Course Aims
Computational thinking (CT) is a problem solving process with the aid of computer; i.e. translating a problem into a solution in a manner that a computer can effectively solve. It includes a number of characteristics, such as breaking a problem into small and repetitive ordered steps, logically ordering and analyzing data and creating solutions that can be effectively implemented as algorithms running on computer. As such, computational thinking is essential in problem solving across all disciplines, including mathematics, science, engineering, business, finance and humanities.

The aim of this course is hence to take students with no prior experience of thinking in a computational manner to a point where they can formulate and code computer programs to solve some basic problems in engineering. This course not only aims to inculcate a Computational Thinking mindset, but also teaches computer programming concepts so that you can build computer programs to further practice and apply your computational thinking skills at the end of the course. This will lay foundation for future programming tasks required of you, be it in building a web or mobile application, or even customizing a microprocessor for monitoring and control purposes.

Course Contents

Assessment Modes
- Continuous Assessment (100%) – Quiz; Practical Assessments & Tests, Class Participation

Textbook

References