Full Stack
C# .NET
Syllabus

GRAND CIRCUS
Grand Circus’s Full Stack C# .NET Bootcamp takes you from coding novice to programming powerhouse in 14 weeks. The .NET programming framework is popular for enterprise development and heavily integrated with C#. In this bootcamp, we pair .NET and C# with Angular, a popular platform for developing user interfaces. By the end of this course, you’ll be ready for an entry-level position as a full stack developer. But Grand Circus doesn’t just teach coding skills. We understand how challenging a career shift can be. We’ll help you prepare for your job search with interview prep, resume reviews, and one-on-one career training. Along the way, you’ll build connections with encouraging instructors, alumni mentors, and affinity groups.
Discovering Coding Fundamentals

We've designed Grand Circus bootcamps for true beginners. In the initial units, you’ll discover the fundamentals of coding with C# and learn to use Visual Studio, the standard development environment for C# and .NET coding languages. As you continue filling your C# toolbox, you’ll learn to manipulate data in console applications. We’ll also introduce best practices for writing good code and give you hands-on experience with pair programming. In coding, as in life, we make lots of mistakes. Version control (using Git/GitHub) tracks changes you make to code and helps you recover from mistakes. With GitHub, you’ll also be able to collaborate with a team and share your code with other developers.

Core Skills
- C#
- Visual Studio
- Console applications
- Core coding concepts like loops, conditionals, data types, and methods
- Debugging and Logging

Learn .NET and Advanced Concepts

Once you’ve covered the basics with C#, it’s time to expand on that. Learn about .NET, object-oriented programming, and advanced concepts like inheritance, abstract classes, and data structures. (Not to worry -- by the time you get through this, you’ll know what those are!) We’ll teach you to write maintainable code and you’ll build customized objects in a large group project. These skills will set you up to move from console applications to web applications.

Core Skills
- .NET
- NuGet Package Manager
- File I/O
- Algorithms
- Data Structures
- Test-Driven Development (TDD)
Work with Data & Develop backend Technologies

A large part of working in .NET is storing and manipulating data. SQL allows you to do that in a big way. Learn to store and access data in a SQL server. We’ll also dive into the backend of web applications using the ASP.NET framework. Create web applications and learn to hook up SQL databases to your applications.

Core Skills
- Structured Query Language (SQL)
- SQLServer Management Studio, Microsoft SQL Server, and Azure Data Studio
- ASP.NET and MVC
- Web Application Architecture
- APIs & JSON

Build Frontends for Interactive Web Apps

Once you’ve built a strong foundation in back-end development, we’ll turn to the frontend to make accessible, robust, and dynamic web pages. In this section, you cover the building blocks of web development: HTML and CSS. Learn to make websites interactive with JavaScript and expand the possibilities for interaction with TypeScript. Create responsive sites with Bootstrap. You’ll also learn about Angular, a powerful front-end framework that builds on basic web development tools. Angular helps you create code that is more readable, maintainable, and modular. We’ll focus on creating single-page applications (SPAs) that connect to our C# .NET backend. And finally, tackle cloud hosting, user logins, and continuous integration (CI).

Core Skills
- HTML and CSS
- JavaScript and TypeScript
- Bootstrap
- Document Object Model (DOM)
- Angular
- Single-Page Applications (SPAs)
- Security and User Logins
- Continuous Integration/Continuous Deployment (CI/CD)
Create a Portfolio Project

The crowning jewel in your Grand Circus bootcamp experience is your final project. By the end of bootcamp, you’ll have a portfolio project that you can share with hiring managers and the skills to describe your work. Following an Agile software development process, you’ll work in a group to create a web application using the skills you developed. During your project, you get real-world experience not only with the technical aspects of building an application but with the career skills required to collaborate with a team.

Core Skills
- Agile software development
- Collaboration
- Maintaining a codebase
- Reviewing and documenting code