Syllabus
MGMT 483 – Advanced Production/Operations Management
Dr. Gregory D. DeYong
Rehn Hall, 207C
618-453-7888
gdeyong@business.siu.edu
Office Hours – Tuesday/Thursday Noon until 2:00 p.m or by appointment

Catalog Description
An in-depth study of production and inventory management with a focus on preparation for the American Production and Inventory Control Society (APICS) certification examinations. Topics covered include planning for material and capacity requirements, scheduling, Theory of Constraints, Just-in-Time and Total Quality Management. Not for graduate credit.

Course Goals
This course covers the linking of operations management concepts into a manufacturing planning and control framework. Concepts from earlier courses will be expanded and new techniques will be introduced throughout the course. Many of these concepts involve mathematical modeling of business decisions. While we will rely heavily on Microsoft Office tools in our model-building exercises, additional, more powerful tools (including the SAP enterprise resource planning system) will be presented as well.

Course Materials/Resources

Software
Microsoft Excel 2010 (required)
SAP ERP System access (provided)

Prerequisites
Prerequisite: MGMT 318 with a grade of C or better.

Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

Course Policies
Students participating in College of Business courses are expected to abide by the standards of academic integrity stated in the SIUC Student Conduct Code as part of developing and maintaining a healthy academic environment. In addition to describing students’ responsibilities in areas of academic honesty,
the code also includes a number of provisions in the area of civility and professional conduct that are worth noting.

Specific course policies for this course include

- Make-up exams will not be scheduled unless advance notification of the absence is given by telephone or e-mail (at least 24 hours notice required).
- In accordance with university guidelines, all e-mail correspondence for this course will be addressed to the students’ university e-mail. Please be sure that your university e-mail address is active and that you are checking it on a regular basis. Failure to check your e-mail frequently is not a valid excuse for missing any communication.
- All work shall be assumed to be individual in nature unless specifically designated as a team project.
- Cell phone calculators are not allowed for exams or quizzes.
- Grade disputes must be initiated within 2 weeks after the grade is posted in Desire2Learn.
- All assignments will have specified due dates. Late work will be penalized as follows

<table>
<thead>
<tr>
<th>Time Past Deadline</th>
<th>Percent Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 30 minutes</td>
<td>10%</td>
</tr>
<tr>
<td>30 minutes to 2 hours</td>
<td>20%</td>
</tr>
<tr>
<td>2 hours to 12 hours</td>
<td>30%</td>
</tr>
<tr>
<td>12 hours to 24 hours</td>
<td>50%</td>
</tr>
<tr>
<td>24 hours to 48 hours</td>
<td>75%</td>
</tr>
<tr>
<td>Greater than 48 hours</td>
<td>100%</td>
</tr>
</tbody>
</table>

Performance Assessment and Grading

Student performance will be assessed using the following weights:

<table>
<thead>
<tr>
<th>Semester Exams (2)</th>
<th>Final Exam</th>
<th>Projects (3)</th>
<th>Basic Skills Exam</th>
<th>Quizzes*</th>
<th>Class Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

* the 2 lowest quiz scores from the course will be dropped

Grading Scale

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-90</td>
<td>B</td>
</tr>
<tr>
<td>70-80</td>
<td>C</td>
</tr>
<tr>
<td>60-70</td>
<td>D</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
</tr>
</tbody>
</table>
Scoring Rubric (approximate grades)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Superior performance</strong> – exceptional accuracy and/or complete and insightful responses</td>
<td><strong>Strong performance</strong> – only minor accuracy issues and/or responses that demonstrate solid knowledge of the material</td>
<td><strong>Fair performance</strong> – some minor and very few major accuracy issues and/or responses that demonstrate understanding of at least some of the required material</td>
<td><strong>Poor performance</strong> – both minor and major accuracy issues and/or responses that demonstrate knowledge of only a small portion of the material</td>
<td><strong>Unacceptable performance</strong> – numerous minor and major accuracy issues and/or responses that indicate only superficial knowledge of the material</td>
</tr>
</tbody>
</table>

- Exams will take place in class and will involve questions in a number of formats (e.g. multiple choice, short answer, essay and/or problem solving).
- Projects will be assigned occasionally through the semester (see schedule for tentative dates) and will be due approximately one to two weeks later. Projects will be either individual or small group in nature, with details to be announced when the assignment is distributed.
- Quizzes will take place either online (via Desire2Learn) or in the computer lab. Makeup quizzes are not allowed, but the lowest two quiz scores for each student will be dropped at the end of the semester.
- Class participation points will be assigned based more upon the quality than the quantity of comments. I will discuss the system in detail during the first class meeting.

