

ENGINEERING DESIGN, MANUFACTURING, AND MANAGEMENT SYSTEMS
COURSE SYLLABUS
EDMM 5460 Concurrent Engineering

Catalog description: The synthesis of automated design, analysis, and manufacturing processes through integrated computer systems. Topics in automated graphics, wire-frame, surface, surface and solids modeling, boundary element analysis, and manufacturing process generation will be investigated.

Prerequisites: Computer-Aided Design

Current Textbooks:

1. Concurrent Engineering: Shortening Lead Times, Raising Quality, and Lowering Costs (Paperback) by John R. Hartley (recommended)
2. Product Lifecycle Management: Driving the Next Generation of Lean Thinking by Michael Grieves (required)

Course objectives: At the end of this course on Concurrent Engineering (CE) the student will understand:

1. The current trends in CE.
2. The potential scope of CE within an organization.
3. The importance of rapid cross-departmental communication.
4. The role of computers in implementing CE.

Projected schedule:

Week 1-5: Topics in Concurrent Engineering (CE)
Week 6: Midterm
Week 8-12: Topics in Product Lifecycle Management (PLM)
Week 13: Project presentations
Week 14: Final exam

Grading scale:

A 93-100; BA 88-92; B 80-87; CB 77-79; C 70-76; D 63-69; E 0-63.

Performance criteria:

Exams: 40%

Midterm and final examinations will be scheduled during the semester

Term paper: 15%

Use the APA style to cite all references (reviews from Amazon.com do not count, avoid encyclopedia recourses including Wikipedia). Plagiarism will earn an automatic zero.

Class Project: 25%

Homework: 10%

Reading the chapters each week is always required as homework. Reading assignments will be given weekly. The assignment will be discussed in the next class. The student will be randomly asked about the reading. The quality of response determines the grade. Other assignments may also be given. Homework is due at the beginning of the class for which it is assigned. Late homework will not be accepted. All homework, assignments, papers, etc., must be submitted to e-learning.

Class participation and quizzes: 10%

Your participation in class discussions and exercises is crucial to the learning process. Effective class participation requires your reading and studying assigned readings prior to class time. Unannounced quizzes will periodically reinforce this requirement. Attendance at class sessions **is required** and will count for ½ of your class participation grade. You must attend the entire class period to be counted as present. The first absence is “no questions asked;” after that, your class participation grade will be adjusted accordingly. Whatever the reason, you still have the responsibility to complete all assignments on time and obtain class notes from a classmate. Notify me in advance of any planned absences.

You are responsible for making yourself aware of and understanding the University policies and procedures that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. (The academic policies addressing Student Rights and Responsibilities can be found in the Undergraduate Catalog at <http://catalog.wmich.edu/content.php?catoid=22&navoid=882> and the Graduate Catalog at <http://catalog.wmich.edu/content.php?catoid=23&navoid=938>.) If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s) and if you believe you are not responsible, you will have the opportunity for a hearing. You should consult with your instructor if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

(EDMM 5460 VER.12/26/15 PGI)