DT081

Honours Degree in Computer and Communications Engineering

This programme is accredited by Engineers Ireland (formerly Institution of Engineers of Ireland) as satisfying the educational standards required for registration of Chartered Engineers.

Programme Description

This programme prepares students for a rewarding professional career as a Communications and IT engineering specialist in a wide range of Business/Industrial sectors.

The use of mobile communications and the Internet continues to transform our social and business lives. Global data networks enable us to communicate via text messages, voice or video, to access and exchange information and to transact business securely. These networks provide the links between people, computer systems and specialised computing devices. In order to maximize the benefits of this blending of communications and computing technologies, organisations are increasingly reliant on access to a new range of engineering development skills. Given the level of demand, such skills are in short-supply and this programme addresses the need to provide appropriate key technical professionals and offers the prospect of valuable career opportunities.

The programme combines elements of electronic, software, hardware and communication engineering to best fit the rapid convergence occurring in the ICT sector. It includes a significant amount of practical and laboratory work together with lectures and tutorials. A strong emphasis is placed on developing the applied design/development skills and in-depth knowledge required by hi-tech companies in the sector. For Work Placement please see reverse.

Entry Requirements

Passes in six subjects in the Irish Leaving Certificate, including English or Irish, with two subjects at grade C3 or higher on higher level papers, one of which must be in Mathematics or such qualification as the Institute may deem equivalent. For Diploma/Ordinary Degree holders the last two years of this programme are available on a part-time basis (DT074).

Duration

Four years full-time.

Award

Bachelor of Engineering (Computer and Communications Engineering) of the Dublin Institute of Technology

Career Opportunities

This programme provides graduates with a wide range of satisfying and well-paid professional career opportunities both in industry and in the wider economy. Initially, graduates may typically be expected to take up employment as communications, network, software or computer engineers

Progression

Students who reach an appropriate honours standard may progress to a range of Masters or Doctorate programmes in DIT or elsewhere in higher education. The school offers a taught Masters degree in Electronic and Communications Engineering (DT086) and also a part-time version (DT085).

For further details contact:

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School of Electronic and Communications Engineering

www.electronics.dit.ie

Programme Outline:

First Year

Mathematics 1, Physics, Electronic Systems, Electrical Systems, Engineering Practice and Design, Communications & IT Skills, Computer Programming 1 & 2

Second Year

Mathematics 2 & 3, Communication Networks 1, Engineering Mechanics and Materials, Regulatory Environment & Engineer in Society, Digital Electronic Design, Software Development, Computer Architecture 1 & 2, Digital Communications 1, Analogue Electronics, Signals and Systems.

Third Year

Mathematics 4 , Field Theory and Digital Signal Processing, Digital Communications 2, Data Communications 1, Software Engineering, Business & Management, Operating Systems, Project Management, Work Placement

Fourth Year

Mathematics 5, Real-Time & Embedded Systems, Data Communications 2, Distributed Systems, Engineering Project, Computer Architecture 3, Wireless Communications, Management, Marketing & Law, Advanced Signal Processing, Option Module.
The engineering project module is a major engineering project, which runs throughout the second semester of the academic year.

WORK PLACEMENT:

The work placement is a 6 months continuous placement in a company, in Ireland or abroad*, in the second semester of the third year of study. Companies who have participated to date include INTEL, ESB, Avaya, Vilicom, RTE, HP, Dell and Ericsson.

*One of our students undertook a placement with CISCO Systems, San Jose, California.

Student Profile:

"The big bonus with this programme is you become a very valuable graduate through the work placement. I completed my placement with a large multinational company. I worked for six months with them and the knowledge and experience I gained during this time was priceless. It is terrific, as what I learned in college I put into practice at work. It all makes so much more sense when you put theory into practice. My placement company have now offered me a full time employment contract when I complete my studies in May."

Fourth Year Student
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