3.2.3.1 Overview

Today many civil engineers design not structures but software systems to manage construction. They practise in the global marketplace being involved in the planning, designing and construction of infrastructure, balancing development with care for the environment. New fields and areas of civil engineering practice and research have emerged, involving the planning, design, construction and management of our man-made living habitat which is constantly evolving. New challenges facing civil engineering, such as our changing population profile, rising energy costs and climate change have arisen.

To this end, the Department structures our curriculum to facilitate our students in embarking on career pathways in the increasingly integrated, interdisciplinary nature of the modern civil engineering profession. Whatever their aspirations, our graduates emerge ready for a broad spectrum of career opportunities from developing into leading specialists in their fields to being imbued with multidisciplinary strengths, geared to play leading roles in global infrastructure projects. The curriculum which places emphasis on developing engineering skills with scientific depths and cross disciplinary breadths has the following objectives:

- To ensure that our graduates are equipped with the basic civil engineering core competencies to meet the requirements for the practice of civil engineering in Singapore in accordance to the Professional Engineers Board.
- To ensure that our graduates are able to apply fundamental knowledge of mathematics, science and engineering using modern engineering techniques, skills and tools.
- To ensure that students are exposed to social sciences and humanities so as to appreciate the interdependency between society and infrastructural systems by encouraging multidisciplinary and multi-cultural interaction and work, as well as cross-cultural exchanges and activities.
- To develop and enhance the interpersonal, communication, and leadership skills of students through group design projects and oral presentations.
- To provide opportunities for students to tailor their degree programme to suit the desired engineering and scientific depths and cross disciplinary breadth.
- To inspire graduates to have the curiosity, ability and desire for lifelong learning.
- To prepare graduates for their future careers through instruction on professionalism and ethical responsibilities, interactions with practitioners and opportunities for internships.

The BEng (Civil Engineering) programme is accredited by the Engineering Accreditation Board (EAB) of Singapore and this accreditation of engineering academic programmes is a key foundation for the practice of engineering at the professional level.