ASU

Prototyping

This course is part of **Rapid Prototyping Using 3D Printing Specialization**

Instructor: Keng Hsu

2,374 already enrolled

Included with **coursera PLUS** • Learn more

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

4.8 ⭐
(24 reviews)

Beginner level
Recommended experience ⓘ

5 hours to complete

Flexible schedule
Learn at your own pace

What you'll learn

✓   Students will examine the what, why, and how of prototyping.

Skills you'll gain

| Computer-Aided Design | Mockups | 3D Modeling | User Feedback | Usability Testing | Prototyping | Industrial Design | Product Design | Development Testing |

Product Development

Details to know

in
Shareable certificate
Add to your LinkedIn profile

📋 **Assessments**
6 assignments

📰 **Taught in English**
Video subtitles available

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

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Build your subject-matter expertise

This course is part of the **Rapid Prototyping Using 3D Printing 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

In this short course, you will learn the what, why, and how of prototyping. After the course, you will be familiar with how to create prototypes, why to use them, and what tools are available to create them.

Course Introduction

Module 1 • 1 minute to complete

Module details ^

In this short course, you will learn the what, why, and how of prototyping. After the course, you will be familiar with how to create prototypes, why to use them, and what tools are available to create them.

What's included

📖 1 reading

Hide info about module content ^

📖 **1 reading • Total 1 minute**

Instructor Bio • 1 minute

Introduction to Prototyping

Module 2 • 2 hours to complete

Module details ^

In this module, you will learn the key principles of prototyping, why we use prototypes, and the various types of prototypes.

What's included

▶ 1 video   📖 6 readings   📄 2 assignments

Hide info about module content ^

▶ **1 video • Total 2 minutes**

Course Introduction • 2 minutes

📖 **6 readings • Total 115 minutes**

Why Prototype • 10 minutes

3 Stages of Prototyping • 10 minutes

Key Principle of Prototyping • 10 minutes

Testing, Why • 30 minutes

Types of Testing • 15 minutes

Testing Practices • 40 minutes

📋 **2 assignments • Total 8 minutes**

Quiz 1 • 3 minutes

Intro to Prototyping Assignment • 5 minutes

Prototyping Tools and Techniques

Module 3 • 2 hours to complete

In this module learners will be introduced to the various tools and techniques of prototyping.

What's included

▶ 1 video   📖 3 readings   📋 2 assignments

Hide info about module content ⌃

▶ **1 video • Total 9 minutes**

Types of Physical Prototyping Methods • 9 minutes

📖 **3 readings • Total 135 minutes**

Physical Prototypes; System Prototypes; Software Prototypes; Combined Hardware Prototypes • 90 minutes

Experience Prototypes • 35 minutes

Making Prototypes • 10 minutes

📋 **2 assignments • Total 6 minutes**

Quiz 2 • 3 minutes

Prototyping Tools and Techniques Assignment • 3 minutes

Polymer 3DP Technologies

Module 4 • 1 hour to complete

In this module learners will be introduced to various 3D printing technologies/tools for making prototypes.

What's included

▶ 3 videos   📖 2 readings   📋 2 assignments

Hide info about module content ⌃

▶ **3 videos • Total 22 minutes**

3D Printing Technology – Polymer 1 • 6 minutes

3D Printing Technology – Polymer 2 • 5 minutes

3D Printing Technology – Polymer 3 • 10 minutes

📖 **2 readings • Total 40 minutes**

3DP Overview • 35 minutes

Sources for Videos • 5 minutes

📋 **2 assignments • Total 8 minutes**

Quiz 3 • 3 minutes

Polymer 3D Printing Overview Assignment • 5 minutes

Earn a career certificate

Add this credential to your LinkedIn profile, resume, or CV. Share it on social media and in your performance review.

