KOENIG SOLUTIONS · COURSE OUTLINE

55621A - Mastering GitHub Copilot for Developers

Learn to set up, code, debug and customise GitHub Copilot, applying it to real-world development use cases and best practices.

1 Day	4	27	7
8 HOURS A DAY	MODULES	TOPICS	HANDS-ON LABS

COURSE OVERVIEW

This course is designed to be interactive, with hands-on activities making up 50% of the time. It provides both beginner and intermediate developers with the skills to leverage GitHub Copilot effectively.

WHO THIS COURSE IS FOR

This course is designed for developers, DevOps professionals, software engineers, and IT professionals who use or plan to use GitHub as a core part of their software development and version control processes

Participants range from beginners seeking foundational GitHub skills to experienced professionals looking to enhance their collaboration, automation, and CI/CD workflows

LEARNING OBJECTIVES

Course Objectives:

- Understand the capabilities and limitations of GitHub Copilot
- Learn how to integrate Copilot into your development workflow
- Maximize productivity using Copilot for coding, debugging, and documentation
- Explore real-world use cases and best practices

COURSE SYLLABUS

4 Modules, 27 Topics

01

2 Labs

Introduction to GitHub Copilot

OVERVIEW OF AI & LLMS

- What is AI & LLMs and how does it help developers?

OVERVIEW OF GITHUB COPILOT

- What is GitHub Copilot?
- Benefits of AI-powered coding assistance
- Supported programming languages and tools

SETTING UP COPILOT

- **Prerequisites:** GitHub account, supported IDEs (VS Code, JetBrains)
- Installing and configuring GitHub Copilot
- Troubleshooting common installation issues

02

2 Labs

Using GitHub Copilot for Coding Writing Code

TOPICS

- Using code completion
- Autocomplete features
- Writing functions and classes
- Generating repetitive patterns and boilerplate code

ENHANCING CODE WITH COPILOT

- Refactoring suggestions
- Exploring language-specific features (Python, JavaScript, etc.)

03

2 Labs

Advanced Features and Customization

PROMPT ENGINEERING IN GITHUB COPILOT

- Controlling suggestion frequency and relevance
- Providing effective prompts for better suggestions
- Breaking down complex tasks

DEBUGGING AND TESTING WITH COPILOT

- Using Copilot for unit test generation
- Debugging tips with AI assistance

04

Lab

Real-World Use Cases and Best Practices

USE CASES

- Code and Security Reviews
- Generating documentation
- Building APIs and data pipelines
- Accelerating front-end and back-end development

BEST PRACTICES

- Combining Copilot with traditional tools
- Avoiding over-reliance on AI
- Remembering you are ultimately responsible for the code
- Static Analysis & Pay attention to compiler warnings
- Ethical considerations and intellectual property

HANDS-ON LABS

Practise What You Learn

#	MODULE	ACTIVITY
01	**Introduction to GitHub Copilot**	■ Install and configure GitHub Copilot in a development environment ■ Generate your first suggestions using simple code snippets
02	**Using GitHub Copilot for Coding Writing Code**	■ Write and refactor a simple program using Copilot ■ Experiment with multi-line code suggestions
03	**Advanced Features and Customization**	■ Generate and execute unit tests ■ Debug an application with Copilot's suggestions
04	**Real-World Use Cases and Best Practices**	Work on a real-world mini-project using GitHub Copilot

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

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Talk to a learning advisor about schedules, group training and customised delivery.

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