NUS ECE Empowers You for a Career in Industry 4.0

Artificial Intelligence	Augmented, Virtual Reality	Blockchain	Collaborative Robotics	3D Printing	Drones, UAVs	Internet of Things

In the future, complex production systems will function as artificial intelligence driven self-organizing internet-of-things

Learn about machines augmented with sensors which communicate with each other, servers, the cloud and people to enhance autonomy, visualization and decision making. Design systems to boost industrial productivity.

The B.Eng. (Electrical Engineering) programme provides a suite of modules, projects and internship opportunities to empower you for an exciting and rewarding career along Industry 4.0.

Representative Modules and Related Programmes

Internet of Things, Blockchain
EE2028 Microcontroller Programming & Interfacing
EE3731C Signal Processing
EE4032 Blockchain
EE4210 Network Protocols
EE5132 Wireless & Sensor Networks

Industrial Automation
EE3331C Feedback Control System
EE4218 Embedded Hardware System
EE4302 Advanced Control System
EE4303, EE5111 Industrial Control
EE4307 Control System Design & Simulation
EE5104, EE6104 Adaptive Control
EE5110 Automation & Control

AI, Machine Learning
EE2211 Machine Learning
EE4211 Data Science for IoT
EE4212, EE4704 Computer Vision
EE4305 Fuzzy & Neural Systems for Intelligent Robotics

Robotics, Unmanned Aerial Vehicles
EE3305 Robotic System Design
EE4308 Autonomous Robot Systems
EE4309 Robot Perception
EE4705 Human-Robot Interaction
EE5106 Advanced Robotics

Innovation, Enterprise
EE3031 Innovation & Enterprise
EE4031 Intellectual Property

Minors in
- Artificial Intelligence
- Business Analytics
- Data Engineering

Second Major in
- Data Analytics

Specializations in
- Internet of Things
- Robotics

Be Humble and Remain Open to Opportunities

Projects (partial List)

Prognostics, Predictive Maintenance, Fault Detection using Deep Learning, Train Fault Detection, Virtual Reality System, UAV Visual Localization with Deep Learning, IoT and Edge Analytics, Smart Buildings, Mobile Vital Signs Monitoring Systems, Rehabilitation

Internships (partial List)

A*STAR, Airbus, Applied Materials, AMD, DSO, Global Foundries, DSTA, Infineon Technologies, Hewlett Packard, Micron, Rolls-Royce, SIMTech, SingTel, ST Kinetics

1784	1870	1969	Now
INDUSTRY 1.0	INDUSTRY 2.0	INDUSTRY 3.0	INDUSTRY 4.0

Now 4.0 — INDUSTRY 4.0 Cyber physical systems

1969 3.0 — INDUSTRY 3.0 Electronic and IT systems, automation

1870 2.0 — INDUSTRY 2.0 Mass production and electricity

1784 1.0 — INDUSTRY 1.0 Mechanization, steam and water power

INDUSTRY 4.0
The Fourth Industrial Revolution