



COURSE SYLLABUS

Spec-Driven Software Development with OpenAI Codex

Build software with OpenAI Codex from written plans: configure AGENTS.md and agent settings, write verify-first acceptance checks, build in small tested pull requests, review with a second AI model and add security checks to CI.

\$1,000 per person

10 course hours (on-demand video and labs) plus 1 hour of coaching

On-demand asynchronous training with online support, plus 1 hour of coaching.

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Build software with OpenAI Codex from written plans: configure AGENTS.md and agent settings, write verify-first acceptance checks, build in small tested pull requests, review with a second AI model and add security checks to CI.

Credential type	Certificate, issued by We Can Code IT
Clock hours	11 (10 course hours plus 1 hour of coaching)
Price	\$1,000 per person
Time	10 course hours (on-demand video and labs) plus 1 hour of coaching
Delivery	On-demand asynchronous training with online support, plus 1 hour of coaching.
Credential	Certificate of completion from We Can Code IT
How you earn it	You earn the certificate by completing the labs and a capstone change taken from plan to a verified merge with passing checks and a review report, reviewed by your coach.
Who it is for	This course is for software developers, test automation engineers, technical builders, and entrepreneurs and founders who build their own products with AI coding agents.
Prerequisites	Introduction to GitHub with AI, or working knowledge of Git and pull requests; Comfort reading code in JavaScript or Python
Requirements	Works on Windows, macOS or Linux; Git, Node.js or Python, and a code editor such as Visual Studio Code (all free), and a free GitHub account; Labs use a public practice repository, since branch protection requires a paid plan for private repositories; do not put employer code in it. Teams on a paid GitHub plan can use a private repository.; Codex through a paid ChatGPT plan (Plus or higher) or a paid OpenAI API key; the free plan does not include the Codex cloud tasks used in the labs; A second reviewer from a different vendor, such as Claude Code, which needs a paid Claude plan (Pro or higher)

About this course

This course teaches spec-driven development with OpenAI Codex, across the Codex CLI, the IDE extension and Codex cloud tasks. You set up the project instructions Codex loads every session, turn a specification into a plan whose every acceptance criterion has a verify command, and direct Codex to build it in small, test-first pull requests. Then you have Claude Code or another vendor's model review the same work adversarially, record decisions, and add security checks that run on every pull request. Shipped means the checks pass on the main branch, with evidence.

What you will be able to do

- You will be able to install and configure OpenAI Codex, including AGENTS.md project instructions, approval modes and sandbox settings.
- You will be able to write a plan file whose acceptance criteria each carry a verify command that passes when built and fails when not.
- You will be able to direct Codex to build from a plan in pull requests under 400 lines, with a failing test written before each fix.
- You will be able to run an adversarial code review with a second AI model from a different vendor, make the reviewers argue, and act on the findings that survive.
- You will be able to configure a CI pipeline that runs tests and security checks for access rules and endpoints on every pull request, with Codex running unattended where useful.
- You will be able to record architecture decisions and risks so later engineers and agents understand why the code is the way it is.

Syllabus

Module	Hours
1. Setting up OpenAI Codex The Codex CLI, IDE extension and cloud tasks, Approval modes, sandbox settings and config.toml, What agents do well and badly, Agents open pull requests and never merge them. Lab: You will install Codex, restrict what it may do, and compare its output on one task with and without a specification.	1 h
2. Project instructions and coding standards AGENTS.md project instructions, Coding defaults and owned paths, Skills, custom prompts and MCP servers, Rules in files, not in memory. Lab: You will write AGENTS.md for a repository, add one reusable command, and confirm Codex follows them on a test task.	1.5 h
3. Plan files and verify-first acceptance checks Exploring the codebase before building, Plan file structure, "When X, the system shall Y" criteria, Verify commands that fail when the feature is absent. Lab: You will have Codex explore the code and turn a product owner's issue into a plan file with a verify command for every criterion, and prove each fails before the build.	1.5 h
4. Building in small, test-first pull requests Pull requests under 400 lines, Failing test before the fix, Baseline test runs, Labeling agent-authored work. Lab: You will have Codex build one plan item as a pull request under 400 lines, with a failing test first.	1.5 h

5. Cross-model adversarial review

1.5 h

Codex's own review commands, Claude Code or another vendor's model as second reviewer, Review prompts that demand vulnerabilities and refusals, Making reviewers argue and triaging findings.

Lab: You will review your pull request with Codex and with Claude Code, make the two debate their findings, and fix what survives.

6. Automation, security checks and decision records

1 h

codex exec and Codex code review on GitHub, Access-rule and tenant isolation tests, Required checks, Architecture decision records and a risk register.

Lab: You will add a security check and an automated Codex review step to CI, and write a decision record for one design choice.

7. Capstone

2 h

Project instructions, Plan with verify commands, Codex build, Cross-model review, Verified merge.

Lab: You will take an issue from plan to a merge whose checks pass on main, and walk your coach through the evidence.

Coaching sessions

1 h

1 hour of coaching. Your coach reviews your capstone with you and answers questions as you work. Teams pool their hours into group sessions, so a team of 6 shares 6 hours of group coaching.

Live online or in-person sessions are available for an additional fee. Email admissions@wecancodeit.org for details.

Provider

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