4th years studying in 2010

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Why do it?

- ...to complete, if you're in the BE!
- Learn more: depth, breadth, up-to-date
- Fun: new ideas/languages/systems/technologies
- Work on a substantial project
- Qualification for more interesting jobs
- Better recognised overseas
- To go on to further graduate study here or overseas
- Qualification for academic/research career

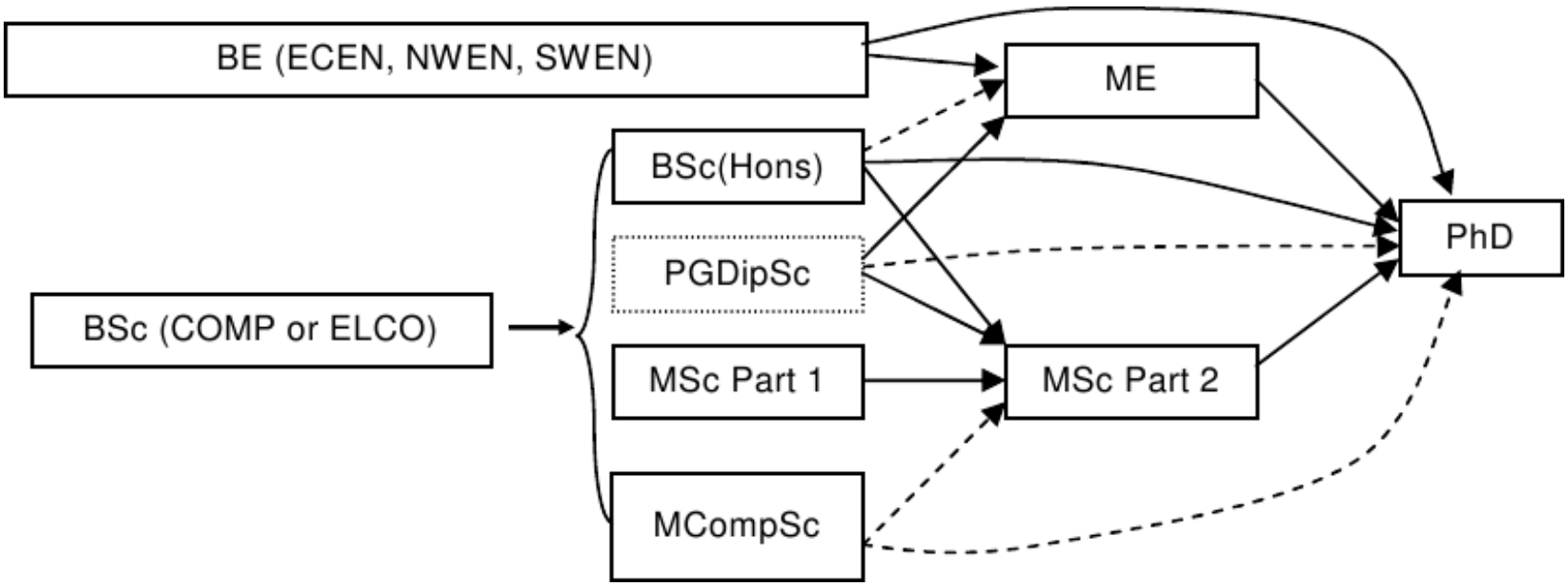
Graduate Programmes

- *BSc (Hons)* in Computer Science:
  - 1 year full-time; 120 pts, including 30 point project.
- *BA/BSc(Hons)* in Logic and Computation (LOCO):
  - 1 year full-time; 120 pts
  - talk to Rob Goldblatt (Maths), or Ed Mares (Philosophy)
- *MCompSc*:
  - ”taught Masters”
  - 16-20 months full-time; 210 pts, including 30 pt project

- *PGDipSc* in COMP, ECSE, or LOCO
  - 1 year full-time; 120 pts at 400 level
  - can be all course work (without research project)
- *PGCertSc* in COMP, ECSE, or LOCO
  - 60 pts at 400 level
  - i.e. ”half of a PGDipSc”
- *GDipSc* in COMP, or ELCO
  - 1 year full-time, course work at 200 and 300 level

- *MSc* in
  - Computer Science, or
  - Logic and Computation, or
  - Electronic and Computer System Engineering

  Structure:
  - Part 1: 1 year; 120 pts of taught courses
  - Part 2: 12-18 month thesis.
- *ME*:
  - either 120 pt Masters thesis, or 90 pt thesis + courses
  - after a BE
- *PhD*:
  - 3–4 year thesis,
  - after BSc (Hons) or a Masters.


