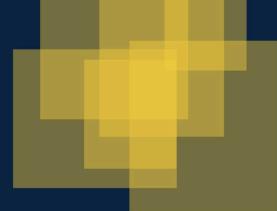




THE UNIVERSITY OF BRITISH COLUMBIA

Extended Learning



Software Development Bootcamp

36 WEEKS | ONLINE | \$14,995



IN PARTNERSHIP WITH CIRCUIT STREAM

Why Software Development?

In an industry where job postings have soared by 125% since 2020 (Indeed, 2023) and are projected to continue to grow by 26% in the next 8 years according to the Bureau of Labor Statistics, the role of a software developer reflects a growing and in-demand career path. Companies are constantly on the lookout for skilled software developers to innovate, build new products, enhance existing applications, and drive technological advancement.

The Software Development Bootcamp curriculum is designed to meet these industry needs head-on, preparing you to become a well-rounded software developer, proficient in the critical skills that align with the market's current trends and demands. From conceptualizing user-centric interfaces to engineering robust backend architectures, including system design and mobile development, we ensure you are prepared as an industry-ready software developer.

Common Job Titles

- Software Developer
- Front End Developer
- DevOps Engineer
- Systems Engineer
- Back End Developer
- Full Stack Developer
- Mobile Engineer
- Software Specialist



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Program Overview

The University of British Columbia Extended Learning has partnered with Circuit Stream to offer you the Software Development Bootcamp. Circuit Stream is at the forefront of technical education, dedicated to bridging the gap between the most in-demand skills and providing thorough, industry-aligned training to cultivate top-tier talent.

The Software Development Bootcamp is a career-focused program that prepares you to enter the software development industry. Over the course of 36 weeks, you will acquire the skills to master the craft of developing advanced, scalable software systems, including leveraging modern AI tools to code faster and smarter. You will also become well-versed in the roles and specializations of software developers and understand their integral position within the broader context of technology development and project management.

By the end of the program, you will have completed a capstone project that demonstrates your ability to architect and develop a complex software solution, showcasing your practical skills and knowledge.

What to Expect

Overall Expectation

- ✓ 36 weeks
- ✓ 280 hours of live sessions
- ✓ Up to 10 one-on-one career sessions
- ✓ Up to 6 projects for your portfolio
- ✓ Capstone project

Weekly Program

- ✓ 5-hours of live class time per week
- ✓ 2.5-hours of Technical and Career Labs every other week
- ✓ 10 hours of independent study per week

Experience

Certification

Upon successfully completing the Software Development Bootcamp, you will receive a Digital Micro-credential badge from UBC Extended Learning and Circuit Stream. This attests to your proficiency and ability to engineer comprehensive and scalable software systems using industry-standard tools and methodologies.



Is This Course for You?

This foundational course is an excellent starting point for those aiming to establish a career in software development, offering an in-depth introduction to the industry's core practices and emerging trends.

The Software Development Bootcamp is tailored for beginners, however, fundamental computer literacy skills are essential for a smooth learning experience. This encompasses file organization and the ability to navigate your operating system, be it Windows, macOS, or Linux.

Admission Process



STEP 1

Submit Online Application

Fill out our online application form and we'll get back to you as soon as possible.

[Submit here](#)



STEP 2

Program Acceptance

Your application will be reviewed by the Circuit Stream admissions team. Once reviewed, if you are accepted, you will receive an email officially offering you a seat in the program.

Outcomes

Software Engineering Foundations

- (✓) Start with web development fundamentals using HTML and CSS, and progress to JavaScript for dynamic interaction, preparing you for the complexities of software engineering, including best practices for code organization and responsive design.
-

Front-End Development & Full-Stack Integration

- (✓) Dive into modern front-end frameworks like React to create interactive user interfaces. Integrate these with backend APIs, learning full-stack development through practical projects that simulate real-world applications.
-

Backend Proficiency and DevOps

- (✓) Delve into server-side programming with Node.js, manage databases effectively, and understand back-end security. Incorporate DevOps practices, including server management and deployment with Docker, to streamline the software delivery process.
-

