Free courses in Computing and IT at the Dublin Institute of Technology

Computing and Information Technology (IT) remains one of the main growth areas in the Irish employment market.

The School of Computing at the Dublin Institute of Technology offers a range of free courses in Computing and Information Technology to applicants with a diverse set of backgrounds through the Springboard 2011 initiative.

**Postgraduate (For computing and non-computing backgrounds)**
- **DT217 MSc in Computing**: Complete a Masters over two years. Different streams for students with and without a background in computing.
- **DT231A Postgraduate Certificate in Software Development**: One year conversion course for applicants without a background in computing.
- **DT762 CPD Diploma in Computing**: Complete one year of your choice of modules. For both applicants with and without a background in computing.

**Degrees (Ordinary and Honours – Top up qualifications)**
- **DT249 BSc (Honours) in Information Systems & Information Technology**: One year course for students with BSc (Ordinary) in Computing or IT to top up to BSc (Honours)
- **DT770 BSc (Ordinary) in Information Systems & Information Technology**: One year course for students with Higher Certificate in Computing or IT to top up to BSc (Ordinary)

**Higher Certificate**
- **DT263 Higher Certificate in Computing**: One year course for students with professional computing experience or academic computing experience to gain a Higher Certificate
- **DT761 Higher Certificate in Science & Technology**: Two year course that allows specialisation in Computing, Mathematics, or Science. No background in Computing or Science required.

**Skills Training (For computing and non-computing backgrounds)**
- **DT773 CPD Diploma in Systems Administration**: 7 month course to learn system administration skills such as networking and scripting. No background in Computing required. Applicants must have level 5 qualification or higher.
- **DT767 CPD Diploma in Software Testing**: 7 month course to gain highly sought after software testing skills in the Irish employment market. No background in Computing required. Applicants must have level 6 qualification or higher.
- **DT783 CPD Diploma in Computer Games & Ludology**: 7 month course to learn how to program and build computer games. Background in Computing desirable. Applicants must have level 6 qualification or higher.
- **DT786 CPD Diploma in Geographic Information Systems**: 9 month course to learn advanced IT skills in specialist area. No background in Computing required. Must have level 7 qualification or higher.
- **DT781 CPD Diploma in Accessible Web Design**: 7 month course to learn how to design, build and evaluate web site to a global standard. No background in Computing required. Applicants must have level 6 qualification or higher.

Apply or get more information?
Apply at [http://www.bluebrick.ie](http://www.bluebrick.ie)
For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail sci-springboard@dit.ie or call 01 402 4718.

More programme details on following pages
Computing Postgraduate Study
Masters of Science in Computing
Postgraduate Certificate (Conversion Course)
Continuing Professional Development Diploma

The School of Computing at the Dublin Institute of Technology offers a range of postgraduate programmes through Springboard 2011 to students who hold an Honours Degree and **have a background in Computing** and to students who hold an Honours Degree and **do not have a background in Computing**.

### MSc Computing (DT217)

**Applicants must have:** BSc (Honours) Computing (certain options & streams) or BSc (Honours) (other options & streams)

**Students must choose:** To take one of four streams:

- **Data Analytics** (requiring computing or similar background): Students will study advanced modules in database design, modelling, data mining, data management, visualisation and machine learning to acquire the advanced technical skills needed to design, build and exploit data infrastructures and models to allow organisations to exploit their data for competitive advantage.

- **Advanced Software Development** (requiring computing background): Students will study advanced technical modules in programming, design, databases, architecture and web development to acquire the advanced technical skills needed to practice as software developers working on leading edge development projects. In addition students will be equipped with key professional, technical communications skills needed to practice as a professional in industry.

- **Information and Knowledge Management** (accepting a range of backgrounds, including business, law etc): Students will study advanced modules in analysis, modelling, databases, architecture, project and knowledge management to acquire the advanced skills needed to design and lead complex ICT projects. In addition students will be equipped with key professional, technical communications skills needed to practice as a professional in industry.

- **Universal Design and Assistive Technology** (accepting a range of backgrounds, including law, social science etc): Students will study advanced modules in universal design, assistive technology, software design and project management to acquire the advanced skills needed to inform, design and lead ICT projects to incorporate universal design and accessibility. In addition students will be equipped with key professional, technical communications skills needed to practice as a professional in industry.

