Careers Practitioners Seminar

Major in Computing & Software Systems

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Why study IT?

IT is pervasive:

Work
- Government, Finance, Manufacturing

Play
- Games, Media, Social networking

Health
- Medicine, Telecare, Research

Society
- Defence, Transport, Education

IT = *Innovation* through Technology
What does a career in IT involve?

Key attributes of IT professionals include:

**People skills**
- Communications and interpersonal skills
- Teamwork

**Technical skills**
- Technical knowledge
- Attention to detail, broad vision
- Problem solving abilities

**Personal attributes**
- Lifelong learning
- A desire to be part of solutions that help people
The study of how to code ideas in a form that can be executed by a machine

• Has elements of mathematics, engineering, philosophy, communication
• Draws on creativity & inspiration – How should I think about this task? What insights do I need to solve this problem?
• Concerned with theories, principles, limits of computation & information
• Also concerned with engineering scalable/generalisable solutions
Computing and Software Systems at Melbourne is focused on practical, general-purpose skills and experience in computational problem-solving, and developing an understanding of the limitations of a particular solution/why one solution may be better than another.

At the same time as developing practical expertise in particular tools and techniques, we work on conceptually “future-proofing” our students and exposing them to real-world domains through NICTA, VLSCI, …

Over the course of their study, students …

- Build a rich ‘tool box’ of ways of analysing and solving problems
- Learn cutting-edge theory, principles, and applications
- Invent, develop, deploy, integrate, build, extend, enhance ….
There is a continuing rise in demand in industry for IT professionals, and significant skills shortages.

Around 500,000 people are working in ICT jobs across Australia – more than in finance and insurance.

ICT contributes more to our national economy than agriculture, defence or education, and almost as much as mining.

**Offshoring?** No, not for high-level system development and integration skills.
Which jobs?

- Health Informatician
- Programmer
- Business analyst
- Network analyst
- Intelligence/threat analyst
- Web developer
- Creative internet campaigner for national environmental group
- Systems designer/engineer
- E-commerce project officer
- Assistive technology designer
- Bioinformatics analyst
- Change and transition manager
- IT security auditor
- IT manager

*IT is also crucial for careers in:*
- business and finance
- media
- science and medicine
- government
- fashion, architecture and design
Employment trends

ICT Managers, Professionals & Technicians (1990 to 2010)

Source: ABS Labour Force Survey - DEEWR trend data
Anywhere in the world!

Our graduates are:

- Writing software, managing IT teams, doing systems and business analysis, designing systems, developing websites…
- They are working at Google, Microsoft, Accenture, PricewaterhouseCoopers, IBM …
- And they are running their own consultancy businesses