Instructor

Keng Hsu
Arizona State University
3 Courses • 7,267 learners

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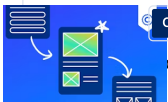...ototyping and Design
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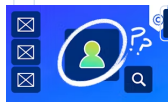...enAI for Prototyping Basics
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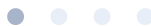...urse

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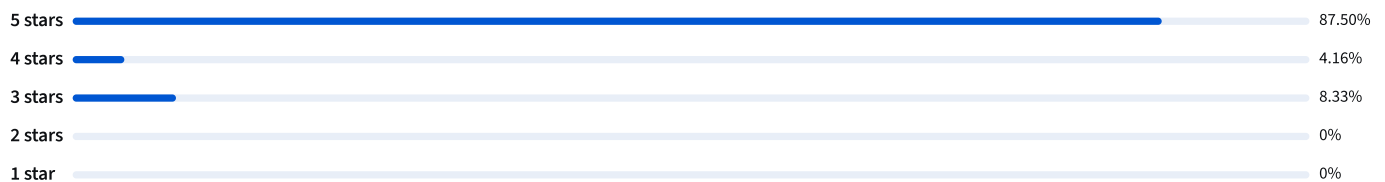## Why people choose Coursera for their career

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★ **4.8** 24 reviews

5 stars		87.50%
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3 stars		8.33%
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GC
★ 5 · Reviewed on Dec 1, 2024

THERE IS SO MUCH IMFORMATION IN THIS COURSE, I LEARNED THINGS THAT I DIN'T EVEN KNOW EXIST TODAY.

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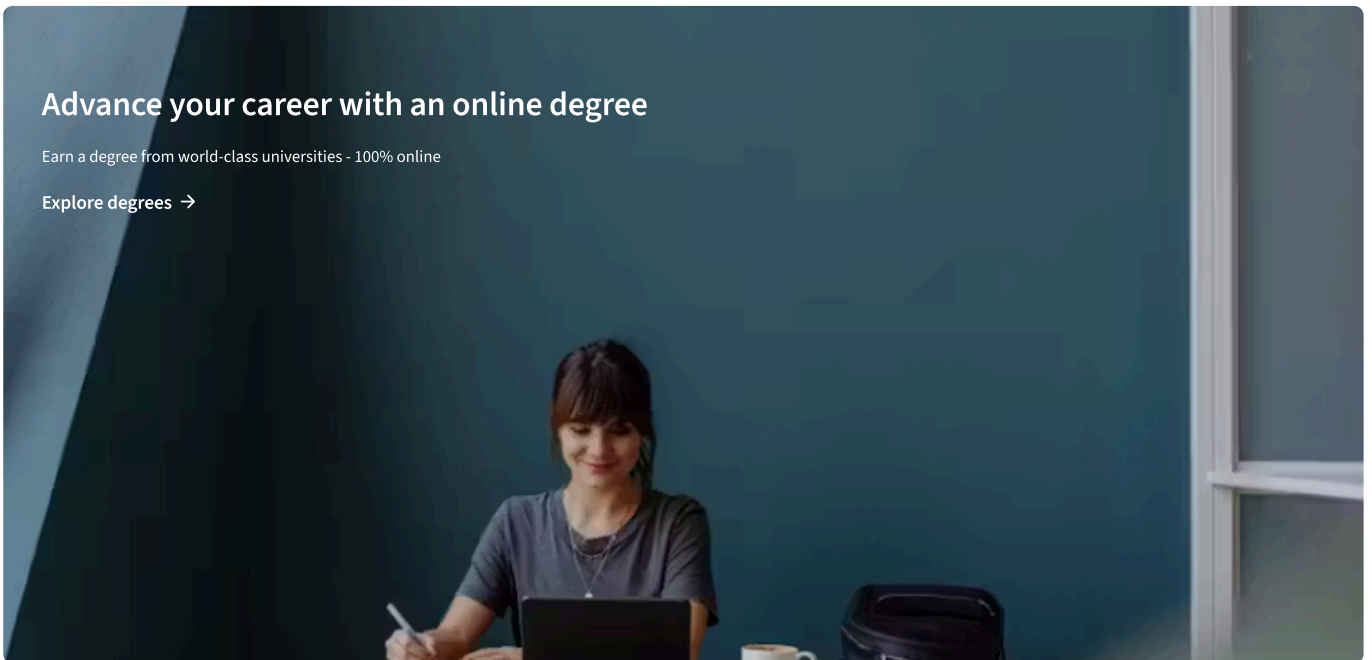
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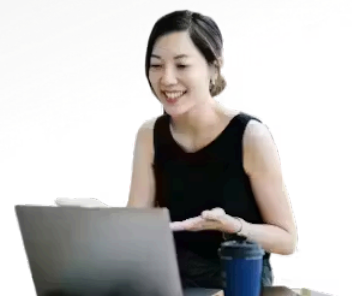
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Frequently asked questions

∧ **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.

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