**Course Description:**

Operations Management explores how to plan, organize and monitor day-to-day business activities. Learners will develop knowledge and skills to plan production activities, promote workplace safety and manage inventory, quality control and operational risk. This course also includes learning outcomes in facilities management and managerial accounting.

**Strand 1. Business Operations/21st Century Skills**

Learners apply principles of economics, business management, marketing and employability in an entrepreneur, manager and employee role to the leadership, planning, developing and analyzing of business enterprises related to the career field.

**Outcome 1.3 Business Ethics and Law**

Analyze how professional, ethical, and legal behavior contributes to continuous improvement in organizational performance and regulatory compliance.

**Competencies**

1.3.1 Analyze how regulatory compliance affects business operations and organizational performance.

1.3.2 Follow protocols and practices necessary to maintain a clean, safe and healthy work environment.

1.3.5 Access and implement safety compliance measures (e.g., quality assurance information, safety data sheets [SDSs], product safety data sheets [PSDSs], United States Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA]) that contribute to the continuous improvement of the organization.

**Outcome 1.11 Principles of Business Economics**

Examine and employ economic principles, concepts and policies to accomplish organizational goals and objectives.

**Competencies**

1.11.4 Determine how the quality, quantity and pricing of goods and services are affected by domestic and international competition in a market economy.

**Strand 2. Business Foundations**

Learners acquire foundational knowledge of business activities supported by economic principles, business processes and global business considerations.

**Outcome 2.1. Business Activities**

Relate business functions to business models, operations and strategies.

**Competencies**

2.1.8 Explain the role and function of supply chain management and how it interacts with other business activities.

2.1.9 Explain the role and function of strategic management and how it interacts with other business activities.

2.1.10 Explain the role and function of operations management and how it interacts with other business activities.

2.1.11 Explain the role and function of sales and how it interacts with other business activities.

2.1.12 Explain the role and function of logistics and how it interacts with other business activities.

**Outcome 2.2 Economic Principles**

Relate principles and concepts of applied economics to business models, operations and strategies.

**Competencies**

2.2.9 Analyze the impact of specialization and division of labor on productivity.

2.2.11 Explain the impact of the law of diminishing returns and the concept of economies of scale.

**Outcome 2.3 Global Business**

Relate global business functions to internal business operations, activities and strategies.

**Competencies**

2.3.7 Describe costs associated with global business, methods used to analyze those costs and the role of outsourcing and offshoring in cost management.

2.3.8 Describe regulatory policies and the government agencies that influence global trade and describe their impact.

**Strand 4. Business Governance**

Learners acquire foundational legal knowledge and apply business governance principles to minimize risk, maintain organizational compliance and establish and maintain organizational structure.

**Outcome 4.1 Risk Management Fundamentals**

Identify policies, processes and strategies to manage risk.

**Competencies**

4.1.4 Describe ways businesses prevent, control, transfer and retain risks.

4.1.5 Identify areas of enterprise risk that must be managed (e.g., security, confidentiality, privacy, processing integrity, availability).

4.1.6 Describe quantitative and qualitative approaches to measuring and analyzing risk.

4.1.7 Distinguish among key risk indicators, key performance indicators and process indicators.

4.1.8 Develop a risk profile using the risk-reward relationship.

4.1.9 Select strategies for managing risk and recovering from disasters.

4.1.10 Describe the elements of an enterprise risk-management policy.

**Outcome 4.2 Contract Oversight**

Administer and evaluate contracts.

**Competencies**

4.2.9 Determine strategies to manage compliance of outsourced and hosted service providers.

**Outcome 4.3 Compliance**

Identify policies, processes and strategies to manage compliance.

**Competencies**

4.3.4 Describe the factors that influence compliance program costs and effectiveness (e.g., organizational size and structure, accreditation, incentives availability).

4.3.7 Discuss methods for documenting adherence to compliance policies and procedures.

4.3.8 Explain the role and function of compliance assessment activities (e.g., due-diligence reviews, internal audits, work plan reviews).

**Outcome 4.6 Corporate Social Responsibility**

Identify and evaluate corporate social responsibility policies and strategies.

**Competencies**

4.6.4 Identify and report noncompliance with corporate social responsibility policies.

**Strand 6. Business Management**

Learners identify and apply policies, processes and strategies for effective management of information, projects, strategy and talent.