System Design and Algorithmic Thinking

- (✓) Gain a solid grasp of algorithms and data structures, which is pivotal for efficient problem-solving and software optimization, preparing you for technical challenges and system architecture roles.
-

Mobile Development and Cross-Platform Innovation

- (✓) Extend your software skills to the mobile domain, learning to adapt web development principles for mobile applications using React Native and understanding platform-specific design and distribution. Implement accessibility features, ensuring inclusivity and usability for all users.
-

AI-Enhanced Software Development

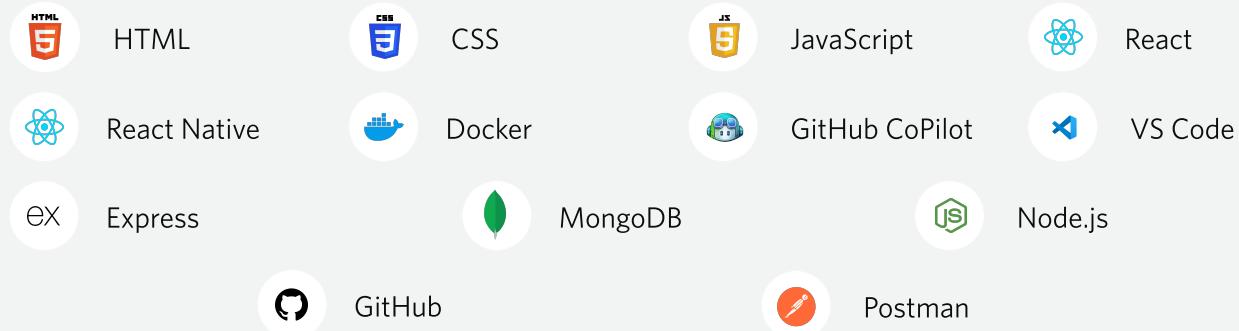
- (✓) Throughout the program, learn how to leverage AI tools like GitHub Copilot for improved code quality, efficiency, and automated testing, integrating AI into the development lifecycle to stay ahead in the evolving tech landscape.
-

Career Development in Software Development

- (✓) Finding a job in a new industry is challenging and it requires the development of many soft skills. This course will provide guidance into the abilities and actions you need to confidently compete for a job.
-

Experience with Industry-Recognized Tools

The Software Developer Bootcamp will expose you to popular developer tools like Git, GitHub, VS Code, and Chrome Dev Tools as you build our your software apps.



Program Structure

Overview



Live Sessions

Each week, there are five hours of live online teaching per week, split into two 2.5 hour sessions. Led by an instructor, you will apply a project-based methodology that gives you engaging challenges and hands-on problem-solving experience.



Lab Sessions

Labs are workshops where you practice and refine your skills through themed technical projects and case studies, career workshops, and dedicated working sessions.



Premium Support

Stay on track with access to premium academic support. A qualified expert will be available to address any technical questions you have and provide guidance as you work through your course material.



Career Services

Career coaching is at the heart of the program. From day one, we'll be there to provide guidance through career coaching, group workshops, one-on-one sessions, and guest lectures. The career component of the program runs concurrently with the technical training.

Learning Activities and Projects

The Software Development Bootcamp is structured around project-based learning that has you gain practical skills while working on real-world projects to help build solid foundations for a career in software development. The course consists of:

01 Assignments

02 In-class challenges

03 Portfolio projects

04 Capstone project

Completion Requirements

To successfully complete the Bootcamp and earn your certification, you must finish with a grade of at least 70%.

● Course Assignments	-----	20%
● Midterm Project	-----	30%
● Capstone project	-----	50%

Prerequisites

The Software Development Bootcamp is beginner-friendly and requires no prior experience to be admitted. Students can enter the program and be confidently learning from day one. To be accepted into the program, you must:

- Be 18 years of age or older.
- Have basic computer literacy.
- Have internet access.

