College:

Southeastern Community College

Signature Program:

Transportation & Logistics – noncredit Production & Inventory Management Certificate

Course Quality Standards:

SCC – Transportation & Logistics - XXBU-XBULM-SDOEE30 Basics of Supply Chain Management
SCC – Transportation & Logistics - XXBU-XBULM-SDOEE32 Master Planning of Resources
SCC – Transportation & Logistics - XXBU-XBULM-SDOEE33 Detailed Scheduling & Planning
SCC – Transportation & Logistics - XXBU-XBULM-SDOEE34 Execution and Control of Operations
SCC – Transportation & Logistics - XXBU-XBULM-SDOEE35 Strategic Management of Resources

This workforce solution is funded by the I-AM Consortium which is 100% financed through a $12,951,165 grant from the Department of Labor's Employment & Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership

COURSE QUALITY STANDARDS

COURSE TITLE: Basics of Supply Chain Management

COURSE NUMBER: XXBU – XBULM – SDOEE30

CONTACT HOURS: 16 LECTURE: 16 LAB: 0 OTHER: APICS on-line study tools

COURSE DESCRIPTION:

This course provides a basic understanding of the planning and control of flow of materials into, though, and out of organizations. Topics include types of manufacturing systems, demand management and forecasting, master planning, material requirements planning, capacity management, production activity control, purchasing, inventory management, physical distribution, quality management, lean manufacturing and the theory of constraints.

This course aligns with the APICS curriculum, Basics of Supply Chain Management (BSCM). Students may utilize the acquired competencies in this course to take the APICS BSCM exam, one of five exams required to obtain status as Certified in Production & Inventory Management (CPIM).

PREREQUISITES:

COREQUISITES:

QUALITY STANDARDS

Upon successfully completing this course, students should be able to:

1. Describe or identify key concepts of Supply Chain Management.
2. Characterize the types, sources and patterns of demand and forecasting.
3. Apply Master Planning principles to incorporate sales & operations planning (S&OP) and master production scheduling (MPS) as an input to material requirement planning (MRP).
4. Create and adjust a priority plan for release & receipt of materials using material requirements planning (MRP).
5. Explain the role and importance of capacity management and production activity control (PAC).
6. Describe and demonstrate the concepts of aggregate inventory management.
7. Describe and demonstrate the concepts of item inventory management.
8. Define the role of purchasing and physical distribution in creating value.
9. Characterize the contribution of lean and quality systems in supply chain management.
10. Explain the practice and principles in Theory of Constraints management philosophy.

ASSESSMENT

Standard	Quiz	Small Group Activity	Problem Sets	Large Group Discussion	Other
1. Describe or identify key concepts of Supply Chain Management.	X	X		X	APICS on-line study tools
2. Characterize the types, sources and patterns of demand and forecasting.	X	X	X	X	APICS on-line study tools
3. Apply Master Planning principles to incorporate sales & operations planning (S&OP) and master scheduling (MPS) as an input to material requirement planning (MRP).	X	X		X	APICS on-line study tools
4. Create and adjust a priority plan for release & receipt of materials using material requirements planning (MRP).	X			X	APICS on-line study tools
5. Explain the role and importance of capacity management and production activity control.	X			X	APICS on-line study tools
6. Describe and demonstrate the concepts of aggregate inventory management.	X	X	X		APICS on-line study tools
7. Describe and demonstrate the concepts of item inventory management.	X	X	X		APICS on-line study tools
8. Define the role of purchasing and physical distribution in creating value.	X	X		X	APICS on-line study tools
9. Characterize the contribution of lean and quality systems in supply chain management.	X			X	APICS on-line study tools
10. Explain the practice and principles used in the Theory of Constraints management philosophy.	X			X	APICS on-line study tools

PREPARED BY: Susan Dunek
DATE: September 11, 2015
DATE REVISED:

COURSE QUALITY STANDARDS

COURSE TITLE: Master Planning of Resources

COURSE NUMBER: XXBU – XBULM – SDOEE32

CONTACT HOURS: 16 LECTURE: 16 LAB: 0 OTHER: APICS on-line study tools

COURSE DESCRIPTION:

This course provides a basic understanding of processes used to develop sales and operations plans, identify and assess internal and external demand, and determine forecasting requirements. Students explore the importance of producing achievable master schedules that are consistent with business policies, objectives, and resource constraints. Topics include demand management, sales & operations planning (S&OP), master scheduling and measurement the business plan.