BE (ECEN, NWEN, SWEN)
ME
BSc(Hons)
PhD
PGDipSc
BSc (COMP or ELCO)
MSc Part 1
MSc Part 2
MCompSc

Admission Requirements

Basically:

- COMP Honours: Good BSc major in COMP
- PGDipSc: BSc with some COMP
- MCompSc: BSc major in COMP
- MSc:
  - Part 1: BSc major in COMP, (or COMP or MATH for LOCO)
  - Part 2: Part 1 or BSc(Hons) or equivalent
- ME: a BE with 1st or 2nd class Honours
- PhD: MSc or ME, Good Honours degree in COMP/ENGR

COMP Research Areas

AI: Machine Learning, Evolutionary Computation, Intelligent Agents

Computer System Engineering: Mechatronics, Embedded Controllers, and Autonomous Mobile Robots

Databases: Conceptual Modelling, Data Warehousing, Data Mining,...

Distributed Systems and Network Engineering: e.g. Grid Computing, Network Design, Security

Electronic Engineering: Communications, Signal Processing, Wireless Communications, Sensor Systems, Dynamic Systems and Control

Human-Computer Interaction: Mobile User Interfaces, Software Visualisation

Logic and Computation

Software Engineering: Compilers, Formal Software Development, OO Design, Programming Languages, Ownership and Immutability, Agile ...

Probable COMP Graduate Courses 2010 - Trimester 1

COMP421	Machine Learning
COMP423	Intelligent Agents
COMP425	*Computational Logic*
COMP425	*Special Topic*
NWEN401	*Distributed Systems Design*
NWEN403	*Advanced Network Engineering*
NWEN406	*High Performance Distributed Computing*
NWEN438	*Special Topic in Network Engineering*
SWEN421	*Formal Software Engineering*
SWEN423	*Object Oriented Paradigms*
SWEN432	*Adv. Database Design and Implementation*
SWEN433	*Web Information Systems Engineering* - not certain yet
SWEN440	*Directed Individual Study* (in either trimester)
ECSE580	*Research Preparation* (30 points, runs over both trimesters)
ECEN405	*Power Electronics*
ECEN425	*Adv. Mechatronic Engineering 1: Hardware and Control*

Probable COMP Graduate Courses 2010 - Trimester 2

COMP422	Data Mining, Neural Nets, and Genetic Programming
NWEN402	*Internet Engineering*
NWEN404	*Mobile Computing*
NWEN405	*Security Engineering*
NWEN439	*Special Topic in Network Engineering*
SWEN422	*Human Computer Interaction*
SWEN424	*Model-Driven Development*
SWEN425	*Design Patterns*
SWEN430	*Compiler Engineering*
SWEN431	*Advanced Programming Languages*
SWEN434	*Data Warehousing* - not certain yet
ECEN403	*Advances Electronics*
ECEN410	*Advanced Communications Engineering*
ECEN415	*Advanced Control Systems Engineering*
ECEN421	*Advanced Signal Processing*
ECEN430	*Adv. Mechatronic Engineering 2: Intelligence and Design*

the 489 research projects

- 30 points
- Working with an academic staff member
- Staff members produce lists of possible topics
- *Wide* variety of topics and approaches.
- Discuss/negotiate ideas/possible topics as early as possible.
- You can look at projects from the past.
- Deliverables in 2009 were:
  - proposal (1 page)
  - 2 short milestone reports
  - a poster presentation
  - a final report (40 pages max)

Financial Support

- Scholarships
- Victoria Graduate Awards in particular.
- Tutoring
- Research grants
- ...

More Information

- Talk to staff.
- Talk to current students.
- Computer science graduate prospectus
- Graduate Study in Computer Science page

Application

- Usual pre-enrolment process.
- Early application helps.