



The new Active Learning laboratory is the perfect environment for collaborative project work. © Donal Murphy Photography.

Testimonials

Undergraduate Testimonial

My favourite subject so far is Data Structures and Algorithms, because it was my first introduction to how a computer internally stores and retrieves data. The module consisted of weekly lab practicals that helped to demonstrate the concepts taught in the lectures. At each practical, demonstrators were there to support us through any problems we had. I would recommend Computer Science to anyone who has a strong interest in computers more so than a background in them.

Daniel Finnegan, 3rd Year Student.

Graduate Testimonials

During my UCD Computer Science degree I learnt how to logically approach problems and identify innovative solutions. After my degree I completed a PhD in personalised web search, and then I worked as a consultant in financial services with Accenture. I am currently a business analyst in the Innovation Centre at Amdocs Changing Worlds where I combine my research skills with my business experience.

Dr. Evelyn Balfe, Business Analyst,
Amdocs ChangingWorlds Dublin.

What I appreciate most about the UCD Computer Science degree is its breadth and depth. Everything from OS architectures to network layers to object orientated design patterns is taught. To understand and debug issues on big projects you need to know a little bit about everything.

Mark Gargan, Software Engineer, IBM Dublin.



DN201



How do I find out more about
Computer Science at UCD?

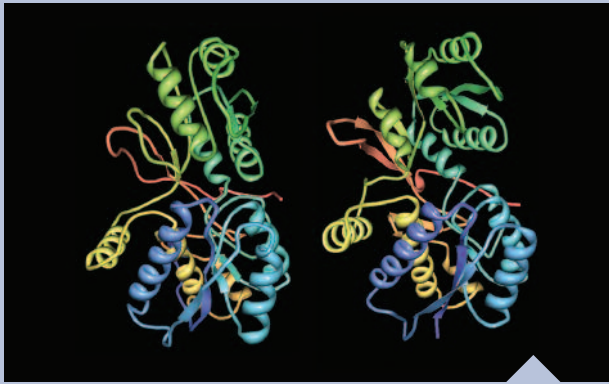
BSc in Computer Science

You can get information about this degree programme
by calling, emailing or writing to:

John Dunnion or Prof. Pádraig Cunningham
UCD School of Computer Science & Informatics
University College Dublin, Belfield, Dublin 4.

Email: john.dunnion@ucd.ie or
padraig.cunningham@ucd.ie
Web: www.ucd.ie/csi
Tel: 01 716 2474/716 5346

University College Dublin



UCD computer scientists are developing software systems that can predict the structure of proteins. These systems are being used by biotechnology and pharmaceutical companies to develop new drugs for fighting diseases such as cancer. Source: Dr Gianluca Pollastri. © UCD

What is Computer Science?

Do you want to be involved in the development of the next generation of advanced web technologies, medical devices, gaming platforms or financial forecasting systems? Are you looking for a rewarding career that will challenge your creative and problem solving abilities? If so, a degree in Computer Science could be for you.

Computer Science is the study of how to efficiently and accurately automate tasks using computers. You will learn the skills required to develop and use computer software and hardware to provide solutions to some of today's most challenging problems in business, finance, health and beyond. Our academic staff are collaborating with industry on many of these exciting challenges such as:

- creating investigation support tools for computer related crimes such as identity fraud or cyber attacks (Digital Forensics);
- developing monitoring software for managing energy consumption in the home (Sensor Technologies);
- developing software that can analyse risk in financial and other investment markets leading to, for example safer pension investments (Artificial Intelligence); and,
- designing mobile systems for monitoring patient health beyond the hospital environment (Digital Systems).

By studying Computer Science at UCD you could also play a vital role in shaping the future of the global technology revolution.



UCD computer scientists are working with people like Artie Kempner from Disney Research (see above) to develop match analysis software that will detect and send video highlights (goals, red cards etc.) to people's mobile devices in real time. © UCD

What will I study as part of my degree?

The BSc in Computer Science covers core subjects including *Formal Foundations of Computing, Software Engineering, Computer Architecture, Hardware Design, Operating Systems and Networks*. Students will be taught by experts in cutting-edge topics such as: *Machine Learning, Programming Design Patterns, Web Multimedia, Bioinformatics, Computer Graphics, Databases, Artificial Intelligence, Network Security, and Cognitive Science*.

Practical work associated with these modules will expose you to different programming languages, environments and tools such as: Java, C/C++, Ruby; *Internet Technologies* - JSP, Java Servlets, ASP, PHP etc.; *Mobile Apps*: Google Android, Apple. *Databases* - MS Access, SQL; *Graphics Languages* - OpenGL, GLUT. We offer small class sizes, a state-of-the-art Active Learning lab and a Computer Science Support Centre, which provides free one-to-one tuition.

After third year at least the top 25% of students can avail of one of two "year out" options: company internships, or study abroad opportunities in Europe, China, USA etc. (not included in the fees). Summer research internships are also available in either industry or within research groups in UCD, offering a great way to build up your CV with relevant experience while completing your degree.

What are the opportunities for graduates in Computer Science?

UCD Computer Science graduates are highly sought after. Jobs open to Computer Science graduates include software engineer, software architect, database developer, business analyst, web developer, systems administrator, network engineer and IT consultant.

A UCD Computer Science degree will teach you transferable skills (logical thinking, team work, creative thinking, communication, entrepreneurship) that employers will perceive as valuable in any profession. The table below summarises some of the postgraduate and industry opportunities that our graduates can pursue.

MSc Taught	Industry
All postgraduate courses requiring numeracy skills including (but not limited to the following):	High Tech Sector, e.g. Google, IBM, Microsoft
<ul style="list-style-type: none"> ■ MSc in Computer Science (by negotiated learning) ■ MSc in Advanced Software Engineering ■ MSc in Digital Investigation ■ MSc in Cognitive Science ■ MSc in Simulation Science 	Financial Sector, e.g. CitiBank
<ul style="list-style-type: none"> ■ Smurfit Business School postgraduate degrees, e.g. Masters in Business Administration; Masters in Business Analytics etc. 	Consultancies, e.g. Accenture, Price Waterhouse Cooper
	R&D Labs, e.g. Telefónica (Barcelona), NEC (Germany), IBM (Dublin), CSIRO (Australia)
	UCD Tech Startups, e.g. Changing Worlds, HeyStaks
	Education, e.g. College lecturer, Postdoctoral researcher
PhD	
Many graduates pursue PhD studies in Ireland and abroad in diverse areas such as:	
<ul style="list-style-type: none"> ■ Artificial Intelligence ■ Software and Systems Engineering ■ Networks and Distributed Systems 	