

# OPERATIONS & SUPPLY CHAIN MANAGEMENT (OSCM)

## 300 Level Courses

**OSCM 303: Operations Management.** 3 credits.

Examines an organization's operations, including design, management and improvement processes, projects and supply chains, in both product and service environments. Uses analytical models to support key planning and control activities. Notes: Students cannot receive credit for both OM 303 and OSCM 303. Those who do not successfully complete this course within three attempts will be terminated from their concentration and will not be eligible to receive a degree from the Costello College of Business. The third attempt will require academic advisor approval. For more information about this, see the "Termination from the Concentration" section under Academic Policies. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Recommended Prerequisite:** BUS 103 and BUS 200.

### Registration Restrictions:

**Required Prerequisites:** (BUS 210<sup>C</sup>, U210 or 210<sup>XS</sup>).

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

### Grading:

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 320: Supply Chain Management in a Global Economy.** 3 credits.

Design, development, and management of supply chain systems, including production and inventory management, distribution channels, and information systems that support them. Emphasizes impact of e-business on companies and industries, including Internet's impact on the way goods and services flow through value chain from providers to customers. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

### Registration Restrictions:

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM L303, 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

### Grading:

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 330: Service Operations.** 3 credits.

The services sector contributes about 80% of the gross domestic product of the US economy. This sector also provides employment to nearly 80% of the working population across diverse industries such as financial services, hospitality, retail, health care, airlines, and public sector. In short, the service sector affects almost every aspect of our day-to-day lives. However, understanding service operations is not easy due to service characteristics such as intangibility, variability, inability to be stored, highly geographically distributed, and a significant amount of customer contact. In light of these factors, this course in Service Operations focuses on how firms in the services sector design and manage their businesses. Specifically, we will explore key concepts in service operations such as services delivery, service encounter, service quality, and management of capacity and demand. Further, this course will explore how these concepts apply across a diverse range of industries. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

### Registration Restrictions:

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

### Grading:

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 352: Management Science.** 3 credits.

Introduces operation research and management sciences (OR/MS) techniques for supporting business management decisions. Specific mathematical programming and probabilistic topics include linear programming, integer programming, goal programming, network flow models, decision analysis, game theory, queuing models, and Monte Carlo simulation. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

### Registration Restrictions:

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

### Grading:

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

## 400 Level Courses

**OSCM 430: Design Thinking for Innovative Operations.** 3 credits.

This course introduces students to an approach to decision making called design thinking. Design thinking is a way of working with user-centered innovation to address problems. Design thinking emphasizes deep user understanding, iteration, and a focus on possibilities as a way to enhance value creation for stakeholders. Design thinking has gained in popularity both in industry and in governments in the last decade and is an important contrast to the more traditional linear view of problem solving. The course will study the concepts and applications of design thinking and will allow students to engage in the design thinking process in an operational innovation context. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 435: Business Process Analysis and Simulation.** 3 credits.

Introduces concepts and tools used in designing, modeling, analyzing, and improving business processes. Various business process analysis and simulation methods, such as process mapping/flowcharting, process flow and capacity analysis, service process design, theory of constraints, process modeling and simulation, and business process reengineering are discussed. Introduces methods and analytical tools such as queue theory and computer simulation used to design, model, analyze, and improve business processes. Discusses methods such as process mapping/diagramming, service process design, process modeling, and business process reengineering. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 440: Public Sector Operations.** 3 credits.

Public sector organizations such as governments and non-profits fulfill important roles in society, delivering widely varying services and products. Operations management, the analysis, design, operation, and improvement of the systems and processes that deliver goods or services, is critical for these organizations to achieve their mission, provide value to their many stakeholders, and effectively translate policy into action. This course equips students with capabilities and strategies to design, evaluate, and improve successful operations activities within government and non-profit organizations. The course is particularly relevant in the context of the DC metropolitan area where public sector represents a key industry sector in terms of contribution to the area's GDP and employment. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 452: Business Forecasting.** 3 credits.

Introduces techniques for producing predictions of future business operations as aids to making planning decisions. Specific topics include judgmental forecasting, forecast accuracy, correlation analysis, smoothing methods, regression models, decomposition, and autoregressive and ARIMA models. Methods demonstrated and used through computer software. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take BUSA crses, Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 456: Quality Management.** 3 credits.

Provides an understanding of the multifaceted nature of quality management by addressing topics such as quality philosophies, total quality management and continuous improvement, design quality, statistical process control, and managing quality in information systems development. Discusses Lean Operations, Six Sigma, ISO 9000, and Capability Maturity Model Integration. Uses software, case studies. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Mason Core:** Mason Core, Writing Intensive in Major (<https://catalog.gmu.edu/mason-core/>)

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 460: Management of Product and Process Technologies.** 3 credits.

This course focuses on analysis of the challenges and opportunities associated with managing a firm's product and process technology resources for long-term competitive advantage in the face of technological evolution. Students will learn concepts of technology evolution, understand how enterprises can manage technology resources efficiently to create and deliver products and/or services that respond effectively to customer requirements and expectations, and examine models that help in the analysis, development and implementation of product and process technologies. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 462: Honors Seminar in Operations Management (Topic Varies).** 3 credits.

Topic and format vary. In-depth study of a topic in the area of operations management. Enrollment limited and competitive. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Specialized Designation:** Topic Varies

**Recommended Prerequisite:** Enrollment in the Operations and Supply Chain Management concentration, senior standing, and permission of the course department.

**Registration Restrictions:**

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Seminar

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 465: Government Contracting and Procurement.** 3 credits.

