Introduction to Operations Management

This course is part of **Business Foundations Specialization**

Instructor: Christian Terwiesch

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4 modules
Gain insight into a topic and learn the fundamentals.

4.4 ⭐
(2,812 reviews)

Beginner level
No prior experience required

Flexible schedule
2 weeks at 10 hours a week
Learn at your own pace

👍 **89%**
Most learners liked this course

What you'll learn

✓ You will learn to analyze processes, optimize flow, and manage variability, driving improvements and achieving excellence in operations management.

Skills you'll gain

| Operations Management | Inventory Management System | Lean Methodologies | Process Improvement | Process Analysis | Supply Chain Management |

| Workflow Management | Statistical Process Controls | Root Cause Analysis | Operational Efficiency | Process Flow Diagrams | Capacity Planning | Quality Management |

| Process Management | Continuous Improvement Process | View less skills |

Details to know

💼 **Shareable certificate**
Add to your LinkedIn profile

📋 **Assessments**
3 quizzes, 15 assignments

🗒 **Taught in English**
28 languages available

See how employees at top companies are mastering in-demand skills

Build your subject-matter expertise

This course is part of the **Business Foundations Specialization**
When you enroll in this course, you'll also be enrolled in this Specialization.

- Learn new concepts from industry experts
- Gain a foundational understanding of a subject or tool
- Develop job-relevant skills with hands-on projects
- Earn a shareable career certificate

There are 4 modules in this course

This comprehensive course delves into operations management and process improvement principles and techniques, providing you with the knowledge and skills necessary to identify and eliminate inefficiencies in your organization. You will gain a solid foundation in operations management by analyzing key concepts such as cost-quality trade-offs, the efficiency frontier, and system inhibitors.

Get ready to delve into process analysis, where you'll identify and analyze steps in a process, implementing changes for enhanced outcomes. With practical exercises, including creating process flow diagrams and capacity calculations, you'll strengthen your analytical skills firsthand.

Experience the power of optimizing flow within operations as you uncover waste sources and design efficient processes for maximum output, reduced costs, and heightened customer satisfaction. An in-depth exploration of Little's Law will equip you to make informed decisions on capacity planning and process improvements, optimizing inventory levels, reducing lead times, and enhancing supply chain coordination.

Additionally, you'll learn to effectively manage variability, laying the groundwork for consistent and exceptional quality standards. Statistical analysis, problem-solving methodologies, and real-time information utilization will empower you to tackle issues, find root causes, and foster continuous improvement.

Throughout the course, the focus remains on driving improvements and achieving excellence. Analyze, improve, and reimagine how work gets done, armed with the necessary tools and frameworks to enhance work processes across diverse industries.

Join this course to analyze, improve, and reimagine how work gets done and to acquire the necessary tools and knowledge to make meaningful improvements in your organization's operations.

Read less

Introduction to Operations Management and Process Analysis

Module 1 • 3 hours to complete

Module details ⌃

At its core, operations management is about finding and then reducing inefficiencies. We will start by examining key concepts such as cost-quality trade-off, the efficiency frontier, and three system inhibitors. We will also explore process analysis, enabling you to identify and analyze the steps involved in a process and make changes to improve its outcomes. By the end of this module, you will have opportunities to practice these concepts by creating process flow diagrams and calculating the resource with the lowest capacity. Additionally, you'll be able to practice calculating capacity, flow rate, and utilization. You will be able to transfer these skills to initiate process analysis within your organization.

What's included

▶ 6 videos   📖 4 readings   🗐 4 assignments

Hide info about module content ⌃

▶ **6 videos • Total 51 minutes**

Introduction to Operations
•
7 minutes

Making Trade-offs in Operations
•
8 minutes

System Inhibitors
•
9 minutes

The Process Analysis Framework
•
10 minutes

Drawing a Process Flow Diagram
•
5 minutes

Thinking About Work as a Process
•
10 minutes

📖 **4 readings • Total 40 minutes**

Key Concepts and Definitions
•
10 minutes

Introduction to Operations: Lecture Slides (PDF)
•
10 minutes

Key Concepts, Definitions, and Equations
•
10 minutes

Process Analysis: Lecture Slides
•
10 minutes

🗐 **4 assignments • Total 120 minutes**

Introduction to Operations Management and Process Analysis
•
30 minutes

Practice Quiz - Lesson 1
•
30 minutes

Practice Quiz - Lesson 2
•
30 minutes

Practice Quiz - M1
•
30 minutes

Module 2: Flow Management and Lean Operations

Module 2 • 6 hours to complete   Module details ⌃

In operations management, flow focuses on the movement of materials, products, and information through the various stages of a production or service process. Lean operations focus on identifying sources of waste both in terms of resources and processes. Optimizing flow can improve productivity, reduce costs, and enhance customer satisfaction. By learning to carefully observe how work is done, we can become better at identifying waste. The goal is to create efficient and effective processes that maximize output while minimizing waste.

