

Course	BUSN 6110-29 Operations and Project Management	
Term	Spring 2 2009 March 16 – May 15 Salt Lake City Campus Room: 301 Day: Tuesdays Time: 5:30 p.m. to 9:30 p.m.	
Instructor	Name: Ms. Tamara E. Taylor Phone: 801-712-0646 Email: tamarataylor34@webster.edu	
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 Business 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 SQC and non-SQC approaches to the management of quality.	Students can develop an SQC chart and use it to evaluate the quality performance of an ongoing production process. The student can also describe how to use QFD, VA, vendor analysis and 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. Student 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

Required Text: Heizer, Jay and Barry Render. (2008) *Operations Management* (9th Edition) Pearson Prentice Hall ISBN: 9780138128784.

Additional Course Readings

Additional course readings are available through the PASSPORTS on-line library system. Requirements and use of these readings will be discussed the first night of class. Students are also expected to follow business news through the *Wall Street Journal*, *Business Week*, *Fortune*, and other industry sources for weekly discussion of course topics.

Text(s) can be obtained online at <http://direct.mbsbooks.com/webster.htm> or by calling MBS Direct at 1-800-325-3252. Credit cards and checks accepted. You may also visit www.webster.edu/utah and click on *Used Books for Sale*.

Suggested:

American Psychological Association. (2001). *Publication Manual of the American Psychological Association* (5th ed.). (APA Manual)

Grading

Component/Assignment	Points	% of Grade
1. Class Attendance/Participation	100	10%
2. Quizzes (total of 6 @ 50 points each)	300	30%
3. Case Studies/Assignments	300	30%
4. Final Exam/Project Presentation	<u>300</u>	<u>30%</u>
Total Possible	1000	100%

Grade	%
A	95 to 100%
A -	90 to 94%
B +	87 to 89%
B	84 to 86%
B -	80 to 83%
C	70 to 79%
F	0 to 69%

The GRADUATE catalog provides these guidelines and grading options:

- **A/A-** Superior graduate work
- **B+/B/B-** Satisfactory graduate work
- **C** Work that is barely adequate as graduate-level performance
- **F** Work that is unsatisfactory

	<ul style="list-style-type: none"> • 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 • W Withdrawn from the course
Activities	<p>The time in class will be spent on lectures, discussion, group exercises, videos and in-class exams. On occasion we will have a guest lecturer speak on a related topic. Some individual and group exercises will be completed during class, but some work may require completion outside class. If you miss a class, you will still be responsible for completing the out-of-class exercises on time. Of course, in-class exercises cannot be made up if you missed the class. Competency will be determined through discussion contribution, critical case analysis, in-class exercises, a final class project, and class presentations. Exams will consist of essay-style, short-answer and problem-solving questions.</p>
Policy Statements: University Policies	<p>University policies are provided in the current course catalog and course schedules. They are also available on the university website. This class is governed by the university's published policies. The following policies are of particular interest:</p> <p>Academic Honesty The university is committed to high standards of academic honesty. Students will be held responsible for violations of these standards. Please refer to the university's academic honesty policies for a definition of academic dishonesty and potential disciplinary actions associated with it.</p> <p>Drops and Withdrawals Please be aware that, should you choose to drop or withdraw from this course, the date on which you notify the university of your decision will determine the amount of tuition refund you receive. Please refer to the university policies on drops and withdrawals (published elsewhere) to find out what the deadlines are for dropping a course with a full refund and for withdrawing from a course with a partial refund.</p> <p>Special Services If you have registered as a student with a documented disability and are entitled to classroom or testing accommodations, please inform the instructor at the beginning of the course of the accommodations you will require in this class so that these can be provided.</p> <p>Disturbances Since every student is entitled to full participation in class without interruption, disruption of class by inconsiderate behavior is not acceptable. Students are expected to treat the instructor and other students with dignity and respect, especially in cases where a diversity of opinion arises. Students who engage in disruptive behavior are subject to disciplinary action, including removal from the course.</p> <p>Student Assignments Retained From time to time, student assignments or projects will be retained by the Department for the purpose of academic assessment. In every case, should the assignment or project be shared outside the academic Department, the student's name and all identifying information about that student will be redacted from the assignment or project.</p>

