



BROWARD COLLEGE COURSE OUTLINE

LAST REVIEW: 2009-10

NEXT REVIEW: 2014-15
(2014-2015)

STATUS: A
A

COURSE TITLE: Operations Management

COMMON COURSE NUMBER: MAN4504

CREDIT HOURS: 3

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS:
(Voc. Course ONLY)

Lecture: **48** Lab:
Clinic: Other:

PREREQUISITE(S): None

COREQUISITE(S): None

PRE/COREQUISITE(S): None

COURSE DESCRIPTION: This course teaches the operational decision making management techniques to improve the processes and productivity in organizations. Topics discussed are quality and outcomes; efficiency; forecasting; work flow processes; inventory control; design of goods and services; waiting lines; and critical path. Managing a project from beginning to end, including how to identify needs, and define, assign, and track items, is addressed.

UNIT TITLES

1. Operations Strategy and Project Management
2. Process Analysis and Design
3. Quality, Performance, and Capacity Planning
4. Constraint Management and Lean Systems
5. Supply Chain Design and Integration
6. Facility and Inventory Management

EVALUATION:

Students will be assessed through a variety of means. Evaluation may include, but is not limited to, the following: exams, quizzes, presentations, portfolios, discussions, class participation, attendance, projects, co-ops, practica, internships, externships, and research reports.

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UNITS

Unit 1: Operations Strategy and Project Management

General Outcome:

- 1.0 The student shall analyze the role of operations management and project management within a competitive marketplace.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Describe operations and supply chains in terms of inputs, processes, outputs, information flows, suppliers, and customers.**
- 1.2 Identify the global trends and challenges facing operations management.**
- 1.3 Explain how operations can be used as a competitive tool.**
- 1.4 Define the major activities associated with organizing, planning, monitoring, and controlling projects.**
- 1.5 Identify the sequence of critical activities that determines the duration of a project.**
- 1.6 Diagram the network of interrelated activities in a project.**

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Unit 2: Process Analysis and Design

General Outcome:

2.0 The student shall apply the concepts of process analysis.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Configure operations into layouts.**
- 2.2 Create flowcharts, service blueprints, and process charts.**
- 2.3 Improve a process using benchmarking.**
- 2.4 Construct asset of metrics for process evaluation.**
- 2.5 Describe Pareto charts, cause-and-effect diagrams, and process simulation.**
- 2.6 Define customer involvement, automation, capital intensity, economies of scope, and focus as these terms relate to Process Analysis.**
- 2.7 Define process reengineering and process improvement.**

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Unit 3: Quality, Performance and Capacity Planning

General Outcome:

- 3.0 The student shall investigate the concepts Quality, Performance, and Capacity planning.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1 Investigate the four major costs of quality.**
- 3.2 Identify quality from the customer's perspective.**
- 3.3 Describe how to determine whether a process is capable of producing a service or product to specifications.**
- 3.4 Describe and recommend how to construct control charts and use them to determine whether a process is out of statistical control.**
- 3.5 Organize and compose a systematic approach to capacity planning.**
- 3.6 Classify the basic principles of TQM and Six Sigma programs.**
- 3.7 Prepare waiting-line models, simulation, and decision trees to assist capacity decisions.**

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Unit 4: Constraint Management and Lean Systems

General Outcome:

4.0 The student shall review and apply the Theory of Constraints.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 Explain the theory of constraints.**
- 4.2 Apply the theory of constraints to product mix decisions.**
- 4.3 Conclude how to manage constraints.**
- 4.4 Identify the characteristics and strategic advantages of lean systems.**
- 4.5 Assess how lean systems can facilitate the continuous improvement of processes.**
- 4.6 Evaluate the implementation issues associated with the application of lean systems.**

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Unit 5: Supply Chain Design and Integration

General Outcome:

5.0 The student shall apply the concepts of Supply Chain design and integration.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Identify the nature of supply chains for service providers, as well as for manufacturers.**
- 5.2 Define the key design issues associated with supply chain processes.**
- 5.3 Formulate critical supply chain inventory and financial measures.**
- 5.4 Compare the major causes of dynamics in a supply chain.**
- 5.5 Explain how integrated supply chains can mitigate supply chain dynamics.**
- 5.6 Explain the nature and purpose of the key nested processes within the new service or product development, supplier relationship, order fulfillment, and customer relationship processes.**
- 5.7 Use a total annual cost analysis and a preference matrix to select suppliers and the expected value decision rule to determine logistics capacity.**

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Unit 6: Faculty and Inventory Management

General Outcome:

6.0 The student shall investigate Facility and Inventory Management.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1 Explain how location decisions relate to the design of supply chains.**
- 6.2 Identify factors affecting location choices.**
- 6.3 Explain the role of geographical information systems in making location decisions.**
- 6.4 Determine the items deserving most attention and tightest inventory control.**
- 6.5 Calculate the economic order quantity and apply it to various situations.**
- 6.6 Determine the order quantity and reorder point for a continuous review inventory control system.**
- 6.7 Determine the review interval and target inventory level for a periodic review inventory control system.**
- 6.8 Define the key factors that determine the appropriate choice of an inventory system.**