



Industry 4.0 and its impact on Manufacturing Sector

This course is part of [Advances in Manufacturing Technology Specialization](#)

Instructor: [Board Infinity](#)

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Starts Dec 2

1,922 already enrolled

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3 modules

Gain insight into a topic and learn the fundamentals.

4.8 ★

(13 reviews)

Beginner level

Recommended experience ⓘ

2 weeks to complete

at 10 hours a week

Flexible schedule

Learn at your own pace

What you'll learn

- ✓ Analyze factors driving industrial revolutions from Industry 1.0 to Industry 4.0.
- ✓ Understand global demand for Industry 4.0 professionals and required skills.
- ✓ Evaluate anticipated technological innovations and sustainable practices.

Skills you'll gain

- Artificial Intelligence and Machine Learning (AI/ML) Socioeconomics Workforce Development Sustainable Technologies Manufacturing and Production
Internet Of Things Emerging Technologies Digital Transformation Automation Industrial Engineering [View less skills](#)

Details to know



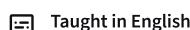
Shareable certificate

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Assessments

12 assignments



Taught in English

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





Build your subject-matter expertise

This course is part of the [Advances in Manufacturing Technology 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 3 modules in this course

Course Description:

This course provides a comprehensive introduction to Industry 4.0 and its transformative impact on the manufacturing sector. It covers the evolution from previous industrial revolutions to Industry 4.0, the factors driving these changes, and the future trends shaping manufacturing. Learners will explore the history and use of technology in manufacturing, understand emerging trends, and recognize the growing demand for Industry 4.0 professionals. Through theoretical learning and practical insights, learners will gain essential knowledge for navigating and contributing to the advancements in the manufacturing industry.

Benefits:

-Holistic Knowledge of Industry Evolution:

Gain a comprehensive understanding of the industrial revolutions from Industry 1.0 to Industry 4.0, including the technological and socioeconomic factors driving these transformations.

-Insight into Future Manufacturing Trends:

Develop a forward-looking perspective on anticipated technological innovations, sustainability practices, and the transition to Manufacturing 5.0.

-Preparation for Industry 4.0 Careers:

Equip yourself with the skills and knowledge needed to meet the global demand for Industry 4.0 professionals, including understanding market segments and career opportunities.

Target Audience:

This course is designed for manufacturing engineers, production managers, industrial engineers, and anyone interested in understanding the evolution and impact of Industry 4.0 on the manufacturing sector. It is suitable for beginners as well as professionals seeking to enhance their knowledge and skills in modern manufacturing technologies.

Note: This is the 1st course of the specialization - "Advances in Manufacturing Technology".

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[Read less](#)

Industrial Revolution: From Industry 1.0 to Industry 4.0

[Module details ^](#)

Module 1 • 6 hours to complete

This module explores the transformative journey of industrial revolutions, from the shift from agrarian to manufacturing economies to the dawn of Industry 4.0. It provides a comparative study of the different industrial eras, examining the key technological and socioeconomic factors that have driven these transitions. The module also looks ahead at future trends, anticipated technological innovations, and the movement towards sustainable and green manufacturing practices. Through a series of video lectures, participants will gain a comprehensive understanding of the historical context, driving factors, and future directions of industrial revolutions.

What's included

15 videos 4 readings 4 assignments 1 discussion prompt

[Hide info about module content ^](#)

15 videos • Total 86 minutes

Introduction to the Specialization

•

2 minutes

Introduction to the Course

•

2 minutes

Meet your Instructor

•

0 minutes

Comparative study of Industrial Revolution: Overview

•

1 minute

From Agrarian Economy To Manufacturing Economy

•

8 minutes

Moving from Industry 1.0 to Industry 3.0

•

7 minutes

Advent of Industry 4.0

•

8 minutes

Factors driving Industrial Revolutions: Overview

•

1 minute

Technological Advancements Driving Industrial Revolutions

•

15 minutes

Socioeconomic Factors Influencing Industrial Transitions

•

6 minutes

Impact of Globalization and Urbanization

•

6 minutes

Future trends in Industrial Revolution: Overview

•

1 minute

Future direction of Industrial Revolution

•

8 minutes

Anticipated Technological Innovations in Industry

•

8 minutes

Sustainable and Green manufacturing

•

6 minutes

4 readings • Total 120 minutes

Syllabus

- 30 minutes

Read More About Industrial Revolution

- 30 minutes

Read More About The Evolution and Impact of the Industrial revolution

- 30 minutes

Read More About Navigating the Future of Industrial Revolution

- 30 minutes

4 assignments • Total 150 minutes

Quiz: Industrial Revolution: From Industry 1.0 to Industry 4.0

- 60 minutes

Quiz: Comparative study of Industrial Revolution

- 30 minutes

Quiz: Factors driving Industrial Revolutions

- 30 minutes

Quiz: Future trends in Industrial Revolution

- 30 minutes

1 discussion prompt • Total 10 minutes

Meet and Greet

- 10 minutes

Shaping the Future of Manufacturing

[Module details ^](#)

Module 2 • 5 hours to complete

This module provides a comprehensive exploration of the evolution and future trajectory of the manufacturing sector. It begins with a historical overview, defining manufacturing and examining its development and economic impact. The module then delves into the role of technology in manufacturing, highlighting significant advancements, their effects on the industry, and the limitations of current technologies. Finally, it addresses the emerging trends that will shape the future of manufacturing, including innovative technologies and sustainability practices. Through detailed video lectures, participants will gain insights into the past, present, and future of manufacturing, preparing them to navigate and influence the industry's ongoing transformation.

