University of North Carolina at Greensboro  
Bryan School of Business & Economics  
Department of Information Systems & Supply Chain Management, Spring 2019

Course Number: SCM 302.04  
Tuesdays: 6:00 pm – 8:50 pm  
Classroom: Bryan Building Room 105

Course Name: Operations Management  
Instructor: Dr. Vashkar Ghosh  
Office: Bryan 437  
E-mail: v_ghosh@uncg.edu  
Office Hours: 4:30 p.m. - 5:30 p.m., Tuesdays or by appointment.

Course Hosting Site

This course will be taught using the face-to-face format but will make extensive use of the Canvas Learning Management System used by UNCG. In addition, every student will need to have access to MyOMLab - See below for additional details on getting access to MyOMLab.

Required Materials

- Required Textbook: *Operations Management (12th edition)* by Heizer and Render.  
- MyOMLab to complete online assignments.  
- Options for acquiring the required material as a bundle or separately.
  
  - The most expensive option is the Pearson Hard Bound text. It is great as a reference as it includes even other interesting chapters beyond what we will cover. The Book Store has a buy back option for it.
  
  - The SCM-302 Bundle is a Paper Bond Customized Text. It only includes the chapters we will cover. The Book Store will not buy these back.
  
  - The e-text has full access to all chapters included in the Hard-Bound Edition. With this option, you can later acquire a loose-leaf version of the text if you want.
  
  - All three packages include access to MYOMLab. This is Mission Critical. If you decide to purchase a used text from somewhere (some people do) then MYOMLab Access will need to be purchased as well through Pearson.
  
  - You can also purchase a used version of the text or rent it from another vendor but then you will need to purchase MYOMLab from Pearson separately as well.
  
- You may access the e-text and MyOMLab on a trial basis for 14 days. This is a good option if you are waiting on financial aid but also allows you to evaluate if e-text will work for you. It is important to access MyOMLab within two days of the first class meeting since the first quiz will be due during that period!
You should always bring your “textbook” and a calculator to class!!!!

Prerequisites: Junior standing, ISM 110, and ACCT, BADM, CARS, ENTR, FINC, INTB, ISSC, MKTG, or STHP major.

Course Description: Survey of the operations functions of organizations with emphasis on the design and control decisions. Qualitative and quantitative problem-solving methods used to enhance managerial competence in the operations function.

Introduction

Operations Management is the process of converting resources into products. Resources may include materials, equipment, capital, and labor. Products may include manufactured goods or services. "Operations" is defined here as the set of activities directed toward the conversion of resources into goods and services. The “Management” of these resources and activities is called production/operations management (OM). Operations management is concerned with an almost unlimited spectrum of organized efforts -- from the manufacture of printed electronic circuit boards to the delivering of a social service by a local government; from the fast-food business to the health services industry. All of these involve activities directed toward the conversion of resources into products.

Operations Management (OM) has, in effect, been in existence since man first organized his efforts toward productive tasks, such as hunting, farming, building and trading. More recently production/operations management has become a defined body of knowledge since the managerial revolution beginning in the early twentieth century. Operations management has its roots in a number of areas of study, such as industrial engineering, materials/inventory management, manufacturing management, production scheduling, quality control, forecasting, etc. Examples of questions that are of concern in the field of OM are:

- How do we reduce costs in our organization, and here at UNCG?
- How do we increase our workers' productivity in The Registrar's Office?
- Are we having quality problems with our heart surgeries?
- Where should Harris Teeter locate its new central distribution facility?
- What route should a home visit nurse follow in handling his/her caseload?
- How many iPhones should we carry in December's inventory?
- How many Honda lawnmowers will we sell next year?
- Should we work overtime in Asheboro or hire new production workers in Mexico to make more Dustbusters?
- Should we make the components ourselves or should we outsource that to a supplier in China?
- Can we afford to automate part of our production process to make more office furniture at Brayton Furniture?
- Can we afford not to automate part of our production process?
- Should we sell our manufacturing plant in Asheboro?
General Course Objectives:

The following basic objectives represent important learning goals of the course organization and content:

1. Provide a basic understanding of the production/operations function of an organization and its relationship to the rest of the organization.
2. Provide a basic understanding of the major decision areas, support systems, and tools used to solve the problems and provide decision-making information for production/operations management.
3. Provide an opportunity to apply some of the tools and techniques used for production/operations management problems.

