COURSE SYLLABUS

AI Software Engineering Bootcamp (Self-Paced)

Self-paced: Learn AI-assisted software engineering through full-stack development, systems design, security, and a capstone application.

> Group classes (Live Online) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://training-nyc.com/certificates/ai-software-engineering-bootcamp-self-paced



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Course Outline

This package includes these courses

- AI Coding Bootcamp with Claude Code (Self-Paced) (60 Hours)
- AI Coding for Product and UX (Self-Paced) (60 Hours)
- AI Coding for Security (Self-Paced) (60 Hours)
- AI Coding for Systems and Architecture (Self-Paced) (60 Hours)
- AI Coding Capstone (Self-Paced) (60 Hours)

AI Coding Bootcamp with Claude Code (Self-Paced)

Build web applications with Claude Code, GitHub, Next.js, Supabase, and APIs. Practice code review, debugging, design, testing, security checks, and deployment.

AI Coding for Product and UX (Self-Paced)

Learn to design with AI, not just build with it: direct, explore, critique, systematize, and verify.

- Write design prompts with references and constraints that get past AI's default look
- Apply hierarchy, typography, color, spacing, and layout to direct and evaluate AI designs
- Use design skills in an AI coding tool, compare the results, and combine what works
- Create a design system and responsive layouts that hold up on every screen
- Add purposeful motion, usable forms, and the interface states AI often skips
- Run a QA pass, accessibility checks, and a usability test, then fix what you find

AI Coding for Security (Self-Paced)

Let AI help you understand attacks, harden accounts and cloud services, and find and stop threats.

- Threat-model a small organization and rank its risks
- Learn how web app attacks work by practicing them safely
- Lock down accounts, secrets, and cloud services
- Recognize AI-specific threats including prompt injection and over-powered agents
- Use Claude Code for log triage, threat hunting, and simple detection rules
- Investigate phishing safely, harden your environment, and lead a documented incident response

AI Coding for Systems and Architecture (Self-Paced)

Once you have worked through the principles of systems design and architecture, the way today's applications are structured, scaled, and tuned will make sense to you.

- Take core computer science concepts into development challenges drawn from real work
- Design systems that scale, guided by modern architecture patterns
- Find your way through networks, concurrency, and environments that use multiple languages
- Configure caching, queues, and workflows for background processing
- Ship applications with the help of cloud infrastructure tools
- Refine performance and maintain system reliability

AI Coding Capstone (Self-Paced)

Plan and build a full-stack application with AI-powered features. Practice testing and deployment, document your work, and present the project.