**Outcome 6.2 Strategic Planning**

Apply strategic planning processes.

**Competencies**

6.2.4 Identify and benchmark (e.g., dashboards, scorecards) key performance indicators and key risk indicators.

**Strand 7. Operations Management**

Learners identify and apply policies, processes and strategies for business operations.

**Outcome 7.1 Safety, Health and Security**

Identify, administer and evaluate safety, health and security policies, processes and strategies.

**Competencies**

7.1.5 Describe policies, procedures, performance aids and monitoring activities to promote and support workplace safety and security goals.

7.1.6 Explain the role and function of safety inspections.

7.1.7 Implement emergency response, business recovery, and incidence response plans based on available business and community resources.

7.1.8 Describe business continuity and disaster reaction exercises.

7.1.9. Describe the importance of reporting and investigating safety and security incidents.

7.1.10 Describe the impact of workplace incidents on business reputation, brand and performance; and describe strategies to reduce risk.

7.1.11 Explain how emergency and incidence response plans are adjusted to address hazardous materials’ presence or release.

**Outcome 7.2 Sourcing and Procurement**

Plan, implement and evaluate sourcing and procurement activities.

**Competencies**

7.2.1 Differentiate among purchasing, procurement and sourcing.

7.2.2 Identify potential sources of materials or services locally, and make purchasing recommendations.

7.2.3 Evaluate the impact of using global sources.

7.2.4 Describe how the bid or contracting process (e.g., bid specification, vendor or supplier search, bid review, selection of vendor) impacts business objectives.

7.2.5 Describe the importance of negotiating vendor contracts with suppliers (e.g., service and maintenance, supplies, system development).

7.2.6 Describe the purpose of monitoring and evaluating vendor performance and relationships (e.g., supplier visits, scorecards).

7.2.8 Describe expense control strategies (e.g., reduce use of supplies or services, develop budgets, review overhead or operating costs, renegotiate contracts).

7.2.9 Identify opportunities to incorporate operational objectives into the procurement process (e.g., supplier diversity initiatives, supply chain management goals, regulatory compliance).

7.2.10 Evaluate whether to make or buy products.

7.2.11 Assess the impact of accepting gifts on procurement decisions, business performance, and brand image.

7.2.12 Explain the role and function of supplier diversity initiatives.

**Outcome 7.3 Inventory Management**

Identify, administer and evaluate inventory management policies, processes and strategies.

**Competencies**

7.3.1 Calculate the cost of carrying inventory.

7.3.2 Identify the advantages and disadvantages of Just-in-Time (JIT) inventory processes.

7.3.3 Describe the factors considered in establishing inventory thresholds (e.g., tolerance for stock-outs, supply chain process goals).

7.3.4 Describe inventory systems and controls to efficiently monitor, safeguard and replenish inventory (e.g., JIT, Lean, FIFO, LIFO, inventory counts) based on usage levels, lead times and forecasts.

7.3.5 Explain the difference between demand forecasts and capacity planning strategies (e.g., lead strategy, lag strategy, match strategy).

7.3.6 Explain the role and function of a master production schedule.

7.3.7 Identify ways to evaluate the effectiveness and efficiency of a master production schedule.

7.3.12 Describe performance metrics (e.g., sales, stock, inventory performance) used to select a distribution strategy.

7.3.13 Conduct inventory valuation (e.g., First In First Out, Last In First Out, average cost).

7.3.14 Explain the importance of planning for inventory disruptions (e.g., stockout, dead, discontinued, obsolete).

7.3.15 Identify factors that impact the availability of inventory.

7.3.16 Describe how inventory management principles apply to intangible services.

7.3.17 Describe different methods to conduct a physical inventory (e.g., annual, cycle count, ABC analysis).

**Outcome 7.4 Quality Management**

Identify, administer and evaluate quality control policies, processes and strategies.

**Competencies**

7.4.3 Explain how a quality control plan is developed and the role of employees and data integrity in the process.

7.4.4 Evaluate the impact of quality control on brand experience, business reputation, financial performance, procurement, sourcing options and process design.

7.4.5 Describe the impacts of quantitative and qualitative quality control methods on risk prevention, appraisal and business performance metrics (e.g., mean time to failure, mean time to repair, training scores, complaint analysis, warranty analysis).

