

# Claude Code 101 Course (Self-Paced)

This course introduces participants to agentic coding workflows using Claude Code, an AI coding assistant that works directly within the terminal. Through guided demonstrations and hands-on exercises, participants learn how to plan tasks, collaborate with an AI coding agent, and safely debug, refactor, and build features across real codebases.

Group classes in Live Online and onsite training is available for this course. For more information, email [onsite@graduateschool.edu](mailto:onsite@graduateschool.edu) or visit: <https://www.graduateschool.edu/courses/claude-code-101-course-self-paced>



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## Course Outline

### Module 1: Getting Started with Claude Code

- Introduction to Claude Code and how agentic coding tools differ from chat-based AI and inline code completion.
- Launching Claude Code in the terminal and exploring a codebase using natural language prompts.
- Using Plan Mode and CLAUDE.md files to provide context and structure AI-assisted coding workflows.

### Module 2: Real-World Coding Workflows with Claude Code

- Using Claude Code to debug failing tests and identify root causes in existing applications.
- Refactoring large or complex code files into modular structures using AI-assisted analysis.
- Building new application features across multiple files using guided agentic workflows.

### Module 3: Context Management and Operational Control

- Managing context windows to prevent context degradation and maintain AI performance.
- Using slash commands to inspect, manage, and optimize AI interactions.
- Configuring permissions and safeguards to balance development speed with operational safety.

### Module 4: Advanced Workflow Features and Custom Commands

- Creating custom slash commands to automate repetitive coding workflows.
- Exploring advanced features such as reusable skills, hooks, and agent extensions.
- Understanding how external integrations and MCP servers expand AI coding capabilities.

### Module 5: Capstone Exercise – Applying Claude Code to Real Projects

- Applying agentic coding workflows to debugging, refactoring, or feature development tasks.
- Using Plan Mode to design and execute multi-step coding changes.
- Reviewing AI-generated code changes using version control and development best practices.