Hardware Requirements

- Operating System: Windows 10 65-bit or later, or MacOS Big Sur or later
- Memory: 8GB RAM minimum, 16GB preferred
- Storage: 256GB SSD minimum
- Processor: Intel Core i5 or higher, M1 or M2 chip

Curriculum

Foundations

Begin your journey into software development by mastering the essentials of web development. You'll learn to construct well-structured web pages using HTML and to style them beautifully with CSS. This foundational knowledge sets the stage for you to create engaging and responsive user interfaces, understanding how each line of code translates into visual elements on the screen.

Week 1 to 3

Key Outcomes

- Gain proficiency in HTML and CSS to develop structured and visually appealing websites
- Understand responsive design principles to ensure your web pages look great on any device
- Employ best practices for web development, from code organization to optimizing for performance and accessibility
- Learn to enhance coding efficiency with GitHub Copilot, utilizing AI to streamline the development process and code generation

Week 4 to 7

JavaScript

Starting with fundamental programming constructs, you'll quickly progress to creating rich, interactive user experiences. You'll employ JavaScript to respond to user interactions, manipulate the DOM in real-time, and make web pages react instantly to each user's input.

Key Outcomes

- Implement JavaScript to create interactive and dynamic web experiences
- Manipulate the DOM and harness the power of asynchronous JavaScript for responsive user interface
- Utilize AJAX, JSON, and third-party APIs to enrich your applications with dynamic content and seamless data integration

Back-End Development

Venture into the server-side realm with back-end development, where you'll build the engine room of your applications. Learn to set up servers, manage databases, and create APIs using Node.js. This module emphasizes the importance of security, teaching you to safeguard your applications against potential threats and vulnerabilities.

Key Outcomes

- ✓ Acquire the skills to build and maintain the back-end infrastructure using Node.js
- ✓ Implement security best practices to protect user data and ensure the integrity of your applications
- ✓ Develop and manage APIs that serve as vital conduits for front-end and back-end communication

Full-Stack Integration

The full-stack integration module is where the front-end and back-end come together. You'll learn to weave front-end displays with back-end logic seamlessly, creating a cohesive and functional application. This module also covers the implementation of user authentication and session management, essential for personalized user experiences.

Key Outcomes

- ✓ Integrate front-end and back-end technologies to develop complete applications
- ✓ Manage user authentication and session states to provide secure and customized experiences
- ✓ Apply industry-standard tools and Agile methodologies to collaborate effectively in team environments

Algorithm and Structural Foundations

Strengthen your software development skills with an in-depth look at algorithms and data structures. You'll learn how to organize data for optimal efficiency and solve complex problems systematically. This knowledge is crucial for writing efficient code that forms the backbone of powerful software solutions.

Key Outcomes

- 🕒 Master the use of algorithms and data structures to solve complex problems with elegance and efficiency
- 🕒 Utilize design patterns and SOLID principles to write clean, maintainable code
- 🕒 Prepare for technical interviews with a solid understanding of computer science fundamentals



Front-End Development

This module introduces you to the dynamic world of front-end frameworks, focusing on React. You'll learn how to build dynamic, single-page applications (SPAs) and create reusable components that bring modern web applications to life. By understanding state management and lifecycle methods, you can construct interactive and data-driven user experiences.

Key Outcomes

- 🕒 Create sophisticated user interfaces using React
- 🕒 Understand the principles of component-based architecture to write reusable and maintainable code
- 🕒 Employ testing strategies to ensure the reliability and robustness of your applications

Deployment and DevOps

Learn the art of deploying software and managing live applications. This module covers server management, continuous integration/continuous deployment (CI/CD) practices, and containerization with Docker. You'll understand how to get your applications out of development and into the hands of users reliably and efficiently.

Key Outcomes

- ✓ Deploy web applications using modern DevOps tools and techniques
- ✓ Configure servers and set up automated deployment pipelines for streamlined software delivery
- ✓ Use Docker to create containerized environments, ensuring consistency across development and production

Mobile Development

Embrace the mobile-first approach as you learn to translate your web development skills to the mobile platform. Focusing on React Native, you'll adapt your applications for iOS and Android, ensuring they are responsive, intuitive, and tap into the unique features of mobile devices.