	<p>Contact Hours for this Course It is essential that all classes meet for the full instructional time as scheduled. A class cannot be shortened in length. If a class session is cancelled for any reason, it must be rescheduled.</p>	
<p>Course Policies</p>	<p>Students are expected to come to each class prepared and ready for class discussion. Assignments are due on the date indicated. Late assignments will not be accepted. Attendance is expected, but students sometimes have work or family problems that cannot be avoided. However, if you must miss more than one class it may put you at a disadvantage because of the amount of material to be learned. If you are not present for class you will miss any material presented from outside the text and you will be unable to participate and your class participation grade could be affected.</p> <p>In assessing the quality of your participation, I consider the following:</p> <ul style="list-style-type: none"> ▪ Do the points go beyond the recitation of the course topics or case facts? ▪ Do comments further class understanding of issues discussed? ▪ Do comments raise interesting questions? ▪ Is there evidence of analysis and insights to back up the statements? 	
<p>Weekly Schedule</p>	<p>Week 1 Mar. 17</p>	<p>INTRODUCTION TO OPERATIONS MANAGEMENT Read: Chapter 1-<i>Operations and Productivity</i>, Pages 1-26 Chapter 2-<i>Operations Strategy in a Global Environment</i>, pages 27-54 Complete problems: 1.1, 1.5, 1.7, 1.10, 1.6. 2.1, 2.2, 2.4, 2.5, 2.6. For in-class discussion, read and answer the discussion questions for: National Air Express Case Study (page 24). Minit-Lube Case Study (page 52). <i>Case Study Take-Home Assignment: Motorola's International Strategy (Due Wk 2)</i></p>
	<p>Week 2 Mar. 24</p>	<p>INTRODUCTION TO OPERATIONS MANAGEMENT (continued) Read: Chapter 3-<i>Project Management</i>, pages 55-102 Chapter 4-<i>Forecasting</i>, pages 103-153 Complete problems: 3.1, 3.3, 3.4, 3.6, 3.14 4.1, 4.5, 4.6, 4.9, 4.41 For in-class discussion, read and answer the discussion questions for: Southwestern University Case Study (page 99). Southwestern University (B) Case Study (page 151). Exam: Week 1 Materials Due: Case Study - Motorola's International Strategy <i>Case Study Take-Home Assignment: Shale Oil Company (Due week 3)</i></p>
	<p>Week 3 Mar. 31</p>	<p>DESIGNING OPERATIONS Read: Chapter 5-<i>Design of Goods and Services</i>, pages 156-190 Chapter 6-<i>Managing Quality</i>, pages 191-219 Supplement 6-<i>Statistical Process Control</i>, pages 221-251 Chapter 7-<i>Process Strategy</i>, pages 253-285 Supplement 7-<i>Capacity Planning</i>, pages 287-313 Complete problems: 5.1, 5.9, 5.11, 5.16, 5.18 6.2, 6.3, 6.8, 6.10, 6.16 S6.1, S6.3, S6.10, S6.21.</p>

