

**COURSE SYLLABUS**  
**IME 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:** Recommended: IME 246 and IME 358 or equivalent.

**Current Textbooks:**

1. Concurrent Engineering: Shortening Lead Times, Raising Quality, and Lowering Costs (Paperback) by John R. Hartley, ISBN 1-56327-189-3 (recommended)
2. Product Lifecycle Management: Driving the Next Generation of Lean Thinking (Hardcover) by Michael Grieves, ISBN 0-07-145230-3 (required)

**Office hours:** Monday/Wednesday 16:30 AM-18:30 PM or by appointment

**Course coordinator:** Dr. Pavel G. Ikonov, Room E-221, Phone: (269)276-3284  
e-mail: pavel.ikonov@wmich.edu

**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 –July 28  
Week 8-12: Topics in Product Lifecycle Management (PLM)  
Week 13: August 16-Project presentations  
Week 14: Final exam - last lecture-August

**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% Currently  
midterm and final examinations are scheduled

Term paper:-----15% Use the APA  
style to cite all references (reviews from Amazon.com do not count ,m avoid encyclopedia  
recourses including Wikipedia). Plagiarism will earn an automatic zero.

Class Project: -----25%

Homework and quizzes:-----10%

Reading the chapters each week is always required as homework. Unannounced quizzes will periodically reinforce this requirement. 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

Class participation:-----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. 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 policies and procedures in the Undergraduate and Graduate Catalogs that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. [The policies can be found at <http://catalog.wmich.edu> under Academic Policies, Student Rights and Responsibilities.] 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). 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.***