

Course	BUSN 6110 Operations and Project Management	
Term	Spring 2, 2010	
Instructor	Name: Larry L. Lynch, Ph.D. Phone: 913-962-2667 (Home) 913-530-4346 (Cell) Connections email: larrylynch25@webster.edu (Use of World Class Room Blackboard is required for all correspondence and assignments that are to be submitted.)	
Catalog Description	This is a course that focuses on the major managerial issues in manufacturing management and the tools that can be used to manage them. Special attention will be given to project management, including PERT, critical path scheduling, and time-cost models, in operations management and other business settings. The major operations management issues are quality management and control, capacity management, plant location, layout and design, production planning and scheduling, supply chain management, and inventory management. The analytical tools covered include queuing theory, statistical quality control, linear programming, and learning curves. Where appropriate, the use of operations management techniques in service and distribution organizations will be demonstrated.	
Prerequisites	BUSN 5760 Applied Statistics	
Course Level Learning Outcomes	Outcome	Expectation
	1. Students understand the role of OM in the firm and how the OM function must be integrated with other functions to ensure organizational success.	Students can describe the appropriate relationship between the goals of other functional areas (i.e. marketing) and analyze operational level conflicts between the goals of functional areas and recommend a constructive response.
	2. Students can utilize PERT analysis to plan, manage, and evaluate a large project.	Students can develop a PERT diagram, calculate the critical path, decide whether or not an activity should be crashed, and estimate the probability that the project will be completed on time.
	3. Students understand new product development processes.	Students can read the description of a new product development process and determine if it is up-to-date. If it is not up-to-date the student can recommend changes that will bring it up to date.
	4. Students know both the SPC and non-SPC approaches to the management of quality.	Students can develop an SPC (Statistical Process Control) chart and use it to evaluate the quality performance of an ongoing production process. The student can also describe how to use QFD (Quality Function Deployment), and Design for

		Manufacturability/Value Engineering in the managing of quality.	
	5. Students understand both the strategic and plant level capacity planning issues.	Students can discuss the major determinants of long term production capacity. The students can also determine bottlenecks in the process and make recommendations for dealing with the bottlenecks. This will include determining if the capacity expansion of the bottleneck makes good profitability sense.	
	6. Students understand the major determinants of facility location decisions and will know how to use factor rating models to assist in the decision.	Students can discuss the facility location decision process to include the major variables. The student will, given the necessary information, also be able to use factor rating to assist in the location decision.	
	7. Students understand the basic issues involved in facility layout with an emphasis on assembly line-type manufacturing.	Student can balance an assembly line to meet the expected production volume and will be able to determine the maximum output of the assembly line. Students can also explain the impact of cycle time on production capacity.	
	8. Students understand the basic issues involved in inventory management to include MRP.	Student can determine the general nature of the inventory management task once the basic competitive posture of the firm has been determined. Students can also use EOQ calculations to assist in the inventory decisions.	
	9. Students understand the general process of production planning to include aggregate planning and plant scheduling.	Students can describe the production planning process from the initial sales estimate to the plant floor. Student can also apply Johnson's rule in scheduling the n-job on two machines problem.	
Materials	Heizer and Render, <i>Operations Management 9th</i> , McGraw-Hill/Irwin. ISBN-13: 978-0-13-234271-1 Text is available through MBS Direct Books at 1-800-325-3252 or www.mbsdirect.net . Checks and credit cards accepted.		