**Course Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Text Reference</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan. 18 – Jan. 24</td>
<td>Manufacturing Planning and Control</td>
<td>MPC Chapter 1</td>
<td>Introduction Definitions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enterprise Resource Planning</td>
<td>MPC Chapter 1A</td>
<td>MPC System Framework</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ERP Basics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Functional Units</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MPC within ERP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Metrics</td>
</tr>
<tr>
<td>2</td>
<td>Jan. 25 – Jan. 31</td>
<td>Demand Management</td>
<td>MPC Chapter 2</td>
<td>Mfg. Environments</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Managing Demand</td>
</tr>
<tr>
<td><strong>Project 1 – Forecasting – Due February 14, 2016 (tentative)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Feb. 1 – Feb. 7</td>
<td>Forecasting</td>
<td>MPC Chapter 3</td>
<td>Forecast Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Regression Analysis</td>
</tr>
<tr>
<td>4</td>
<td>Feb. 8 – Feb. 14</td>
<td>Forecasting</td>
<td>MPC Chapter 3</td>
<td>Forecast Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Regression Analysis</td>
</tr>
<tr>
<td><strong>Exam 1 – February 16, 2016 (Covers Chapter 1, Chapter 1A, Chapter 2, Chapter 3)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Feb. 15 – Feb. 21</td>
<td>Exam 1 – February 16, 2016</td>
<td></td>
<td>Introduction to SAP – February 18, 2016 (in Rehn Hall Computer lab)</td>
</tr>
</tbody>
</table>
6  |  Feb. 22 – Feb. 28  |  Master Production Scheduling  |  MPC Chapter 5  |  MPS Activities  
|    |                    |                                |                 |  MPS Techniques  
|    |                    |                                |                 |  Freezing/Time Fences  
7  |  Feb. 29 – Mar. 6  |  Material Requirements Planning  |  MPC Chapter 6  |  Record Processing  
|    |                    |                                |                 |  Technical Issues  
|    |                    |                                |                 |  Using the MRP System  
|    |                    |                                |                 |  System Dynamics  
8  |  Mar. 7 – Mar. 11  |  Material Requirements Planning  |  MPC Chapter 6  |  Record Processing  
|    |                    |                                |                 |  Technical Issues  
|    |                    |                                |                 |  Using the MRP System  
|    |                    |                                |                 |  System Dynamics  

Mar. 12 – Mar. 20  |  Spring Break March 12 – March 20 – No Class  

**Project 2 –MPS/MRP – Due March 21, 2016 (tentative)**

9  |  Mar. 21 – Mar. 27  |  Advanced Material Requirements Planning  |  MPC Chapter 6A  |  Order Quantities  
|    |                    |                                |                 |  Buffering  
|    |                    |                                |                 |  Nervousness  

**Exam 2 – March 29, 2016 (Covers Chapter 5, Chapter 6, and Chapter 6A)**

10 |  Mar. 28 – Apr. 3  |  Exam 2 – March 29, 2016  
|   |                  |  Materials Planning in SAP – March 31, 2016  

11 |  Apr. 4 – Apr. 10  |  Production Activity Control  |  MPC Chapter 8  |  PAC Framework  
|   |                  |                                |                 |  PAC Techniques  

12 |  Apr. 11 – Apr. 17  |  Management of Supply Chain Logistics  |  MPC Chapter 10A  |  Logistical Elements  
|   |                  |                                |                 |  Warehouse Systems  
|   |                  |                                |                 |  Warehouse Location  

