1. The Faculty of Engineering

The mission of the Faculty of Engineering is:
(a) To nurture engineers with a global outlook and passion for innovation, who can lead teams and apply knowledge creatively across functional boundaries;
(b) To be a leading source of innovative technologies, products and processes by advancing frontiers of engineering knowledge and,
(c) To be an engineering school of choice for talented students, capable researchers, outstanding faculty and high quality staff.

1.1 Introduction

The Faculty of Engineering at the National University of Singapore has, since its inception in 1968, contributed substantially to the rapid economic growth of Singapore. It comprises seven departments/division/office: Bioengineering, Chemical and Biomolecular Engineering, Civil Engineering, Electrical and Computer Engineering, Environmental Science and Engineering Programme, Industrial and Systems Engineering and Mechanical Engineering.

The Faculty’s modern and broad-based curriculum is designed to produce quality engineering graduates who possess not only the traditional attributes of problem-solving, analytical, communication, inter-personal, management and decision-making skills, but also the modern attributes to enable them to practise their profession with competence and confidence in an ever changing world. These modern attributes include independent learning, a yearning for life-long learning, innovativeness and creativity, ability to muster knowledge from neighboring disciplines, be IT savvy, to work at the interfaces between traditional disciplines, to work in a team and to possess an international outlook.

The Faculty offers excellent teaching facilities, well-equipped laboratories and excellent computing facilities for use by students in tutorial, laboratory and project assignments. Students enjoy access to state-of-the-art software and other comprehensive IT resources. The Graduate Studies Office offers excellent opportunities for research students working towards the M.Eng. and PhD degrees. In addition, it also offers courses for practicing engineers leading to the degree of M.Sc. in Engineering.

History

Professional engineering education in Singapore had its humble beginnings in 1956 at the campus of the University of Malaya. When the department of engineering was transferred to Kuala Lumpur in 1958, a four-year professional diploma course was established in the Singapore Polytechnic. This course was superseded in 1964 by the establishment of the four-year Bachelor of Engineering course. Engineering students of the Singapore Polytechnic were allowed to register as students of the University under certain conditions and be eligible for the award of the University’s Degree of Bachelor of Engineering. The first batch of 37 Engineering students under
this scheme graduated in June 1968. In 1969, the Engineering programme of the Singapore Polytechnic was upgraded and a fully constituted Faculty of Engineering was established at the University of Singapore. The Faculty then comprised the Civil, Electrical, and Mechanical Engineering departments. In 1972, the Department of Industrial and Systems Engineering was established. Chemical Engineering started as a department in the Faculty of Science in 1975 but was transferred to the Faculty of Engineering in 1979.

The Faculty of Engineering within the National University of Singapore was reconstituted in August 1980 with the merger between the University of Singapore and Nanyang University. In response to the nation’s needs, the Department of Chemical Engineering took the initiative to introduce degree programmes in environmental engineering and changed its name to the Department of Chemical and Environmental Engineering in 1998. The success of these programmes has led to the formation of a separate Environmental Science and Engineering Programme (ESEP) within the Faculty. This has allowed the Department to assume its current name, the Department of Chemical and Biomolecular Engineering in January 2004, to give due recognition to the biomolecular research and educational programmes in the department. Similarly in July 2000, the Department of Electrical Engineering changed its name to the Department of Electrical and Computer Engineering to reflect the department’s offering of the Computer Engineering Programme. The Division of Bioengineering was formed in 2000 and its first batch of undergraduate bioengineering students matriculated in the academic year 2002/2003.