Grading	Exam 1	150 points	
	Exam 2	150 points	
Weekly Assignments	270 points (30 points each class)		
Outline for Project Paper Project Paper Project Presentation	30 points 120 points 100 points		
Attend/Participation	180 points (20 pts each class)		
Total	1000 points		
	<p><u>Grading Scale</u> A = 95 - 100 % (950-1000 pts) A- = 90 - 94.9 (900-949 pts) B+ = 87 - 89.9 (870-899 pts) B = 83 - 86.9 (830-869 pts) B- = 80 - 82.9 (800-829 pts) C = 70 - 79.9 (700-799 pts)</p> <p>The GRADUATE catalog provides these guidelines and grading options:</p> <ul style="list-style-type: none"> • A/A- Superior graduate work • B+/B/B- Satisfactory graduate work • C Work that is barely adequate as graduate-level performance • CR Work that is performed as satisfactory graduate work (B- or better). A grade of "CR" is reserved for courses designated by a department, involving internships, a thesis, practicums, or specified courses. • F Work that is unsatisfactory • I Incomplete work • ZF An incomplete which was not completed within one year of the end of the course. ZF is treated the same as an F or NC for all cases involving G.P.A., academic warning, probation, and dismissal. • IP In progress • NR Not reported <p>W Withdrawn from the course</p>		
Activities	<ul style="list-style-type: none"> • Exams will be essay: Time will be 90 minutes and will be open book/open notes/Internet access (may contain basic problems). • Weekly Assignments will be assigned on a week to week basis: Two assignments each week, i.e., eighteen assignments over the span of the course (15 points for each assignment-30 points total each class period). See "Weekly Assignments" found in the "Additional Information" section of this syllabus. • Project Paper and Presentation: See the "Requirements for the Development of the Research Project" found in the "Additional Information" section of this syllabus. Research Paper (120 points); Research Presentation (100 points). • Participation and Attendance: Required (180 points-20 points per class). 		

Course Policies	<p>This syllabus may be revised at the discretion of the instructor without the prior notification or consent of the student. The schedule below presents an approximate expectation of course progress. The instructor reserves the right to add, delete, or modify any weeks of this schedule. The instructor also reserves the right to change the overall course grade weighting. Any changes will be announced in class.</p> <p>Class meetings are to be treated as important business appointments. Because so much of the value of this course comes from class discussion, attendance is required. There are, of course, excusable absences. However, excusable absences will always be for reasons that are beyond the student's ability to control. Please talk to the instructor concerning any absences. In addition, at the instructor's discretion and on a subjective basis, attendance points may be deducted for those who are late or leave class early.</p> <p>If you miss class you are responsible for getting notes and assignments. No late homework will be accepted unless prior approval to miss class is obtained from the instructor. Makeup exams will be scheduled only if arranged in advance of the scheduled exam date.</p> <p>The research paper should be typewritten with charts, figures and tables appropriately identified. All charts and diagrams included should be drawn neatly or printed using available software. All quotations/citations should be acknowledged and referenced appropriately. Supporting documents such as computer printout should be placed in the Appendix section of your report. Graphs and tables should be placed in the report soon after first reference to it in ordered fashion.</p> <p>Assignments are due no later than the due date specified.</p> <p>The class is governed by University Policies on attendance, behavior, performance and grievances.</p> <p>Students with special needs are urged to contact the Academic Resource Center on campus in order to acquire services which may be available to them.</p> <p>Students with special needs are urged to contact the Academic Resource Center on campus in order to acquire services which may be available to them.</p>
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Weekly Schedule	Week 1	<p>Introduction to Operations Management</p> <p>Chapter 1 – Introduction to the Field</p> <p>Chapter 2 – Operation Strategy in a Global Environment</p> <p>Discussions will center on developing an understanding of competitiveness, the importance of developing an operational strategy in business, and a review the primary topics in Operations Management.</p> <p>Prepare for Research Project</p> <p>Weekly Assignments will be assigned on a week to week basis.</p>
	Week 2	<p>Quality</p> <p>Chapter 6 – Managing Quality</p> <p>Discussions will cover total quality management with further focus on understanding and recognizing quality issues from the standpoint of the company, the employee, the union, and the customer.</p> <p>Prepare for Research Project</p> <p>Supplement 6 – Statistical Process Control</p> <p>Statistical process control and the process of designing quality into the scope of Operations Management will be the topics of discussion.</p> <p>Weekly Assignments will be assigned on a week to week basis.</p>
	Week 3	<p>Forecasting, Product Design, Process Strategy</p> <p>Chapter 4 – Forecasting</p> <p>Discussions will cover various forecasting techniques used in the business setting. (Read this chapter to understand concepts, not to be able to solve complex mathematical problems.)</p> <p>Prepare for Research Project</p> <p>Chapter 5 -- Design of Goods and Services</p> <p>Discussions will center on the design process including strategy, quality function, customer role, as well as process characterization and planning format (including the pressures of technology, customer demands and ease of manufacture).</p> <p>Chapter 7 – Process Strategy</p> <p>Various strategies for process contingencies are discussed.</p> <p>Research Project Outline Due plus Weekly Assignments</p>
	Week 4	<p>Capacity Planning and Location Strategies</p> <p>Supplement 7 – Capacity Planning</p> <p>This supplement will cover the capacity of the firm to produce its demand.</p>

