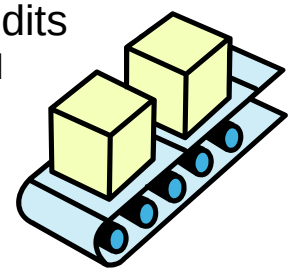
Course Syllabus
William E. Cattin Instructor

Course: Production Technology MET 345, 4credits
Hours: Monday, Wednesday, Friday 1:00PM - 2:50PM
Office 301
E-mail cattinw@cwu.edu
Web Page www.cwu.edu/~cattinw
Hogue Tech 963-1191
Home 962-8370



TEXT: Stevenson, William, Operations Management, 8th. ed. Irwin, 2005.

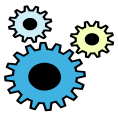
COURSE DESCRIPTION:

This course introduces the student to mass production principles of theory, organization for production, product engineering, production system design, jig and fixture development, and special problems in production. Emphasis will be placed on application of these concepts into student projects. Written and visual communication skills are considered necessary for success in this course.

COURSE OBJECTIVES:

Upon completing the course, the student will be able to:

1. Evaluate proposed product designs for production feasibility.
2. Design a production layout, given a product design and production requirements.
3. Develop a production schedule, given information on facilities and production requirements.
4. Assess the feasibility of implementing a just-in-time production system given conditions.
5. Identify elements of a successful quality control system.



SPECIAL EQUIPMENT AND SUPPLIES:

Safety glasses
Shop apron or coat

GRADING PROCEDURE:

1. All assignments will be turned in on the day designated during class time for the course. No grade will be given for late work.

2. No make-up assignments or examinations will be allowed unless provisions for circumstances are made in advance of the date in question.

3. All written work will be evaluated on the following criteria:

a. neatness
b. spelling
c. content quality
d. completeness

4. Please ask questions if assignments are unclear. The final responsibility for misunderstandings and late work rests with the student.

5. Points will be assigned for each student's work. The total points obtained throughout the course will then be evaluated according to the following chart:

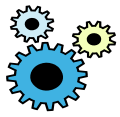
A	100-92%	A-	90-92%		
B+	88-90%	B	82-88%	B-	80-82%
C+	78-80%	C	72-78%	C-	70-72%
D+	68-70%	D	62-68%	D-	60-62%

6. Missing class is **not** "OK". Discussion questions, safety instruction, and instruction on equipment and instruments are all valuable and should not be missed. Absences cause expensive wear and tear on equipment, supplies and facility. Demonstrations on equipment and technique will not be given over.

7. Students are expected to perform ongoing cleaning and minor maintenance on equipment in the laboratory if used in this course. Work areas should be straightened up and clean before leaving the lab area.

8. All written work will be typed or word-processed double-spaced, with 1" margins. Papers will be stapled in the upper left-hand corner.

9. Appointments can be directly made with the instructor or via E-Mail.



10. "Close" grades will be determined by attendance patterns, enthusiasm and willingness to learn.

Evaluation:

Two mid-term exams	30%
Final exam	20%
Lab work*	50%

*Quality and quantity of work, contribution to success of project, attendance.

Lab procedures:

A.) Safety procedures must be observed at all times.
B.) Put all tools and materials away at the end of lab sessions.
C.) Dust machines and benches and sweep the floor at the end of lab sessions.

Homework:

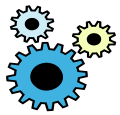
Homework is required in this course. Students may wish to keep a copy for exam reference

Methods of Instruction:

Lecture	Audio visual
Demonstration	Laboratory practice
Projects	Handouts
Group Discussion	Guest Speakers

ADA:

Students who have special needs or disabilities that may affect their ability to access information and / or material presented in this course are encouraged to contact the instructor or the ADA Compliance Officer, Director, ADA Affairs and Students Assistance on Campus at 963-2171, for additional disability related educational accommodations.



MET 345Course Activities

The laboratory portion of the course will consist of the following activities: The class will select a product to be produced. The class will be organized as a business to design the product, build a prototype, design the production system and produce and market the product. The class will be responsible for obtaining materials and supplies to produce the product.

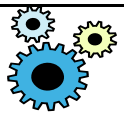
Product Selection Criteria:

1. The product should include wood and metal composition
2. The product must consist of a number of parts to be assembled.
3. The product must require a variety of machine operations.

Class Organization:

The class will be organized as a business with a head for each of the following departments:

Position	Activities
Designer	1. Produce preliminary drawings 2. Assist in prototype construction 3. Produce final working drawings and specify materials.
Production Manager	1. Supervise prototype construction 2. Supervise design and construction of all jigs and fixtures 3. Oversee development of work stations and job descriptions 4. Develop production schedule 5. Supervise production
Procurement	1. Obtain material requirements from design 2. Locate material sources and prices 3. Obtain funds from finance 4. Purchase materials and supplies 5. Transfer receipts to finance
Finance	1. Keep records of all finances 2. Issue receipts for deposits on products 3. Issue funds for purchase of materials
Quality Control	1. Develop a quality control system 2. Inspect incoming materials, work in progress and finished products as necessary



Course Schedule
Fall Quarter 2005

Week	Topic	Reading (Chapters)	Lab Work
1.	Course Orientation	1	
2.	Productivity	2	Select Production Product
	Product Design	4	Company Organization
3.	Process Design	6	Prototype Development
	Facilities Layout	6	
4.	Design of Work Systems	7	Production System Design
	Test #1		
5.	Location Planning	8	Pilot Run
	Intro. to Quality	9	
6.	Quality Control	10	Production Run
	Inventory Management	13	
7.	Material Requirements Planning	15	Production Run
	Just-in-Time Systems	16	
8.	Maintenance	16(Sup.)	Production Run
	Test #2		
9.	Scheduling	17	Production Run
	Project Management	18	
10.			Finish Production

Final exam Tuesday, Dec. 8 8:00-10:00 AM