

**Course Syllabus**  
BA 361 Operations Management  
Instructor Timothy Ewest  
Winter 2009

Scope of Course:

Survey of operating practices and models in manufacturing and service-oriented firms. Introduction to operational issues, including quality control, designing, acquiring, operating, and maintaining inventories, facilities, processes. Prerequisites: MA 107 or MA 250; MA 214 or MA 313.

Class Times:

Mon-Wed-Fri, 9:00 AM - 10:05 AM (1/5/2009 - 4/17/2009)

Location: MAIN WBC 117

Administration of course:

Instructor: Timothy Ewest,

Location: *Home:* 715 3<sup>rd</sup> Ave, Waverly, IA 50677. *Office:* 104, Whitehouse.

You can call me anytime - really. I check my email daily as well, and it is one of the best ways to get a hold of me. I normally respond to emails on the same day I receive them, including weekends. It is my responsibility to get back to you in a timely manner.

Email: [timothy.ewest@wartburg.edu](mailto:timothy.ewest@wartburg.edu)

Phones: *Work#:* 352-8416; *Home#:* 352-4857.

Conferences: If you are underperforming in the class at any point I will make you aware of your performance gap and help you develop a strategy to become successful.

Course Objectives:

1. To understand the link between strategy, production, capacity and core competencies.
2. To be able to know and manage the various components behind project management, including the tools which project managers use.
3. To be able to understand how supply chains work, including the ability to forecast production levels.
4. To be able to identify the various quality control programs including: T.Q.M., Employee Involvement, Reengineering and Knowledge Management.
5. To reach the level of a "Yellow Belt" in Six Sigma, understanding the D.M.A.I.C. process, both in implementation and execution.
6. To have a good grasp of tools used in quality control, knowing when to implement them including their desired results.
7. To develop the skills to accurately forecast production levels. Forecasting
8. To effectively understand how Facility layout affects production levels and to implement facility "flow" to bring increased output.
9. To have a firm grasp of Lean Manufacturing principles and how they can reduce waste and increase value to the product or service.

Required Texts/Articles:

- Reid, D; Nada, S. (2007) *Operations Management: An Integrated Approach* *Operations Management: An Integrated Approach*. Third Edition. Hoboken, New Jersey. Wiley Publishing.
- Pande, P. Neuman, R . Cavanagh, R. (2001). *The Six Sigma Way Team Fieldbook: An Implementation Guide for Process Improvement Teams* New York, NY. McGraw-Hill.
- Womack, J. Daniel, J. Womack, J. Jones, D. (2003). *Lean Thinking : Banish Waste and Create Wealth in Your Corporation*. New York, NY. Free Press.
- Articles as assigned. The articles for this course are going to be uploaded in the course site on MyWartburg.

Student Responsibilities:

1. Attend all classes. If you are going to be absent you must notify me 24 hours before class time. Absenteeism normally results in a lower course grade, and is an early indication of future problems within the workplace. Develop good attendance and participation habits now by being on time and present for every class.
2. Read all assigned material.
3. Make sure you submit all assignments on the day they are due. Late assignments will be marked down 10% for each day they are late. Also you should note:
  - a. All papers are to be submitted in APA format. Samples are provided in the course web site.
  - b. Some papers are to be submitted electronically (formatted in Microsoft Word) others are to be turned in as a Hard Copy. A forum will be provided for you to submit your electronic assignments. Do not email me papers.

Course Activities (what do I need to do to pass this course):

1. Three exams: Each exam will cover the material presented in the classroom as well as those materials within the course textbook. The exams will consist of multiple-choice, true false, short response and essay.

Six Sigma Cases:

*Students who pass the course with a “B” or better will be awarded a Yellow Belt in Six Sigma. The first two team leader who performs the best in both the CASE projects or in the REAL project will be awarded a Six Sigma Green Belt by the department of Business and Economics, remaining students who receive a “B” can take a Green Belt exam.*

2. Six Sigma Team CASE Projects: The class will be broken up into Six Sigma teams. Each team will consist of no more than five members, and no less than three. During the semester each team will read three cases and present solutions as if they were an actual Six Sigma team. The presentations will be no longer than 10 minutes. Each team will be completed all necessary documentation for the project as well as giving evidence of tools used to bring about solution.

3. Six Sigma Team REAL Projects: The second projects are “REAL” on the ground projects.

- a) The first will be helping a local manufacturing company eliminate variation in one of its manufacturing processes. The operations manager will provide all the information (data) needed for your teams to make an accurate assessment. An on site tour should be anticipated by the teams.
- b) The second is helping a social entrepreneurial venture with facility layout and supply chain management. Again, each team will be provided with the same information as well as an opportunity to discuss the onsite location, and specifications with the operations manager.

You will be given more information about both of these projects during the middle of the semester. But, you should be aware, that the winning teams' solution will actually be used in both situations. The importance of this is to note that the solution cannot be theoretical. The operations managers will be determining the veracity of implementation based on how well your solution solves the problems they are facing.

Each team is expected to give two 10 minute presentations at the end of class, during finals week, defining their solution. As with the previous presentations, each team will have completed all necessary documentation for the project as well as giving evidence of tools used to bring about solution.

