The digital revolution has transformed virtually every area of human activity—and you can be part of it as a web development professional. Vanderbilt University Coding Boot Camp is a self-paced, 24-week Online Flex course that gives you the knowledge and skills to build dynamic end-to-end web applications and become a full stack web developer.

With a personalized format, this program is designed to fit into your life schedule whether you’re employed or attending college full-time.

The program is rigorous and fast-paced and covers both the theory and application of web development. As you gain proficiency, you’ll use what you learn on real projects. Plus, you’ll have an impressive professional portfolio and the confidence to succeed as a web developer.
Are you creative, curious and looking to reinvent yourself professionally? If so—or if any of the following describes your situation—enrolling in our coding boot camp could be a smart career move:

- You’re considering a career change but not sure how to take the first step.

- You’re happy in your current field, but want to move to another company—or stay put but shift from a non-technical into a technical position.

- You want to engage more deeply with your current job—or boost your earnings and broaden your experience with freelance work.

- You have an entrepreneurial idea and need to acquire the skills to go “all in” on it and launch your business.

- You’re a full-time student but hungry to learn more and expand your skill set.
REAL PROJECTS, REAL JOBS

Our graduates will be qualified for many different roles, including:

- Full Stack Developer
- Software Developer
- Front End Web Developer
- Application Development Manager
- Back End Web Developer
- Computer Programmer
- Product Manager
- Web Designer
- Technical Project Manager
- Email Developer
- QA and Test Engineer
- Web Producer
COURSE STRUCTURE

EXERCISES
The written curriculum includes most of the information and teaching material. This is how we teach the concepts you’ll learn in order to work on the projects, solve coding challenges, and ultimately, work to get a job as a developer.

You’ll be coding alongside the lessons as you work through them, so you’ll be able to use the instructions and compare your results to the expected results outlined in the lessons. If your code or project doesn’t look as it should, it’s time to put on your problem-solving hat! The best developers dive into problems to see where they might have made a mistake or where there’s a better solution, and we have a lot of support to help you get unstuck as you learn the ropes.

VIDEOS
The video lessons are recordings of short lectures that walk you through high-level concepts and overviews of material. These are meant to provide more clarity on complex topics and really help you connect the pieces of the puzzle. We’ll give you pointers throughout the course so you know when it makes sense to watch each video.

CHALLENGES
Throughout the program, you’ll work through a handful of challenges to practice what you’re learning. Just like a developer on a team in the real world, you’ll submit your code for review after completing each challenge. Our team will review your code and provide you with feedback and suggestions for how you can refactor or improve your code.

QUIZZES
Quizzes are short activities that allow you to show us what you’ve been learning and allow us to evaluate your progress. We’ll ask you to complete coding quizzes at specific points throughout the program.

The coding quizzes are meant to make sure you’re on track and retaining the material necessary to succeed. If you consistently pass the coding quizzes, you’ll know that you’re on the right track and well on your way to achieving your goals.
COURSE OVERVIEW

The best way to retain knowledge is by getting hands-on experience. Our program will teach you to not only think like a developer—but problem-solve like one. We’ve taken years of on-the-job learnings and transformed them into strategically constructed lessons to teach students the skills they need to enter real web developer roles.

PHASE I — Build

In this phase, we will work together to build your foundational skill set.

1. Intro to Software Engineering
2. Technical Immersion
3. Development Process and Structure

PHASE II — Apply

Now that you have your foundation, we will apply your skills to make you employable.

4. Employable Experience
5. Technical Evaluation
6. Developer Confirmation

PHASE III — Execute

We will take all of your skills and apply them within a real-world setting.

7. Real Team Experience
8. Showcase Yourself
WE’RE HERE TO HELP

ON-DEMAND SUPPORT
When you’re stuck on a problem, you’ll have access to Teaching Assistants who can keep you moving in the right direction. Your Teaching Assistants will walk through the issue with you to help you understand and fix the problem.

ONE-ON-ONE MENTORSHIP
Whether you have questions on your career path or technical concepts, you’ll have personal, one-on-one mentor sessions weekly to help coach you through it all.

TECHNICAL FEEDBACK
This is where we teach you to think like a developer. We’ll walk through your projects and your development process to help you think about problem-solving in the most efficient way.

