



THE UNIVERSITY OF VERMONT
**PROFESSIONAL AND
CONTINUING EDUCATION**

Coding Certificate
Program

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About the Coding Certificate Program



DESIGNED TO FIT A WORK SCHEDULE

Classes meet three times per week from 6:30PM - 9:30PM. All classes will be held 100% online.



TAUGHT BY INDUSTRY INSTRUCTORS

Learn from instructors who put their knowledge to use every day as developers and engineering managers themselves. They'll not only teach you the fundamentals, but the updates, tips, & tricks they learn daily.



LEARN BY DOING

Apply the new concepts and skills you learn in practical exercises, ongoing activities, and real-world projects.



ADVANCE YOUR CAREER

Take the next step on your unique professional journey by learning the essential professional skills to build the career you want.



PROFESSIONAL ACCELERATION PROGRAMS & 12 WEEKS CAREER COACHING AND MENTORING SUPPORT

Our career mentors will guide you in your career growth and job search, and help you connect with the right people and companies along the way

What You Will Learn

- JavaScript
- SQL
- MySQL
- RESTful APIs
- Express.js
- HTTP
- Building Web Apps
- Test Driven Development
- Integration Testing
- Node.js
- React.js
- Git & Github
- Model-View-Controller (MVC Architecture)
- JSON
- Mocha, Chai, and Sinon
- DevOps & Amazon Web Services (AWS)
- HTML & CSS
- Functional Programming
- Technical Interviewing

- ✓ Build & deploy full stack web applications from start to finish
- ✓ Build RESTful APIs
- ✓ Interact with databases, manipulating, and returning information
- ✓ Understand *why*, not just *how* code works
- ✓ Navigate job searches for technical roles
- ✓ Understand the fundamentals of modern software development
- ✓ Manage version control with Git & Github
- ✓ Communicate effectively under pressure
- ✓ Debug code
- ✓ Create test suites that help guarantee code quality



Relevant Skills For

- Junior Web Developer
- Web Developer
- Full Stack Developer
- Junior Software Engineer
- DevOps Engineer
- Experience Developer
- Junior Product Manager
- QA Engineer
- Technical Customer Success Manager
- Software Developer



Alex Alejandro, FALL 2020

- *Previous career: Camp Counselor at YMCA*
- **Now: Junior Software Developer at ICF**



New projects every week helped me apply the concepts I learned, which gave me more confidence in my skills, and an overall better understanding of what I learned. Not only did it give me the technical skills I needed to land my first role, the course taught me the importance of networking and getting to know people in the industry.”

— ALEX ALEJANDRO, FALL 2020

Description	Topics
<p>Hit the Ground Running</p> <p>The best way to learn is to do. This module will introduce you to the three building blocks of all web applications: HTML, CSS, and JavaScript. Along the way you will become familiar with the tools developers use everyday such as git, Chrome developer tools and VS Code.</p> <p>Begin at the Beginning. Programming Fundamentals</p> <p>All software is built up from the basic constructs of programming. This module will introduce you to the fundamentals such as data structures and flow of control. With these tools at their disposal, you will be able to write your first working programs.</p>	<ul style="list-style-type: none"> • Tools used by professionals • Version control with Git & Github • Chrome developer tools • HTML, CSS, & Javascript • Functions and Variables in JavaScript • Flow of control • Branching, Arrays, and Loops
<p>Out of the Browser. Introduction to Node</p> <p>With JavaScript fundamentals under your belt you will be ready to move out of the browser to the Node JavaScript engine. In this module you will become proficient in tools such as mocha and chai as well as the test driven development methodology.</p> <p>Think Like a Developer. Algorithms and Data Structure</p> <p>Being a developer is all about breaking down and solving problems. This module will help you hone your problem solving skills by immersing you in the type of algorithmic thinking that is the hallmark of a great developer.</p>	<ul style="list-style-type: none"> • NodeJS and NPM • Test Driven Development • ECMAScript & ES6+ • Mocha and Chai • Functional Programming • Recursion • Objects, Arrays, and JSON • Pair Programming • Debugging
<p>How the Web Works. HTTP and Express</p> <p>Creating full stack web applications requires a deep understanding of internet protocols. Armed with this knowledge of HTTP you will begin developing your first Express application using the Pug templating engine.</p> <p>Wiring It All Together. Model, View, Controller (MVC)</p> <p>Bringing together skills learned so far, you will learn how to create data backed, full stack web applications. In this module you will utilizing models to interact with your data, controllers to manipulate that data, and views to present that data to the user. You will also begin learning one of the most critical elements of a developer's skillset: RESTful APIs.</p>	<ul style="list-style-type: none"> • HTTP • ExpressJS • Pug • Model, View, Controller (MVC) • Sequelize • Sinon, Stubs, and Mocks • RESTful APIs • REST API Handlers • Postman • Express Middleware • Integration Testing

