Higher Certificate
Software Development

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

Undergraduate

This programme is delivered part-time by night in access mode.

Contact us

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The Higher Certificate in Software Development is a part-time level 6 programme designed to provide students with the an introduction to computer science in stage one with modules in Programming Fundamentals, Web Development Fundamentals, Computer Architecture, Computer Security Principles, Mathematics for Computer Science, Modular Programming, Introduction to Databases, Operating Systems in Practice, Networking Fundamentals, Discrete Mathematics and Physical Computing.

The programme provides students with the relevant skills and knowledge in the area of modern software development focusing on languages, techniques, tools and methodologies.

The second stage of the Higher Certificate programme builds on the stage one foundation and has a deeper focus on software development with modules in Object-Oriented Programming, Requirements Engineering, Data Structures & Algorithms, OO Analysis & Design, Database Design, NoSQL Data Architectures, and many more.

There is also a progression pathway available to level 7 degree level. Graduates of the Higher Certificate may progress to stage three of the BSc in Software Development which is also offered part-time by night.

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.

Higher Certificate Software Development Programme Schedule

The first four semesters of the Higher Certificate in Software Development programme are shown below. Students have to successfully complete the Higher Certificate before progressing to the degree stage. Detailed module descriptors can be viewed at https://cs.cit.ie/evHC-schedule.

Stage 1 - Semester 1 - Higher Certificate	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

Stage 1 - Semester 2 - Higher Certificate	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

Stage 2 - Semester 1 - Higher Certificate	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

Stage 2 - Semester 2 - Higher Certificate	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

Progression to Level 7 Degree Programme

Graduates of the Higher Certificate in Software Development programme may progress to the stage year of the part-time level 7 BSc in Software Development degree programme. Please visit http://cs.cit.ie/evsd for full details of the level 7 degree programme.

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