**Basic Skills Exam – April 19, 2016**

13  |  Apr. 18 – Apr. 24  |  Basic Skills Exam – April 19, 2016  
|    |                  |  Production Activity Control in SAP – April 21, 2016  

**Project 3 – Production Activity Control – Due April 24, 2016 (tentative)**

14  |  Apr. 25 – May 1  |  Management of Supply Chain Logistics  |  MPC Chapter 10A  |  Vehicle Scheduling  
|    |                  |  Order Point Inventory Control Methods  |                 |  Customer Service  
|    |                  |                                |                 |  Inventory Costs  
|    |                  |                                |                 |  EOQ Model  
|    |                  |                                |                 |  Safety Stock  
|    |                  |                                |                 |  Techniques  

15  |  May 2 – May 8  |  Order Point Inventory Control Methods  |  MPC Chapter 11  |  Inventory Costs  
|    |                  |                                |                 |  EOQ Model  
|    |                  |                                |                 |  Safety Stock  
|    |                  |                                |                 |  Techniques  

May 12, 2016  |  2:45 p.m. to 4:45 p.m.  |  Final Examination (Covers Chapter 8, Chapter 10A and Chapter 11)  
|    |                  |  The final examination is NOT optional. The final exam will be  
|    |                  |  12/14/2015 from 12:30 to 2:30 p.m. in Lawson Hall 0141.  

**Other Policies**
- **Laptop/Wireless Devices Policy:** Southern Illinois University doesn't allow use of laptops, PDA’s, cell phones or any other wireless device during class time, **unless allowed specifically by the instructor.** In cases where laptop use is allowed, the usage is limited to academic work only. You are not to connect the laptop to the network unless **explicitly** required by the instructor. Any use of these devices for non-class activities during class time will be considered a serious violation.

- Although Southern Illinois University, as an institution, does not observe religious holidays, it has long been the university’s policy that every reasonable effort should be made to help students avoid negative academic consequences when their religious obligations conflict with academic requirements. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. Students who expect to miss classes, examinations, or other assignments as a consequence of their religious observance shall be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of dates of religious holidays on which they will be absent. Such notice must be given by the end of the fourth week of the fall or winter semester or by the end of the third week of the spring or summer semester. Students who are absent on days of examinations or class assignments shall be offered an opportunity to make up the work, without penalty, unless it can be demonstrated that a make-up opportunity would interfere unreasonably with the delivery of the course.

- It is the responsibility of every person and/or team to keep a backup of all work for the entire semester. While we would like to be able to guarantee that servers will never go down and files will never be corrupted during submission, we cannot make that promise. Therefore it is critical that everyone keep a backup copy of his or her work for the entire semester. If there is a question about any project, the only way we have to resolve the issue may rely on your ability to produce a backup copy of the original work. If you cannot produce a valid (not re-created after the due date) backup of your work, we will be unable to address any grading issues.

- Important information concerning other SIU policies can be found at this link: [http://pvcaa.siu.edu/_common/documents/syllabus%20attachments/syllabus-attachment-spring-2016.pdf](http://pvcaa.siu.edu/_common/documents/syllabus%20attachments/syllabus-attachment-spring-2016.pdf).
Learning Goals

This course is primarily designed to address the following Learning Goals:

Our students will demonstrate an understanding of major concepts, theories, and practices in Advanced Operations Management

- Our students will demonstrate an understanding of supply chain integration.
- Our students will demonstrate an understanding of inventory control frameworks.
- Our students will demonstrate an understanding of forecasting and demand management.
- Our students will demonstrate an understanding of production scheduling.

Our students will demonstrate an understanding of the role that key environmental, strategic, and technological factors play in managerial practice

- Our students will demonstrate an understanding of the relationship between corporate and operations strategies.
- Our students will demonstrate an understanding of enterprise resource systems.

Our students will be able to demonstrate an understanding of conceptual frameworks and quantitative tools that help integrate entities within a supply chain, including inventory, transportation, and warehouse management.

- Our students will demonstrate an understanding of inventory management systems.
- Our students will demonstrate an understanding of logistics topics, including transportation and warehouse management.