Full-Stack Web Developer Program

C# Fundamentals 1 - Introduction to C# Language & .NET Framework (CSF1) (*5 days or 8 evenings*) CSF1 students learn foundational concepts for using the C# language in Microsoft's .NET framework. Students write code to create console applications, as well as to form a strong basis of knowledge for using C# in any application development. This course also introduces terms and concepts that are widely used throughout multiple development languages and design methodologies. Students also set up their Git Hub account which will be regularly updated as they complete various labs and projects.

C# Fundamentals 2 - Complex Datatypes & Collections (CSF2) (*5 days or 8 evenings*) CSF2 introduces students to advanced C# topics, such as inheritance, polymorphism, and debugging. These concepts will be reinforced throughout the week with a console-based application that they build in class. Students also work in teams to build an application with no instructor input.

Front-End Development 1 - HTML5, CSS3 & Frameworks (FED1) (*5 days or 8 evenings*) FED1 introduces students to the components and languages for building the web pages that comprise a front-end website. Students learn how to build usable, attractive user interfaces utilizing HTML5 and CSS3 as they also begin building their Personal Site.

Front-End Development 2 - JavaScript & jQuery (FED2) (*5 days or 8 evenings*) FED2 begins with students deploying the local files for their Personal Site to their web server. The course then focuses on the syntax and logic of using JavaScript in a browser. They also will use jQuery to achieve commonly desired JavaScript functionality with less code. They will learn to debug JavaScript and the benefits and downsides of using jQuery.

Introduction to Data - SQL, XML, and JSON (DATA) (*5 days or 8 evenings*) DATA students learn how SQL, XML, and JSON store, manipulate, and retrieve data for use in applications. Students will create a data model for a Relational Database Management System (RDBMS) using tables, data types, primary and foreign keys, and constraints.

Introduction to MVC - Model, View, Controller Fundamentals (MVC1) (*5 days or 8 evenings*) In MVC1 students will combine front-end and middle tier code utilizing Microsoft's ASP.NET MVC framework. Model View Controller (MVC) is a very popular and useful design pattern. Students will demonstrate how MVC makes model classes reusable without modification. Students will be introduced to the components of the ADO.NET API and combine the use of data (ADO.NET Connected SQL) with their MVC Application.

MVC and Data Integration - Entity Framework and n-Tier Architecture (MVC2) (*5 days or 8 evenings*) In MVC2 students will complete full stack projects utilizing front-end, middle tier, and a database in a single application. Students will also incorporate data into a multi-tier application and use Identity Framework to complete authentication and authorization on their site.

Advanced MVC - State Management, Advanced Identity, AJAX, Web Services, and Unit Testing (MVC3) (*5 days or 8 evenings*) In MVC3 – which goes beyond basic CRUD operations and scaffolding – students will learn how to enhance the application to improve the customer experience. Students will also learn Unit Testing and how to implement custom error pages for the application.

Front End Frameworks – ReactJS (FEF) (*5 days or 8 evenings*) FEF offers students the opportunity to learn one of the up and coming front end frameworks ReactJS. Students will learn the basics of this JavaScript based framework and have the opportunity to learn how to interact with data as well.

Advanced C# Review and Technical Interview Prep (ARTP) (*5 days or 8 evenings*) ARTP offers students a deeper dive into more complex concepts of C#, such as collections, interfaces, and Language Integrated Queries. They also discuss practice coding tests, group coding, and techniques for technical interviews.

Project Management for the Developer – SDLC, ALM, Planning and Completion of a Project (PMD) (*5 days or 8 evenings*) In PMD, students learn to collaborate with Application Lifecycle Management, Agile, and Scrum. They are also introduced to Software Development Lifecycle (SDLC), the Unified Modeling Language, and Clean Coding principles like SOLID and DRY. Students will plan and complete a small project as part of this course.

Full Stack Development Project Build Week (PRO1) (*5 days or 8 evenings*) During PRO1, students take the knowledge that they have gained and practically apply it to create a data-driven web application that successfully integrates provided project requirements. During this week, students will focus on the planning, development, and testing of the web application.

Full Stack Development Project Deployment & Employer Presentation (PRO2) (*5 days or 8 evenings*) In PRO2 students complete, deploy, and present full stack web application projects to fellow students, staff, and prospective employers as they realize their goal of becoming a Full Stack Developer.

Full-Stack Web Developer Program

Full-Stack Web Developer Hybrid Program – Day 1/18/21

Course	Days	Days on Prem	Dates
Front-End Development 1 (HTML5, CSS3 & Frameworks)	5	Mon – Tues	1/18 – 1/22
C# Fundamentals 1 (Introduction to C# Language & .NET Framework)	5	N/A	1/25 – 1/29
C# Fundamentals 2 (Complex Datatypes & Collections)	5	N/A	2/1 – 2/5
Front-End Development 2 (JavaScript & jQuery)	5	N/A	2/8 – 2/12
Self-Paced Week C# BT			2/15 – 2/19
Introduction to Data (SQL, XML, & JSON)	5	N/A	2/22 – 2/26
Introduction to MVC (Model, View, Controller Fundamentals)	5	Mon – Tues	3/1 – 3/5
MVC and Data Integration (Connected SQL, Entity Framework, and n-Tier Architecture)	5	N/A	3/8 – 3/12
Advanced MVC (Design Patterns, Unit Testing, and Advanced User Interactions)	5	N/A	3/15 – 3/19
Self-Paced Week			3/22 – 3/26
Front End Frameworks (ReactJS)	5	Mon – Tues	3/29 – 4/2
Advanced C# Review and Technical Interview Prep	5	N/A	4/5 – 4/9
Project Management for the Developer (SDLC, ALM, Planning and Completion of a Project)	5	Wed – Thurs	4/12 – 4/16
Full Stack Development Project Build Week	5	N/A	4/19 – 4/23
Full Stack Development Project Deployment & Employer Presentation	5	Mon – Tues	4/26 – 4/30

Class Times are Monday – Friday from 8:30 AM – 4:00 PM | Holiday weeks may result in schedule adjustment(s)