Tech Educators

MERN STACK COURSE OVERVIEW

2023

You don't actually need a **phd** **A Levels** or an **Undergraduate Degree** to work in tech.

Tech Educators

We develop different.
Instructor led coding bootcamps for everyone.

Our Mission

To support the future of tech talent

Our mission at Tech Educators is to cultivate the tech talent of tomorrow by making high-quality, software development education accessible to everyone, at any level or personal circumstance.

Our comprehensive courses, expert instructors, cutting-edge curriculum, and hands-on approach, equip people with the practical skills they need to succeed right away, and the know-how to stay relevant as their career develops. From 'hello world' to world class.

Supporting beginners to experienced practitioners, we're committed to ensuring that no one gets left behind in the rapidly evolving digital landscape. We provide a supportive and inclusive community where everyone can learn, grow, and thrive, as they build a better future.

Learning to code is a journey and through this course outline, we hope to give you an idea of how that journey with Tech Educators would progress. Whether you choose to join us in one of our locations around the country, or prefer an online online approach. Our courses are always instructor led and outcomes focussed.

James Adams, Founder and CEO

student focus

Tafadzwa Tino Mpofu, Full Stack Graduate

"If you don't go for something. You will never know what you could have achieved. The team at Tech Educators have been so incredibly supportive throughout the course. It's tough, but when it gets tough, you have an entire community around you to support you. That's what the bootcamp is about."

"When I think back now on what I knew before I started, how quickly I learnt, and how fast it went. I didn't realise just how great the experience was, until I reflected on it."

The taster session

One day

In this one-day workshop, you will get a sneak peek of what it is really like to become part of the Tech Educators community. You will learn find how websites are built, and code your very first web page using industry-standard tools and professional coding practices.
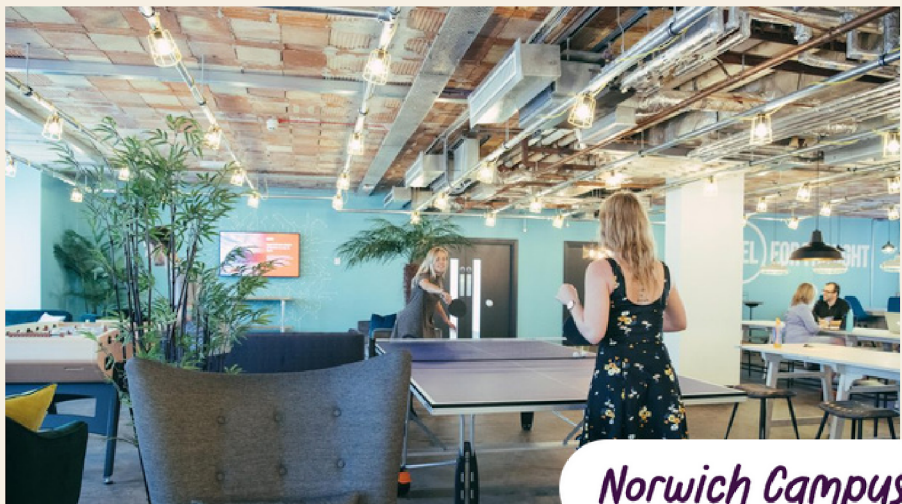
Whilst this may be the very first interaction you have had with code, don't worry. We are here to guide you every step of the way and give you all the information that you need to decide if this course, and this career path is for you.

Learning outcomes

- Understand the basics of what it means to be a professional software developer.
- Understand how HTML and CSS work together to create the modern web.
- Create a complete website. Know how to deploy your website and be able to share your accomplishments with friends and family.
- Be able to identify whether a career in coding and the Tech Educators program is right for you.

Ready to proceed?

What a difference a day makes. After this one day taster session hopefully you like us, we like you, but we all love coding and where we think it can take you in your journey and your career. If after the one day taster session

Norwich Campus

The fundamentals

One week

In our fundamentals week, students move beyond the concepts covered in Taster Session to get a tour of the tools and techniques of modern developers. Whilst this week may feel that it is theoretical, it is these fundamentals of understanding and learning industry-led tools such as GitHub. This week will prepare students for a career in software development.

We will dive much deeper into HTML, CSS and getting your setup ready to take on the world as a super developer, or... you know. Get a job in tech.

Learning outcomes

- Configuring a computer and see the workflow for serious software development, with free and open-source tools.
- Dive deeper into the proper usage of "semantic" HTML tags.
- Practice utilising CSS to make your web pages look just the way that you want.
- Get introduced to the subtle language of programming and concepts like Variables, Conditionals and Loops.
- Learn how to utilise JavaScript.
- Be able to high five your new found project team and fellow coders as you've overcome the challenges of getting your setup just the way you want it. Nice work.

Buckle up. Here comes code.

By now everything will be set up, ready to go and you will have a real grasp of the fundamentals of web development. Look how far you've come in just a week. Now prepare for the code to come thick and fast. We are into the next phase and the next block before your first project week.

Cambridge Campus

You don't have to be an **evil** **private island** **super-villain** to work in tech.