What's included

▶ 10 videos   📖 4 readings   📝 2 quizzes   📋 5 assignments

Hide info about module content ⌃

▶ **10 videos • Total 107 minutes**

How People Work: A Micro Level Perspective
•
14 minutes

Labor Productivity
•
13 minutes

Tools to Improve Processes
•
12 minutes

Module Review and Practice Problem
•
10 minutes

The DNA of Waste
•
8 minutes

Wasting the Time of a Resource
•
8 minutes

The Seven Sources of Waste
•
9 minutes

Wasting Flow Time
•
6 minutes

Achieving a Smooth Process Flow
•
13 minutes

Module Review and Practice Problem
•
11 minutes

📖 **4 readings • Total 40 minutes**

Key Concepts, Definitions, and Equations
•
10 minutes

Optimizing Flow Management: Lecture Slides
•
10 minutes

Key Concepts, Definitions, and Equations
•
10 minutes

Lean Operations: Lecture Slides
•
10 minutes

📝 **2 quizzes • Total 90 minutes**

Flow Management and Lean Operations
•
60 minutes

Practice Problem: Five Step Process
•
30 minutes

📋 **5 assignments • Total 150 minutes**

Practice Problem: Fast Food Pasta

•

30 minutes

Practice Problem: OEE

•

30 minutes

Practice Problem: Flow Time Efficiency

•

30 minutes

Practice Problem: Toyota Production System

•

30 minutes

Practice Quiz - M2

•

30 minutes

Module 3: Little's Law

Module 3 • 3 hours to complete

Module 4: Quality

Module 4 • 2 hours to complete

Module details ⌃

Variability can introduce defects and hinder the pursuit of excellence. By recognizing and managing variability, organizations can lay the foundation for consistent and exceptional quality standards. This module introduces frameworks that provide systematic ways to analyze variability. We'll look at how statistical analysis and problem-solving methodologies can enhance quality. We'll also explore the power of real-time information and how it fosters continuous improvement. We'll examine strategies for finding the root cause of an issue and explore how we might develop targeted solutions as we unravel complex problems.

What's included

▶ 7 videos   📖 2 readings   🗒 1 quiz   📄 2 assignments

Hide info about module content ⌃

▶ **7 videos • Total 56 minutes**

How Variability Causes Quality Problems

•

7 minutes

Process Capacity and Six Sigma

•

10 minutes

The Power of Quick Feedback

•

9 minutes

The Five Why Framework: Finding the Root Cause of a Problem

•

5 minutes

How to Define a Problem Using the Why-How Ladder

•

12 minutes

The PDCA Cycle

•

6 minutes

Conclusion

•

5 minutes

📖 **2 readings • Total 20 minutes**

Key Concepts, Definitions, and Equations

•

10 minutes

Module 4: Lecture Slides

•
10 minutes

☑ 1 quiz • Total 30 minutes

Quality
•
30 minutes

📋 2 assignments • Total 60 minutes

Practice Problems: Tour Eiffel and Chocolate Chip Creators
•
30 minutes

Practice Quiz #4
•
30 minutes

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Instructor

Instructor ratings ⓘ **4.5** ★ (335 ratings)

Christian Terwiesch
University of Pennsylvania
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● ○ ○ ○

★ **4.4** 2,812 reviews

5 stars ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ 68.12%
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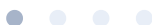
JS
★ **5** · Reviewed on Mar 7, 2016

very objective and hands on structure. Excellent for working executive as well, gives a hands on refresher with the help of best and latest on the subject. very concise and focused.

KR
★ **5** · Reviewed on Aug 25, 2020

Great Instruction by Prof Christian - very lucid and with real world examples. Learning a business skill is mostly learning observation.. Now I know what to observe when looking for productivity!

SN
★ **5** · Reviewed on Sep 13, 2024

Concepts very well explained by the professor. The explanations were in simple and easy to understand language, with real life examples. That made the course very interesting. Thanks.

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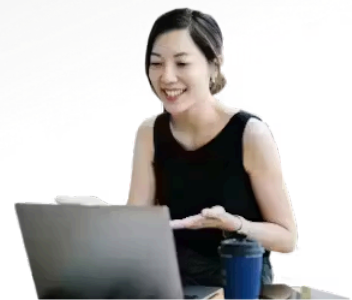
Frequently asked questions

⌃ **When will I have access to the lectures and assignments?**

To access the course materials, assignments and to earn a Certificate, you will need to purchase the Certificate experience when you enroll in a course. You can try a Free Trial instead, or apply for Financial Aid. The course may offer 'Full Course, No Certificate' instead. This option lets you see all course materials, submit required assessments, and get a final grade. This also means that you will not be able to purchase a Certificate experience.

⌃ **What will I get if I subscribe to this Specialization?**

When you enroll in the course, you get access to all of the courses in the Specialization, and you earn a certificate when you complete the work. Your electronic Certificate will be added to your Accomplishments page - from there, you can print your Certificate or add it to your LinkedIn profile.

⌃ **Is financial aid available?**

Yes. In select learning programs, you can apply for financial aid or a scholarship if you can't afford the enrollment fee. If fin aid or scholarship is available for your learning program selection, you'll find a link to apply on the description page.

More questions

ⓘ
Visit the learner help center

Financial aid available, learn more

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Data Analytics

Digital Marketing

English Speaking

Generative AI (GenAI)

Microsoft Excel

Microsoft Power BI

Project Management

Python

Certificates & Programs

Google Cybersecurity Certificate

Google Data Analytics Certificate

Google IT Support Certificate

Google Project Management Certificate

Google UX Design Certificate

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IBM Data Science Certificate

Machine Learning Certificate

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