This course provides an in-depth knowledge and analysis of the Government Contracting industry, and Business to Government (B2G) relationships. It will discuss Procurement and Supply Chain processes in the government regulatory environment, and how they are executed in practice by government organizations, with a focus on US Federal Government contracting policies, processes and procedures. It is designed for students potentially pursuing careers in government organizations or businesses that serve government clients. Topics will include Federal Acquisition Regulation (FAR), Federal Budgeting, Market Analysis, Category Management, Small Business Utilization, National Security implications, Innovation and Research Funding. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 491: Seminar in Operations Management.** 3 credits.

Analyzes selected topics that highlight latest developments in the operations management field, including contemporary research findings and case studies of operations management in business and other organizations. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Enrollment limited to students with a class of Senior.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Seminar

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 492:** *Internship in Operations and Supply Chain Management*. 3 credits.

Opportunity to gain practical, professional experience in conjunction with academic development. An internship is an important part of academic and career preparation. May be used as elective credit, but may not be repeated. Notes: No more than 6 credits of Costello College of Business internship coursework (BUS 492 or OM 492) can be applied towards a student's 120 (BU) degree applicable credits. Students must receive departmental approval in order to register for this course; please contact the Costello College of Business Office of Career Services for internal eligibility requirements. Offered by Information Sys and Ops Mngmnt. May be repeated within the degree for a maximum 6 credits.

**Recommended Prerequisite:** 75 credit hours

**Registration Restrictions:**

**Required Prerequisites:** (MIS 301<sup>B-</sup> or 303<sup>B-</sup>) and (OM 301<sup>B-</sup>, 303<sup>B-</sup>, OSCM 303<sup>B-</sup> or MBUS 306<sup>B-</sup>).

<sup>B-</sup> Requires minimum grade of B-.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take BUSA crses, Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Internship

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 493:** *Management of Technology Projects*. 3 credits.

Focuses on managerial problems associated with meeting technical, cost, and time constraints of technology projects. Discusses project management areas including organization, teams, scheduling, cost control, earned value analysis, risk management, and quality. Includes software cost estimation models and the management of IT projects. Software and case studies. A third attempt will require academic advisor approval. Offered by Information Sys and Ops Mngmnt. Limited to two attempts.

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>DS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

<sup>DS</sup> Requires minimum grade of DS.

Students with a class of Freshman may **not** enroll.

Non-Degree level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 499:** *Independent Study in Operations Management*. 1-3 credits. By special arrangement with instructor, and approval from associate dean for undergraduate programs. Investigates business problem according to student interest, using state-of-the-art decision science methodology. Offered by Information Sys and Ops Mngmnt. May be repeated within the term for a maximum 6 credits.

**Specialized Designation:** Topic Varies

**Registration Restrictions:**

**Required Prerequisites:** OM 301<sup>C</sup>, L301, 303<sup>C</sup>, L303, OSCM 303<sup>C</sup>, 303<sup>XS</sup>, OM 303<sup>XS</sup>, MBUS 306<sup>C</sup>, 306<sup>XS</sup> or L306.

<sup>C</sup> Requires minimum grade of C.

<sup>XS</sup> Requires minimum grade of XS.

Students with a class of Freshman or Sophomore may **not** enroll.

Non-Degree or Washington Consortium level students may **not** enroll.

Students with the Ineligible to take OSCM crses, terminated from BC major or terminated from ISOM major attributes may **not** enroll.

**Schedule Type:** Independent Study

**Grading:**

This course is graded on the Undergraduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

## 700 Level Courses

**OSCM 721:** *Seminar in Operations and Supply Chain Management*. 1.5 credit.

This course is designed to expose doctoral students to academic research in operations and supply chain management. Offered by Information Sys and Ops Mngmnt. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Enrollment is limited to students with a major in Business.

Enrollment is limited to Graduate level students.

Enrollment limited to students in a Doctor of Philosophy degree.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 731:** *Seminar in Supply Chain Management*. 3 credits.

This course is designed to expose doctoral students to a broad foundation in supply chain management research including theory, quantitative and empirical tools. Offered by Information Sys and Ops Mngmnt. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Enrollment is limited to students with a major in Business.

Enrollment is limited to Graduate level students.

Enrollment limited to students in a Doctor of Philosophy degree.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

**OSCM 732:** *Seminar in Innovation and New Product Development*. 3 credits.

This course is designed to expose doctoral students to a broad foundation in innovation and new product development research including theory, quantitative and empirical tools. Offered by Information Sys and Ops Mngmnt. May not be repeated for credit.

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Enrollment is limited to students with a major in Business.

Enrollment is limited to Graduate level students.

Enrollment limited to students in a Doctor of Philosophy degree.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)

## 800 Level Courses

**OSCM 893:** *Special Topics in Operations Management*. 3 credits.

This course is designed to expose doctoral students to a specialized topic within the operations and supply chain management field through theoretical, quantitative and empirical work in the topic area. Offered by Information Sys and Ops Mngmnt. May be repeated within the degree for a maximum 9 credits.

**Specialized Designation:** Topic Varies

**Registration Restrictions:**

Enrollment limited to students with a class of Advanced to Candidacy or Graduate.

Enrollment is limited to students with a major in Business.

Enrollment is limited to Graduate level students.

Enrollment limited to students in a Doctor of Philosophy degree.

**Schedule Type:** Lecture

**Grading:**

This course is graded on the Graduate Regular scale. (<https://catalog.gmu.edu/policies/academic/grading/>)