Miami University
School of Engineering and Applied Science
Department of Engineering Technology

ENT 316 PROJECT MANAGEMENT IN ENGINEERING TECHNOLOGY 3
Course Number Title Credit Hours

DESCRIPTION: This course is for upper level students in Engineering Technology. This course covers background, techniques and case studies in project management. The student will develop a fundamental understanding of the concepts for managing both small and large projects. This course is somewhat unique since in engineering technology project managers are not only managers but also extremely active members of the team. The development and nurturing of discussion, evaluation and presentation skills will be accomplished. Concentration will be focused on engineering technology project management, but will also involve project management in other fields in order to understand the differences as they relate to engineering technology.

PERIODS PER WEEK: 2 Lecture. 1 Lab

PREREQUISITE(S): ECO 201 or 202 or permission of instructor.
CO-REQUISIRE(S): STA 301, 368, or permission of instructor.

TEXT:
Project Management: A Managerial Approach 6th Edition
Jack R. Meredith and Samuel J. Mantel Jr. John Wiley & Sons Inc. ISBN 0-471-71539-9
Supplemental readings and Harvard Business Case (HBS) studies

METHOD OF PRESENTATION:
Classroom presentations will be primarily lecture, discussion, role-playing and case studies.
Labs and additional information are on ENT server http://ent.ham.muohio.edu

METHOD OF EVALUATION:
The following is the distribution of credit for the required tasks:

Class participation	20%
Case write-up	10%
Homework	20%
Midterm Exam	25%
Final Exam	25%

OBJECTIVES:
Upon Completion of this course, students will be able to:
(1) Define what projects are and how they are used in the industrial and manufacturing world.
(2) Demonstrate the tools and technology requirements for project management.
(3) Demonstrate the team concept for project operation and management.
(4) Demonstrate the process of finding and critically evaluating information in project management.

COURSE ASSESSMENT CRITERIA
Outcome 11 "Effective team work skills"
Outcome 12 "Project management"
ASSESSMENT TOOLS USED IN ENT 278 AND ENT 252
Employer Surveys
Graduate Surveys
Student Evaluations
Design/Lab Projects and Tests from ENT 314, ENT 316, ENT 415, ENT 497/498
Instructor Course Evaluation Form from ENT 314, ENT 316, ENT 415, ENT 497/498

TOPICAL OUTLINE:

Week	Chapter	Title	Homework Questions	Case Studies / Lab Activities*
1		Introduction		Case Studies & Blank Case Form
2	**1**	Projects in Contemporary Organizations	**14, 15, 17, 18, 19**	Manadriot Machine Tool, Pearless Laser Process
3	**2**	Project Selection	**1, 2, 3, 4, 6, 7, 9, 10**	Paradigms and nine dots ***TTS Candle Company*** Linking Projects to Strategy
4	**3**	The Project Manager	**1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13**	PMI, Case Form ***Oilwell Cable Company***
5	**4**	Project Organization	**1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11**	***Geartrain International)*** Cause and Effect Diagrams
6	**5**	Project Planning	**1, 2, 3, 4, 5, 6, 7, 8, 9**	Planning for Crises Risk Management
7	**6**	Conflict and Negotiation	**4, 5, 6, 7**	Methods for resolving conflicts ***Machinists' Mutiny***
8		**Midterm Exam**		
9	**7**	Budgeting and Cost Estimation	**1,4, 5, 6, 9**	Three Perceptions of Project Cost
10	**8**	Scheduling	**3, 11**	***Completing the Limerick Nuclear Facility***
11	**9**	Resource Allocation	**1, 2, 7, 9**	***P&G Fabreze)***
12	**10**	Monitoring and Information Systems		Gantt Charts Brainstorming Process ***Mod IV Product Development Team)***
13	**11**	Project Control		***Boeing 767***
14	**12**	Project Auditing		***Navistar***
15		**Project Presentations**		
16		**Final Exam**		

- The laboratory exercises for this class involves interaction of class members, reading and review of Case Studies and presentation of results
- Bold underlined are case studies. Other case studies to be used include: ***Turner Construction, NASA Challenger Explosion, Johnson Controls, Transformation of Ford***

Presentation and Case Study Process:

(1) Each student will present a case to the class during the last weeks of class. The entire class must participate in this discussion.
(2) Cases will be selected on a first come first serve basis. The instructor will assign a presentation date and time.
(3) A formal typed report must be submitted approximately (3 pages), which describes the key points of the case. A PowerPoint presentation is required and must also be submitted.
(4) Each team is responsible for selecting a case to present for HBS website or other sources and must be approved by the instructor no later than one week prior to the presentation.
(5) Guest speakers will be scheduled as appropriate.

Miami University Learning Community

Miami University is committed to fostering a supportive learning environment for all students irrespective of individual differences in gender, race, national origin, religion, handicapping condition, sexual preference, or age. Students should expect, and help create, a learning environment free from all forms of prejudice. Disparaging comments, sexist or racist humor, or questioning the academic commitment of students based upon these individual differences are behaviors that undermine our learning community. If such behaviors occur in class, please seek the assistance of your instructor or department chair.

Students with disabilities are encouraged to register with the Disability Service Office in order that academic accommodations can be made.

Prepared by: Professor Gary Drigel, April 6, 2007