**Students will study:** A range of modules including core modules and electives, as well as completing a Masters dissertation in the second year of the programme

**Students must attend:** For two years for 3 or 4 nights per week

### Postgraduate Certificate Software Development (Conversion Course) (DT231A)

**Applicants must have:** BSc (Honours) in a discipline other than computing

**Students will study:** *Design Principles, Authoring Principles, Database and Information Systems and Problem Solving, Communication and Innovation* as well as two option modules such as *Programming and Security*

**Students must attend:** For 3 nights per week for one year

**Graduates can then:** Apply for positions in the ICT industry, or advance to further study in Computing.

### Continuing Professional Development Certificate in Computing (DT762)

**Applicants must have:** BSc (Honours) Computing (certain options & streams) or BSc (Honours) (other options & streams)

**Students will study:** A selection of six modules from the Masters courses in the School of Computing, depending on the areas in which the student wishes to upskill.

**Students must attend:** In the evening for most modules, some modules may be available during the day or at the weekend

**Graduates can then:** Advance to further study in Computing, possibly applying to join the MSc programmes in the DIT

**Apply or get more information?**

Apply at [http://www.bluebrick.ie](http://www.bluebrick.ie).

For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail sci-springboard@dit.ie or call 01 402 4718.
Computing Top Up Programmes
BSc (Honours) Information Systems and IT
BSc (Ordinary) Information Systems and IT
Higher Certificate Computing

The School of Computing at the Dublin Institute of Technology offers three top up programmes through Springboard 2011 to Computing students who already have a background in Computing.

- For students who already hold a BSc (Ordinary) (NFQ Level 7) in Computing or similar, it is possible to apply for the one year DT249 top up programme, bringing the student to the level of BSc (Honours)
- For students who already hold a Higher Certificate (NFQ Level 6) in Computing or similar, it is possible to apply for the one year DT770 top up programme, bringing the student to the level of BSc (Ordinary)
- For students who have an academic or professional background in Computing, including students who have completed at least one year of a computing programme, students who have completed a programme with a significant computing element, and students with significant professional experience in computing, it is possible to apply for the one year DT263 top up programme, bringing the student to the level of Higher Certificate, thus formalising their experience.

BSc (Honours) Information Systems and IT (DT249)

Applicants must have: BSc (Ordinary) (NFQ Level 7) in Computing
Students will study: Distributed Systems and System Integration, Information Systems Engineering, Honours Degree Project, Research Practice, and four specialist modules such as Security and Cryptography, Bioinformatics and others.
Students must attend: At least 3 nights per week for one year, from 6:30pm to 9:30pm
Students must also: Meet with their project supervisor and attend the Research Practice sessions
Graduates can then: Progress to postgraduate study, or apply for positions requiring BSc (Honours)

This is the final stage of the programme described at http://www.comp.dit.ie/dt249.

BSc (Ordinary) Information Systems and IT (DT770)

Applicants must have: Higher Certificate (NFQ Level 6) in Computing
Students must attend: At least 3 nights per week for one year, from 6:30pm to 9:30pm
Students must also: Meet with their project supervisor if taking the project route
Graduates can then: Progress to study towards BSc (Honours), or apply for positions requiring BSc (Ordinary)

This is the third stage of the programme described at http://www.comp.dit.ie/dt249.

Higher Certificate Computing (DT263)

Applicants must have: Significant experience in IT, professionally or academically or both
Students will study: Modules are selected to fill the gaps in your background and bring you to the level of Higher Certificate. Possible modules include Computer Programming, Databases, Networking, and Software Engineering
Students can attend: During the daytime or evening or both. If evening, attendance for at least 3 nights per week for one year, from 6:30pm to 9:30pm. If daytime, hours will vary depending on student choices.
Students must also: Complete a learning portfolio, demonstrating your prior learning
Graduates can then: Progress to study towards BSc (Ordinary), or apply for positions requiring computing qualifications

Students take modules from the first two stages of the programme described at http://www.comp.dit.ie/dt249.

Apply or get more information?

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For more information visit http://www.dit.ie/upskill/#sci or e-mail sci-springboard@dit.ie or call 01 402 4718.
Higher Certificate in Science & Technology

“Transition to Technology”

The College of Sciences and Health at the Dublin Institute of Technology offers this two year part-time conversion course in Science and Technology to applicants under Springboard 2011. The course provides a route into Science and Technology for students with a diversity of backgrounds, including people with qualifications such as the Leaving Certificate, Apprenticeships, Post Leaving Certificate qualifications, FETAC qualifications, as well as qualifications at Higher Certificate and Degree level.