This course aligns with the APICS curriculum, Master Planning of Resources (MRP). Students may utilize the acquired competencies in this course to take the APICS MRP exam, one of five exams required to obtain status as Certified in Production & Inventory Management (CPIM).

PREREQUISITES: _Basics of Supply Chain Management XXBU – XBULM – SDOEE30 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.

COREQUISITES:

QUALITY STANDARDS

Upon successfully completing this course, students should be able to:

1. Describe and identify key concepts underlying master planning of resources.
2. Characterize concepts related to forecasting demand and types of forecasting techniques.
3. Evaluate demand management and customer service through forecast evaluation, customer relationship management (CMR) and safety stock practices.
4. Describe and demonstrate the concepts of distribution network planning, distribution replenishment planning and distribution system performance measurement.
5. Characterize the attributes and fundamentals of sales and operations planning (S&OP) processes and development / validation of a production plan.
6. Describe the functional relationship between S&OP and master scheduling, including major influences on master scheduling in the business environment.
7. Examine the role of the master scheduler in managing the master schedule, reviewing capacity requirements and measuring master scheduling performance.
8. Analyze case studies to reinforce master planning of resources.

ASSESSMENT

Standard	Quiz	Small Group Activity	Problem Sets	Large Group Discussion	Other
1. Describe and identify key concepts underlying master planning of resources.	X	X		X	APICS on-line study tools
2. Characterize concepts related to forecasting demand and types of forecasting techniques.	X	X		X	APICS on-line study tools
3. Evaluate demand management and customer service through forecast evaluation, customer relationship management (CMR) and safety stock practices.	X	X	X	X	APICS on-line study tools
4. Describe and demonstrate the concepts of distribution network planning, distribution replenishment planning and distribution system performance measurement.	X	X		X	APICS on-line study tools
5. Characterize the attributes and fundamentals of sales and operations planning (S&OP) processes and development / validation of a production plan.	X			X	APICS on-line study tools
6. Describe the functional relationship between S&OP and master scheduling, including major influences on master scheduling in the business environment.	X	X		X	APICS on-line study tools
7. Examine the role of the master scheduler in managing the master schedule, reviewing capacity requirements and measuring master scheduling performance.	X	X	X	X	APICS on-line study tools
8. Analyze case studies to reinforce master planning of resources.		X		X	APICS on-line study tools

PREPARED BY: Susan Dunek
DATE: September 11, 2015
DATE REVISED:

COURSE QUALITY STANDARDS

COURSE TITLE: Detailed Scheduling and Planning

COURSE NUMBER: XXBU – XBULM – SDOEE33

CONTACT HOURS: 16 LECTURE: 16 LAB: 0 OTHER: APICS on-line study tools

COURSE DESCRIPTION:

This course provides a basic understanding of material requirement planning (MRP), capacity requirements planning (CRP), inventory management practices, and procurement and supplier planning. Topics include techniques and practices of inventory management, mechanics of detailed MRP, planning operations to support the plan, and planning procurement and external sources of supply.

This course aligns with the APICS curriculum, Detailed Scheduling and Planning (DSP). Students may utilize the acquired competencies in this course to take the APICS DSP exam, one of five exams required to obtain status as Certified in Production & Inventory Management (CPIM).

PREREQUISITES: _Basics of Supply Chain Management XXBU – XBULM – SDOEE30 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.

