CODE WITH ZEAL – COURSE CURRICULUM

INTRODUCTION

Zeal are working to transform the demographic of the Leeds tech sphere by providing the skills, space and inspiration for young women to pursue careers in technology.

Our free programme, Code with Zeal, is a 10 week course for young women aged 14-16, offering an introduction to the world of technology through web development skills, networking, and mentorship.

You will learn to code with HTML, CSS and JavaScript, and build a portfolio site to demonstrate your work. The final project, where you can showcase your new skills, is an activist website where you can campaign for a cause that you care about.

Additionally, you will get exposure to a range of different tech jobs, meet women in tech careers, and become part of a network of other like-minded young women around Leeds.

As well as this, there will be a panel with local women who work in tech, where you can learn about different roles in the industry, for example web development, web design, SEO and social media.

By the end of the course, you'll be qualified to explore a career pathway in the tech sector. After the course has ended, Zeal will offer long term support and guidance through mentorship and work experience placements, where you can get hands-on experience working in digital, and use the skills you learned during the course in real life situations.

COURSE DETAILS

The course will run for 10 weeks from the 4th April 2022, with sessions at 6pm every Monday. Sessions will be 1 hour long, with half an hour at the end of every session dedicated to student questions and help with work.

As the course is completely virtual, the only equipment you'll need is a computer and internet access. The tools we will use to code will be explained and demonstrated in the first week of the course.

The sign up deadline for the course is the 18th March. We are limiting the course to 30 students to allow students to get to know each other well and for instructors to be able to offer more student-orientated teaching.

To sign up, all you need to do is fill in the form on the website. After you have signed up, one of our instructors will be in touch to arrange a chat with you, to talk about your motivation to sign up to the course, what you'd like to get out of the course, etc.

COURSE GOALS

Skills

To empower young women with programming skills and a passion for technology

Inspire

To inspire bravery in young women to pursue careers in technology

Networking

To connect young women from around Leeds with like-minded people, and provide mentors to help them pursue their goals

COURSE INSTRUCTOR

The course will primarily be run by Alana, a web developer at Zeal. If you have any questions about the course, drop her an email: alana@wehavezeal.com.

COURSE CURRICULUM

The following outlines a proposed course curriculum. This is subject to change based on student requirements and other factors, but the content will remain roughly the same.

Every week, we will also spend 5 minutes looking at a different influential female role model in tech – who they are, what they did and how they changed/are changing the landscape of the digital world.

Each session will also have optional homework to develop your understanding of the session's content, but this is by no means compulsory.

Week 1: Introduction to the course and HTML

Learning objectives:
- To know the course schedule and the aims of the course
- To understand what HTML is, and what it's used for on the web
- To use Replit, our IDE, to write your first HTML

Session content:
- Housekeeping, tools, icebreaker
- Introduction to HTML:
  - What is HTML?
  - What do HTML elements look like?
  - Basic HTML elements (headings, paragraphs)

Woman in Tech: Ada Lovelace

Week 2: HTML continued – attributes and anchor tags

Learning objectives:
- To know some basic HTML tags, and be able to use them on a portfolio site
- To understand what attributes are and how they are used in HTML
- To add multiple pages to your portfolio site

Session content:
- HTML elements with attributes
- To add elements to your portfolio site – by the end of the session to have headings, paragraphs, a list and images added
- Anchor tags and adding multiple pages

Woman in Tech: Grace Hopper

Week 3: Introduction to CSS – properties and declarations

Learning objectives:
- To understand what CSS is and what it is used for
- To identify the different parts of a CSS declaration block
- To apply styles to your portfolio site

Session content:
- CSS declaration blocks
- Basic properties, e.g. background-colour, font-size, color
- Add learned property styles to your portfolio site

Woman in Tech: Hedy Lamarr

Week 4: CSS continued – selectors and flexbox

Learning objectives:
- To know what selectors are and how they're used in CSS
- To know how to use flexbox to change the layout of a page
- To understand what accessibility is on the web and know how to use CSS to makes sites accessible

Session content:
- The <div> HTML tag
- Flexbox
- Accessibility standards (colour contrast, etc)
- Add flexbox to at least one part of your portfolio site to change the native layout

Woman in Tech: Annie Easley

Week 5: Introduction to Javascript – variables and data

Learning objectives:
- To know what Javascript is and what it is used for on the web
- To know what the different data types are, and how to store them in variables
- To be able to store data from a portfolio site

Session content:
- Data types, e.g. number, string, boolean
- Variables (declaring with let and const, and the difference between the two)
- Console.log to debug our code
- Getting data from a portfolio site with document.querySelector

Woman in Tech: Belinda Parmar

Week 6: Javascript continued – conditionals and event listeners

Learning objectives:
- To use conditionals to manipulate variables
- To use event listeners to dynamically change content on your website

Session content:
- If / else statements
- For loops
- Event Listeners
- Add a button to your portfolio site that changes some content when clicked

Woman in Tech: Katherine Johnson

Week 7: Women in tech panel with Q&A

Session content:
- A break from coding! A variety of women from different sectors in tech from Zeal and other agencies will talk about their motivations, journeys and experiences of their careers and answer any of your questions

Week 8: Final project planning and micro-sessions

Learning objectives:
- To fill in any knowledge gaps or misunderstandings of the course content with micro-sessions
- To decide a topic to build an activist website for
- To wireframe a design for the final course project, hitting all of the project requirements

Session content:
- Time for you to ask any questions or for instructors to address any misconceptions that have appeared over the course
- Discuss the final project objectives
- How to make a wireframe
- Planning in small groups

Woman in Tech: Dr Sue Black OBE

Week 9: Final project building and micro-sessions

Learning objectives:
- To fill in any knowledge gaps or misunderstandings of the course content with micro-sessions
- To start building your final course project
- To peer review and assess strengths and weaknesses of your peers' projects

Session content:
- Time for you to ask any questions or for instructors to address any misconceptions that have appeared over the course
- You will start building their projects with support from peers and instructors in smaller breakout rooms
- Peer review other students' work in smaller breakout groups

Woman in Tech: Kike Oniwinde: Founder & CEO of the BYP Network

Week 10: Project showcase and celebration

Learning objectives:
- To self review and assess strengths and weaknesses of your own project
- To present your work

Session content:
- Presentations of final projects with self evaluations based on the project objectives
- Student surveys to find out strengths and weaknesses
- A celebration of your work
- Next step ideas

Woman in Tech: Kike Oniwinde: Founder & CEO of the BYP Network