

3ME - VISION ON EDUCATION

AIM OF THE PROGRAMME

The faculty is proud of its history, of delivering large numbers of engineers¹ for over 150 years who have a broad grounding in their subject and go on to make a valuable contribution to society. It considers as its duty to educate students to become independent, responsible and innovative engineers with wide-ranging problem-solving skills. The faculty aims to offer students a cohesive programme in which they acquire technological (and possibly medical) knowledge whilst developing skills in communication, presentation, creativity and reflection. The students grow to become independent professionals with the knowledge and skills that enable them to take on the challenges of society. They are able to manage the personal, interdisciplinary, social, cultural and ethical aspects of engineering. They respect and value others for their abilities, which they are able to supplement where necessary. They are capable of managing themselves and their team and continue to develop throughout their careers. The programme offered at the Faculty of 3mE coaches school pupils as they grow to become students and, ultimately, professionals.

PROGRAMME & LEARNING ENVIRONMENT

The faculty (academic staff and organisation) endeavours to support students in their development, facilitate their learning process and take account of their different backgrounds. At curriculum level, the faculty offers programmes that are cohesive, logically constructed and 'studiable'. At course level, the faculty offers educationally effective teaching in which the learning objectives, modes of instruction and assessment are carefully coordinated. In this, the provision of information is an important tool: it must be clear to students what needs to be learned in order to successfully complete courses. The faculty sees the quality of education and of assessment as non-negotiable. The faculty consistently monitors and maintains that quality.

The focus in the first year is on the transition from school pupil to independent student. In the course of the first semester, directive guidance is replaced by assistance, taking the form of coaching. Students have control over their own degree programmes, but this greater freedom also entails greater personal responsibility. Students are expected to adopt a responsible approach to their work and to respond respectfully to the learning environment and support offered. The first year of the Bachelor's degree programme is considered to be the selection year and is very broad. The majority of students who successfully complete this selection year should be capable of completing the Bachelor's programme within four years. Completing it within this nominal period is feasible for students who apply themselves to it. In order to do justice to the structure and cohesion of the programme, the faculty expects students to invest the time required in their studies and to complete the programme in chronological order.

The Bachelor's degree programmes focus on education at a more general level, whereas Master's degree programmes involve specialisation with greater freedom of choice. The Bachelor's programmes offered by the Faculty of 3mE are intended as a qualification for the Master's programmes. However, since they are well constructed, cohesive programmes, it is also possible to go on to apply for a Master's degree programme at another faculty or university or to go straight into employment.

¹ Engineer: also refers to clinical technologist.

In addition to projects aiming at engineering design and skill training, the Bachelor's programme includes a wide variety of technical and mathematical courses, enabling students to gain a thorough grounding in their profession. The focus is on insight and understanding rather than learning facts. Within the projects, students learn to apply their knowledge, to engage in engineering design and to work together with colleagues. The Master's degree programme builds on and broadens this, focusing on fundamental knowledge and newer developments. In their final projects, students also learn to conduct independent research and contributing knowledge and innovations to the specialist field as fully-fledged engineers.

ORGANISATION AND TEACHING STAFF

The faculty has a professional staff who are proud to educate the world's engineers. For its academic staff, the faculty aims to afford equal value to both teaching and research. This balance is a basic premise that underlies the structure, organisation and implementation of the curricula. The faculty assumes that both its teaching and support staff have an intrinsic motivation and responsibility in offering high-quality education. This means that there is a basis of trust rather than scrutiny and that everyone is committed to improving the education offered. The faculty aims to be a good employer and supports its staff in carrying out their duties. Teaching and support services staff are able to call each other to account in fulfilling their responsibilities. Members are open to feedback and suggestions for improvement and keep each other informed when changes occur.

INNOVATION IN EDUCATION

The faculty offers freedom and space for new innovations and ideas, including new courses and Master's specialisations and adapts its education in line with the latest research and technological advances.

The faculty is open to new teaching methods and techniques, with the quality of education always taking priority. Educational innovations are implemented if they genuinely improve education.