STUDENT SUPPORT
You don’t have to go through it alone. You’ll use Slack and other communication tools to chat with other students, seek help, and help others out.

CAREER SERVICES
In addition to learning to code, you will have access to career services that will help you prepare for technical roles after graduation such as:

- Career Content and Practice Sessions
- Database of Customizable Tools and Templates
  - Multiple Technical Resume Templates
- Github Best Practices
- Guidelines To Building A Portfolio
- Creating an Elevator Pitch
- Developing a Bio
- Online Career Events With Industry Professionals
- Soft Skills Training
- One-on-One Career Coaching
## Module Description

### Intro to Software Engineering
**Duration:** 15 — 30 hours  
**Contents:** 43 steps, 5 challenges  

**Learn the Fundamentals**  
You’ll work with us to build multiple scripts in Ruby. We’ll provide you the technical feedback as you learn how to write programs, manage flow control, and use Ruby methods. At the end of this course, you’ll have a live portfolio website to showcase your work.  
- HTML  
- CSS  
- Ruby  
- Sublime Text  
- Code IDEs

### Technical Immersion
**Duration:** 15 — 30 hours  
**Contents:** 19 steps, 11 videos, 2 assignments  

**Use the Tools**  
You’ll dive into the deep end by building a database-driven application using the Rails framework. You’ll learn how to manage version control using real developer tools, and host an application online. At the end of this course, you’ll have a custom quote generator to showcase your newly acquired skills.  
- Ruby on Rails  
- Active Record & PostgreSQL  
- Model/View/Controller architecture  
- Deployment via Heroku  
- Twitter Bootstrap  
- Git & GitHub

### Development Process and Structure
**Duration:** 90 — 105 hours  
**Contents:** 51 steps, 4 challenges, 12 videos, 1 quiz  

**Refine the Skills**  
You’ll learn how to use algorithms, object-oriented programming, and APIs, which employers will look for when hiring web developers. You’ll use data structures to build features like user authentication, comments and ratings, and image uploading.  
- Object-Oriented Programming  
- Inheritance  
- Authentication  
- Algorithms & Coding Challenges  
- Amazon Web Services (S3)

### Employable Experience
**Duration:** 120 — 135 hours  
**Contents:** 39 steps, 2 challenges, 34 videos, 2 quizzes  

**Build a Video Streaming Platform**  
You’ll take your foundational skills and take them to the next level. You’ll learn how to design complex user interfaces, architect advanced database relationships, and link it all together with by solving challenging algorithms. At the end of this course, you will have developed a custom marketplace with payments.  
- Complex database relationships  
- Intro to JavaScript  
- JSON  
- Ajax Requests  
- SCSS

### Technical Evaluation
**Duration:** 90 — 105 hours  
**Contents:** 21 steps, 5 challenges  

**Test the Skills**  
You’ll learn how crucial testing is to the development process. You’ll build automated software tests, ensure good test coverage, and release tested code at an advanced level. At the end of this course, you will have grasped the test-driven development process.  
- rspec  
- red/green/refactor cycle  
- FactoryBot and factory patterns

### Developer Confirmation
**Duration:** 105 — 120 hours  
**Contents:** 20 steps, 9 challenges  

**Apply the Knowledge**  
You’ll take the skills you’ve learned and apply them to a completely different programming language to showcase your versatility as a developer. At the end of this course, you will build an entire dynamic application through JavaScript.  
- Single Page Applications  
- Advanced JavaScript (Asynchronous Programming Paradigms)  
- JavaScript Callstacks  
- EventQueue  
- Web APIs

### Real Team Experience
**Duration:** 120 — 150 hours  
**Contents:** 3 steps, 8 sessions  

**Prove You’re a Developer**  
You’ll transition from individual developer to contributing team member. You’ll work with other members and a scrum master, meeting weekly to discuss objectives and divide tasks. During this course, you will build a complex chess app using the agile methodology to demonstrate to employers that you can operate within a professional work environment because you’ve worked with other developers in a meaningful way on a complex project.  
- Kickoff Planning  
- Agile Sprint Planning  
- Merge conflicts  
- Pull Requests  
- Performing and Receiving Code Reviews  
- Database Modeling  
- Complex business logic  
- Building features from ticket specification