Why Science and Technology?
Science and Technology remain among the largest growth areas in the Irish employment market. This is what the Expert Group on Future Skills Needs (government advisory group) say about Science and Technology:

- Recent data points to shortages of chemists in product development, biologists, medical scientists and nutritionists. At technician level, shortages of laboratory analysts have been identified.
- IT skills were the [joint top] most frequently mentioned as difficult to source by recruitment agencies. Despite the recession, the demand for IT skills remains strong, as illustrated by recent job announcements

What will I study?
In the first year of the programme you will study the following subjects:

- Computer Programming
- Introductory Biology
- Mathematics
- Introductory Physics for Science and Technology
- Introductory Chemistry and its Applications
- Career Planning and Management, Project Management

You will then be given the opportunity to specialise in second year by taking one of the following three routes:

- Science: Modules such as Physical and Analytical Chemistry, Food Science, Project-based Physics and Human Biology
- Mathematics: Modules such as Algebra, Calculus / Analysis, Discrete Mathematics and Numerical Methods
- Computing: Modules such as Object-Oriented Programming, Software Testing, Database Systems and Networking

In addition, you will complete a group project with classmates, and get valuable experience in a real world organisation.

What will I do afterwards?
You have a number of choices:

- At the end of second year you will graduate with a Higher Certificate
- At the end of first year, you can leave the programme and apply for CAO entry to one of our full time programmes
- At the end of second year you can apply for advanced entry to one of our CAO programmes
- At the end of first or second year you can apply to enter one of our part-time degree programmes

When are my classes?
Your first year timetable will be similar to the following (subject to final confirmation):

- Tuesday, 6:30pm to 9:30pm, Mathematics
- Thursday, 6:30pm to 9:30pm, Programming
- Selected Fridays, all day, Biology
- Saturdays, Chemistry and Physics
- Workshops (in Sept., Jan., occasional weekdays): Project Management, Career Planning

Classes start on Monday 5th September 2011 (classes all day that week). Several classes are delivered and/or supported online.

Apply or get more information?
Apply at http://www.bluebrick.ie.
For more information visit http://www.dit.ie/upskill/#sci or e-mail sci-springboard@dit.ie or call 01 402 4718.
Continuing Professional Development Diploma in System Administration

The School of Computing at the Dublin Institute of Technology offers this 7 month part-time course in System Administration. It is aimed at learners who don't necessarily have a background in Computing, who wish to acquire skills in networking, programming, scripting, and sys-admin. It incorporates real-world experience, and career-oriented modules designed to help the learner return quickly to the workplace. This programme is ideal for people with a technical interest who may lack formal training or experience.

What is a Continuing Professional Development Diploma?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that the majority of the assessment takes place without examinations, rather through practical work. This programme is designed to meet very specific industry needs, including networking, scripting and sys-admin skills.

Can I apply?
This is a programme at Level 7 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 5 or 6 (e.g. Leaving Cert, Apprenticeship, PLC) on the NFQ (not necessarily in Computing).

What will I study?
You will take three technical modules and three career supporting modules. The technical modules are:
- **Networking**: This module addresses much of the content of the Cisco Certified Network Administrator (CCNA) training programmes (CCNA-1 and CCNA-2).
- **Scripting**: This module teaches the student how to design and write Linux/Unix shell scripts, which can serve as a good foundation to learn more about Computer Programming in the future.
- **Computer Systems Architecture and Administration**: This module equips the student with a sufficient skill to support systems administration activities and gives hands on practice of applying systems administration techniques.

The non-technical, career supporting modules are:
- **Organisational Experience**: For this module, students will complete a project with a real-world organisation.
- **Introductory Project Management**: Students will learn the skills needed to complete, participate in, and manage projects.
- **Career Planning and Management**: This module focuses on the practical skills needed to return to the workforce - including online recruitment, personal development planning and interview preparation.