4. Class participation: Each student is expected to contribute to class discussion and participate in all activities.

Weight of each assignment:

- Three Exams: Each Exam = 150 points (3 exams) = 450 (45%)
- Six Sigma Project CASE = 100 points = 300 (30%)
- Six Sigma Project REAL=100 points = 200 (20%)
- Class Participation: 50 points (5%).

Evaluation System:

I grade straight percentage, no curve. Some grades will receive +/- . The percentages are as follows: A = 100-90%, B= 89-80%, C=79-70%, D=69-60%, F=59

Honor Code:

By attending Wartburg College, students are demonstrating their dedication to the Honor Code, which says:

As a matter of personal commitment, students, faculty, and staff of Wartburg College are expected to demonstrate three simple principles:

- (1) All work submitted be your own.
- (2) When using the work or ideas of others, including fellow students, give full credit through accurate citations.

(3) If you are uncertain about the ground rules on a particular assignment, ask for clarification.

All are responsible for abiding by these guidelines and opposing academic dishonesty by reporting any act that goes against these guidelines.

Accommodation:

The Americans with Disabilities Act of 1990 (ADA) provides protection from illegal discrimination for qualified individuals with disabilities. Students requesting instructional accommodations due to disabilities must arrange for such accommodations by contacting Pathways Associate for Testing and Advising Carla Coates. She can be reached at the Pathways Center, 314 Vogel Library, Wartburg College, Waverly, IA 50677, 352-8230, <Carla.coates@wartburg.edu>. Presenting documentation of a student's disability early (before the beginning of classes) is helpful and often necessary to secure needed materials in a timely way. Accommodations should be requested PRIOR to affected assignment due dates. For more detailed information, please see <http://www.wartburg.edu/pathways/testing/AccomodationProcessStudents.pdf>

## Course Schedule

### Week One:

#### Reading:

- Text: Chapter #1, Introduction to Operations Management.
- Six Sigma Workbook: Chapters 1-2.
- Lean: N/A.

#### Assignments:

- Read: “ASIMCO Int. Case Study”.
- Read: “What is Six Sigma”.

### Week Two:

#### Reading:

- Text: Chapter #2, Operations Strategy; #3 Product Design and Process Selection.
- Six Sigma Workbook: Chapters 3,5.
- Lean: N/A.

#### Assignments:

- Mid-Week. Six Sigma Teams determined.
- White Belt Obtained.

### Week Three:

#### Reading:

- Text: Chapter #16, Project Management.
- Six Sigma Workbook: Define: Chapters, 6-8.
- Lean: N/A.

#### Assignments:

- Review PmBok.

### Week Four:

#### Reading:

- Text: Chapter #4, Supply Chain Management.
- Six Sigma Workbook: Measure: Chapters: 9-11.
- Lean: N/A.

#### Assignments:

- Exam One.

**Week Five**

Reading:

- Text: Chapter #5, Total Quality Management.
- Six Sigma Workbook: Analyze: Chapters: 12-14.
- Lean: N/A.

Assignments:

- CASE: Project One presentation - ASIMCO Int. Case Study.

**Week Six**

Reading:

- Text: Chapter #6, Statistical Process Control.
- Six Sigma Workbook: Improve: Chapters: 15-17.
- Lean: Chapters 1-3

Assignments:

- Read: “Longxi Machinery Works – Quality Improvement” A.

**Week Seven**

Reading:

- Text: Chapter #7, Just in Time and Lean Systems.
- Six Sigma Workbook: Control: Chapters 18-20.
- Lean: Lean: Chapters 4-5, 6, 10.

Assignments:

- None.

**Week Eight**

Reading:

- Text: Chapter #7, Just in Time and Lean Systems.
- Six Sigma Workbook: N/A.
- Lean, Environment Production.

Assignments:

- Exam Two.

**Week Nine**

Reading:

- Text: Chapter #8, Forecasting.
- Six Sigma Workbook: N/A.
- Lean: N/A.

Assignments:

- None.

### **Week Ten**

#### **Reading:**

- Text: Chapter #9, Capacity Planning and Location Analysis.
- Six Sigma Workbook: N/A.
- Lean: N/A.

#### **Assignments:**

- CASE: Project Two presentation - Longxi Machinery Works – Quality Improvement”.
- Read: “Forefront Manufacturing Production Processes and Change Management in Mainland China.”

### **Week Eleven**

#### **Reading:**

- Text: Chapter #10, Facility Layout.
- Six Sigma Workbook: N/A.
- Lean: N/A.

#### **Assignments:**

- Exam Three.

### **Week Twelve**

#### **Reading:**

- Text: Chapter #11, Work Design Systems.
- Six Sigma Workbook: N/A.
- Lean: N/A.

#### **Assignments:**

- CASE: Project Three presentation “Forefront Manufacturing Production Processes and Change Management in Mainland China.”

## **Finals:**

### **Presentations:**

- *Yellow Belts Awarded.*
- Process Improvement – John Flemming.
- Facility Layout/Supply Chain – Tom Durrant.