



# SCM 307 Introduction to Operations Management

Course Syllabus – Winter, 2012

Department of Information Systems

& Operations Management – 255 Rike Hall

|                |   |
|----------------|---|
| Section 01     | TR 10:25 AM - 12:05 PM Millett 286  |
| INSTRUCTOR:    | George G. Polak, Ph.D.  |
| OFFICE:        | 227 Rike Hall   |
| PHONE:         | Office (937) 775-3489 or 775-2895 (Department number)   |
| FAX NUMBER:    | (937) 775-3533  |
| E-MAIL:        | <a href="mailto:george.polak@wright.edu">george.polak@wright.edu</a> ; Please see email policy below.   |
| URL:           | <a href="http://www.wright.edu/~george.polak/">http://www.wright.edu/~george.polak/</a>   |
| OFFICE HOURS   | TR 12:15 – 1:45 PM<br>or by appointment. Please note that office hours occasionally must be rescheduled due to faculty meetings and similar commitments, so <i>please check your Pilot and Wright State University email account often.</i> |
| PREREQUISITES: | MS 205 and MTH 228. <b>These will be enforced.</b>  |
| TEXT:          | Reid, R. Dan and Nada R. Sanders, <i>Operations Management, An Integrated Approach</i> , (4 <sup>th</sup> edition) John Wiley & Sons, Inc., New York, New York, 2010, and supplements on text website.                                      |
| SOFTWARE:      | 1) <u>Microsoft Excel</u> (5.0 or later)  |

### Course Description:

This course examines the major management decision areas in the design and production of goods and services. Major topics include: strategic issues, planning and control systems, quality management, and project management.

### Course Objectives:

Overall, the student should

- gain a clear understanding of all major issues involved in managing the operations and supply chain functions in organizations in the manufacturing, public and service sectors
- employ appropriate tools for problem solving and quantitative analysis
- learn to integrate the operations function with other business disciplines such as the management, financial and marketing
- Students will understand the role of integrated supply chain decision making and the dynamics of supply chains.
- Students will be able explain different approaches to inventory systems in supply chains and their relative advantages.

- Students will understand the strategic role of quality in supply chains and understand quality planning and control.

**Teaching Mode:**

The course material is delivered through lectures and notes. The student is responsible for all material in course readings, and that discussed or presented in class. Absence, whether for good reason or not, is not an excuse for being unaware of course proceedings. If you must miss, find a study partner from the class who can fill you in. Each student is expected to attend and be prepared to *participate in discussions and experiential games* in each class. The instructor reserves the right to make any change to this syllabus or the stated procedures as deemed necessary, but will inform the students in such cases.

Evaluation: The final grade will be determined as follows:

| Requirement                                       | Weight      |
|---|-------------|
| Pre-course assessment                             | 1%          |
| Quiz 1  | 14%         |
| Quiz 2  | 14%         |
| Midterm test                                      | 25%         |
| Final Exam (comprehensive)                        | 29%         |
| Graded Assignment                                 | 5%          |
| Beer Game (Participation)                         | 2%          |
| Littlefield Simulation (Participation and Report) | 5%          |
| Class Participation & Professionalism             | 4%          |
| Post-course assessment                            | 1%          |
| <b>Total</b>                                      | <b>100%</b> |

The grade scale is:

| Percentage Points Earned    | Letter Grade |
|-----------------------------|--------------|
| 90% and above               | A            |
| 80% and above but below 90% | B            |
| 70% and above but below 80% | C            |
| 60% and above but below 70% | D            |
| Below 60%                   | F            |

All quizzes & tests are closed book and in-class, and are to be the sole work of each student. Formula sheets and tables will be provided by the instructor as required. Quizzes will include true/false, multiple choice and perhaps short answer questions. The tests may include these as well as short essays and more detailed problem solving exercises. Some questions will be based on problem solving or interpretation of output from software. Calculators (but not computers) are allowed, but are not allowed to be shared among students. Students will be able to take practice quizzes and tests online via Pilot.

The pre-course and post-course assessments are to be completed online via Pilot. The pre-course assessment will be take-pass, but the post-course assessment will be graded. *No early tests will be given, including the Final Exam. **So don't plan to leave for the break before your exam date!***

Missing Tests: There will be no make-up quizzes or tests. In case of an excused absence from a quiz or the midterm exam, the student's course grade will be computed proportionally on the basis of the scores on the student's remaining tests and assignments. An excused absence from a test must meet three conditions: (1) the professor must be notified in advance of the test, (2) the professor must approve the absence, and (3) the student can have at most two excused absences. Unexcused absences will be recorded as zeros. All students must take the final exam.

Homework often require formulating, solving, and interpreting solutions to mathematical models, and hands-on use of software and interpreting the output. Writing skills and presentation of results are also important. Submitted assignments will be strictly checked for completeness, correctness and overall quality, and must be submitted *in hard copy* on the due date at the beginning of class. The assignments will be specified during the quarter. **Guidelines for Submitted Assignments:** 1) Unless otherwise noted, assignments must be produced by MSWord or other word processing software and submitted in hard copy; 2) Provide name, date, section number at top of first page; 3) Identify question or problem: page and number; 4) Relevant parts of any software output clearly should be clearly marked or highlighted; 5) State your solution clearly and explain it in words as if you were explaining it to a business associate; 6) **Keep a copy for your own study.**

Failure to follow these guidelines or sloppiness = points off. Late homework, if turned in before the assignment is discussed in class, will receive half credit. Problem solving breeds familiarity and confidence. I suggest keeping a notebook of problems.