		<p>Chapter 8 – Location Strategies Discussions will cover process planning, facility location models, capacity planning strategies, and production modeling.</p> <p>EXAM #1 (Chapter Assignments from Weeks 1-4) Weekly Assignments will be assigned on a week to week basis.</p>
	Week 5	<p>Facility Layout and Just-in-Time Manufacturing</p> <p>Chapter 9 – Layout Strategy Different physical layouts for various functions will be studied.</p> <p>Chapter 16 – Just-in-Time Manufacturing Discussions will cover the use of just-in-time manufacturing relating to facility layout, inventory control, and other matters.</p> <p>April 15, 2010— Tour of Harley-Davidson at approximately 10:00 a.m. No evening class. (Open-toed/heeled shoes are not allowed in the factory!) See “Additional Section” for more details.</p> <p>Weekly Assignments will be assigned on a week to week basis.</p>
	Week 6	<p>Human Resources and Job Design; Supply Chain Management</p> <p>Chapter 10 – Human Resources and Job Design Where do the people fit into all of this, and how do we design the job to fit the people?</p> <p>Prepare for Research Project.</p> <p>Chapter 11 – Supply Chain Management Discussions will cover supply chain management, purchasing, and suppliers.</p> <p>Weekly Assignments will be assigned on a week to week basis.</p>
	Week 7	<p>Inventory Management; MRP, MRP II, and ERP</p> <p>Chapter 12 – Inventory Management Discussions will cover inventory management and the impact of inventory on performance and how it affects the on-going corporate strategy.</p> <p>Prepare for Research Project Presentation.</p> <p>Chapter 14 – MRP, MRP II, and ERP Discussion will concentrate on MRP, MRP II, and ERP: the descriptions of each, the evolution process of these systems, and how the three interrelate today.</p> <p>Research Project Paper Due plus Weekly Assignments</p>

	<p>Week 8</p> <p>Week 9</p>	<p>Project Management; Short-term Scheduling Chapter 3 – Project Management Discussions will cover project management including PERT and CPM. Chapter 15 – Short-term scheduling Discussions will cover issues in scheduling in the short term.</p> <p>EXAM #2 (Chapter Assignments from Weeks 5-9) Weekly Assignments will be assigned on a week to week basis.</p> <p>Aggregate Planning Chapter 13 – Aggregate Planning Discussions will cover issues in scheduling for the intermediate future.</p> <p>Weekly Assignments for Chapter 13.</p> <p>Research Project Presentations</p> <p>Course Wrap-up</p>	
<p>Additional Information</p>	<p style="text-align: center;">Project Management</p> <p>One chapter includes the topic of project management, including PERT, critical path scheduling, and time-cost models in operations management and other business settings.</p> <p style="text-align: center;">Weekly Assignments</p> <p>180 points total: 20 points each class. Each week you will be assigned Discussion Questions at the end of the chapters that are to be covered for that week. You are expected to describe how each of the questions and your answers <i>apply to an organizational/business situation with which you are familiar</i> (e.g., your work, church, school, or any other organization with which you are currently involved or have been involved in the past). Be prepared to present your answers to the class for your assigned Discussion Questions. In the event the questions/answers do not apply to an organizational situation of which you are familiar, you <i>must</i> research the subject matter and explain how each of the questions/answers apply to an organizational/business situation uncovered by your research.</p> <p style="text-align: center;">Week 5 Harley-Davidson Tour</p> <p>Week 5, for those who can attend, we will take a tour of the Harley-Davidson factory. We will meet at Harley-Davidson at 10:00 a.m. to sign in. The tour will begin at approximately 10:15 a.m. (Open-toed/heeled shoes are not allowed in the factory!) No evening class scheduled for this week. (For those who cannot make the tour, I will meet with you this week at our normal time on campus.) After the tour, we will go to Granite City at Zona Rosa for lunch. There we will have a discussion of the Harley factory as well as a discussion over Chapters 9 and 16 (The chapters on Location and Just-in-Time).</p>		

