EM 6120
PRODUCTION OPERATIONS MANAGEMENT

Catalog Data: Analysis and application of new concepts in the field of quality control. Tests of significance, probability studies, and other uses of statistics as applied to quality control.

Prerequisite course: EDMM 3260 or IEE 4160 or IEE 5010 or equivalent.

Text: Nigel Slack, Stuart Chambers, and Robert Johnston, *Operations Management MyOMLab pack*, Prentice-Hall, 7th Edition, 2013.

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Course Prerequisites
1. Be able to apply tools necessary to identify and analyze customer needs (a,b,c,f)
   Basic electronic communication skills; word processing, electronic spreadsheet, internet access, email, database searches
   Working knowledge of descriptive statistics, mean, variance, graphical display methods, probability (MTH2160, 2600, or 3660)
   Working knowledge of inferential statistics; estimation, hypothesis testing, regression (MTH216, 260, or 366)
   Understand the overall decision making framework associated with the field of Production/Operations Management. (IME3260 or 4160 or 5010)
   Be able to apply decision making techniques and to understand the strategic implications of decisions regarding product (IME3260 or 4160 or 5010)
   Be able to apply basic inventory models, material requirements planning, and scheduling models in an operations environment. (IME3260 or 4160 or 5010)
   Be able to analyze and present results of variety of situations in a manufacturing environment. (IME3260 or 4160 or 5010)

Course objectives:
Understand the role of operations and its link to competition and a firm's competitive advantage
Be aware of the implications of a firm's competitive advantage to decision making at all levels of an organization.
Understand the management process in push and in pull manufacturing processes.
Be able to make upper level managerial decisions relating to manufacturing in all aspects of the planning and control system.

Academic honesty policy:
You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate and Graduate Catalog that pertain to Academic Integrity on the web at http://osc.wmich.edu/academicintegrity. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. 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 me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test. Penalty for academic dishonesty will range from a reduction in grade up to failure in the course.

Grading policy:
My job in this class is to make you **think**, therefore, your ability to regurgitate book or resource information

on tests and assignments will not be valued as highly as your ability to think about, analyze, and discuss information. This is graduate school, I assume you know how to read, write, add, subtract, multiply, divide, speak, and do other things a graduate student should. In other words, spelling, grammar, and math errors do count. Poorly written reports, tests, or analyses will result in a reduction in grade. Write and cite things properly. You can find guidance at http://libguides.wmich.edu/citing.

All outside assignments will be collected at the beginning of the period it is due. Late work is not accepted without written verification of an emergency beyond student's ability to plan for or control that event. There's always traffic and weather in Michigan. If the assignment is late, even if it is turned in later than the beginning of the period when it's due, a 10% penalty may be assessed. When the electronic submission of work is required, the following conditions apply:

1. Your email communication must be dated and timed no less than 30 minutes before the start of class.
2. The Subject of the email must take the form Subject: IME6120 Assignment Due [insert date] [Last name].
3. File name must take the form: IME6120 Topic of assignment [Last name].
4. Sending an email with a virus will result in a grade of 0 for that assignment.
5. Set up the material so that it can be printed in portrait format.

Tests will be take home and will be open book and open note, and will consist of problems, short answer, or essay and discussion questions. They may include website analysis, EXCEL files with data to analyze, etc. This class will be conducted on an interactive basis, that is, during our discussion of concepts and techniques, your participation is expected. Because participation is a part of the grade you will receive, it may be important to recognize the approach I will take in its evaluation. Scholarship appropriate to graduate level course work is expected. Discussions should focus on the quality of one's response rather than its quantity.

Final grades will be based on your performance in the following activities:		For the purpose of assigning grades, the following scale will be used.			
Test #1	30%	A	90-100	C	70-75
Test #2	30%	BA	85-90	DC	65-70
Outside assignments	15%	B	80-85	D	60-65
Class Participation	5%	CB	75-80	E less than 60	
Term Project	10%				
POM Simulation	10%				

Your term project will be to develop material (term report, training, or EXCEL based tool) following the model presented in www.freequality.org. You will need to select a topic that deals with production/operations management (use the APICS Certification Body of Knowledge as your guide).

Topic	Chapter
Introduction-operations management	1
Operations performance, strategy	2,3
Product and Process design	4,5
Supply network design and forecasting,	6,6S,
Layout and process technology	7,8
Turn in Midterm (no class)	
Nature of planning and control	10
Capacity planning	11
Turn in Term Project Inventory planning and control	12
Supply chain management	13
ERP, MRP	14, 14S,
Improvement	18,19
Corporate and social responsibility	20,21
Turn in Test 2 Interactive computer simulation	