

## Advanced Web Development (full stack)

Join the AI revolution! – TDU, in partnership with [Pupilfirst.org](https://pupilfirst.org), brings you a graded set of courses for you to learn foundational full stack development skills that will enable you to build Generative AI products.

The first course, Web development (WD) 101, is optional and is being offered free to help you get a better understanding of the foundational skills involved in Web development. The remaining two modules, WD 201 and WD 301, will give you the full set of skills that you are seeking to become a full stack web developer.

### Web Development (WD) 101 - Getting started with JavaScript (Beginners)

By completing the WD 101 course, you will learn how to:

- Set up your development environment.
- Transform data with JavaScript.
- Use computational abstractions.
- Work with the HTML Forms.
- Work on native HTML Form Validations.
- Understand Web Storage for saving and retrieving data.

As mentioned earlier, this course is being offered free to help students assess if they would like to take WD 201.

### Web Development (WD) 201 - Server-side programming with Node.js (Intermediate)

By the end of the course, the students will be able to:

- Build web applications using Express.js
- Manipulate data using both imperative and functional programming techniques.
- Model real-world systems using object-oriented design.
- Write HTML & CSS to create elegant web pages.
- Build database applications using Sequelize.

#### **Recommended Duration: 12 weeks**

Students are free to complete the courses at their own pace. Candidates who opt for university certification and credits, and complete WD 201 will receive 6 credits.

### Web Development (WD) 301 - Front-end development with React & TypeScript

By the end of the course, students are expected to:

- Be able to create Single Page Applications (SPA) using React.

- Be able to build robust UIs using the statically typed programming language TypeScript.
- Get better at styling web applications using Tailwind CSS.
- Understand typed state management that is in line with the backend data model.
- Understand the best practices followed in industry for production grade applications.

**Recommended Duration: 12 weeks**

Students are free to complete the courses at their own pace. Candidates who opt for university certification and credits, and complete WD 301 will receive 6 credits.

**Eligibility**

This is a lifelong continuous learning/ upskilling/reskilling course that does not have any eligibility criteria, other than interest and aptitude. Anyone can take these courses at any time during their career. We recommend that you take WD 101 to get a flavour of the course and get you started with WD 201. Eligibility for WD 301 is completion of WD 201.