Description	Topics
<p>A Place for Everything. Data Modeling and SQL</p> <p>Modern web applications operate on very complex data in order to deliver value to the user. To interpret this data at scale, many applications employ databases. Properly utilizing a database requires that an accurate data model be created. This module will give you the skills to create proper models and implement them with the SQL language.</p>	<ul style="list-style-type: none"> • Data Modeling • Entity Relationship Diagrams (ERD) • Structured Query Language (SQL)
<p>Everyone to the Front: Building Front End Apps with React</p> <p>You've learned how to build the back end of applications with JavaScript, Node, and SQL Databases, and you've touched on the front end with HTTP and CSS. Now it's time to get serious using React, a JavaScript framework for developing front end applications.</p>	<ul style="list-style-type: none"> • Front End Development • React.js, React Hooks • JavaScript XML, BabelJS, WebpackJS • MonoRepo • React Router & Styled Components • React Component Testing
<p>The System is Down. A Survey of Modern Day DevOps</p> <p>DevOps blends the worlds of software development with system management. A developer's job doesn't end with the creation of code; the responsibility for getting the code running on production servers and solving issues that may arise is shared between the developer and the system administrators. This course will provide a survey of the tools and techniques used by teams to be production ready.</p>	<ul style="list-style-type: none"> • Hosting Software in various environments • Managing DNS with AWS Route53 • Deployment of a Node server with Amazon Elastic Beanstalk • Continuous Delivery with CircleCI
<p>Getting a Call Back. Technical Interview Preparation</p> <p>Performing well in a technical interview is a skill that requires practice. You will learn the techniques that will make you successful in these high stress situations and practice these skills with an experienced interviewer to guide them.</p>	<ul style="list-style-type: none"> • Navigating technical interviews • Practice solving common interview questions
<p>Tag, You're It. Building Your Own REST API</p> <p>After months of honing your skills and building projects along the way, you will finish developing your own API-backed web application, and launch it to the public, adding another real-world project to your portfolio.</p>	<ul style="list-style-type: none"> • Company Project Presentations • Finish building the capstone project API and push it live for the world to use

Professional Acceleration Program: Throughout this program, you will be introduced to the social, emotional, and professional skills that companies look for in top performers, and will help you succeed throughout your career. These will be critical as you practice, hone, and showcase your abilities in your Company Project, where you'll apply both your technical skills and your ability to collaborate on diverse teams in real-world situations.



FULL TUITION

Pay full tuition at the start of the program and receive \$250 off

\$11995



INCOME SHARE

Make flexible payments once you're above a minimum income

\$0

Upfront



INSTALLMENT PLAN

Pay tuition in 4 payments during the bootcamp with no interest

\$1899-2375

Per month



STUDENT LOAN

Choose when you start paying and how much based on your credit history and finances

\$150-250

Per month

About Stack Education & University of Vermont Professional and Continuing Education

Stack Education empowers colleges & universities to offer industry-driven, industry-taught courses, helping students of all ages learn the skills and earn the experience they need for the modern economy. Our programming is unique as we use local industry experts to teach our classes and provide an industry project in partnership with a local business. Our proprietary Professional Acceleration Program curriculum (PACC) envelops our program and gives students the necessary capabilities and skills required to thrive in business and in life. Stack Education is headquartered in Boston, MA.

Every year we help thousands of non-traditional students continue their education at the University of Vermont. Through collaborations with UVM's various colleges and schools, we offer courses and programs to help you explore your options. Whether you're planning a career change, looking for personal enrichment or professional development, or preparing for an undergraduate or advanced degree.