BSc (Honours)
Computer Systems

The Internet of Things is here and it's growing rapidly. Smart, connected devices are already transforming our world.

The BSc (Hons) in Computer Systems programme is a software development degree that shares the core modules found in the BSc (Hons) in Software Development programme. The Computer Systems programme differs in that it focuses on a number of key areas including computer networking, embedded systems and the Internet of Things (IoT).

Embedded systems have become widespread in industry and can be found in almost all modern consumer devices from washing machines to cars. The Internet of Things (IoT) is starting to play a significant role in industry and at home. With growth and advancements in the field of electronics and wireless communications, devices around us are able to communicate in a better way than ever before leading to new possibilities and opportunities.

Computer systems engineering is a growing market in today's computer industry. Graduates of this programme will be equipped with the necessary knowledge and engineering skills to work as a software engineer in the rapidly growing area of embedded systems and IoT.

The programme has a significant work placement element where students are placed with selected employers for up to 9 months starting in January of year three.

Undergraduate

This programme
is delivered
full-time over
four academic years.

Contact us

Dr David Stynes
Department of Computer Science
Munster Technological University Cork
Bishopstown
Cork
T12 P928
Ireland

Email: David.Stynes@mtu.ie
Web: http://cs.cit.ie/cs

MTU
Ollscoil Teicneolaíochta na Mumhan
Munster Technological University

Department of Computer Science

The Department of Computer Science at MTU Cork is one of the largest Computer Science departments in Ireland. We offer a range of modern undergraduate programmes and a host of opportunities at master's degree and at PhD level. Our industry engaged programmes match the needs of our economy and have an excellent reputation for producing the most employable computer science graduates. These highly skilled graduates are in huge demand and contribute significantly to the development of the region. As technology plays a greater role in our society the growth in the demand for these graduates will continue year after year.

BSc (Honours) Software Development Programme Schedule

Detailed programme descriptors can be viewed at https://cs.cit.ie/cs-schedule.

Year 1 - Semester 1	CR
Programming Fundamentals (SOFT6018)	5
Web Develop Fundamentals (SOFT6007)	5
Computer Architecture (COMH6002)	5
Computer Security Principles (COMP6035)	5
Maths for Computer Science (MATH6055)	5
Creativity, Innovation & Teamwork (CMOD6001)	5

Year 1 - Semester 2	CR
Modular Programming (SOFT6017)	5
Introduction to Databases (COMP6041)	5
Operating Systems in Practice (COMP6042)	5
Networking Fundamentals (COMP6027)	5
Discrete Mathematics (MATH6004)	5
Physical Computing (COMP6043)	5

Year 2 - Semester 1	CR
Object Oriented Principles (SOFT7004)	5
Routing & Switching Concepts (COMP7032)	5
Operating Systems (SOFT7006)	5
Requirements Engineering (SOFT7007)	5
Linear Data Structures & Algorithms (COMP7035)	5
Linux Administration (COMP7036) (E)	5

Year 2 - Semester 2	CR
Object Oriented Programming (COMP7013)	5
NoSQL Data Architectures (COMP7037)	5
C Programming (SOFT7019)	5
OO Analysis and Design (SOFT7005)	5
Virtualisation Technologies (COMP7041)	5
Probability & Statistics (STAT7007)	5

Year 3 - Semester 1	CR
Distributed Systems Programming (SOFT8023)	5
Group Project (SOFT7003)	5
Programming Microcontrollers (SOFT7029)	5
Agile Processes (COMP7039)	5
Embedded Systems Networking (COMP8044)	5
Programming for Data Analytics (SOFT8032) (E)	5

Year 3 - Semester 2	CR
Work Placement/Internship (PLAC7009)	30

Year 4 - Semester 1	CR
Scalable Microservices (SOFT8025)	5
Project Research Phase (INTR8016)	5
Embedded Systems Tools & Models (COMP8049)	5
Software-Defined Networking (COMP8052)	5
Embedded Software Security (COMP8053)	5
Game Development (SOFT8009) (E)	5

Year 4 - Semester 2	CR
Embedded Systems Programming (SOFT8037)	5
Project Implementation Phase (INTR8015)	10
Nonlinear Data Structures & Algorithms (COMP7038)	5
Real Time Systems (COMP8026)	5
Advanced OS & Virtualisation (COMP8051) (E)	5
User Experience Theory (SOFT8010) (E)	5

CR = ECTS Credit, (E) = Example elective module. Work Placement is normally paid and organised by the department.