COREQUISITES:

QUALITY STANDARDS

Upon successfully completing this course, students should be able to:

1. Identify and characterize types of inventory policies.
2. Describe and demonstrate the concepts of aggregate and disaggregate inventory planning, inventory accuracy and the impact of lean production tools.
3. Identify the information used in the material planning process and characterize the use of MRP and other planning parameters.
4. Describe and identify the basic MRP mechanics and calculate gross and net requirements.
5. Demonstrate the use of MRP outputs to maintain the material plan and manage projects.
6. Explain the influence on, and information used for detailed capacity planning.
7. Characterize the various detailed capacity management approaches and by industry type.
8. Identify the factors determining supply relationships and approaches available for establishing supplier relationships.
9. Explain the supplier partnership roles in development, purchasing and supply chain acceleration.

ASSESSMENT

Standard	Quiz	Small Group Activity	Problem Sets	Large Group Discussion	Other
1. Identify and characterize types of inventory policies.	X			X	APICS on-line study tools
2. Describe and demonstrate the concepts of aggregate and disaggregate inventory planning, inventory accuracy and the impact of lean production tools.	X	X	X	X	APICS on-line study tools
3. Identify the information used in the material planning process and characterize the use of MRP and other planning parameters.	X		X	X	APICS on-line study tools
4. Describe and identify the basic MRP mechanics and calculate gross and net requirements.	X	X	X	X	APICS on-line study tools
5. Demonstrate the use of MRP outputs to maintain the material plan and manage projects.	X		X	X	APICS on-line study tools
6. Explain the influence on, and information used for detailed capacity planning.	X	X		X	APICS on-line study tools
7. Characterize the various detailed capacity management approaches and by industry type.	X	X	X	X	APICS on-line study tools
8. Identify the factors determining supply relationships and approaches available for establishing supplier relationships.	X	X	X	X	APICS on-line study tools
9. Explain the supplier partnership roles in development, purchasing and supply chain acceleration.	X	X		X	APICS on-line study tools

PREPARED BY: Susan Dunek
DATE: September 11, 2015
DATE REVISED:

COURSE QUALITY STANDARDS

COURSE TITLE: Execution and Control of Operations

COURSE NUMBER: XXBU – XBULM – SDOEE34

CONTACT HOURS: 16 LECTURE: 16 LAB: 0 OTHER: APICS on-line study tools

COURSE DESCRIPTION:

This course provides a basic understanding of prioritizing and sequencing work, executing work plans and implementing controls, reporting activity results, and providing evaluating feedback on performance. Topics include techniques for scheduling and controlling production processes, the execution of quality initiatives and continuous improvement plans, and the control and handling of inventories.

This course aligns with the APICS curriculum, Execution and Control of Operations (ECO). Students may utilize the acquired competencies in this course to take the APICS ECO exam, one of five exams required to obtain status as Certified in Production & Inventory Management (CPIM).

PREREQUISITES: _Basics of Supply Chain Management XXBU – XBULM – SDOEE30 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.

COREQUISITES:

QUALITY STANDARDS

Upon successfully completing this course, students should be able to:

1. Describe or identify key concepts and principles underlying execution of operations.
2. Characterizes three approaches to scheduling and authorization: material requirement planning (MRP) systems, theory of constraints (TOC) scheduling and lean-based scheduling systems.
3. Compare key principles, techniques and processes used in execution of production schedules.
4. Characterize principles and techniques used in controlling costs and quality.
5. Investigate the significance of management and communication in the execution and control of operations.
6. Describe and demonstrate key tools and techniques that support quality and continuous improvement: check sheet, histogram, Pareto chart, cause and effect diagram, process map, A3 report, DMAIC and PDCA.
7. Characterize principles and techniques manufacturers use in designing products and processes as well as tradeoff considerations.
8. Analyze case studies to reinforce execution and control of operations.

