



IET 330 / 630
Industrial Design / Industrial Design Lab
Course Syllabus
Fall 2015

Department of Applied Engineering and Technology
College of Science and Technology
Morehead State University

Course Description:

This course covers product design with emphasis on consumer demands. The key principles, elements and precepts of modern design are discussed with emphasis on the design methodology in both individual and collaborative settings. The other purpose of this course is to extend student's knowledge in designing components for manufacturability, in a concurrent mode of engineering. At the end of the course, students will be required to utilize their acquired knowledge and skills to prepare a proposal for their Senior Project (Capstone) course.

Prerequisites: junior/senior standing and all 100 level IET core courses and MATH 152 College Algebra.

Instructor:

Dr. Jorge Ortega-Moody
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Morehead State University
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Office hours:

Monday, Wednesday and Friday: 9:00 AM to 12:00 PM

Textbook:

"Engineering Design" by Eggert R. J., High Peak Press, 2nd Ed., ISBN: 978-0-615-31938-4

Course Objectives:

- Develop an understanding and appreciation for the phases of engineering design and the Product Development Process.
- Be provided the opportunity to work with software, equipment and other materials for Engineering Design.
- Develop skills using the scientific method of inquiry to redesign or create new products in a collaborative mini, small and large group.
- Learn to develop useable skills in the areas of design, layout, creativity, production, and presentation associated with engineering design.

- Justify the criteria for appropriate materials selection and manufacturing processes as effective stages of Design for Manufacturability.
- Develop an understanding of how design impacts society: locally, nationally and globally.

ACADEMIC HONESTY

Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of 3 the student assessment item or course, and/or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read The Eagle: Student Handbook or ask your instructor. The policy is located at: <http://www.morehead-st.edu./units/studentlife/handbook/academicdishonesty.html>

For example: Copying information from the Internet is plagiarism if appropriate credit is not given.

POLICY for ACCOMMODATING STUDENTS with DISABILITIES

Professional staff from MSU Academic Services Center (ASC) coordinates efforts to address accessibility needs and class accommodations with instructors of students who have learning or physical disabilities. Faculty will cooperate with the ASC staff to accommodate the needs of students taking departmental courses.

In-Class Conduct:

According to the MSU Student Handbook, "No student either singly or in concert with others shall abridge the personal rights of another student by willfully disrupting or preventing the peaceful and orderly conduct of classes..." Further, students are expected to respect one another, especially when in class. Disrupting or distracting behavior of any type is not allowed in class. This include talking (excluding class discussion, of course), reading newspapers, snoring, etc. Student that disrupt the class may be asked to leave. Regarding late arrivals to class, consistent late arrivals are considered a serious disruption to the class. The instructor will maintain a written record of the late arriving student. After a student accumulates three late arrivals, the instructor will ask the student to leave the classroom for all other class sessions in which the student arrives late.

Cell Phones and Pagers:

The use of cellular phones and pagers is common. However, the operation of a cell phone and pagers during a university class is likely to disrupt the class, Therefore, all cell phones and pagers must be either be turned off or set to a silent mode of operation (e.g. vibrating rather than beeping) during class or laboratory. If you have to answer a call, please quietly leave de classroom. Student whose phones disrupt the course will be asked to verbally apologize to the entire class and will be required to leave the class for the remainder of the session. The class instructor may approve an exception for special circumstances, based on a student request prior to class session.

CAMPUS SAFETY STATEMENT

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at www.moreheadstate.edu/emergency.

CONTINGENCY PLAN

In case of emergency that may impact classes, students are expected to contact Blackboard for an announcement by the instructor.

EVALUATION

Activity	Points	Percentage
Quizzes	200	20
Exam	200	20
Presentation (Group)	100	10
Presentation (Individual)	100	10
Senior Project Proposal	400	40

Note: 90% - 100% = **A** 80% - 89% = **B** 70% - 79% = **C** 60% - 69% = **D** Below 60% = **E**

SCHEDULE

Week 1 & 2			Week 3 & 4		
Week Beginning	Activity	Chapter	Week Beginning	Activity	Chapter
08/17	Course Introduction Syllabus review and AS1 Group Project	Ch.1	08/31	Concept Design Projects Teamwork and Ethics Quiz Chap. 2&3 and AS3	Ch. 4 Ch. 14
08/24	Defining Design Problem Formulating Design Problem Quiz Chap. 1 and AS2	Ch. 2 Ch. 3	09/07	Materials Selection Manufacturing Processes Quiz Chap. 4&14 and AS4	Ch. 5 Ch. 6
Week 5 & 6			Week 7 & 8		
Week Beginning	Activity	Chapter	Week Beginning	Activity	Chapter
09/14	C&P Design Quiz Chap. 5&6 and AS5	Ch. 7&8	09/28	Engineering Economic Analysis Detail Design Quiz Chap. 9&10 and AS7	Ch. 12 Ch. 13
09/21	Failure Modes and Effects Analysis Design for X Quiz Chap. 7&8 and AS6	Ch. 9&10	10/05	EXAM for all the Chapters.	

Week 9 & 10		Week 11 & 12	
<u>Week Beginning</u>	<u>Activity</u>	<u>Week Beginning</u>	<u>Activity</u>
10/12 GROUP PROJECTS	Senior Project Proposal Assigned. Workshop: Engineering tools.	10/26 GROUP PROJECTS Update (2)	Senior Project Proposal Update. Workshop: Engineering tools.
11/19 GROUP PROJECTS Update (1)	Senior Project Proposal Update. Workshop: Engineering tools.	11/02 GROUP PROJECTS Update (3)	Senior Project Proposal Update. Workshop: Engineering tools.
Week 13 & 14		Week 15 & 16	
<u>Week Beginning</u>	<u>Activity</u>	<u>Week Beginning</u>	<u>Activity</u>
11/09 GROUP PROJECTS Update (4)	Senior Project Proposal Update. Workshop: Engineering tools.	11/23 GROUP PROJECTS Update (6)	Senior Project Proposal Final Review
11/16 GROUP PROJECTS Update (5)	Senior Project Proposal Update. Workshop: Engineering tools.	11/30 GROUP PROJECTS	Senior Project Proposal

AS = Assignment

NOTE: This syllabus is subject to change at the discretion of the instructor to accommodate student and/or instructional needs.