What will I do afterwards?
You have a number of choices:
- You can apply to do the Ethical Hacking course in the School of Computing in March 2012, also Springboard funded
- You can apply to join one of our major award programmes, such as our Higher Certificate in Computing.
- You can apply for entry level positions in IT support and/or can pursue professional certification (e.g. CCNA)

When are my classes?
Your timetable will be similar to the following (subject to final confirmation):
- Week beginning 29th August, full-time for one week, Networking
- Week beginning 5th September, full-time for one week, Introductory Project Management
- Week beginning 12th September, full-time for one week, Scripting
- Week beginning 19th September to week beginning 12th December, one day per week for Networking and Scripting
- Weeks beginning 9th January to 16th January, full-time for two weeks, Computer Systems Architecture and Administration.
- Week beginning 23rd January, full-time for one week, Introductory Project Management
- Selected evenings and weekends throughout the year, Career Planning and Management
- Beginning January 2012, for 4-6 weeks, Organisational Experience

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For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail [sci-springboard@dit.ie](mailto:sci-springboard@dit.ie) or call 01 402 4718.
Continuing Professional Development Diploma in Software Testing

The School of Computing at the Dublin Institute of Technology offers this 7 month part-time course in Software Testing. It is aimed at learners who don't necessarily have a background in Computing, but who wish to develop the skills necessary to work in the thriving Irish software industry. Software testing is a skill which is in very high demand in Ireland currently. It incorporates real-world experience, and career-oriented modules designed to help the learner return quickly to the workplace. On successful completion of the course, students can also apply to participate in a Springboard funded course in Ethical Hacking in March 2012.

What is a Continuing Professional Development Diploma?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that the majority of the assessment takes place through practical work. It is designed to meet very specific needs for the Irish software industry, and provide students with an opportunity to transition into that industry.

Can I apply?
This is a programme at Level 7 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 6 (e.g. Higher Cert) on the NFQ (not necessarily in Computing) and excellent generic ICT skills to apply.

What will I study?
You will take three technical modules and three career supporting modules. The technical modules are:
- **Software Development Process**: This module introduces students to software engineering and software development as a discipline, and explains the various stages of the software development lifecycle.
- **Configuration and Operating Systems**: This module provides the student with skills and competence in the setup and use of an operating system, such that they develop their skills beyond basic use of a computer.
- **Software Testing**: This module provides the student with the skills to test software, with emphasis on test strategies, test design and test execution. Students will focus on the practical issues associated with testing software.

The non-technical, career supporting modules are:
- **Experiential Learning**: For this module, students will complete a project with a real-world organisation. The project may be a placement, or a group project completed for an organisation – based on a need identified by them.
- **Project Management Skills**: Students will learn the skills needed to complete, participate in, and manage projects.
- **Innovation and Career Development**: Including entrepreneurship and business development skills.

What will I do afterwards?
You have a number of choices:
- **You can apply to do the Ethical Hacking course in March 2012, also Springboard funded**
- You can apply to join one of our major award programmes, such as our Higher Certificate in Computing.
- You can apply for software testing positions in the software industry, and continue learning and professional development.

When are my classes?
Your timetable will be similar to the following (subject to final confirmation):
- **Week beginning 29th August**, full-time for one week, **Software Development Process**
- **Week beginning 5th September**, full-time for one week, **Configuration and Operating Systems**
- **Week beginning 12th September**, full-time for one week, **Project Management Skills**
- **Week beginning 19th September** to week beginning 12th December, selected evenings and weekends for **Software Testing**
- **Week beginning 16th January**, full-time for one week, **Project Management Skills**
- Selected evenings and weekends throughout the year, **Innovation and Career Development**
- **Beginning January 2012**, for 4-6 weeks, **Organisational Experience**

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For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail [sci-springboard@dit.ie](mailto:sci-springboard@dit.ie) or call 01 402 4718.
Continuing Professional Development Diploma in
Computer Games & Ludology

The School of Computing at the Dublin Institute of Technology offers this 7 month part-time course in Computer Games and Ludology. It is aimed at learners who don’t necessarily have a strong background in Computing, but who wish to acquire the skills necessary for design and build computer games. It incorporates real-world experience, and career-oriented modules which are designed to help the learner return quickly to the workplace. On successful completion of the course, students can also apply to participate in a Springboard funded course in iPhone/Android Application Development in March 2012.

### What is a Continuing Professional Development Diploma?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that the majority of the assessment takes place through practical work. It is designed to meet very specific needs for the Computer Games industry and provide students an opportunity to begin the transition into that industry.

### Can I apply?
This is a programme at Level 7 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 6 (e.g. Higher Cert) on the NFQ (preferable in Computing or similar) and excellent generic ICT skills to apply.

