



ODU Global
CONTINUING EDUCATION
OLD DOMINION UNIVERSITY



PRINCIPLES OF SUPPLY CHAIN MANAGEMENT

**A modular program designed for those
seeking a better understanding of the
modern supply chain**

odu.edu/cepd/supply-chain-management

PRINCIPLES OF SUPPLY CHAIN MANAGEMENT

There are six modules that can be taken independently at a cost of \$1000 per module or as part of a complete program for \$5000. Learners have up to one year to complete the program.

- Module 1: Supply Chain Overview and Customer Relationship Management
- Module 2: Purchasing Management and Demand Forecasting
- Module 3: Supplier Relationship Management and Resource Planning Systems
- Module 4: Inventory Management, Domestic & Global Logistics, and Service Response Logistics
- Module 5: Lean and Six Sigma in the Supply Chain and Process Integration
- Module 6: Performance Measurement in the Supply Chain, Global Location, Supply Chain 4.0, and Professional Supply Chain Certifications



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ABOUT THE COURSE

- **Modular:** Learners may take as many or as few modules as they wish. Each module is \$1000, or take all six for \$5000. All modules are completely online and feature monthly collaboration sessions with the instructor. Additionally, the instructor is always available via phone or e-mail to answer specific questions.
- **Competence Milestones:** Upon successful completion of each module, learners will receive a badge, and if they take all six will also be award a Certificate of Achievement from ODU.
- **Completion Time:** Modules open January 1 and close December 31, giving students up to 1 year to complete the program.



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ABOUT THE INSTRUCTOR

Chuck Gates has 40 years of experience with Caterpillar, where he led global supply chain management, product design, and other areas. He also has 30 years of experience teaching at universities and serving as a board member for three technical organizations including ASCM (formerly APICS,) SME, and ASQ.)



MODULE 1: SUPPLY CHAIN OVERVIEW AND CUSTOMER RELATIONSHIP MANAGEMENT

Learners will understand the detailed workings of the supply chain, the value of better supply chain interactions and partnering, the challenges of continually improving the supply chain performance, and the trends in supply chain management.

Additionally, they will develop an understanding of comprehensive customer relationship management, the value of smaller customer segmentations, ways to use technology to connect with more customers, and the absolute first step in supply chain management: **how to enhance the customer experience.**

TOPICS AND ASSIGNMENTS

- Supply Chain Structure
- Supply Chain Origins
- Bullwhip Effect
- Sustainability
- Supply - Operations - Logistics - Integration
- Current Trends in Supply Chain Management (SCM)
- Recommended CRM Program
- Types of Customers
- Customer Loyalty
- Customer Lifetime Value
- Data Security & eMarketing

Assignments include discussion questions, problem sets, a case study, and multiple choice final exam.



MODULE 2: PURCHASING MANAGEMENT AND DEMAND FORECASTING

Learners will understand the detailed workings of global purchasing management techniques, making the optimum sourcing decisions, e-procurement, supplier selection & supplier certification, purchasing organization structure and characteristics, basic international trade law and commercial terms.

Additionally, they will build their understanding of how to improve the accuracy of demand forecasting, analyze several qualitative and quantitative forecasting models, the value of collaborative planning, forecasting, and replenish for select partners in the supply chain.

TOPICS AND ASSIGNMENTS

- Purchasing Terms
- Supply Management
- Manual Purchasing
- e-Procurement
- Make-or-Buy Breakeven Analysis
- Supplier Selection
- Purchasing Organization
- Global Sourcing
- Collaborative Planning Forecasting & Replenishment (CPFR)
- Qualitative & Quantitative Forecasting Methods
- Artificial Intelligence & Forecasting
- Cloud Based Techniques
- Demand Management

Assignments include discussion questions, problem sets, a case study, and multiple choice final exam.



MODULE 3: SUPPLIER RELATIONSHIP MANAGEMENT & RESOURCE PLANNING

Learners will hear about suppliers and other supply chain partners, how to build successful partnerships, supplier evaluation and certification programs, supplier recognition, techniques to manage relationships during a changing environment and challenges, and the use of software programs to better, more rapidly engage with supply chain partners.

Additionally, they will build their optimal production strategies, the detailed process for balancing supply with demand, the top to bottom planning and execution systems for planning and monitoring capacity, and the advanced enterprise resource planning (ERP), and expansion of ERP to include supply chain partners.

TOPICS AND ASSIGNMENTS

- Supplier Selection
- Supplier Evaluation & Certification
- Types of Supplier Relationships
- Supplier Recognition Programs
- Balanced Score Card (BSC)
- Supplier Relationship Model
- Aggregate Production Planning
- Master Production Schedule
- Bill of Materials
- Material Requirements Planning
- Manufacturing Resource Planning
- Capacity Planning
- Distribution Requirements Planning
- Enterprise Resource Planning

Assignments include discussion questions, problem sets, a case study, and multiple choice final exam.



MODULE 4: INVENTORY MANAGEMENT, DOMESTIC & GLOBAL LOGISTICS, AND SERVICE RESPONSE LOGISTICS

Learners will understand inventory management techniques, economic order quantity, quantity discount models, reorder point (ROP), optimizing inventory, domestic, global, service response logistics and queuing and wait times.

TOPICS AND ASSIGNMENTS

- Dependent & Independent Demand
- ABC Inventory
- Inventory Models
- Economic Order Quantity (EOQ)
- Fixed Order Quantity
- Modes of Transportation
- Warehousing & Distribution
- Global Logistics
- Reverse Logistics
- Service Industry Supply Chains
- SCM for Service
- Service Productivity
- Service Channels
- Queuing & Wait Times

Assignments include discussion questions, problem sets, a case study, and multiple choice final exam.



MODULE 5: LEAN AND SIX SIGMA IN THE SUPPLY CHAIN AND PROCESS INTEGRATION

Learners will understand the detailed workings of lean and waste elimination, six sigma and reduced variation, to effectively apply lean, six sigma, and continuous process improvement tools and techniques, and how to use statistical process control (SPC) and process capability to move quality to the excellence level.

Additionally, they will develop an understanding of ways to integrate processes in the supply chain for improved sharing and collaboration of best practices and to meet other process improvement goals to be world class.

TOPICS AND ASSIGNMENTS

- Lean SCM
- Six Sigma SCM
- Statistical Process Control (SPC)
- SCM Integration Model
- Supply Chain Visibility

Assignments include discussion questions, problem sets, a case study, and multiple choice final exam.



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MODULE 6: PERFORMANCE MEASUREMENT, GLOBAL LOCATION, SUPPLY CHAIN 4.0, AND PROFESSIONAL CERTIFICATIONS

Learners will understand the need to upgrade the performance metrics for all supply chain partners, examining better performance measurements such as the Balanced Score Card (BSC), the SCOR Model, the Triple Bottom Line (TBL), and to design a common set of performance metrics.

Additionally, they will develop an understanding of how locating globally can dramatically impact the profitability, how trade agreements impact business decision-making, how business clusters and logistics hubs help determine the location of a business function.

Finally, they will learn about the current trends in the supply chain such as Supply Chain 4.0 and the value of obtaining a supply chain professional certification.

TOPICS AND ASSIGNMENTS

- World-Class Performance Measurements
- Sustainability Triple Bottom Line
- Balanced Score Card (BSC)
- SCOR Model
- Location Factors
- Business Clusters
- Logistics Hub Example - VEDP

Assignments include discussion questions, problem sets, a case study, and multiple choice final exam.





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