



Course Learning Outcomes

An overview of what you'll learn and the structure of this course.

We'll cover the following



- Welcome to the Course
- What Will I Be Able to Do by the End of the Course?
- The Components
 - An Introduction to the Basics
 - The Layered Architecture
 - Socket Programming Basics

Welcome to the Course#

Welcome to Network Fundamentals! In this course, you'll get an in-depth overview of the key concepts of computer networks. Here are a few key components that will help you get the most out of this course!

What Will I Be Able to Do by the End of the Course?#

- **Develop** socket programs in Python.
- **Trace** networks metadata through the command line.
- Learn about tools that help **debug** network problems.
- **Understand** how applications such as browsers and mobile apps work from the perspective of the network.
- **View and understand** browser interactions with websites.

The Components#

An Introduction to the Basics#

The course starts off by introducing some key concepts and networks lingo that will be used throughout the rest of the course.



The Layered Architecture#

Computer networks are organized into conceptual layers. This makes learning concepts easier and is a standard teaching method in most books and courses.

You will learn about each layer in a separate chapter. Each chapter will start off by laying down the theoretical foundations and then will give some hands-on experience with `bash shell` or `python` playgrounds that you can run commands in.

Socket Programming Basics

A chapter of this course teaches python socket programming through basic server and client programs in python. It builds up to the programs line-by-line; each line is explained in detail before the next one is added on.

Let's dive right in!

[Next →](#)

Learning Instruments

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