Lecture 1 – Introduction
The Software Quality Challenge

- Overview of the Module
- The uniqueness of software quality assurance
- The environments for which SQA methods are developed

Learning outcomes: Identify unique characteristics of as a product and as production process that justify separate treatment of its quality issues.
Recognise the characteristics of the environment where prof. s/w dev. and maintenance take place.
Explain the difficulties faced by s/w development and maintenance teams as a result of this environment.

Teaching Activities
- Tuesday 16-17 hrs in A25-JBCSOUTH,
  Thursday 13-14 hrs in B43-JBDEARING
- Notes for the lectures are available from the following url:
  http://www.cs.nott.ac.uk/~cah/G53QAT/G53QAT.html
- Students are also expected to take notes in class
- Exercises and extra notes will be

Assessment
- Written examination (50%).
- Coursework (50%). Building a small web based portfolio on a given topic, giving a presentation on your topic. Marking other peoples topics and presentations.
- This depends on numbers etc. Details will be
given in the module web page later

SQA Environments
- Students develop s/w as part of their education.
- S/w amateurs develop s/w as a hobby.
- Professionals in eng, economics, management etc develop s/w to assist in their work.
- S/w professionals (systems analysts and programmers) develop s/w ( & firmware) products as prof career objective in teams in a variety of organisations (s/w house, s/w dept etc)
The characteristics of the SQA environment process

- Being contracted
- Subjection to customer-supplier relationship
- Requirement for teamwork
- Need for cooperation and coordination with other development teams
- Need for interfaces with other software systems
- Need to continue carrying out a project while the team changes
- Need to continue maintaining the software system for years

Cooperation and coordination scheme for a software development project team

Salary software system - an example of software interfaces

<table>
<thead>
<tr>
<th>Attendance control system</th>
<th>Salary processing system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input interface</td>
<td>Output interface</td>
</tr>
<tr>
<td>Monthly attendance report, including overtime calculations</td>
<td>Money transfers to employees' bank account accounts</td>
</tr>
</tbody>
</table>

Input interface

Output interface

Bank information system