**What is This Course About?**

Get introduced to the course.

**We'll cover the following**

* [Kubernetes is not one-size-fits-all](https://www.educative.io/courses/programming-with-kubernetes/what-is-this-course-about#Kubernetes-is-not-one-size-fits-all)
* [What we’ll cover](https://www.educative.io/courses/programming-with-kubernetes/what-is-this-course-about#What-well-cover)

**Overview**

Kubernetes is undoubtedly the first choice to deploy and manage containerized applications at scale. It’s becoming a de facto standard similar to Linux, where more companies and organizations are leveraging managed cloud-native applications.

**Kubernetes is not one-size-fits-all**

There is no one-size-fits-all approach to satisfy all our business needs and goals. However, Kubernetes is well-designed and extensible, providing us with ways to customize and implement the approaches to our goals. The fascinating part of Kubernetes is its high configurability and extensibility, which means we can build on top of that and make full use of it.

It takes too much time to gain the critical perspectives and experiences needed to effectively utilize these customizations through past experiences or trial and error. It results in genuine problems of downtime and disruptions.

**What we’ll cover**

In this course, we’ll discuss how to extend and customize Kubernetes to meet our special requirements, without introducing any unexpected behaviors that break Kubernetes conformance. Beyond that, we’ll learn more about the Kubernetes design philosophy, extension points, existing patterns, and their trade-offs and limitations.

In this course, we’ll also discuss how to define our own models and APIs with CustomResourceDefinition (CRD). Some best practices will be learned as well. This course combines theory and practice. You’ll get hands-on experience in extending and customizing Kubernetes. After this course, you’ll have gained the knowledge and skills to effectively use Kubernetes as a resourceful tool for a variety of situations.

# Intended Audience and Course Requirements

Learn about the intended audience and course requirements.

**We'll cover the following**

* [Intended audience](https://www.educative.io/courses/programming-with-kubernetes/intended-audience-and-course-requirements#Intended-audience)
* [Course requirements](https://www.educative.io/courses/programming-with-kubernetes/intended-audience-and-course-requirements#Course-requirements)
* [Kubernetes flavors](https://www.educative.io/courses/programming-with-kubernetes/intended-audience-and-course-requirements#Kubernetes-flavors)

## Intended audience

This course is intended for anyone who has some basic understanding of Kubernetes and wants to apply it to their business needs and goals, such as building Kubernetes-style APIs on top of Kubernetes, integrating with self-owned authentication systems, etc.

This course is based on use cases and lessons learned from real-world projects. Architects, technical consultants, cluster operators, and developers will benefit greatly from this course. It will also help you learn how to take your knowledge of Kubernetes to the next level.

## Course requirements

In this course, we assume that you’ve been using Kubernetes for a while and are familiar with it. We’ll touch on many Kubernetes features, architecture designs, extension points, etc. This course won’t attempt to explain the details of every such aspect from scratch.

We’ll be using a Kubernetes cluster, so it’s assumed you know how to bootstrap a cluster and keep it up and running.

## Kubernetes flavors

In this course, you’re encouraged to set up a cluster using official Kubernetes builds, where we could explore completed features without tailoring. You can also apply these lessons and code snippets to any certified Kubernetes offerings. We might need to make slight changes here and there, but that won’t be a big problem.

A self-hosted Kubernetes cluster where we could manually configure and easily make customizations is also preferred for this course. Kubernetes could run anywhere, such as on bare metals, public clouds, etc.

Regarding Kubernetes versions, there are no strict limitations. However, it’s suggested to use versions newer than 1.20.