Computing Science Syllabus *Autumn 2008*

ITNP25 Foundations of Computing

Lecturers
Dr Mario Kolberg (coordinator), Room 4B60, email mko@cs.stir.ac.uk
Mr Larry Tan, Room 4B58, email klt@cs.stir.ac.uk

Prerequisites
None

Learning Outcomes

A basic understanding of fundamental topics in Computing Science, including the operation of computer systems and networks at all levels of abstraction. In particular,

- operating systems and networks
- software engineering
- professional and ethical issues

Transferable Skills

- understanding and use of modern computer systems and networks
- ability to informally estimate the relative efficiency and performance of systems
- ability to deal with complex ethical and professional issues in the profession of Computer Science
- a critical understanding of theories and concepts in modern computer systems
- a critical awareness of current issues in network security
- ability to communicate with peers and more senior colleagues
- ability to research topics independently and present results
- apply critical analysis, evaluation and synthesis to current issues in computer systems

Contents

- *Computer System Architecture and Operation*
  - » Operating systems
  - » Networks and the Internet
  - » Network Security
- *The Software Engineering Process*
  - » The software life cycle
  - » Project planning and management
- *Professional Issues*

Textbooks

Computer Science: An Overview, J. G. Brookshear, latest edition, Addison-Wesley (strongly recommended)

Professional Issues in Software Engineering, F Bott et al, second edition, UCL press (background)

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Assessment

One assignment worth 40% and an exam worth 60%. Coursework will be accepted up to five days after the submission date (or expiry of any agreed extension) but the grade will be lowered by one grade point per day or part thereof (e.g. if you are three days late and the assignment is graded as B+, then you will receive C+ to penalise lateness). After five days the piece of work will be deemed a non-submission and will receive an X (no grade), resulting in No Grade for the module overall.
If a student does not submit an item of course work, or does not attend the exam, they will receive 'no grade' for that component of assessment, again resulting in No Grade for the module overall. This rule may be relaxed for students who can show good cause for failure to submit an item of coursework. 'Good cause' may include illness (for which a medical certificate or other evidence will be required.) If you are unable to attend the exam, you should apply to the Student Programmes Office for a Deferred exam. Further information is available from the Student Programmes Office.

Lectures

The first lecture will be held on **Thursday 18th September at 11am in A5**.

Day	Time	Room
Thursday	11am	A5
Friday	9am	2B133

Tutorials

The first tutorials will be in the week beginning **Monday 6th October**. Tutorials will take place on Tuesdays at 10am in 4B94. A detailed plan will be made available at the first lecture.

Assignment

There is one assignment, worth 40% of the total course work. The details of the assignment will be announced later. The assignment should be submitted on or before **5pm on Tuesday 2nd December.**