

Master of Science in Engineering (Electrical)

Course overview:

Areas of Research – Electrical Stream

Electronic systems engineering

- Air traffic management
- Aviation safety
- Avionics systems
- Electronic system design
- Surveillance, cockpit display and instrumentation design, flight simulation and modelling
- Traffic collision avoidance
- Trajectory optimisation, flight control and guidance

Industrial Electrical Power Conversion

- Analysis of renewable energy systems for grid integration
- Control of electrical machine drives
- Direct Ac-Ac Converters
- Domestic and industrial electrical energy efficiency
- Electric transportation technology (Electric Cars, Electric Boats)
- Electromagnetic design of electric machines
- Emc of power converters
- Energy efficiency in buildings
- Microgrids and smart grids
- Quality of electrical supply
- Sensorless control of A.C. Machines

- Switching Power Converters
- Wind and P.V. grid connected systems

Systems and Control Engineering

- Adaptive and intelligent control
- Automatic control systems
- Bayesian estimation
- Biomedical signal processing
- Computational intelligence
- Machine and computer vision
- Neural networks
- Nonlinear control systems
- Robot control
- Signal and image processing
- Spatio-temporal system modelling
- System identification

Further information with regard to the Systems and Control Engineering stream are available [here](#).