7.4.6 Explain the role and function of documentation systems (e.g., quality manuals, plans, procedures, work instructions, inspections and tests) in quality control and management.

7.4.7 Analyze and report quality of products and services using recognized quality standards and specifications.

7.4.8 Describe validation and qualification methods used in new or revised products, processes and services (e.g., alpha and beta testing, first-article, customer satisfaction surveys).

7.4.9 Select, apply and interpret quality controls (e.g., flowcharts, Pareto charts, cause-and-effect diagrams, check sheets, scatter diagrams, histograms).

7.4.10 Evaluate plans for quality improvement using continuous improvement techniques (e.g., Lean, Six Sigma, ISO 9000, Malcolm Baldridge, DMAIC [Define, Measure, Analyze, Improve and Control]).

**Outcome 7.5 Facilities Management**

Identify, administer and evaluate methods of maintaining facilities, equipment and property.

**Competencies**

7.5.1 Identify routine activities for maintaining, disposing, retiring and replacing business facilities and equipment.

7.5.2 Create a preventive maintenance program that considers workflow efficiencies and production requirements.

7.5.3 Describe how to monitor, evaluate and improve maintenance program.

7.5.4 Identify waste-reduction opportunities to reduce costs and minimize environmental impact and energy consumption.

7.5.5 Describe the process for obtaining LEED certification.

7.5.6 Describe factors to consider in developing an emergency preparedness plan.

7.5.7 Develop a strategy to optimize the use of a facility’s space (e.g. spacial configuration, renovations, energy use, preventative maintenance plans).

7.5.8 Evaluate options for securing facilities and office space to support growth, risk mitigation strategies (e.g., off-site data centers) and new ventures.

**Outcome 7.8 Operations Risk Management**

Identify, administer and evaluate policies, processes and strategies to manage risk of operational failure.

**Competencies**

7.8.1 Compare the costs of routine operational failures (e.g., execution errors, accidents, processing failures) with non-routine operational failures (e.g., fraud, conscious violation of professional ethics, acts of nature).

7.8.2 Identify factors that increase the risk of routine and non-routine operational failures.

7.8.3 Explain factors used to reduce the risk of routine and non-routine operational failures (e.g., automation, procedures, checklists).

7.8.4 Identify the operational risk factors associated with new ventures or business changes (e.g., new product, market, system, process).

7.8.5 Develop alternative strategies for performing operational duties in an emergency situation and explain the importance of planning for catastrophic risk.

**Strand 8. Data and Process Management**

Learners apply principles of business process management to collect, analyze and distribute data and maintain business knowledge and information systems.

**Outcome 8.4 Business Applications**

Plan, create and evaluate technology applications.

**Competencies**

8.4.2 Mine standard databases (e.g., accounting, customer, product, vendor, sales, operations, human resources, patient, supplier, procurement), apply analytical tools, and interpret the findings.

8.4.3 Implement collaborative or groupware and cloud computing applications to facilitate business operations.

**Strand 9. Financial Analysis and Evaluation**

Learners apply principles of financial and managerial accounting to collect, analyze and distribute financial data, evaluate investment opportunities and operate financial services.

**Outcome 9.4 Internal Controls**

Identify, select and evaluate internal controls in compliance with applicable regulations.

**Competencies**

9.4.4 Explain the role and function of internal controls (e.g.., cash controls, inventory controls, payroll controls, capital asset control, data protection, personal information controls).

9.4.5 Inspect and ensure the continued functioning of internal controls.

**Outcome 9.7 Managerial Accounting**

Apply principles of accounting to analyze financial information for internal decision-making.

**Competencies**

9.7.2 Track and allocate costs to a variety of cost objects (e.g., products, departments, divisions, activities).

9.7.3 Calculate Cost of Goods Manufactured and Cost of Goods Sold using job order, process and activity-based costing systems.

9.7.4 Compute contribution margin and contribution margin ratio. Use these calculations to compute break-even and prepare cost, volume and profit analysis.

9.7.5 Allocate service department costs and corporate support costs.

9.7.6 Apply cost and revenue data for short-term and long-term decision-making, strategic planning, and forecasting (e.g., adding or dropping products, using limited resources, special order decisions, and equipment replacement decisions).

9.7.7 Project future revenues and expenses for budgeting and forecasting purposes.