BUSN 6110 Research Project Requirements

220 Total Points (Written and Presentation)

Use of Blackboard "Turnitin" Required

(For help in choosing a topic, use the textbook Table of Contents)

This course covers a wide range of OM topics facing contemporary organizations. The purpose of the final project is to synthesize learning from the entire course and to apply academic theory to real-world practice.

The student will develop his/her own organizational case study based on OM concepts from the **course, text, and additional outside sources (obtain information from at least three outside peer reviewed sources in addition to the text)**. You may choose to analyze a particular problem or situation in an existing organization, or choose an OM topic and develop a hypothetical situation in a fictitious organization.

Written Synopsis (120 points):

The written synopsis should be 7 full pages to 9 pages maximum (excluding the title page, resource page, and appendices). Anything less than 7 full pages or more than 9 pages **will not be accepted**. Proper APA format is required. As a minimum, your paper must contain the following components entered as headings in your paper (format with suggestions for information for you to include under each heading is as follows—**your paper will not be accepted if the following headings are not utilized in your paper**):

Title of Paper

(Because the introduction is clearly identified by its position in the paper, APA does not require a heading for the introduction. (20 pts)

- Give background information.
- What is the thesis, or main idea, of the case study?
- What are the relevant key points about the **organization** (real or fictitious)?
- What are the relevant key points about the **situation** (real or fictitious)?

Analysis

(As a minimum, this is to be a main section and heading in your paper! You may use additional major headings if you wish, and you will probably also want to use subheadings—see example format at the end of this guideline.) (30 pts)

- What is the situational analysis of the problem or issue? (A SWOT analysis is suggested here.)
- What are the causes/effects of the situation or problem?
- How did the problem evolve (over night or over time)?
- How can course concepts be applied to provide greater understanding of the situation?

Recommendations and Rationale

(As a minimum, this is to be a main section and heading in your paper! You may use additional major headings if you wish, and you will probably also want to use subheadings—see example format at the end of this guideline.) (30 pts)

- How can the problem be solved?
- What specific recommendations can be made for improving the situation?
- How do we explain our rationale for these suggestions?
- How will these recommendations, if implemented, enhance organizational effectiveness?

(Per APA, start the "References" section on a new page after the last page of your last section of this paper.)

References (This heading is centered—see example format below) (20 pts)

- Have you used proper APA style in your References section? Be sure to use the latest edition of the APA style.
- The APA web site is www.apa.org
- An excellent Web site for the APA style is <<http://owl.english.purdue.edu/owl/resource/56>
- Be sure that you have given credit to the source of all borrowed information, whether quoted directly or paraphrased in your own words.

Attention to style, format, and proper mechanics (20 pts)

- Are the key points clear and well organized?
- **Have you proofread the final document that will be submitted? Have you had someone else proofread your paper?**
- **Is the document free of mechanical errors?**

The instructor reserves the right to reject papers that contain an inordinate number of spelling, grammar, and/or mechanical errors. A rejected paper could result in zero points for the paper.

Abbreviated example format of paper follows: (Using the "header/footer" function, the title of your paper and page number should appear at the top right-hand corner of each page, beginning with the title page.)

Title of Your Paper

Begin with an introduction to your paper, background, definitions, etc. Start writing here with 1/2 inch indention. You may or may not want subheadings in this section.

Analysis

Subheading (First level of subheading—either underline or italicize)

Start writing here. You will name the subheadings your own title names. Again, you may or may not have subheadings in this section.