ASSESSMENT

Standard	Quiz	Small Group Activity	Problem Sets	Large Group Discussion	Other
1. Describe or identify key concepts and principles underlying execution of operations.	X	X		X	APICS on-line study tools
2. Characterizes three approaches to scheduling and authorization: material requirement planning (MRP) systems, theory of constraints (TOC) scheduling and lean-based scheduling systems.	X	X		X	APICS on-line study tools
3. Compare key principles, techniques and processes used in execution of production schedules.	X		X	X	APICS on-line study tools
4. Characterize principles and techniques used in controlling costs and quality.	X			X	APICS on-line study tools
5. Investigate the significance of management and communication in the execution and control of operations.	X	X		X	APICS on-line study tools
6. Describe and demonstrate key tools and techniques that support quality and continuous improvement: check sheet, histogram, Pareto chart, cause and effect diagram, process map, A3 report, DMAIC and PDCA.	X	X	X	X	APICS on-line study tools
7. Characterize principles and techniques manufacturers use in designing products and processes as well as tradeoff considerations.	X			X	APICS on-line study tools
8. Analyze case studies to reinforce execution and control of operations.		X		X	APICS on-line study tools

PREPARED BY: Susan Dunek
DATE: September 11, 2015
DATE REVISED:

COURSE QUALITY STANDARDS

COURSE TITLE: Strategic Management of Resources

COURSE NUMBER: XXBU – XBULM – SDOEE35

CONTACT HOURS: 16 LECTURE: 16 LAB: 0 OTHER: APICS on-line study tools

COURSE DESCRIPTION:

This course provides a basic understanding of the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. Students explore the importance of aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change. Topics include competitive market issues, the choices affecting facilities, supply chain, IT and organizational design, configuring and integrating internal processes and project management / evaluation.

This course aligns with the APICS curriculum, Strategic Management of Resources (SMR), Students may utilize the acquired competencies in this course to take the APICS SMR exam, one of five exams required to obtain status as Certified in Production & Inventory Management (CPIM).

PREREQUISITES: _Basics of Supply Chain Management XXBU – XBULM – SDOEE30 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.
Master Planning of Resources XXBU – XBULM – SDOEE32 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.
Detailed Scheduling and Planning XXBU – XBULM – SDOEE33 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.
Execution and Control of Operations XXBU – XBULM – SDOEE34 or evidence of successful completion of the APICS Basics of Supply Chain Management exam.

COREQUISITES:

QUALITY STANDARDS

Upon successfully completing this course, students should be able to:

1. Identify and describe key concepts, assessments and their use in developing the business strategy: external environment, internal environment, competitive strategy.
2. Characterize the principles for strategies in the global environment that incorporate corporate social responsibility and sustainability.
3. Describe and demonstrate the concepts of operations strategy: product and service process design, structure and infrastructure requirement, and performance measurement systems.
4. Characterize the dependence of performance objectives on operations strategy choices and financial measurements.
5. Identify and describe key concepts used to align operations with supply chain partners.
6. Explain the key features if infrastructure systems: management, quality, information infrastructure and deployment of facilities and equipment.
7. Characterize the contribution of change management influences on strategic management of resources: leadership and management, risk assessment and mitigation, and project management.
8. Analyze case studies to reinforce strategic management of resources.

ASSESSMENT

Standard	Quiz	Small Group Activity	Problem Sets	Large Group Discussion	Other
1. Identify and describe key concepts, assessments and their use in developing the business strategy: external environment, internal environment, competitive strategy.	X	X		X	APICS on-line study tools
2. Characterize the principles for strategies in the global environment that incorporate corporate social responsibility and sustainability.	X	X	X	X	APICS on-line study tools
3. Describe and demonstrate the concepts of operations strategy: product and service process design, structure and infrastructure requirement, and performance measurement systems.	X	X	X	X	APICS on-line study tools
4. Characterize the dependence of performance objectives on operations strategy choices and financial measurements.	X		X	X	APICS on-line study tools
5. Identify and describe key concepts used to align operations with supply chain partners.	X	X		X	APICS on-line study tools
6. Explain the key features if infrastructure systems: management, quality, information infrastructure and deployment of facilities and equipment.	X	X		X	APICS on-line study tools
7. Characterize the contribution of change management influences on strategic management of resources: leadership and management, risk assessment and mitigation, and project management.	X		X	X	APICS on-line study tools
8. Analyze case studies to reinforce strategic management of resources.		X		X	APICS on-line study tools

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