

About This Course

This is a hands-on course. There will be 20 hours of instruction, exercises, and breaks. In the end, you will not only have learned new concepts, but practiced them.

This course counts toward the Tool Maker Track certification in Enthought Academy.

Certificate Awarded Upon Completion Of Course



Course Overview

Web Application Prototyping for Scientists & Engineers is designed to enable scientists to start building quick web-based tools.

Web-based tools are great for communicating research results and for sharing analyses or tools with colleagues (without the need to install additional software on a laptop or desktop).

In this workshop class, you will learn about the basic technologies of the web and how to interact with them from Python.

Each student will gain practical experience building working web applications.

Packages: flask, json, requests

Lectures

Web Applications for R&D

Introduction, Examples of Use Cases

Basic Web Infrastructure

Networking Basics, Web Pages (HTML/CSS)

Reading the Web with Python

URLs, Requests, Responses, Encodings

Web Services

RESTful APIs

A First Web Application

Text Elements, Images, Links

Web App Practicum 1

Project #1: One Page Dashboard

User Interactions

Forms, Saving State, Data Persistence

Web App Practicum 2

Project #2: Web Data Collection

Web App Practicum 3

Project #3: Multi-Page Applications

Deploying Web Applications

Servers, Security, Responsiveness

Prerequisites

This course requires basic proficiency with Python and the scientific Python stack. Some practical experience with standard Python, NumPy (ndarrays), and Pandas (DataFrames) are essential to working with the code and concepts presented in this course.

If you have taken Enthought's **Python Foundations for Scientists & Engineers**, you have the requisite background knowledge for this course.

About Our Instructors

Enthought instructors have advanced degrees in scientific fields such as physics engineering, computer science, and mathematics, and all have extensive experience through research and consulting in applying Python to solve complex problems across a range of industries allowing them to bring their real world experience to the classroom every day.