Topic(s)/Discussion:	"Engineering… It's Not Easy, but It's Worth It" by presented John Vasselli The Engineering Profession
Pre-Reading Assignment:	Chapter 2
Homework Due:	None
Handouts:	Design Project Assignment

Class 4:	**Monday, June 9, 2014**
Topic(s)/Discussion:	Professional Communication Etiquette & Attire Senior Advisor Classroom Visitation
Pre-Reading Assignment:	None
Homework Due:	Timesheet 1 Journal 1 – "Why Engineering? What type of engineer do you want to be? What characteristics do you possess that would make you a great engineer?"
Handouts:	Professional Attire Professional Commication

Class 5:	**Tuesday, June 10, 2014**
Topic(s)/Discussion:	Personal Growth and Student Development
Pre-Reading Assignment:	Chapter 6
Homework Due:	Keirsey Temperament Sorter II www.keirsey.com/sorter/register.aspx
Handouts:	None

Class 6:	**Wednesday, June 11, 2014**
Topic(s)/Discussion:	Design Project – 25% Milestone
Pre-Reading Assignment:	None
Homework Due:	None
Handouts:	None

Class 7:	**Monday, June 16, 2014**
Topic(s)/Discussion:	Making the Learning Process Work for You
Pre-Reading Assignment:	Chapter 5
Homework Due:	Timesheet 2 Journal 2 – "Where do you see yourself in 5 years? 10 years? What are the steps/guidelines that you would take to get there? How could you stay on track? What may get you off track?"
Handouts:	None

Class 8:	**Tuesday, June 17, 2014**
Topic(s)/Discussion:	Résumés & Interviews
Pre-Reading Assignment:	None
Homework Due:	Résumé – first (rough) draft
Handouts:	None

Class 9:	**Wednesday, June 18, 2014**
Topic(s)/Discussion:	Design Project – 50% Milestone
Pre-Reading Assignment:	None
Homework Due:	None
Handouts:	None

Class 10:	**Monday, June 23, 2014**
Topic(s)/Discussion:	Exam 1
Pre-Reading Assignment:	Prologue and Chapters 1, 2, 5, 6
Homework Due:	Timesheet 3 Journal 3 – "List three strengths and three weakness. How can you turn those weaknesses into strengths?"
Handouts:	None

Class 11:	**Tuesday, June 24, 2014**
Topic(s)/Discussion:	Understanding the Teaching/Learning Process Making the Most of How You Are Taught
Pre-Reading Assignment:	Chapters 3 and 4
Homework Due:	Index of Learning Styles Questionnaire www.engr.ncsu.edu/learningstyles/ilsweb.html Résumé – second draft
Handouts:	None

Class 12:	**Wednesday, June 25, 2014**
Topic(s)/Discussion:	Design Project – 75% Milestone
Pre-Reading Assignment:	None
Homework Due:	None
Handouts:	None

Class 13:	**Monday, June 30, 2014**
Topic(s)/Discussion:	Broadening Your Education Orientation to Engineering Education "Meet an Engineer" Panel Discussion
Pre-Reading Assignment:	Chapters 7 and 8
Homework Due:	Design Notebook Timesheet 4 Journal 4 – "Write about adversity and how you resolved a difficult situation."
Handouts:	None

Class 14:	**Tuesday, July 1, 2014**
Topic(s)/Discussion:	Exam 2
Pre-Reading Assignment:	Chapters 3, 4, 7, 8
Homework Due:	None
Handouts:	End-of-Course Survey

Class 15:	**Wednesday, July 2, 2014**
Topic(s)/Discussion:	Design Project – 100% Milestone
Pre-Reading Assignment:	None
Homework Due:	None
Handouts:	None