



Bachelor of Science 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 BSc in Software Development is a 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.

This programme is designed and intended only for graduates of the Higher Certificate in Software Development. As this degree programme is delivered on campus by night, students must first successfully complete the Higher Certificate in Software

Development before applying for entry to this programme.

The first semester of the programme has four taught modules and a group project. The second semester has a 30 credit work placement element where students are placed with selected employers for up to 9 months starting in January. A module based work placement alternative is also available.

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.

 **CORK
INSTITUTE OF
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INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

Department of Computer Science

The Department of Computer Science at Cork Institute of Technology 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. Detailed programme descriptors can be viewed under the Computer Science link at <http://courses.cit.ie>.

BSc Software Development Programme Schedule

The first four semesters are shown below for reference purposes only and are from the Higher Certificate in Software Development programme. Students have to successfully complete the Higher Certificate before progressing to the degree year. Click on each hyperlink below to view module descriptors. Please visit <http://cs.cit.ie/evsd> for more information.

| Year 1 - Semester 1 - Higher Certificate | CR | Year 1 - Semester 2 - Higher Certificate | CR |
|--|----|---|----|
| Programming Fundamentals (SOFT6018) | 5 | Modular Programming (SOFT6017) | 5 |
| Web Develop Fundamentals (SOFT6007) | 5 | Introduction to Databases (COMP6041) | 5 |
| Computer Architecture (COMH6002) | 5 | Operating Systems in Practice (COMP6042) | 5 |
| Computer Security Principles (COMP6035) | 5 | Networking Fundamentals (COMP6027) | 5 |
| Maths for Computer Science (MATH6055) | 5 | Discrete Mathematics (MATH6004) | 5 |
| Creativity, Innovation & Teamwork (CMOD6001) | 5 | Physical Computing (COMP6043) | 5 |
| Year 2 - Semester 1 - Higher Certificate | CR | Year 2 - Semester 2 - Higher Certificate | CR |
| Object Oriented Principles (SOFT7004) | 5 | Object Oriented Programming (COMP7013) | 5 |
| Database Design (SOFT7022) | 5 | NoSQL Data Architectures (COMP7037) | 5 |
| Operating Systems (SOFT7006) | 5 | C Programming (SOFT7019) | 5 |
| Requirements Engineering (SOFT7007) | 5 | OO Analysis and Design (SOFT7005) | 5 |
| Linear Data Structures & Algorithms (COMP7035) | 5 | Nonlinear Data Structures & Algorithms (COMP7038) | 5 |
| Server-side Web Development (SOFT7008) (E) | 5 | Probability & Statistics (STAT7007) | 5 |
| Year 3 - Semester 1 | CR | Year 3 - Semester 2 | CR |
| Distributed Systems Programming (SOFT8023) | 5 | Work Placement/Internship (PLAC7009) | 30 |
| 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 | | |

Progression to Level 8 Honours Degree

Graduates of the BSc in Software Development programme may progress to the final year of the full-time 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 offered a place on the full-time 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.