

**Product Design and Fabrication**  
**GE: 240**  
**SPRING 2014**  
**SYLLABUS**

<b>CREDIT:</b>	4 Credits Hours
<b>CLASS MEETING:</b>	Tuesday and thursday 4:00 PM to 6:30 PM
<b>INSTRUCTOR:</b>	Tom McGovern Associate Professor Engineering
<b>OFFICE:</b>	E151H, Emerson building FV campus
<b>PHONE:</b>	314-513-4313
<b>E-MAIL:</b>	tmcgovern@stlcc.edu
<b>ADDRESS:</b>	Engineering & Technology Department St. Louis Community College at Florissant Valley 3400 Pershall Road St. Louis, Mo. 63135
<b>CONSULTATION:</b>	Office hours are posted on my door. Other hours are available by arrangement.
<b>COURSE DESIGN:</b>	This course is a final course in the Engineering Technologies curriculum. Students will be expected to apply previous classes to the design and build of a special project. Industry tools such as simulations, Grant charts and other concepts will be discussed.
<b>PREREQUISITES:</b>	ME: 240 Machine Design 1
<b>SUPPLIES:</b>	Electronic Calculator – Engineering/Scientific. Expect to spend up to \$120 in supplies
<b>TEXTBOOK:</b>	No text is required

## COURSE OBJECTIVES

### OUTCOMES:

A successful student will demonstrate understanding of the following:

- a) The ability to analyze design requirements
- b) integrate various engineering concepts into a project
- c) plan for and utilize resources for project management

**ATTENDANCE:** Students must attend regularly to pass this course, and must come to class on time. Habitual late attendance will result in lower grade for the class. **Two unexcused absences will be grounds for an F in the course.** Any notes, or other course materials missed by the student are the responsibility of the student to gather.

**BEHAVIOR:** College education should be about more than simply learning course contents. We all must act and behave in a civilized and professional manner at all time. In addition,

- In support of school policy, NO food, drinks, or smoking will be allowed in the classroom.
- Since this course is for a professional career, students are expected to maintain a professional environment and demeanor in the classroom.
- Cell phones will not be permitted. If you have a situation for which you are willing to leave class, please let me know before hand.

### WRITING AND ORAL COMMUNICATION:

Being able to write grammatically correct and concise reports and memos and making formal and informal presentations are important skills necessary for technical professions. Therefore, classroom assignments will be given which will focus on such skills. Daily journals and project presentations will be used to reinforce these skills. All students will be expected to participate in such presentations.

Plagiarism is the copying word for word, or paraphrasing without adequate reference another persons work. Plagiarism is a form of cheating. Cheating is punishable by the loss of grade on the assignment up to an F in the class overall. There is an established policy in the Student Fact Finder for the appeal process. If you feel you were cheated off of, please contact me prior to my grading the assignment.

### ACCESS STATEMENT

The College has designated the ACCESS OFFICE-Disability Support Services as the primary office to guide, counsel, and assist students with disabilities. If you receive services through the ACCESS OFFICE and required accommodations for this class, make an appointment with me as soon as possible to discuss your approved accommodation needs. Bring your *Instructor Notification Memo* provided by the ACCESS OFFICE to the appointment. I will hold any information you share with me in strictest confidence unless you give me permission to do otherwise.

If you have not made contact with the ACCESS OFFICE and have reasonable accommodation needs for a volunteer note taker, extended time for tests, special seating arrangements, etc., I will be happy

to refer you. The ACCESS OFFICE will require appropriate documentation of disability.

If you have a disability and have no need for accommodations, the use of the ACCESS OFFICE is voluntary.

**PROJECT**

The project and associated design notebook are critical components of the grade in this class. The project will be a semester long project from concept to build. Along the way various deadlines and hallmarks must be met. The project will probably be in 4 person groups. Preliminary guidelines and rubrics are included in the blackboard shell.

**DESIGN JOURNAL**

Each student must keep a Daily Journal and included in the notebook should be the following:

- Course Outline and Schedule
- Class notes: This is your daily account of what is covered in class.
- Design concepts: As you work on your project all thoughts should be written
- Design sketches and research: All the information for your project should be here
- Problems: Those worked in class as examples and out of class as homework

The journal will be collected randomly 2 times during the semester and at the final. Not everyone’s journal will be collected at the same time.

**Article Presentation**

During the course of the semester you will be responsible for 2 article summaries. These articles will be on a current product in the market place. You will need to provide the article, lead a discussion on the product, and write a summary. An example will be provided.

**GRADING POLICY**

The final grade will be based on total points accumulated relative to the maximum number of points. They are as follows:

Homework, Quizzes, and small projects	5-15%	_____
Article summaries	5-20%	
Summary 1		_____
Summary 2		_____
Midterm	5-15%	_____
Design Journal	20-40%	
1 <sup>st</sup> evaluation		_____
2 <sup>nd</sup> evaluation		_____
Final evaluation		_____
Design Project	20-50%	
Preliminary Project Proposal		_____
Preliminary Design Review		_____
Prototype Presentation		_____
Final Presentation		_____
Final	5-20%	_____

*Final Grades* will be calculated based upon a percentage of the total points possible for the course. Grade distribution is as follows.

90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

**LATE POLICY:**

Homework is not accepted more than 1 class period late without prior approval. Quizzes and Tests may not be made up more than 1 class period late either without having contacted the instructor prior to missing the quiz or test. All late homework will have a -10% applied to it.

**WITHDRAWAL POLICY:** Students may withdraw themselves from class until April 13<sup>th</sup>, 2014. After that date there is no withdrawal available.

**ASSESSMENT:** In order to provide the best learning experience possible from time to time I will ask for feedback in the form of non graded activities. These activities are designed to help all of us accomplish the goal of learning this material in a better fashion.

**Proficiencies/Homework (Tentative schedule)**

**Schedule** (Subject to change):

Topics	Week
Getting started, groups, syllabus and connections	1
Decision making (idea development and consensus)	2
Work characteristics and 1 <sup>st</sup> articles (4 people)	3
Good, bad and Present – <b><u>Preliminary Project Presentations DUE</u></b>	4
Work week and 1 <sup>st</sup> articles (4 people)	5
Presidents day and 1 <sup>st</sup> articles (4 people)	6
Game Theory	7
Midterm Test and <b><u>Preliminary Design review DUE</u></b>	8
2 <sup>nd</sup> articles (4 people)	9
Human Factors, 2 <sup>nd</sup> articles (4 people)	10
2 <sup>nd</sup> articles (4 people)	11
2 <sup>nd</sup> articles (4 people)	12
Pure work week	13
<b><u>Working Prototypes DUE</u></b>	14
Ethics and <b><u>Final Presentation DUE</u></b>	15
Finals	16

The remaining time will be used for various small projects and for completion of the large semester project.