Bachelor of Science
Software Development

"Programming is the art of algorithm design and the craft of debugging errant code." - Ellen Ullman

The BSc in Software Development is a three-year level 7 degree programme designed to provide students with the theoretical and practical skills necessary to gain employment in the software development industry. More specifically, the programme provides students with the relevant skills and knowledge in the area of modern software development focusing on languages, techniques, tools and methodologies, and their application to real-world problems.

Year one of the programme introduces a broad range of computer science modules including an introduction to databases, mathematics, operating systems, programming, fundamentals, web development, networking and security.

The second year of the programmme adds the study of algorithms and data structures, object-orientated programming, database architectures and design, statistics and probability, and software engineering,

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

Potential areas of employment include working as a Software Developer, Software Tester, Software Support Engineer or Database Developer, to name but a few career possibilities.

Undergraduate

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

Contact us

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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 Software Development Programme Schedule

Detailed module descriptors can be viewed at https://cs.cit.ie/sd-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
Database Design (SOFT7022)	5
Operating Systems (SOFT7006)	5
Requirements Engineering (SOFT7007)	5
Linear Data Structures & Algorithms (COMP7035)	5
Server-side Web Development (SOFT7008) (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
Nonlinear Data Structures & Algorithms (COMP7038)	5
Probability & Statistics (STAT7007)	5

Year 3 - Semester 1	CR
Distributed Systems Programming (SOFT8023)	5
Group Project (SOFT7003)	5
Programming Mobile Devices (SOFT7035)	5
Agile Processes (COMP7039)	5
Programming for Data Analytics (SOFT8032)	5
Technical Writing Using XML (COMP7040) (E)	5

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

Progression to Level 8 Honours Degree

Graduates of the BSc in Software Development programme may progress to the final year of the level 8 BSc (Hons) in Software Development degree programme. All level 7 BSc in Software Development graduates who achieve a grade of Merit 2 (50% or greater) will be automatically offered a place on the level 8 programme. Please visit http://cs.cit.ie/sdh for full details of the level 8 programme.

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