### What will I study?
You will take three technical modules and three career supporting modules. The technical modules are:
- **Fundamentals of Programming and Object Oriented Programming**: This module is delivered intensively over 2 week and designed to provide students with the necessary foundation in programming to complete this course.
- **Games Logic and Design**: This module introduces students to the fundamental knowledge and skills of game development such as game engines, computer graphics, sound and artificial intelligence.
- **Games Programming**: This module will expose students to an industry standard gaming development environment. At the end of this module students will have developed a distributable modification of an existing game engine.

The non-technical, career supporting modules are:
- **Experiential Learning**: For this module, students will complete a project with a real-world organisation. The project may be a placement, or a group project completed for an organisation – based on a need identified by them.
- **Project Management Skills**: Students will learn the skills needed to complete, participate in, and manage projects.
- **Innovation and Career Development**: Including entrepreneurship and business development skills.

### What will I do afterwards?
You have a number of choices:
- **You can apply to do the iPhone/Android App Development course in March 2012, also Springboard funded**
- You can apply to join one of our major award programmes, such as our Higher Certificate in Computing.
- You can apply for entry level positions in the IT industry, and continue your learning and professional development.

### When are my classes?
Your timetable will be similar to the following (subject to final confirmation):
- Weeks beginning 29th August and 5th September, full-time for two weeks, **Fundamentals of Programming and OOP**
- Week beginning 12th September, full-time for one week, **Project Management Skills**
- Week beginning 19th September to week beginning 24th October, two nights per week for **Games Logic and Design**
- Week beginning 31st October to week beginning 5th December, two nights per week for **Games Programming**
- Week beginning 16th January, full-time for one week, **Project Management Skills**
- Selected evenings and weekends throughout the year, **Innovation and Career Development**
- Beginning January 2012, for 4-6 weeks, **Organisational Experience**

### Apply or get more information?
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Continuing Professional Development Diploma in Accessible Web Design

The School of Computing at the Dublin Institute of Technology offers this 7 month part-time course in Accessible Web Design. It is aimed at learners who don't necessarily have a background in Computing, but who wish to acquire the skills necessary to design, build and evaluate accessible web sites. It incorporates real-world experience, and career-oriented modules which are designed to help the learner return quickly to the workplace. On successful completion of the course, students can also apply to participate in a Springboard funded course in iPhone/Android Application Development in March 2012.

What is a Continuing Professional Development Diploma?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that the majority of the assessment takes place without examinations, rather through practical work and demonstration of skills. This programme is designed to meet the requirements of standards bodies such as the World-Wide-Web Consortium, so that graduates of the programme can build and websites to a standard.

Can I apply?
This is a programme at Level 8 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 7 (e.g. BSc Ordinary) on the NFQ (not necessarily in Computing) and excellent generic ICT skills to apply.

What will I study?
You will take four technical modules and three career supporting modules. The technical modules are:

- **Internet Development (Client):** Learn to write code in HTML, CSS and JavaScript to create basic web pages.
- **Internet Development (Server):** Learn to create web applications using PHP, Apache Server and MySQL.
- **Universal Design and Assistive ICT:** This module introduces the student to the principles and requirements for designing for diversity and inclusivity, in ICT and other domains.
- **Accessible Web Design:** The student will learn about the Web Content Accessibility Guidelines (2.0) and how to develop and evaluate web resources to that highly important standard for accessible web content.

The non-technical, career supporting modules are:

- **Enterprise Project:** For this module, students will complete a project with a real-world organisation. The project may be a placement, or a group project completed for an organisation – based an a need identified by them.
- **Advanced Project Management:** Students will learn the skills needed to complete, participate in, and manage projects.
- **Advanced Innovation and Career Development:** Including entrepreneurship and business development skills.

