

## What is Computer & Software Engineering?

Computer & software engineering is the inventive and creative application of engineering expertise to the design and development of hardware and software computer systems. These systems play a major role in every aspect of our lives from entertainment and communications to healthcare and transport. Mobile phones, MP3 players and computerised cars are all developments which were realised by the ingenuity of computer & software engineers.

### What do Computer & Software Engineers do?

Computer & software engineering is a rapidly advancing sector, responding to the ever-increasing demand from society for new and advanced technology. Computer & software engineers combine the principles of computer design techniques, communications engineering and mathematical analysis to solve the challenges of designing and developing state of the art computer hardware, software and information systems. The consistent revolution in this sector results in an exciting and interesting career, which contributes to all avenues of life from traffic lights to heart monitors to computer games. It offers a wide choice of career paths allowing graduates to specialise in a whole range of areas including:



**Applications software:** analysing software user needs and designing, constructing and maintaining computer applications software which will essentially tell the computer what to do.

**Hardware:** designing networks which link computers together and designing new computer chips, processors and computers such as Playstations

**Software architecture:** designing and providing the computer system design specifications for the building of computer software applications.

**Systems software:** designing, configuring, implementing and installing complete computer systems.





## Career Opportunities

Computer & Software engineering is experiencing significant growth both in Ireland and abroad. The need for well-qualified professional computer & software engineers, technologists and technicians is greater now than ever before. As part of the computer & software engineering team you can work for:

- Industry
- Civil Service and Government
- Product Design and Development
- Consultancy
- Research and educational centres

### As a computer & software engineering graduate you could

- Design a new system to beat fraudulent cards at ATMs
- Design powerful diagnostic equipment to improve health care
- Produce new innovations for mobile phones

### Employers of computer & software engineering graduates include:

Apple, Boston Scientific, IBM, Intel, Iona Motorola, Technologies, Microsoft, Siemens to name but a few.

Aeronautical	
Biomedical	
Biosystems, Agriculture & Food	
Building Services	
Chemical Engineering	
Civil Engineering	
COMPUTER & SOFTWARE	▶ Applications Software
Electrical Engineering	Hardware
Electronic Engineering	Software Architecture
Industrial & Manufacturing	Systems Software
Mechanical Engineering	

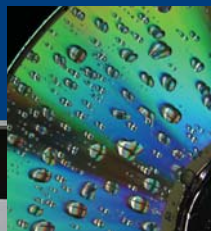
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### Did you know?

It was computer & software engineers who invented and developed the Internet? The Internet is constantly evolving and new engineers are needed to maintain the security and accessibility of this invaluable information communication tool.

Engineering provides a host of exciting opportunities for individual enterprise and job flexibility with rapid progress to creative, responsible and financially rewarding careers.

For more information look up [www.steps.ie](http://www.steps.ie)



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