What's included

-  12 videos  3 readings  4 assignments

[Hide info about module content ^](#)

12 videos • Total 67 minutes

History of Manufacturing: Overview

- 1 minute

What is Manufacturing

- 7 minutes

Understanding the History of Manufacturing

- 7 minutes

Impact of Manufacturing on Economy

- 6 minutes

Use of Technology in Manufacturing: Overview

- 1 minute

Technological Advancements in Manufacturing

•
8 minutes

Ways in which Technology impacts Manufacturing Industry

•
6 minutes

Limitations of the use of Technology

•
6 minutes

Trends that will dominate the Manufacturing Industry: Overview

•
1 minute

Emerging Trends in Manufacturing Technologies

•
5 minutes

Sustainability Practices in Manufacturing

•
7 minutes

Transition to Manufacturing 5.0

•
6 minutes

3 readings • Total 90 minutes

Read More About The Evolution of Manufacturing Techniques

•
30 minutes

Read More About The Role and Impact of Technology in Modern Manufacturing

•
30 minutes

Read More About Emerging Trends and Future Challenges in the Manufacturing Industry

•
30 minutes

4 assignments • Total 150 minutes

Quiz: Shaping the Future of Manufacturing

•
60 minutes

Quiz: History of Manufacturing

•
30 minutes

Quiz: Use of Technology in Manufacturing

•
30 minutes

Quiz: Trends that will dominate the Manufacturing Industry

•
30 minutes

Global Demand of Industry 4.0 Professionals

[Module details ^](#)

Module 3 • 5 hours to complete

This module focuses on the rising demand for professionals in the digital manufacturing industry, driven by the advancements of Industry 4.0. It begins by exploring the estimated demand and growth projections for digital manufacturing, providing a detailed understanding of various market segments. The module then outlines the key technical and non-technical skills required for Industry 4.0 careers, offering strategies for effective training and skill development. Finally, it examines career opportunities and key roles within the digital manufacturing market, highlighting the global demand for Industry 4.0 professionals and identifying major players in the industry. Through insightful video lectures, participants will be equipped to meet the evolving needs of the digital manufacturing landscape.

What's included

 13 videos  3 readings  4 assignments  1 discussion prompt

[Hide info about module content ^](#)

13 videos • Total 71 minutes

Demand and Growth of Digital Manufacturing Industry: Overview

- 1 minute

Estimated Demand for Digital Manufacturing

- 7 minutes

Growth Projections of Global Digital Manufacturing Industry

- 7 minutes

Understanding the Digital Manufacturing Market Segment

- 9 minutes

Skills needed to prepare for Industry 4.0: Overview

- 1 minute

Key Technical Skills for Industry 4.0 Professionals

- 7 minutes

Non Technical Skills that are in high demand

- 5 minutes

Training and Skill Development Strategies for Industry 4.0 Careers

- 7 minutes

Career and Key Roles in in Industry 4.0: Overview

- 1 minute

Global Demand of Industry 4.0 Professionals

- 6 minutes

Exploring Key Roles and Growth trajectories in Digital Manufacturing

- 7 minutes

Major Players Operating in the Digital Manufacturing market

- 9 minutes

Course Closure - Gratitude !

- 1 minute

3 readings • Total 90 minutes

Read More About the Global Digital Manufacturing Landscape

- 30 minutes

Read More About Upskilling for Industry 4.0

- 30 minutes

Read More About Skills Enhancement for preparing for Industry 4.0 Careers

- 30 minutes

4 assignments • Total 150 minutes

Quiz: Global Demand of Industry 4.0 Professionals

- 60 minutes

Quiz: Demand and Growth of Digital Manufacturing Industry

- 30 minutes

Quiz: Skills needed to prepare for Industry 4.0

- 30 minutes

Quiz: Career and Key Roles in Industry 4.0

- 30 minutes

 1 discussion prompt • Total 15 minutes

Navigating the Evolution: Understanding Technological, Socio-Economic, and Future Trends in Industry 4.0

- 15 minutes



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Industry 4.0 Technologies in Manufacturing - 1

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Industry 4.0 Technologies in Manufacturing - 2

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Key Enablers and Challenges in Implementing Industry 4.0

Course

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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](#)

Skills	Certificates & Programs	Industries & Careers	Career Resources
Artificial Intelligence (AI)	Google Cybersecurity Certificate	Business	Career Aptitude Test
Cybersecurity	Google Data Analytics Certificate	Computer Science	Examples of Strengths and Weaknesses for Job Interviews
Data Analytics	Google IT Support Certificate	Starts Dec 2 Data Science	High-Income Skills to Learn
Digital Marketing	Google Project Management Certificate	Education & Teaching	How Does Cryptocurrency Work?
English Speaking	Google UX Design Certificate	Engineering	How to Highlight Duplicates in Google Sheets
Generative AI (GenAI)	IBM Data Analyst Certificate	Finance	How to Learn Artificial Intelligence
Microsoft Excel	IBM Data Science Certificate	Healthcare	Popular Cybersecurity Certifications
Microsoft Power BI	Machine Learning Certificate	Human Resources (HR)	Preparing for the PMP Certification
Project Management	Microsoft Power BI Data Analyst Certificate	Information Technology (IT)	Signs You Will Get the Job After an Interview
Python	UI / UX Design Certificate	Marketing	What Is Artificial Intelligence?

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