What will I do afterwards?
You have a number of choices:

- You can apply to do the iPhone/Android App Development course in March 2012, also Springboard funded
- You can apply to join one of our major award programmes, such as our Degrees and Masters (depending on background).
- You can apply for relevant positions in the IT industry, and continue your learning and professional development

When are my classes?
Your timetable will be similar to the following (subject to final confirmation):

- Weeks beginning 5th Sept and 12th Sept, full-time for two weeks, Adv. Proj. Mgmt and Internet Development (Client)
- Week beginning 19th September to week beginning 12th December, one day per week (2:00pm to 8:00pm (TBC)) for Universal Design and Assistive ICT and Internet Development (Server)
- Weeks beginning 9th January and 16th September, full-time for two weeks, Accessible Web Design
- Selected evenings and weekends throughout the year, Adv. Proj. Mgmt and Advanced Innovation and Career Development
- Beginning January 2012, for 4-6 weeks, Enterprise Project

Apply or get more information?
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For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail sci-springboard@dit.ie or call 01 402 4718.
Continuing Professional Development Diploma
Building Geographic Information Systems

The School of Computing at the Dublin Institute of Technology offers this 9 month part-time course in Building Geographic Information Systems (GIS). It is aimed at learners who don't necessarily have a background in Computing, but who wish to acquire the skills necessary to design and build GiS, Spatial Databases and Web Applications incorporating spatial systems. It incorporates real-world experience, and career-oriented modules which are designed to help the learner return quickly to the workplace.

What is a Continuing Professional Development Diploma?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that a large focus is placed on practical work and demonstration of skills.

Can I apply?
This is a programme at Level 8 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 7 (e.g. BSc Ordinary) on the NFQ (not necessarily in Computing) and excellent generic ICT skills to apply.

What will I study?
You will take five technical modules and three career supporting modules. The technical modules are:

- **Introduction to Programming for Geographic Information Systems**: This is a practical course in programming, which provides students with the foundation to complete the technical modules on this programme.
- **Geographic Information Systems**: This module covers four broad areas of modern GIS, the applications, the technology, the theory and current research.
- **Spatial Databases**: Students will be familiarised with the features of a spatially enabled database systems and will develop applications that use the spatial database extensions.
- **Web Mapping**: Students will learn XHTML, CSS, JavaScript, PHP and use server-side technologies to render maps.
- **Spatial Statistics and Spatial Knowledge Discovery**: Students will be equipped with the necessary skills to extract decision support information from large datasets using statistical and knowledge discovery techniques.

The non-technical, career supporting modules are:

- **Enterprise Project**: For this module, students will complete a project with a real-world organisation. The project may be a placement, or a group project completed for an organisation – based an a need identified by them.
- **Advanced Project Management**: Students will learn the skills needed to complete, participate in, and manage projects.
- **Advanced Innovation and Career Development**: Including entrepreneurship and business development skills.

What will I do afterwards?
You have a number of choices:

- You can apply to join one of our major award programmes, such as our Degrees and Masters (depending on background).
- You can apply for relevant positions in the IT industry, and continue your learning and professional development.

When are my classes?
Your timetable will be similar to the following (subject to final confirmation):

- Weeks beginning 5th September and 12th September, full-time for two weeks, Adv. Proj. Mgmt and Programming
- Week beginning 19th September to week beginning 12th December, one day per week (2:00pm to 8:30pm (TBC)) for Geographic Information Systems and Spatial Databases. Examinations in week beginning 9th January.
- Week beginning 30th January to week beginning 7th May, one day per week (2:00pm to 8:30pm (TBC)) for Web Mapping and Spatial Statistics and Spatial Knowledge Discovery
- Selected evenings and weekends throughout the year, Adv. Proj. Mgmt and Advanced Innovation and Career Development
- Beginning January 2012, for 4-6 weeks, Enterprise Project

Apply or get more information?
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For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail [sci-springboard@dit.ie](mailto:sci-springboard@dit.ie) or call 01 402 4718.
Continuation Course in
Ethical Hacking

The School of Computing at the Dublin Institute of Technology offers this short course in Ethical Hacking. It is aimed at learners who have some background in Computing, and as such, applicants for this course are encouraged first to complete one of the other Continuing Professional Development courses in the School of Computing – in particular the Software Testing (DT767) or System Administration (DT773) courses. Participants in these courses will be given information on how to apply for this short continuation course to extend their skills. This course will take place over a short period in semester 2 – starting in February.

What is a Continuing Professional Development Certificate?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that the assessment takes place without examinations, rather through practical work and demonstration of skills. This programme is designed to meet very specific skills needs in computer security and security testing.

What is Ethical Hacking?
The Internet has allowed researchers, organisations and entities of all sorts to become more effective and efficient. This has enabled an unprecedented exchange of ideas, information, and culture among previously unconnected individuals and groups. However, this ubiquitous connectivity opens the cyber space to the greatest risks. As the networks increase in size, reach and functions, their growth empowers both law-abiding citizens and hostile actors.

