

Curriculum Overview

Our Goal

The goal of the WeThinkCode_ Curriculum is to facilitate learning that will transform students

into competent, entry-level software developers who:

- Can quickly add value to the software development teams and organisations they join; and
- Are equipped with the technical and behavioural skills to self-direct their learning beyond their training at WeThinkCode_.

This model is built from a holistic view of the software developer's capabilities and skills to be effective in their daily work.

Our Pedagogy

We train using a peer-to-peer methodology which means there are no lecturers. Learning material is delivered digitally, and students support one another in their learning. The style of instruction supports self-directed and peer-to-peer learning, which is a necessary skill set of an effective professional software developer.

We built a proprietary Learning Management System (LMS) that directly implements our pedagogy and essential software development practices expected by the industry. In addition, the LMS seamlessly integrates with tools widely used globally, such as git and PGP. This combination promotes the fundamentals of programming and provides valuable experience using prevalent tools.

Students are introduced to concepts in bite-sized chunks in the coursework and subsequently required to demonstrate their understanding by submitting exercise solutions that are functional and working at every step.

We leverage some additional constructs to supplement the coursework, such as the Technical Mentor Program and Code Clinics.

The Learning Management System

The LMS client is a command-line application used to deliver curriculum content to students and track their submissions and progress. All exercises come with a set of automated tests that must execute successfully for the student to submit. Additionally, the LMS pairs students with each other so that their submissions undergo peer reviews. The reviews encourage peer-learning, sharing healthy feedback and enhancing code comprehension.

In-Person Support

While there are no lecturers on campus to augment the peer-to-peer learning environment, we also provide in-person support in the form of Technical Mentors and Code Clinics. WeThinkCode_ has a team of software developers that use the LMS data to track the progress and performance of students. This team provides further support for students as needed.

Code Clinics

Stronger students may volunteer their time to help students who are otherwise struggling. Code Clinics encourages cross-pollination and peer-to-peer teaching and learning.

Technical Mentorship

Technical Mentors are a nominated set of second-year students with good performance to support groups of first-year students. Technical mentors act as the interface between WTC_ staff and first-year students. In addition to being a source of technical support, they also serve as a channel to drive non-technical outcomes by facilitating activities such as daily/weekly updates, task management and reviewing presentations designed to build confidence in speaking in front of groups.

Coursework Format

Software development practitioners who are respected and highly recognised and have a collective experience spanning several decades design the curriculum. The WeThinkCode_ curriculum authors continually refresh the curriculum based on feedback from students, partners and industry trends. Individual and team projects make up the coursework of every module. Students design and deliver on the project requirements using programming languages, development tools, technologies and practices adopted by high performing software delivery companies.

Every module focuses on the holistic learning of:

- **Programming** as the act of designing and writing code for a system;
- **Engineering** as the set of techniques for automated testing, deployment and running of programmed systems;
- **Communication** which is the foundation for analysis, design and collaboration; and
- **Teamwork** because software developers inevitably work in teams to deliver software products.