



Digital Technologies and the Future of Manufacturing Specialization

Emerging Digital Technologies in Manufacturing. Learn about breakthrough digital technologies in manufacturing and the business value they deliver.



Instructor: M.S. Krishnan

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Starts Dec 2

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3 course series

Get in-depth knowledge of a subject

4.5 ★

(270 reviews)

Beginner level

No prior experience required

4 weeks to complete

at 10 hours a week

Flexible schedule

Learn at your own pace

What you'll learn

- ✓ Learn the basics of technology breakthrough in manufacturing and their business applications
- ✓ Evaluate a company's value, risks, challenges, planning, and impact on employees, and propose recommendations in a case study

Skills you'll gain



Details to know



Shareable certificate

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-Taught in English

22 languages available

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





Advance your subject-matter expertise

- Learn in-demand skills from university and industry experts
- Master a subject or tool with hands-on projects
- Develop a deep understanding of key concepts
- Earn a career certificate from University of Michigan

Specialization - 3 course series

Digital technologies are fundamentally transforming every aspect of the value chain in manufacturing, logistics, and management consulting. In this course series, you'll learn the basics behind some of these breakthrough technologies and their business applications, including improved productivity, quality, and cycle-time benefits within manufacturing and logistics. Challenges and risks for businesses will also be addressed.

The content presented in this series draws on a number of real-life interviews and case studies, and was created through a partnership with Siemens.

Applied Learning Project

The course projects are based on case studies of fictional companies facing manufacturing challenges or opportunities where digital technologies can be implemented as viable solutions. Learners will be asked to take on the role of a technology consultant, evaluate a company's situation, and based on what they have learned about a particular technology topic, present recommendations to the company's leadership for consideration. Given the business emphasis of the courses in the specialization, the project will challenge learners to consider the business value, risks, challenges, planning, and impact on employees when developing their recommendations.

[Read less](#)



[Industrial Internet of Things \(IIoT\)](#)

Course 1 • 10 hours

[Course details ^](#)

What you'll learn

- ✓ Understand the basics of IIoT, including its applications in manufacturing and business consideration for this technologies
- ✓ Hear from industry experts talking about the opportunities and challenges of implementing IIoT in the form of interviews and case studies

Skills you'll gain

- Internet Of Things Cloud Computing Business Transformation Operational Efficiency Value Propositions Data-Driven Decision-Making
Real Time Data Business Technologies System Implementation Emerging Technologies Digital Transformation Scalability Automation
Manufacturing Operations Cybersecurity Technology Strategies Case Studies



[Digital Twins](#)

Course 2 • 9 hours

[Course details ^](#)

What you'll learn

- ✓ Understand the basics of digital twins, digital twins platform and ecosystem
- ✓ Learn the implementation of digital twins in manufacturing, the corresponding business values, and risks

- ✓ Get to know the future trends of digital twins and digital threads

Skills you'll gain

Internet Of Things Manufacturing Operations Systems Integration Emerging Technologies Business Modeling Risk Analysis
Product Lifecycle Management Case Studies Digital Transformation Business Transformation Production Planning Technology Roadmaps
Real Time Data Business Trend Analysis Technology Strategies Simulation and Simulation Software



Additive Manufacturing

Course 3 • 12 hours

[Course details ^](#)

What you'll learn

- ✓ Understand the basics of Additive Manufacturing and industrial applications
- ✓ Learn about business considerations around implementing Additive Manufacturing

Skills you'll gain

Manufacturing and Production Cost Benefit Analysis Manufacturing Processes Organizational Change Business Transformation Case Studies
Risk Analysis Technology Roadmaps Technology Strategies Strategic Partnership Emerging Technologies Business Modeling



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Instructor



M.S. Krishnan

University of Michigan

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Frequently asked questions

^ Is this course really 100% online? Do I need to attend any classes in person?

This course is completely online, so there's no need to show up to a classroom in person. You can access your lectures, readings and assignments anytime and anywhere via the web or your mobile device.

^ Can I just enroll in a single course?

Yes! To get started, click the course card that interests you and enroll. You can enroll and complete the course to earn a shareable certificate. When you subscribe to a course that is part of a Specialization, you're automatically subscribed to the full Specialization. Visit your learner dashboard to track your progress.

^ **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.

▼ **Can I take the course for free?**

▼ **Will I earn university credit for completing the Specialization?**

Show less ^

More questions



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Financial aid available, [learn more](#)

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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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