		<p>7.1, 7.2, 7.3, 7.4, 7.7 S7.2, S7.3, S7.7, S7.9, S7.29</p> <p>For in-class discussion, read and answer discussion questions for: De Mar's Product Strategy Case Study (page 189). Southwestern University (C) Case Study (page 217). Rochester Manufacturing Corp (page 283).</p> <p>Exam: Week 2 Materials Due: Case Study – Shale Oil Company <i>Case Study Take-Home Assignment: Green River Chemical Company (Due Wk 4)</i></p>
Week 4 April 7	DESIGNING OPERATIONS (continued)	<p>Read: Chapter 8-<i>Location Strategies</i>, pages 315-344 Chapter 9-<i>Layout Strategies</i>, pages 345-385 Chapter 10-<i>Human Resources and Job Design</i>, pages 387-409 Supplement 10-<i>Work Measurement</i>, pages 411-430</p> <p>Complete problems: 8.2, 8.5, 8.11, 8.19, 8.23 9.1, 9.2, 9.5, 9.9, 9.10 10.2, 10.3, 10.4, 10.6, 10.12 S10.1, S10.2, S10.5, S10.23, S10.27.</p> <p>For in-class discussion, read and complete the discussion questions for: Southern Recreational Vehicle Company Case Study (page 341). State Automobile License Renewals Case Study (page 382). Jackson Manufacturing Case Study (page 429).</p> <p>Exam: Week 3 Materials Due: Case Study - Green River Chemical Company <i>Case Study Take-Home Assignment: Southwestern University (Due Wk 5)</i></p>
Week 5 April 14	DESIGNING OPERATIONS (continued)	<p>Read: Chapter 11-Supply Chain Management, pages 431-461 Supplement 11-Outsourcing as a Supply Chain Strategy, pages 463-480 Chapter 12-<i>Inventory Management</i>, pages 481-523 Chapter 13-<i>Aggregate Planning</i>, pages 525-558 Chapter 14-<i>Material Requirements Planning (MRP) and ERP</i>, pages 559-597</p> <p>Complete problems: 11.2, 11.6, 11.7, 11.10, 11.13 9.1, 9.2, 9.5, 9.9, 9.10 10.2, 10.3, 10.4, 10.6, 10.12 S10.1, S10.2, S10.5, S10.23, S10.27. S11.1, S11.2, S11.3, S11.4, S11.5 12.1, 12.5, 12.6, 12.9, 12.12 13.1, 13.4, 13.5, 13.12, 13.14 14.2, 14.3, 14.4, 14.5, 14.8</p> <p>For in-class discussion, read and complete the discussion questions for: Dell's Value Chain Case Study (page 459) for in-class discussion. Ikon's Attempt at ERP Case Study (page 595) for in-class discussion.</p> <p>Due: Case Study - Southwestern University <i>Case Study Take-Home Assignment: Cornwell Glass (Due Wk 6)</i></p>
Week 6 April 21		<p>Read: Chapter 15- <i>Short-Term Scheduling</i>, pages 599-637 Chapter 16-<i>JIT and Lean Operations</i>, pages 639-665</p>

		<p>Chapter 17-<i>Maintenance and Reliability</i>, pages 667-684</p> <p>Complete problems: 15.1, 15.3, 15.4, 15.6, 15.11 16.1, 16.2, 16.4, 16.5, 16.7 17.1, 17.2, 17.3, 17.6, 17.7</p> <p>For in-class discussion, read and complete the discussion questions for: Old Oregon Wood Store Case Study (page 635). Mutual Insurance Company of Iowa (page 662). Worldwide Chemical Company Case Study (page 683).</p> <p>Exam on Week 5 Materials Due: Case Study – Cornwell Glass <i>Case Study Take-Home Assignment: Payroll Printing, Inc (Due Wk 7)</i></p>
	<p>Week 7 April 28</p>	<p>Read: Module A <i>Decision-Making Tools</i>, pages 685-704 Module B <i>Linear Programming</i>, pages 705-732 Module C <i>Transportation Models</i>, pages 753 – 780 Module D <i>Waiting-Line Models</i>, pages 781-794 Module E <i>Learning Curves</i> pages 783-794 Module F <i>Simulation</i>, pages 795-815</p> <p>Complete problems: A.1, A.3, A5, A.7, A.17 B.1, B.2, B.4, B.7, B.9 C.1, C.4, C.7, C.11, C.15 D.1, D.2, D.8, D.11, D.14 E.1, E.5, E.6, E.8, E.11 F.3, F.4, F.9, F.13, F.17</p> <p>For in-class discussion, read and complete the discussion questions for: Ski Right Corporation Case Study (703). Custom Vans, Inc Case Study (page 751). New England Foundry Case Study (page 779). SMT’s Negotiation with IBM (page 793). Alabama Airline’s Call Center (page 814).</p> <p>Exam: Week 6 Materials Due: Case Study - Payroll Printing, Inc <i>Case Study Take-Home Assignment: Arctic, Inc (Due Wk 8)</i></p>
	<p>Week 8 May 5</p>	<p>Final Exam Review Exam: Week 7 Materials Due: Project Presentations Case Study - Arctic, Inc.</p>
	<p>Week 9 May 12</p>	<p>Final Exam</p>
<p>Additional Information</p>	<p>PASSPORTS on-line library: Students are encouraged to use Passports, which is Webster University’s online library. Passports allows for 24-hour access. Students are encouraged to take the time to go through the tutorials http://library.webster.edu/wbt/welcome.html#vidseries The main page for Passports is http://library.webster.edu/</p>	