

# They learn the science behind machines

SUSS helps students enhance career with changes to curriculum

## ADELINETAN

As a healthcare professional, Ms Sharifah Nassir often wonders how medical equipment are designed and how they operate.

She handles equipment such as cardiac monitors, vital signs monitors and defibrillators.

The 36-year-old is currently enrolled in the Singapore University of Social Sciences' (SUSS) Biomedical Engineering part-time programme.

Her time in SUSS has shown her that there is a lot of research and data collection that goes behind each piece of medical equipment.

She said: "I am able to see how medical data can help meet the needs of the end users. By knowing the science behind the medical equipment, we can better optimise the equipment to assist the user in their daily activities."

Ms Sharifah has a minor in Paramedicine and Emergency Response.

In 2015, SUSS revised its curriculum to allow students to do a minor in other fields to help enhance their career.

Next year, the university will introduce a new course, Applications of AI in Healthcare, to help students become better equipped in the biomedical and healthcare industries.

Associate Professor Ooi Chui Ping, Head of Programme, Biomedical Engineering, said: "We now live in a world where algorithms are used to save lives every day. Machine learning is infiltrating and optimising nearly every aspect of medicine, from the way emergency services are dispatched to assisting doctors during surgery.

"Singapore has also provided open-source government

healthcare datasets to boost the local technology start-up scene and encourage technopreneurship."

Recognising the shift to the technological age, SUSS's Electronic Engineering programme also aims to provide students with a strong grounding in mathematics, computing and electronics fundamentals.

## DEMAND

By training students in circuit design, signal processing, communication systems, micro-controller programming and control systems, it can fill the demand for jobs in industries facing a technological disruption.

Dr Bheema Thiagarajan Lokesh, Head of Programme for Electronics Engineering, said: "The smart nation initiative, together with the technological disruption happening in the



Students in the Experimental Biomedical Lab Skills class at SUSS. PHOTO: SUSS

industries, are driving the demand for electronics engineers in Singapore.

"The influence of electronics in our modern-day living spans a wide range of applications such as hardware design, precision instrumentation, automation and control."

The programme is open to anyone with a local polytechnic diploma. It also encourages students to find interesting ways to

understand difficult concepts and to be hungry for knowledge.

Mr N. Saravanan, who graduated from the course earlier this year, said: "It instigates me to share the knowledge with fellow students and lecturers to verify and better understand the concepts. Ultimately, I find this skill most applicable, as my passion is teaching."