Er is the title for professional engineer

Besides the university degree, engineers must have four years of practical experience, pass two exams and an interview to get registered and use the title

by li yann ling

A SOLAR car, a hydrogen electric hybrid bus and a satellite — these are some of the exciting projects that aspiring engineers are working on at the School of Civil and Environmental Engineering at Nanyang Technological University (NTU).

Over at the National University of Singapore (NUS), students have also been involved in the engineering of Singapore’s first commercial WIG (wing-in-ground) vessel launched earlier this year by Wiget works Private.

Building a rich industrial network, vibrant research culture, and providing out-of-classroom learning and global exposure for students are ways to ensure that engineering remains an attractive career choice for students.

The president of the Professional Engineers Board (PEB) and managing director of the HDB Building Research Institute, Er Lau Joo Ming, is a distinguished alumnus of NUS and the appointed chairman of the Program Advisory Committee of the B Eng (Civil) programme at NTU.

He says: “As professional engineers (PEs), we celebrate our achievement and inventiveness as a team. Which is why any good engineering firm must create an environment of learning and expertise sharing for the benefit of the future generations.

“Engineering is a degree with great versatility. Engineering students will not have difficulty making a switch to other professions upon graduation.

“But it is important for young people to consider PE as a professional milestone to aspire towards. PEs are given the opportunity to transform the world we live in. We travel and see the world, and deal with practical, day-to-day and tangible matters which people can identify and see for themselves.”

The landscape is very wide, he says. Although the majority of PEs in Singapore are civil, mechanical and structural engineers, their work range from the most intricate electronic circuits to the most complex geotechnical works.

To encourage students to pursue a career in professional engineering, PEB awards up to 24 undergraduate scholarships, each valued at $3,000, and 12 PEB Gold Medals (undergraduates and post-graduates) to outstanding students from the civil, electrical and mechanical engineering schools at NUS and NTU.

Since last year, NUS has also launched two Engineer-Leaders Initiatives — the Design-Centric Curriculum (DCC) and the Global Engineering Programme (GEP).

The DCC exposes students to real-life design projects in three areas: Future Transportation Systems, Engineering-in-Medicine and Smart, Sustainable Cities.

The GEP gives top students early exposure to research and one-to-one mentorship. They get to complete their B Eng degree in three years in stead of four to pave the way for a master’s degree or PhD in a leading overseas partner university.

Obtaining accredited academic qualifications is just the first step. Since 2006, degrees from overseas universities in Australia, the UK, the US, China and India have been recognised by PEB in Singapore. To ensure consistency in standards, professional engineers registration examinations have become compulsory.

Engineers will have to accumulate four years of practical experience, sit for two prescribed examinations and pass an interview before they can successfully register as a professional engineer and use the title “Er.”

Er Kenneth Chua Jiin, 32, is a newly registered PE at this year’s PE Day of Dedication. He graduated from NUS with a Bachelor in Engineering (Electrical) in 2003. His batch is the first to be affected by the compulsory examinations.

Er Chua passed his Fundamentals of Engineering Examination in 2007 after accumulating four years of practical experience. He passed his Practise of Professional Engineering Examination in 2008 and his final round of interview early this year.

He says: “I am very happy because it’s quite difficult to get the practising certificate.”

“Passing the Professional Paper really depends on one’s working experience. The past few years have been satisfying, learning about how things work, learning to manage different functions and emergencies. For the engineer, every day is different.

“Like other jobs, there can be times when the hours are long and you wonder if the pay is worth it. But people expect engineers to solve problems and every problem is different, so you learn to think in creative ways.”

PEB collaborates with the Institute of Engineers Singapore, Association of Consulting Engineers Singapore on continual professional development. Membership to these learned societies and professional associations help to uphold and enhance the standing, dignity and reputation that comes along with the profession.