3.2.7.1 Overview

The BEng (Environmental Engineering) programme is offered by the Department of Civil and Environmental Engineering. The curriculum is designed to meet student needs in the context of the mission of the Department and the Faculty of Engineering. The programme’s educational objectives are:

- Graduates will be technically competent. This includes having the ability to analyse and solve environmental engineering problems by applying mathematics, engineering principles, computer skills, and natural sciences to environmental engineering practice, and using modern engineering techniques, skills, and tools to identify, formulate and solve environmental engineering problems.
- Graduates will be able to apply knowledge and skills from a broad education in order to understand the impact of environmental engineering solutions in a global, societal, and environmental context, consistent with principles of sustainable development.
- Graduates will be prepared for professional practice in environmental engineering and will demonstrate abilities to communicate and work effectively in an ethical manner on professional teams, exhibiting a commitment to life-long learning and professional development in industry, government, and/or academia.

Outcomes

The BEng (Environmental Engineering) programme aims to achieve the following learning outcomes:

- An ability to apply scientific and engineering principles as well as contemporary technology to the discipline.
- An ability to design and conduct experiments, as well as to analyse and interpret data in several areas, which can include air quality and resources, water and land quality and resources, energy systems, and environmental and human health impacts.
- An ability to identify, formulate and solve engineering problems and to design a system, component, or process to meet desired needs.
- An ability to convey technical material through oral presentations and written communications.
- A knowledge of contemporary and emerging environmental issues and a recognition of the need for, and an ability to engage in, life-long learning.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice with an integrated understanding of professional, societal, and ethical responsibilities and the importance of, and role for, multidisciplinary teams in professional practice.

The four-year undergraduate BEng (Environmental Engineering) programme has been designed to provide a comprehensive learning experience. The Programme Requirements are made up of general Faculty Requirements and Major Requirements of the department that is granting the degree. For a breakdown of the requirements, see Table 3.2.7a.

The requirements for a major in BEng (Environmental Engineering) programme ensure a balanced exposure to science, engineering principles as well as contemporary technology. BEng (Environmental Engineering) programme will provide greater flexibility in the choice of career paths of the graduates. It is anticipated that the students will be more motivated in their learning endeavours to make themselves well prepared to pursue their professional interests in a knowledge-based economy. The BEng (Environmental Engineering) programme at NUS is accredited by Engineering Accreditation Board (EAB)
of Singapore. EAB is a signatory to the Washington Accord. The Washington Accord is an international agreement which provides a mechanism for mutual recognition of the substantial equivalence of engineering academic programmes in satisfying the academic requirements for the practice of engineering at the professional level.