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The foundations

Four weeks

It's time to build a well-rounded foundation of skills necessary for modern web development. We will work some more advanced HTML and CSS as well as spending a lot more time working with JavaScript. There's tools and processes being introduced now too, including Git workflow processes, project organisation, designing with wireframing and employing introductory Agile development methods. We wrap it all up with a week for your first project, so you can show the world what you've got.

Learning outcomes

- Define the structure of a web page utilising the semantic hierarchical structural conventions of HTML5.
- Apply CSS and HTML to implement page layout styles including grid, fluid, and responsive techniques; and to style content with colour, typography, and images
- Utilise JavaScript to make web projects interactive, such that user input is stored and processed to create updated and personalised content when a user interacts with a page
- Write JavaScript that leverages the fundamentals of Computer Science, the Object-Oriented Programming paradigm, basic data types, data structures, and basic algorithms, so that the code is efficient, error-free, and matches commonly accepted standards and practices of syntax and style, as measured by the code's functionality and ability to pass a code linter
- Utilise industry-standard version control tools and workflows, including Git and GitHub, to write functional, properly styled code and to work efficiently and harmoniously in professional environments.
- Deliver a real world project that you have defined, designed, built and presented.

Let's change gear

That was some four weeks, we now change gear and start looking forward to a career in software development.

student

focus

"As one of the first graduates from Tech Educators I am so grateful for their support and where I am now. I landed a job before I completed the course and am now embedding my knowledge and furthering my skills in a career I see myself in for a long long time."

"If you are thinking of a career in tech, marketing, or any of the related fields, then I would say go for it. It isn't just about the course itself, it's about the growth mindset you build along the way."

Leanna Lucas, Full Stack Graduate

Career week

One week

Okay, so that past four weeks was wild, but by now we are sure you are really settling into the swing of things. This next week is time to solidify that learning. Catch up on some of the reading material you may want to re-embed. Run through some pair programming with your other students, and spend some time with our Student Success team as we really dig into where you want to take these talents you are creating for yourself. We also introduce our industry led mentors this week, with talks, fireside chats and opportunity to focus on where you want to go.

Learning outcomes

- Articulate with some certainty the type of career path you would like to take as you step into the world of being a software developer.
- Finalise and cement any further reading and concepts that need to be defined and embedded with our mentors.
- Understand and have visibility of your own strengths and areas for improvement as a developer.
- Have an initial CV and outline of next steps in preparation for a career in the industry.

Ready for the final push?

This week will have presented some different challenges, and given you the chance to reflect on where you want to take your career. It's also going to have given you the time to prepare for the final push as we move towards bringing in some new concepts that are going to blow your mind.

Are you ready for the final push? This next bit is going to be intense, but it's going to show you just how far you've come.

"We have developed the entire career prep week around our students needs. This is the time where we focus on embedding the foundational software development skills learnt over the past five weeks, but also take the time to consider where this new knowledge will take our students."

"The mentor support, talks, and fireside chats are incredibly valuable to everyone involved."

Jenna Buxton, Student Success Executive

The MERN stack

Four weeks

This is the most intensive part of the course, where we will study the common core of software development. That's some real technical stuff including the MVC pattern, object-oriented and functional programming, and computer science fundamentals such as basic data structures and algorithms, but don't worry, with all you know now. You've got this.

We will learn how to create and deploy web apps in the "MERN" stack with Mongo, Express, React, and Node.js, with the help of third-party APIs and libraries from around the web. It's four weeks of lectures, lab, coworking, and the final collaborative projects and graduation.

Learning outcomes

- Collaboratively design and create web applications from scratch using MVC patterns, built with professional-grade HTML, CSS, and JavaScript using the React JavaScript library
- Work with string, array, and object data structures and algorithms to solve code challenges with pure JavaScript programming
- Build dynamic front-end and back-end applications deployed to cloud platforms
- Explain the fundamentals of how the World Wide Web works, over the internet
- Utilise dependency management techniques to build with third-party libraries such as ExpressJS and React-Bootstrap
- Persist data in a NoSQL database, sourced from third-party APIs or user-generated content
- Authenticate users using a third-party OAuth library.
- Follow Agile software development practices during week-long sprints, including pair-programming, stand-ups, daily retrospectives, project management with Kanban boards, regular refactoring, and working in a shared codebase.

Graduation

At the end of the four weeks you will be presenting everything you have done to this point and graduating from the Tech Educators MERN stack program. It's not the end of our journey though, there's so much more in the community to explore.

Tim Smith, Software Development Course Director

"We know that this can be the most intense part of the course, but our focus is on ensuring that students get an excellent grasp of the concepts, whilst achieving their own goals. We believe that it's about the journey and the outcomes, which is why we pair our instructors industry knowledge, with education excellence."

"My goal, and the goal of our delivery team is to make sure you have the tools to succeed in industry and remember your time with us as a positive and exciting experience."

You don't have to be a young smart hipster with the very latest macbook-pro to work in tech.

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www.techeducators.co.uk