Key Outcomes

- ✓ Develop cross-platform mobile applications that offer a seamless user experience across devices
- ✓ Utilize mobile-specific features and design patterns to enhance the functionality and usability of your applications
- ✓ Navigate the ecosystem of mobile app development, from platform guidelines to app store distribution
- ✓ Implement accessibility features in mobile applications, ensuring inclusivity and usability for all users, regardless of their abilities.

Capstone Project

Over 4 weeks, you'll harness your comprehensive software development skills to identify a real-world problem and craft a targeted software solution. Your journey culminates in a presentation to industry experts, showcasing your ability to transform challenges into impactful technology solutions. This is where you transition from learning to leading, demonstrating your readiness for the professional tech landscape.

Project Breakdown

Foundations & JavaScript Create a personal portfolio website that showcases your work, skills, and potential. In the JavaScript unit, add interactivity to the website.

Back-End Development Develop a RESTful API for a task management application using Node.js. Implement CRUD operations and ensure data is securely stored and retrieved from a database.

Full-Stack Integration Connect a provided user interface to a custom API to enable user account creation, profile editing, and data storage.

Algorithm & Structural Foundations Develop a dynamic data dashboard. Use HTML, CSS, and JavaScript, alongside visualization libraries like D3.js, to present complex datasets through interactive charts and graphs.

Front-End Development Develop a weather forecast application where users can enter a location and receive a weekly weather outlook. Ensure functionality with comprehensive test coverage.

Mobile Development Convert an existing web application into a mobile app using React Native, maintaining feature parity and seamless data synchronization between desktop and mobile versions.

Career Preparation and Guidance

During Circuit Stream's career lab support, you will be equipped to showcase your software development skills and behavioral strengths, craft a captivating portfolio featuring your Software Development Bootcamp projects, and elevate your digital presence to align with your personal brand. Delve into software design specializations, understand the interview questions associated with each specialization, and excel at industry networking while thoroughly preparing for job interviews for MAANG and in the software engineering world.

Career support highlights

- ✓ Writing resumes and cover letters
- ✓ Navigating job search
- ✓ Crafting a compelling portfolio
- ✓ Preparing for interviews
- ✓ Negotiating salary
- ✓ Pitching projects and networking

Units

Self Discovery

- (✓) Navigating your way through a new industry can be overwhelming, but getting clarity on what you want and need makes things easier. In this lab, you will undergo deep self-exploration. In the end, you will determine your goals to start a career in software development.

Market Research

- (✓) Learn how to do research and compare what you are thinking with the reality of the job market, using public information like postings and industry descriptions. Then, figure out how job search works in any industry and define an overview of the most important steps you need to follow, and the challenges you might face.

Personal Brand

- (✓) Your personal brand should comprise the aspects you defined in the previous labs. You will implement your strengths and industry knowledge to refine your digital messaging to make the right connections for your new career.

Digital Presence

- Once you determine what your new and shiny personal brand should be, turn it into your digital presence. You will show what you can do with key digital tools that will lead to a successful career transition.

Job Search

- Discover the best practices for job search and interview success, including job application strategies, resume building and etiquette, writing your personal brand statement, networking to find job leads and potential employers.

Networking Events

Through Circuit Stream's partnership network, you will receive the opportunity to network and connect with hiring partners—including those looking to hire talented software engineers and software developers.



Pitch Day

You will have the opportunity to take part in Pitch Day, a day dedicated to showcasing your capstone project that takes place a month after Bootcamp ends. The event ranges between 2-3 hours, and you will have the opportunity to present and pitch your project to hiring managers and industry experts. This is also an opportunity to gain feedback from peers and participants alike.

Outcomes

- Networking with industry professionals
- Real-time project feedback
- Connect with potential employers

Pricing

Pay Upfront

Pay in full before you start. Circuit Stream accepts wire transfers and credit card payments.

\$14,995
excluding tax

Deferred Payments



Circuit Stream offers 3-month or 24-month payment plan.
Payment plans are subject to a one-time admin fee.

for as low as
\$625/mo



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Ready to get started?

Schedule a call with a Program Advisor to learn how this course can help you.

[Schedule here](#)

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