



Computer Science (COMP) 505

Operations Management in Information Systems (Revision 5)

Status:

Replaced with new revision, see the [course listing](#)  for the current revision 

Delivery mode:

Grouped study . Delivered via Brightspace.

Credits:

3

Area of study:

Information Systems

Prerequisites:

None

Precluded:

None

Faculty:

Faculty of Science and Technology 

Notes:

This is a graduate level course, and you must apply and be approved to one of the graduate programs or as a non-program **School of Computing and Information Systems**  graduate student in order to take this course. Minimum admission requirements must be met. Undergraduate students who do not meet admission requirements will not normally be permitted to take this course.

Course extensions are not permitted for COMP 505 due to the nature of the course activities.

Workload: The course schedule is based on working 15 hours per week. This translates into approximately 12 hours of reading and 3 hours of synthesis and/or exercises each week.

Instructor:

Dr. Larbi Esmahi

Overview

Computer Science 505: Operations Management in Information Systems introduces students to the tools, processes, and concepts of operations management and their relevance to IT professionals.

Operations refers to most of the activities performed by people in an organization, whether the organization delivers services or creates products. The effective management of operations, through the application of tools and processes to develop competitive strategies, is critical to organizational success. IT professionals are usually involved in the creation of services meant to facilitate operations management goals. Thus, an understanding of this topic is important, particularly in view of globalization.

Outline

- Unit 1: Introduction to Operations Management
- Unit 2: Statistical Process Control
- Unit 3: Product Design
- Unit 4: Product and Service Creation and Quality Assurance
- Unit 5: Process and Capacity
- Unit 6: Human Resources and Project Management

- Unit 7: Supply Chain Management and Sustainability
- Unit 8: Forecasting
- Unit 9: Inventory Management
- Unit 10: Sales and Operations Planning
- Unit 11: Resource Planning and Lean Systems
- Unit 12: Scheduling
- Unit 13: Final Assignment

Learning outcomes

Upon successful completion of this course, you should be able to

- understand the project management process.
- learn how to use statistical tools for forecasting and designing operations.
- gain detailed knowledge about the issues and steps in operations planning, implementation, and maintenance.

Evaluation

To pass this course, you must achieve an average grade of at least 60% on all three assessments. You must also pass the final assignment with a grade of at least 60%.

To **receive credit** [↗](#) for COMP 505 as a **Foundation/Core course** [↗](#) in the Master of Science - Computing and Information Systems program, you must achieve a course composite grade of at least **B- (70%)** [📄](#).

Activity	Weight
Case discussion forums (5% for each forum)	40%
Numerical work (5% for each set)	20%
Final assignment	40%

Activity	Weight
Total	100%

Materials

Digital course materials

Links to the following course materials will be made available in the course:

Russell, R. S., Taylor, B. W., Bayley, T., & Castillo, I. (2020). *Operations management: Creating value along the supply chain* (2nd Canadian ed.). Wiley.

Important links

- › [Future Course Offerings](#) 
- › [Important Dates and Deadlines](#) 
- › [MSc CIS Contact Information](#) 

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery methods may vary from their individualized study counterparts.

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Updated October 10, 2025

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