

**SCHOOL OF ELECTRONIC ENGINEERING**

**AND COMPUTER SCIENCE**

**PROGRAMME DESCRIPTOR 2024-2025**

**BSc Software Engineering for Business with Industrial Experience (4 years): I1N1**

**Please note this programme has a Compulsory first and second year module diet, Core third year module diet, Compulsory final year Semester 7 diet and Core final year Project**

**Year 1 Modules**

**Semester 1**

ECS401U/ECS401A Procedural Programming (15 credits(pre requisite for ECS501U C Programming, ECS505U Software Engineering, ECS522U Graphical User Interfaces, ECS 605U Image Processing,. ECS652U Compilers)

ECS404U/ECS430A Computer Systems and Networks (15 credits)

ECS407U Logic and Discrete Structures (15 credits)

ECS427U Professional and Research Practice (15 credits)

**Semester 2**

ECS414U/ECS414A Object Oriented Programming (15 credits) (pre-requisite for ECS 605U Image Processing, ECS639U Web Programming, ECS652U Compilers ECS657U Multi-platform Game Development)

ECS417U Fundamentals of Web Technology (15 credits)

ECS419U/ECS419A Information Systems Analysis (15 credits)

ECS421U Automata and Formal Languages (15 credits) (pre requisite for ECS652U Compilers)

**Year 2 Modules**

**Semester 3**

ECS501U C Programming (15 credits) (pre requisite ECS401U)

ECS505U Software Engineering (15 credits) (pre requisite ECS401U) (pre requisite for ECS506U Software Engineering Project)

ECS519U Database Systems (15 credits)

ECS529U Algorithms and Data Structures (15 credits)

**Semester 4**

ECS506U Software Engineering Project (15 credits) (pre requisite ECS505U)

ECS518U Operating Systems (15 credits

ECS522U Graphical User Interfaces (15 credits) (pre requisite ECS401U) (pre requisite for ECS661U User Experience Design)

ECS524U Internet Protocols and Applications (15 credits)

**Year 3 Modules**

**Semester 5 and 6**

ECS551UIndustrial Placement Project (30 credits**) Core**

**Final Year Modules**

**Semester 7**

ECS635U Project (30 credits) **Core**

ECS609U Project Risk Management (15 credits)

ECS639U Web Programming (15 credits) (pre requisite ECS414U)

**Plus one from (**replacing ECS646U Software Development and Quality (15 credits) 24-25)

ECS607U Data Mining (15 credits)

ECS610U Computer Graphics (15 credits) (pre requisite ECS401U)

ECS638U Design for Human Interaction (15 credits)

ECS639U Web Programming (15 credits) (pre requisite ECS414U)

ECS640U Big Data Processing (15 credits)

ECS642U Embedded Systems (15 credits) (pre requisite ECS518U)

ECS651U Computability, Complexity and Algorithms 15 credits)

ECS657U Multi-platform Games Development (15 credits) (pre requisite ECS414U)

ECS658U Further Object Oriented Programming (15 credits) (pre requisite ECS414U

ECS671U Semi-Structured Data Engineering (15 credits) (pre –requisite ECS519U)

**Semester 8**

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

ECS655U Security Engineering (15 credits)

**Plus two modules from:**

ECS605UU Image Processing (15 credits) (pre requisite ECS401U and ECS414U)

ECS622U Product Development (15 credits)

ECS637U Digital Media and Social Networks (15 credits)

ECS647U Bayesian Decision and Risk Analysis (15 credits)

ECS656U Distributed Systems (15 credits)

ECS659U Neural Networks and Deep Learning (15 credits

ECS661U User Experience Design (15 credits) (pre requisite ECS522U)

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

5 January 2024