

**SCHOOL OF ELECTRONIC ENGINEERING**

**AND COMPUTER SCIENCE**

**PROGRAMME DESCRIPTOR 2024-2025**

**BEng Electronic Engineering (3 years): H610**

**Please note this programme has a compulsory first and second year module diet and Core final year project**

**Year 1 Modules**

**Semester 1**

ECS408U Electronic Engineering Mathematics I (15 credits)

ECS412U Digital Circuit Design (15 credits) (pre requisite for ECS502U Microprocessor Systems Design)

ECS429U Programming Fundamentals for Engineers (15 credits)

ECS431U Engineering Skills and Practice (15 credits)

**Semester 2**

ECS403U Communications and Networks (15 credits)

ECS409U Analogue Electronic Systems (15 credits) (pre requisite for ECS517U Electronic Devices and Applications)

ECS411U Signals and Information (15 credits) (pre requisite for ECS515U Signals and System Theory)

ECS423U Electronic Engineering Mathematics 2 (15 credits)

**Year 2 Modules**

**Semester 3**

ECS502U Microprocessor Systems Design (15 credits) (pre requisite ECS412U) (pre requisite for ECS642U Embedded Systems)

ECS517U Electronic Devices and Applications (15 credits) (pre requisite ECS409U)

ECS528U Communications Systems (15 credits)

ECS532U Power Systems Analysis (15 credits)

**Semester 4**

ECS504U Electric and Magnetic Fields (15 credits)

ECS514U Design and Build Project in Electronic Engineering (15 credits)

ECS515U Signals and Systems Theory (15 credits) (pre requisite ECS411U) (pre requisite for ECS602U Digital Signal Processing)

ECS527U Digital Systems Design (15 credits) (pre-requisite for ECS617U Integrated Circuit Design)

**Final Year Modules**

**Semester 5**

ECS635U Project (30 credits) **Core**

**Plus three modules from:**

ECS601U Control Systems (15 credits) (pre-requisite for ECS654U Advanced Control Systems)

ECS602U Digital Signal Processing (15 credits) (pre requisite ECS515U)

ECS642U Embedded Systems (15 credits) (pre requisite ECS502U)

ECS643U Power Electronics (15 credits)

ECS644U Microwave and Millimetrewave Electronics (15 credits)

**Semester 6**

ECS635U Project (cont) (30 credits) **Core**

**Plus three modules from:**

ECS617U Integrated Circuit Design (15 credits) (pre-requisite ECS527U)

ECS649U Electrical Machines and Systems (15 credits)

ECS654U Advanced Control Systems (15 credits) (pre-requisite ECS601U)

ECS660U Modelling and Performance (15 credits)

ECS662U Electric and Hybrid Powertrain Transport (15 credits)

ECS670U Electrical and Electronic Materials (15 credits) **(not available 2024-2025)**

**Elective modules are subject to timetabling constraints and module availability.**

5 January 2024