### Professionalism and Participation

To better facilitate a “learning environment” for everyone in the class, please follow a few simple rules of professionalism and business etiquette in class. Please be on time. Please do not begin to leave the class until the instructor or fellow students have finished speaking. **Please do not text message or otherwise use cellphones, instant messaging, mp3 players, or emails in class.** Please respect each other by being polite, courteous, and willing to listen to the ideas and opinions of others.

Class participation encompasses class discussions and participation in the experiential games (the Beer Game and Littlefield Technologies). Participation will be subjectively evaluated for effort and quality. The best way to prepare for class discussions is to read assigned selections from the text, consider the recommended discussion questions, and attempt the recommended problems. Note questions that arise and ask the instructor. Note that the Beer Games cannot be made up after it is played in class.

### Calculators, Laptops, and Software:

Each student should bring a calculator capable of calculating square roots (at the least) to every class, including quiz and test dates. **The use of laptops is not permitted during class**, except in designated situations, and are not permitted for tests, except as supervised by the Office of Disability Services. Microsoft Excel is available on numerous computers in many computer laboratories on campus.

### Email & Office Hours Policy

**Email** to the instructor should be limited to specific questions relevant to course material. This is not a correspondence course or a distance-learning course via email: an open-ended question such as “what - are we doing/did we do - in class” is not appropriate. Neither will the instructor conduct discussions about class policies or grading decisions by email. Office hours are valuable opportunities for students to ask questions and follow up on classroom discussions, assignments, and tests. However, such questions should be well thought-out and focused. Each lecture is given only once on a class meeting day, and office hours are not a substitute for missed classes or lectures.

### Academic Integrity

Academic dishonesty of any kind will not be tolerated. Academic dishonesty is a serious violation of Wright State University’s Code of Student Conduct. Your student handbook includes a statement of academic integrity. Please consult this handbook for your rights and responsibilities regarding academic integrity issues. The WSU academic integrity policy is at <http://www.wright.edu/students/judicial/integrity.html>. All incidents of academic dishonesty will be dealt with in accordance with the university’s policy on academic integrity. This includes, but is not limited to, the student being given an “F” for the entire course.

**SCM 307** \* Introduction to Operations Management \* Tentative Calendar \* Winter, 2012

| Week |                   | Chapt  | Topics   | Recommended Questions & Problems  |
|------|-------------------|--|--|---|
| 1    | Jan. 3-5          | 1<br>2   | Introduction<br>OM Strategy & Competitiveness<br><b>Pre-course assessment (online) by Jan. 6</b> | Ch 1: Discussion #6,8,11,14<br>Ch 2: #5,7,9<br>Ch 2: Discussion #4,7,10       |
| 2    | Jan. 10-12        | 2<br>3   | OM Strategy & Competitiveness<br>Product Design & Process Selection                              | Ch 3: #5, 9, 13<br>Ch 3: Disc. # 1,4,14                                       |
| 3    | Jan. 17-19        | 4  | <b>Assignment due Jan. 17</b><br>E-Commerce & Supply Chain Management                            | <b>TBA</b><br>Ch 4: #1, 3<br>Ch 4: Disc. #5,6,11,12                           |
| 4    | Jan. 24-26        | 4  | E-Commerce & SCM<br><b>Quiz 1, Jan. 24</b><br><i>The Beer Game, Jan. 26</i>                      |   |
| 5    | Jan. 31 - Feb. 2  | 5  | Total Quality Management   | Ch 5 #3, 7, Disc. #3,5,6  |
| 6    | Feb. 7-9          | 6  | Statistical Quality Control<br><b>Midterm, Feb. 9</b>  | Ch 6: #1, 7, 12; Disc. #2,5,7,9   |
| 7    | Feb. 14-16        | 7  | JIT & Lean Systems<br>Styro Simulation<br>Inventory Management                                   | Ch 7: #3, 5, Disc. # 3,7,9,10<br>Ch 12: #3, 9, 11, 20<br>Ch 12: Disc. #4,5,14 |
| 8    | Feb. 21-23        | 12   | Inventory Management<br><b>Littlefield Simulation Report due Feb. 23</b>                         | Ch 12: # 23, 29<br>Ch 12: Disc. # 15,16,18                                    |
| 9    | Feb. 28 - March 1 | 16   | <b>Quiz 2, Feb. 28</b><br>Project Management   | Ch 16: #2,6,8; Disc. #1-4   |
| 10   | March 6 - March 8 | 13   | Aggregate Planning<br>Introduction to Optimization<br>(Course notes & text website)              | Ch 13: #1, 3, 5, 7<br>Ch 13: Disc. # 4,8,21,24                                |
| 11   | Sec 01            | <b>FINAL</b><br>Thursday, March 15, 10:45AM – 12:45PM<br><b>Post-course assessment (online) by March 17.</b> |  | <b>Comprehensive</b>  |

**Registration / Withdraw:**

You must be registered for the course to attend classes and receive a grade for the course You should be aware of the following dates:

January 23, 2012 Last day for ALL students to drop a class without a grade.

February 20, 2012 Last day for ALL students to drop a class with a grade of W.

See <http://www.wright.edu/registrar/calendars/academic/>

For a summary report of your course grade, please leave (or mail to me at 271 Rike Hall, Wright State University, Dayton OH 45435) a self-addressed stamped envelope by Tuesday, March 15. Grades are *not* available by email or by phone per University privacy policy.