COGNITIVE COURSE OBJECTIVES

Upon completing the course, the student should be able to:

1. Differentiate between productivity, effectiveness, efficiency, and other performance measures for operations management.
2. Explain the factors that make a service operation more difficult to manage as compared to a manufacturing operation.
3. Compare and contrast the different types of conversion systems (i.e., project, job shop, batch flow, line flow, and continuous flow processes).
4. Use project management techniques to plan a project.
5. Develop and use a process control chart for managing quality.
6. Understand the role played by total quality management in organizations.
7. Distinguish between long range, intermediate range, and short range capacity planning in operations management.
8. Identify the factors that influence the location of service vs manufacturing facilities.
9. Identify the important aspects and issues related to facility design decisions.
10. Discuss the role of logistics in operations management.
11. Understand the role of a forecasting system in the operations of an organization.
12. Explain the role of strategic sourcing in the procurement of materials for operations management.
13. Describe the typical objectives and constraints in the aggregate planning problem related to both manufacturing and service organizations.
14. Differentiate the inventory management concerns between dependent demand items and independent demand items.
15. Understand the value and importance of various Lean Systems/Total Quality Management (“JIT/TQM” or “Pull”) systems and techniques.
17. Document and analyze business processes with one or more appropriate forms: flow process chart, report to management, memorandum, proposal, and/or feasibility report.
18. Describe how operational and supply chain processes enable firms to deliver sustainable products and services to the marketplace.
Instructional Methodology:

The methods employed to achieve these objectives will vary, but include:

1. Textbook reading and study assignments.
2. Class lectures and highlighting of critical textbook material.
3. Homework problems and questions.
4. Interactive Quizzes, video clips, video cases, online reviews and assignments
5. Some reading assignments from sources other than the textbook.
6. Classroom discussions and participation
7. A student plant tour project

In general, the overall focus for this course assumes the average student will NOT become an operations specialist, but does need to know the role of the operations manager in order to be successful in his/her own job in business, regardless of what that may be. For those of you who may wish to pursue additional courses in operations management toward a possible career in the area, this course serves as an important introduction to subsequent, more detailed course work.

Performance Evaluation & Grading:

1. Grades - The semester grade will be based on the following point distribution:

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Exam 1</td>
<td>20%</td>
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<tr>
<td>Exam 2</td>
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<td>Exam 3</td>
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<tr>
<td>Homework</td>
<td>15%</td>
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<tr>
<td>Quiz</td>
<td>10%</td>
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<tr>
<td>Project</td>
<td>15%</td>
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Note:
- Details about the homework and exams will be announced in class and posted on the course website.

Grading Scale (%):

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<thead>
<tr>
<th>Grade</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
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<th>D+</th>
<th>D</th>
<th>D-</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>93 -</td>
<td>90 -</td>
<td>86 -</td>
<td>84</td>
<td>80 -</td>
<td>77</td>
<td>73</td>
<td>70</td>
<td>66</td>
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<td>89</td>
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<td>79</td>
<td>76</td>
<td>72</td>
<td>69</td>
<td>65</td>
<td>64</td>
<td>60</td>
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</tbody>
</table>
2. **Homework**

Each student will be required to complete homework assignments. Details will be provided in class, and due dates will be posted on Canvas and MyOMLab. Each homework assignment is worth at least 10 points. Homework is intended to be a major learning tool and again, the material is "fair game" for exam questions, so I expect you to collaborate with other students (if you wish) and/or ask questions about the homework if questions exist. Questions about a homework problem can be asked at any time - in class or during office hours. Homework (and online quizzes) are available through MyOMLab. Here are the instructions for signing into MyOMLab.

**MyLab & Mastering: Student Registration Instructions**

To gain access to MYOMLab for SCM 302 Spring 2019:

a. Go to [canvas.uncg.edu](http://canvas.uncg.edu) and select the SCM 302.04 course from your list of courses
b. Click on MyLab and Mastering on the left hand size of the main navigation menu
c. Click on any of the **Student** links.
d. Follow the steps on the opened window.

**e. To sign in later after registering, go to the Canvas course site:**

i. Click on the Mylab & Mastering link
ii. No additional sign in will be needed thereafter.
iii. Click on the appropriate link to gain access to the software to complete assignments and quizzes.

3. **Exams**

Exams will be a combination of multiple choice and computational problems. All Exams will be given during scheduled time periods on the dates indicated in the syllabus. You must log into MyOMLab and complete the scheduled exams. There are only two excuses that will allow a make-up exam:

- A note from a physician in the case of an illness
- A note from Academic Advising in the case of any other problem.

In either case, you must if at all possible notify me prior to missing an exam.