The aim of this programme is to provide the student with a detailed understanding of system vulnerabilities and how attackers take advantage of these vulnerabilities and practical techniques of mitigating the effects of attacks. The programme has a very strong practical flavour. Students will be shown how to find vulnerabilities, perform ethical hacking and devise strategies for securing their systems. All the practical experiments to be done in this module will be on simulated environment.

Can I apply?
This is a programme at Level 7 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 6 (e.g. Higher Cert) on the NFQ (not necessarily in Computing) and relevant skills acquired through the Software Testing (DT767) or System Administration (DT773) courses or similar.

What will I study?
Programme content includes:

- Introduction to Ethical Hacking
- Nurturing ethical hacking mindset
- Enumeration, scanning, footprinting
- Evading Intrusion Detection Systems and Firewalls
- Hacking all major web browsers
- System hacking
- Malware
- Sniffers, Session hijacking and Denial of service
- Hacking wireless networks
- Application vulnerabilities: SQL injection, buffer overflows
- Penetration testing

How should I prepare, and what will I do afterwards?
This is a short top-up course design to augment the skills you acquired in Software Testing (DT767) or System Administration (DT773). You should apply for one of those programmes first then top up with this to add to the skills you acquired in that area. Security testing and ethical hacking are excellent additional skills for software testers and system administrators.

When are my classes?
Classes will take place over 52 hours in semester 2 starting in February. Further details will be provided closer to the delivery date.

Apply or get more information?
Apply at [http://www.bluebrick.ie](http://www.bluebrick.ie). For more information visit [http://www.dit.ie/upskill/#sci](http://www.dit.ie/upskill/#sci) or e-mail sci-springboard@dit.ie or call 01 402 4718.
Continuation Course in
iPhone App Development
Android App Development

The School of Computing at the Dublin Institute of Technology offers these short courses in mobile application development. Separate courses will be provided for the iPhone and Android platforms. Both courses are aimed at learners who have some background in Computing, and as such, applicants for this course are encouraged first to complete one of the other Continuing Professional Development courses in the School of Computing – in particular the Computer Games and Ludology (DT783) or Accessible Web Design (DT781) courses. Participants in these courses will be given information on how to apply for this short continuation course to extend their skills. This course will take place over a short period in semester 2 – starting in February.

What is a Continuing Professional Development Certificate?
This is a qualification which is oriented more towards practical skills than academic work. It is different to a degree programme, or other programmes at that level, in that the assessment takes place without examinations, rather through practical work and demonstration of skills. These programmes are designed to meet very specific skills needs for mobile application development.

What is Mobile Application Development?
Recently, the number of apps downloaded by iPhone/iPad/iPod touch owners exceeded ten billion (Jan 2011), while the number of apps downloaded by users of Google’s Android Operating System exceeded two billion. The worldwide mobile app market is projected to be worth $15 billion by 2013. There is a low barrier to entry for developers who wish to develop and sell apps and a number of indigenous Irish companies have been successful in targeting the app market worldwide.

The purpose of this course is to enable students to target this lucrative market by learning how to develop their app ideas into commercial products. In addition to technical considerations, the course will also cover commercial considerations such as project lifecycle/management, funding/investment, business models, preparing a business plan and marketing plan.

Can I apply?
This is a programme at Level 7 on the National Framework of Qualifications (NFQ), and as such, you are expected to have a qualification at Level 6 (e.g. Higher Cert) on the NFQ (not necessarily in Computing) and relevant skills acquired through the Computer Games and Ludology (DT783) or Accessible Web Design (DT781) courses or similar.

What will I study?
Programme content (for iPhone course, Android course similar for that platform) includes:

- Mobile applications and trends
- Object Orientated programming using the Objective C language
- Strings in Objective C
- Memory management
- COCOA Collections
- iOS User Interface Guidelines
- Views
- Quartz graphics programming
- Geo and movement API
- Publishing an App on the App store
- Marketing, PR, legal and financial issues

How should I prepare, and what will I do afterwards?
This is a short top-up course design to augment the skills you acquired in Computer Games and Ludology (DT783) or Accessible Web Design (DT781). You should apply for one of those programmes first then top up with this to add to the skills you acquired in that area. Afterwards you will be equipped with the skills needed to start developing your own app.

When are my classes?
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