I. RATIONALE:

This course is an introduction and foundation survey of operations and supply chain management. Operations management is a key business function related to the design and control of business processes associated with the production of goods and delivery of services. Supply chain management pertains to the network of materials, processes, and service necessary to delivery product and/or service to end customers. In this course, MBA students are provided with a basic understanding of the common issues and opportunities facing operations managers as well as knowledge of the vocabulary, concepts, and tools associated with operations and supply chain management. Emphasis is on both qualitative and quantitative business process analysis tools. Specific topics covered include six sigma, constraint theory, operations information systems such as enterprise resource management, and product and process design.

II. MAJOR INSTRUCTIONAL GOALS:

GOAL A:
The student will be introduced to the field of operations management. Students will learn the basic principles of operations management and define its central function and relationship with other functional areas within the business cycle.

Learning Outcomes: The student will:

A-1 Define and describe the field of operations management and supply chain management and describe its essential role in the delivery of product and or services to the customer.
A-2 Describe the historical development of the field of operations management and discuss topical issues in operations management.
A-3 Define the concepts of efficiency, effectiveness, sustainability, and the implications of an effective and optimal operational supply chain strategy tailored various business situations.
A-4 Define how operations and supply chain management processes are critical components of an effective overall corporate strategy and define the strengths and weaknesses of the various models presented.

GOAL B:
The student will be introduced to product and process design concepts, as well as methods, study, and evaluation techniques of product and service-delivery process analyses including lean manufacturing, inventory control methods, forecasting, and statistical control methods.
Learning Outcomes: The student will:

B-1 Describe operations in terms of inputs, processes, outputs, information flows, suppliers, and customers.
B-2 Define and apply the generic Product Design Process (PDP) in the six phases of produce development.
B-3 Utilize flowcharting techniques to design product and/or service-delivery processes.
B-4 Calculate economic order quantities.
B-5 Apply appropriate forecasting techniques to a given decision-analysis problem.
B-6 Analyze lean manufacturing production preparation through system assessment, process and value-stream mapping.
B-7 Define lean manufacturing production control concepts including just-in-time, pull, Toyota production, cellular, and quick change and set-up reduction methods.

GOAL C:
Students will study and research Six Sigma quality management principles as they apply to product and service-delivery processes.

Learning Outcomes: The student will:

C-1 Define the components of a total quality management (TQM) program.
C-2 Devise a detailed TQM program for a manufacturing product or process or service delivery process.
C-3 Define the concept of Six Sigma and its DMAIC methodology.
C-4 Use the Six Sigma methodology to decrease the defect rate of a proposed manufacturing or service-delivery process.

GOAL D:
Students will apply the Theory of Constraints to produce and service process flow to optimize operations and supply chain management principles.

Learning Outcomes: The student will:

D-1 Define the theory of constraints and how it applies to product and process operational flow.
D-2 Apply the theory of constraints to a simulated operational process and use the theory to identify solution(s) to increasing throughput while minimizing operational expense and inventory.

GOAL E:
Students will be introduced to information-based systems that result in improved efficiency and effectiveness in operations management processes.

Learning Outcomes: The student will:

E-1 Define and apply the concepts of Enterprise Resource Planning systems to an operations and/or supply chain process.
E-2 Define and apply the concepts of Materials Requirements Planning to an operations and/or supply chain process.