COURSE SYLLABUS
EDMM 4120: Industrial Systems Management

Catalog Description

"Principles and applications of advanced systems management: including project management, continuous improvement and advanced quality systems. Computer tools to manage systems will be introduced. Philosophies of systems management will be discussed. Students will acquire advanced systems management skills as applied to multiple industries including manufacturing and service."

Course Objectives (corresponding to Modules 1-6)	**Performance Criteria[1]**
1. Define, build, and scope a domain of responsibility.	A3 Applies systems tools to model and solve problems.
2. Identify performance criteria for the domain and identify data and information needs.	D3 Evaluates the performance of a system or process.
3. Design relevant information portrayals.	G2. Conveys technical information effectively in graphical form. J2. Applies knowledge that considers professional, societal, and/or global impact.
4. Conduct an ABC Audit and time log.	K3 Considers the role of time in the design process, in decision making, and/or in manufacturing and service processes.
5. Develop Data Flow Diagrams for the domain.	F3 Applies tools and modeling techniques suited to the problem.
6. Build and use a management tool.	B3 Uses appropriate engineering, science, and mathematical tools for decision making.

Required Text: Each of the six modules will have assigned reading provided from Dr. Harold Kurstedt's ISE 4015 Course Pack [MSE Textbook]. Blacksburg, VA: Virginia Tech. All course materials can be found on e-learning. One required Harvard Business School case can be purchased via the link provided in e-learning.

Course Materials Citation: Mallak, L. A. Slides for EDMM 4120—Industrial Systems Management. Personal Collection of L. Mallak, Western Michigan University, Kalamazoo, MI.

Prerequisite Learning

Students are expected to have knowledge of and the ability to apply the following concepts in class:

1. Basic understanding of key business processes (e.g., production, finance, marketing) and technical processes (e.g., manufacturing processes, engineering design process). This is typically accomplished through active participation and successful completion of the first two years of coursework in an engineering or engineering-related curriculum and through work experience, whether part-time, coop, intern, or full-time employment.
2. Ability to define, model, and solve problems using tools and techniques from operations research, including linear programming, integer programming, etc.
3. Able to understand, write, speak, and present in clear, understandable English.
4. Experience finding articles using databases such as ABI/Inform, FirstSearch, InfoTrac, Lexis-Nexis, and other sources.

Description of Graded Assignments and Evaluation Guidance

Note on preparation of assignments: All assignments must be neatly word-processed and submitted via e-learning. I place special emphasis on the use of proper grammar, spelling, and the use of an appropriate writing style.

Reading

I lecture and discuss material after you've read the material, not before you've read the material. You need to have some ideas from the reading before class, because in my lectures and discussions I have time only for the critical or subtle points, to fill in gaps in the reading, or to extrapolate what you've read.

Homework

Each module will have two assignments—one individual and one group assignment. Assignments are due at times listed on the respective e-learning dropbox. Presentation grades are included in the corresponding module submission grade.

If you know you'll miss class, contact me in advance by e-mail or phone and make arrangements to e-mail or upload your assignment(s).

Late Policy—All homework is due no later than the beginning of the class period for which it was assigned. The first late homework will be subject to a 20% penalty; after one late homework, no further late homeworks will be accepted. No homework will be accepted later than the class period following the one when the homework was originally due. Students who believe their lateness should not be penalized should present appropriate documentation.

Quiz(zes)—One or more quizzes will be administered to prepare the student for the final exam.

Final Exam—The final exam will be comprehensive.

Class Participation—Your attendance and 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. Even if you are absent, you have the responsibility to complete all assignments on time and obtain class notes from a classmate. Notify me in advance of any planned absences.

Cell Phone Policy—The use of cell phones is prohibited during classtime. A student who is using his or her cell phone during class will be marked "absent" for that class session. No warning will be given. Computer use for other than instructional purposes will be treated the same as cell phone use during class.

Evaluation Distribution

Exercises	
Individual	25%
Group	25%
Quiz(zes)	10%
Class Participation	10%
Final Exam	30%
Total	100%

Grading Scale

94-100	A	74-76.9	C
88-93.9	BA	67-73.9	DC
84-87.9	B	64-66.9	D
77-83.9	CB	00-63.9	E

Academic Integrity

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://www.wmich.edu/catalog 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.

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Note: Refer to e-learning for links and up-to-date information.

	Topics	**Assignment Due**
1	Module 0: Intro to the class Group formation	
2	Module 0: Buster Bronco Coffee Shop and Cases for 4120	
3	Module 1: Domains of Responsibility (lect)	Module 0 individual (fast food)
4	Module 0: Presentations	
5	Module 1: Domains of Responsibility (in-class exercise & group work time)	
6	Module 2: Performance Criteria (lect)	Module 1 individual
7	Module 1: Domains of Responsibility (Presentations)	Module 1 group
8	Module 2: Performance Criteria (in-class exercise & group work time)	
9	Module 2: Performance Criteria (Presentations)	Module 2 individual
10	Module 3: Information Portrayals (lect)	Module 2 group
11	Module 4: ABC Audits and Frameworks (lect)	
12	Module 3: Information Portrayals (in-class exercise)	
13	Module 3: Information Portrayals (group work time)	Module 3 individual
14	Module 3: Information Portrayals (Presentations)	Module 3 group
15	Module 4: ABC Audits and Frameworks (in-class exercise & group work time)	**Midterm Quiz Due**
16	Module 5: Data Flow Diagrams (lect)	Module 4 individual
17	Module 4: ABC Audits and Frameworks (Presentations)	Module 4 group
18	KIA Visit (& 11/1)	Handout in e-learning
19	Module 5: Data Flow Diagrams (in-class exercise)	
20	Module 5: Data Flow Diagrams (group work time)	Art & Science assignment (KIA)
21	Module 6: Building Management Tools (lect)	Module 5 individual
22	Module 5: Data Flow Diagrams (Presentations)	Module 5 group
23	Module 6: Building Management Tools (in-class exercise & group work time)	

24	Module 6: Building Management Tools (Presentations)	Module 6 individual
25	Closure and feedback on modules	Module 6 group
26	Review and discuss final exam	
27	**Final Exam**	