Subheading. Start writing here. (Next level of subheading. If you have one subheading at this level, then you must have at least two subheadings.) Note the period at the end of this title for this level of subheading. Again, either underline or italicize.

Subheading (Back to first level of subheading—either underline or italicize)

Start writing here. If you have one subheading, then you must have at least two subheadings.

Recommendations and Rationale

Follow the pattern from above.

(See the next page for the "References" Section.)

(The References section begins on a new page. The title of your paper and page number continue to be placed at the top right corner of each page—the page numbers continue from the previous page of the paper.)

References

List references in alphabetical sequence utilizing a hanging indent.

(From www.apa.org)

In general, the list of references is **double-spaced** and **listed alphabetically** by the first author's last name. For each reference, the first line is typed flush with the left margin, and any additional lines are indented as a group a few spaces to the right of the left margin (this is called a *hanging indent*).

For example:

APA Publications and Communications Board Working Group on Journal Article Reporting Standards. (2009). Reporting standards for research in psychology: Why do we need them? What might they be? *American Psychologist*, 63, 839–851. doi:10.1037/0003-066X.63.9.839.

See <http://dianahacker.com/pdfs/Hacker-Mira-APA-Ref-RD4.pdf> for more examples.

Important! See http://owl.english.purdue.edu/media/pdf/20090212013008_560.pdf for a helpful example of a complete paper with APA comments.

Oral Presentation (100 points):

The oral presentation/demonstration (minimum 25 minutes) should **involve the entire class (major points here)** and may use a variety of delivery styles, formats, and techniques. While the oral presentation/demonstration will no doubt contain the same info as the written synopsis, it should be remembered that the two parts of the project serve different purposes, involve different styles and skill sets, and are intended for different audiences (remember that the entire class is the audience of the presentation, not just the instructor).

Think about the following before completing the introduction and the analysis. Then follow with the recommendations and rationale for the recommendations.

- Who is the audience, and what do they need to know about the problem, situation, organization, etc.?
- How can your group involve others in the analysis of the problem/situation and development of recommendations?
- How can you ensure that lessons can be learned from your case study?

The following components must be clearly included in the Oral Presentation:

- Introduction & Background Information (25 pts)
- Analysis (25 pts)
- Recommendations and Rationale for the Recommendations (25 pts)

Presentation skills (25 pts)

- **Involve the audience and encourage participation.**
- Allow opportunity for questions, critical thinking, and discussion.
- Avoid verbal interrupters (uhm's, ah's, etc.) distracting behaviors, mannerisms,

or body language (reading notes word-for-word, turning back to audience to look at screen, minimizing eye-contact, “fidgeting,” etc).

Examples of Peer Reviewed Journals:

Below are just a few examples of the kind of sources than can be used for this class. They give you a good idea of what is acceptable.

Your text book is required as a source for this assignment. Other texts are acceptable as well.

In addition to the text, three peer reviewed journal articles are required sources for this assignment. Peer reviewed sources are primary sources (direct observers) as opposed to secondary sources. In addition, peer reviewed sources have been reviewed by the writer’s peers for authenticity and accuracy before being published.

Examples of peer reviewed journals are: *Harvard Business Review*, *Purchasing*, *International Journal of Production Research*, *Management*, *International Journal of Qualitative Methods*, *American Journal of Economics & Sociology*, *Journal of Economic Issues*, *The Sociological Quarterly*, *British Journal of Sociology*, as well as other professional journals.

The following publications are examples of secondary sources (those who are relying on others for their evidence). Secondary sources are often hearsay, opinions, and not necessarily factual. Your sources should not be articles from *Time*, *Newsweek*, *U.S. News and World Report*, *Ladies Home Journal*, *Reader’s Digest*, *New York Magazine*, and other secondary sources similar to these. If you find information from secondary sources that would enhance your project, be sure to have the source approved by your instructor.

Important information! Here is a helpful site for more information on how to determine peer reviewed journals:

http://www.mulibrary.org/wiki/index.php?title=Peer_Reviewed_Journals.