4. **Online Quizzes**

Students will be required to complete Online quizzes through MyOMLab. For the most part, quizzes will be based on material from the textbook and class notes. The quizzes will cover basic material and are intended to test your understanding of the fundamentals of operations management. You may take each quiz twice before the due date. You will receive credit for the higher of the two grades. **The online quiz for any chapter should be completed by the due date indicated on MyOMLab and/or Canvas**
5. **Attendance**

The time demands on a student are well-known but this class is structured so that a great deal of learning should be accomplished during the class if the student is conscientious about listening, asking questions, completing assignments, and challenging aspects that appear unreasonable. In short, while missing class may not immediately or directly affect the class grade, you should expect that missing class will affect both the overall learning and your performance on exams. **As there is a group project (described below) any student with more than 4 unexcused absences will lose a letter grade.**

**Other Requirements**

**Group Project** - This assignment will be a team project. Each team (4 or 5 students) will complete a physical or virtual tour of a company/plant, write up the findings of the tour and turn the report in by the due date mentioned in the syllabus. A separate detailed document on the Group Project will be posted on Canvas.

Your plant tour write-up should be professionally done. It should include any pictures taken, diagrams, illustrations etc. needed to enhance your report. A minimum of 10 pages (excluding illustrations) is expected. Emphasis should be on the process flow. Samples of old project reports are available in my office for review.

** The plant tour report is due on Tuesday, April 30, 2019.**

**Technology Applications:** Students will be expected, whenever possible, to use appropriate information technology in completing assignments. Discussion of the impact of emerging technology on the Operations function will be a component of this course.

**Ethical Perspectives:** Specific coverage of ethical issues in operations decisions is limited.

**Global Perspectives:** Discussion of the impact of global operations and the challenges it poses for managers will be covered in this course.

**Demographic Diversity Perspectives:** This course will not specifically address this issue.

**Political, Social, Legal, Regulatory and Environmental Perspectives:** These will be discussed as they apply to location decisions made by Operations Managers and how they pose challenges for Operations Managers.

**Academic Integrity Policy:** You must abide by the UNCG Academic Integrity Policy on all assignments (papers, projects, tests, quizzes etc.) that are part of this course. Failure to abide will result in appropriate consequences as spelt out in the policy. See [https://osrr.uncg.edu/academic-integrity/](https://osrr.uncg.edu/academic-integrity/)
Faculty/Student Guidelines: The Bryan School has developed a set of guidelines on student behavior and expectations in and out of the classroom as well as what you should expect of me as faculty member. I will encourage you to read through those guidelines by the end of the first week of class. Here is a link to the pdf file for those guidelines. [https://bryan.uncg.edu/wp-content/uploads/2017/08/Faculty-and-Student-Guidelines-2018-2019.pdf](https://bryan.uncg.edu/wp-content/uploads/2017/08/Faculty-and-Student-Guidelines-2018-2019.pdf)

CLASS SCHEDULE:

NOTE: This schedule is tentative only in that sensitivity will be given to class progress. Some areas may take longer than planned, while others may be finished more quickly than anticipated.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>15-Jan</td>
<td>Introduction to Course/ Operations and Productivity</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>22-Jan</td>
<td>Operations Strategy</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>29-Jan</td>
<td>Project Management</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>5-Feb</td>
<td>Forecasting</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>12-Feb</td>
<td>Supply Chains and Sustainability</td>
<td>Chapter 5</td>
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<td><strong>Exam 1 - Tuesday February 19th</strong></td>
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<tr>
<td>19-Feb</td>
<td>Quality Management</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>26-Feb</td>
<td>Statistical Quality Control</td>
<td>Chapter 6s</td>
</tr>
<tr>
<td></td>
<td><strong>Spring Break - Tuesday March 5th</strong></td>
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<tr>
<td>12-Mar</td>
<td>Process Strategy and Capacity Management</td>
<td>Chapter 7 &amp; 7s</td>
</tr>
<tr>
<td>19-Mar</td>
<td>Location Strategies</td>
<td>Chapter 8</td>
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<tr>
<td>26-Mar</td>
<td>Layout Strategies</td>
<td>Chapter 9</td>
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<tr>
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<td><strong>Exam 2 - Tuesday April 2nd</strong></td>
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<tr>
<td>2-Apr</td>
<td>Supply Chain Management</td>
<td>Chapter 11</td>
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<tr>
<td>9-Apr</td>
<td>Inventory Management</td>
<td>Chapter 12</td>
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<tr>
<td>16-Apr</td>
<td>Aggregate Sales &amp; Operations Planning</td>
<td>Chapter 13</td>
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<tr>
<td>23-Apr</td>
<td>Material Requirements Planning (MRP) and ERP</td>
<td>Chapter 14</td>
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<tr>
<td>30-Apr</td>
<td>JIT and Lean Operations. Final Report Due.</td>
<td>Chapter 16</td>
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Exam 3 - Tuesday May 7, 7:00 p.m.