

About Computer Science

Love computing? Get a kick out of troubleshooting glitches and software bugs? Want to know exactly how it all works and help set future directions in the fast-paced world of IT? Then this is the course for you! Computer Science at Murdoch will give you a thorough understanding of the theory, methods and systems used in the computing industry. You will be fully trained in computer systems technology and software development with a strong focus on the application of computer and software systems for problem solving.

What can I do with my Computer Science degree?

Computer Science graduates go everywhere from business, industry and manufacturing right through to government departments and the community sector. Depending on which skill combinations or specializations you choose, your Murdoch degree may lead you to work or study in a huge number of exciting areas. Not just in your country either, but right around the world you'll be in demand in areas as diverse as programming, system analysis and software engineering.

The following are some of the professions you could consider:

- Software Architect/Developer/Programmer;
- Software Engineer;
- Computer Systems Analyst;
- Security Specialist;
- Network Analyst;
- Computational Scientist

Professions	What they do
Systems Analyst/ Computer Systems Analyst	Computer Systems Analysts solve computer problems and apply computer technology to meet the individual needs of an organization. They help an organization to realize the maximum benefit from its investment in equipment, personnel, and business processes. Systems Analysts may plan and develop new computer systems or devise ways to apply existing systems resources to additional operations. They may design new systems, including both hardware and software, or add a new software application to harness more of the computer's power. Most Systems Analysts work with specific types of systems; for example, business, accounting, or financial systems, or scientific and engineering systems' that vary with the kind of organization. Some Systems Analysts also are known as systems developers or systems architects. Systems Analysts begin an assignment by discussing the systems problem with managers and users to determine its exact nature. Defining the goals of the system and dividing the solutions into individual steps and separate procedures, Systems Analysts use techniques such as structured analysis, data modeling, information engineering, mathematical model building, sampling, and cost accounting to plan the system. They specify the inputs to be accessed by the system, design the processing steps, and format the output to meet user's needs. They also may prepare cost-benefit and return-on-investment analyses to help management decide whether implementing the proposed technology will be financially feasible.
Security	Security Specialists manage the security of an organization's

Specialist	system infrastructure, investigate and resolve incidents, monitor for intrusions, provide virus protection defenses, enforce bandwidth policy, monitor data transactions in and out of a network environment and secure all servers from unauthorized use.
Network Analyst	Network Analysts research and recommend policies and strategies for an organization's network infrastructure. They design, install, analyze and implement computer systems/networks, ensure that the network is effective and that it meets emerging requirements of the organization. The role can also include operational tasks such as monitoring system performance, software and hardware upgrades.
Computational Scientist	Computational Scientists apply computer simulation and other forms of computation to problems in Physics or in other scientific disciplines.