

OPERATIONS MANAGEMENT (OM)

Course Descriptions

OM 521 Operations Management 3 Credit Hours

This course introduces students to the fundamentals of operations management. It explores how organizations can efficiently transform inputs into outputs that deliver innovative products and services that effectively achieve customer satisfaction while considering the ethical and environmental impacts. Students will learn managerial concepts and tools for understanding processes, improving operational performance, and promoting positive and sustainable practices. (F, W).

OM 571 Supply Chain Management 3 Credit Hours

This course provides an understanding of the key elements of supply chain management. Special attention is given to the tools and skills needed to develop effective and innovative solutions to supply chain problems. The course objective is to equip students with the necessary theoretical and technical expertise to evaluate different supply chain management approaches and to be aware of opportunities to improve supply chain sustainability. (F).

Prerequisite(s): OM 521* or IMSE 580* or EMGT 520*

OM 631 Service Operations Management 3 Credit Hours

This course examines both traditional and new approaches for achieving operational competitiveness in service businesses. Major Service sectors such as health care, banking and financial services, transportation, restaurants, hotels, and resorts are examined. The course addresses both strategic and operational decision making. Among topics covered are: the service concept and operations strategy, design of effective service delivery systems, productivity and quality management, response time (queuing) analysis, capacity planning, yield management, and the impact of information technology.

Prerequisite(s): OM 521 or IMSE 580 or EMGT 520

OM 660 Supply Chain Analytics 3 Credit Hours

The purpose of this course is to equip students with decision support models and tools to recognize, analyze, and resolve supply chain problems. Compared to other supply chain management courses, it is designed for a more analytical oriented audience, including applications of advanced analytics as well as business intelligence and reporting aspects of supply chain management. This course focuses on identifying and reformulating problem statements and provides students with hands-on experience to solve those identified problems by applying analytical tools and models.

Prerequisite(s): OM 521 or IMSE 580 or EMGT 520

Restriction(s):

Can enroll if Class is Graduate

OM 661 Supply Chain Logis Mgmt 3 Credit Hours

This course aims to comprehensively understand integrative managerial issues and challenges in supply chain logistics. Students will explore how logistics can add value through achieving time and place synchronization while also considering environmental impact and social responsibility. Emphasis will be placed on addressing challenges related to logistics with a focus on integrating sustainable practices and ensuring ethical decision-making. Students will gain the knowledge and skills to develop effective and responsible logistics strategies that contribute to the well-being of individuals, communities, and the environment. (F).

Prerequisite(s): OM 521 or IMSE 580 or EMGT 520

Restriction(s):

Can enroll if Class is Graduate

OM 662 Product Dvlpmnt & Tech Mgmnt 3 Credit Hours

The purpose of this course is to provide in-depth knowledge of the frameworks, policies, and issues that arise in the design and development of new products and the management of technology. This course emphasizes new product introduction and the development of new technologies to drive positive technological and organizational change. Topics include the product design and development phases, firm capabilities, product architectures, the make vs. buy decision, supplier involvement, sustainable design, and the management of technological change. Part of the course is project-based and covers modern tools and methods to develop products that are good for business, society, and the environment. (F).

Prerequisite(s): OM 521 or IMSE 580 or EMGT 520

Restriction(s):

Can enroll if Class is Graduate

OM 663 Lean & Six Sigma 3 Credit Hours

This course offers a comprehensive understanding of Lean and Six Sigma methodologies. Students will explore the principles and philosophies behind lean production and Six Sigma and their application in various industries for operational improvement. In addition to covering fundamental tools and concepts, the course provides a management overview of both methodologies, emphasizing best business practices and incorporating sustainable thinking. (S).

Prerequisite(s): (OM 521 or IMSE 580 or EMGT 520) and (DS 520 or IMSE 510 or IMSE 514)

Restriction(s):

Can enroll if Level is Rackham or Graduate

OM 664 Strategic Sourcing 3 Credit Hours

This course explores the critical role of strategic sourcing within businesses, emphasizing sustainability and creating value-driven relationships. It covers the purchasing process, sourcing strategies, supplier selection and evaluation, supplier management and development while integrating environmental and social considerations such as ethical sourcing. Students will examine how sourcing decisions can align with corporate social responsibility and generate positive organizational impact. (W).

Prerequisite(s): OM 521 or IMSE 580 or EMGT 520

Restriction(s):

Can enroll if Class is Graduate

OM 665 ERP in SCM 3 Credit Hours

This course covers concepts in enterprise resource planning (ERP). The main focus of this course is to show how ERP systems integrate business processes across functional areas and support business management and performance analysis. This course will also evaluate the benefits and costs of implementing an ERP system. A real ERP system, SAP, will be used extensively to illustrate how ERP systems are used. SAP customers generate over 85% of total global commerce.

Prerequisite(s): OM 521 or IMSE 580 or EMGT 520

Restriction(s):

Can enroll if Class is Graduate

OM 667 Sustainable Operations 3 Credit Hours

This course examines the relationships between the environment, social issues, and governance (ESG), focusing on sustainable business practices in operations. The course emphasizes the need for firms to consider their actions' social and environmental impacts beyond financial success. Topics covered include sustainable development principles, environmental impact improvement, circular economy, Science-Based Targets for emission reduction, and carbon emissions. Students will gain a comprehensive understanding of contemporary issues related to the environment, sustainability, and governance in business, as well as explore evolving practices across various operational processes. (F, W).

Prerequisite(s): OM 521

*An asterisk denotes that a course may be taken concurrently.

Frequency of Offering

The following abbreviations are used to denote the frequency of offering: (F) fall term; (W) winter term; (S) summer term; (F, W) fall and winter terms; (YR) once a year; (AY) alternating years; (OC) offered occasionally