INTRODUCTION
The application and use of information technologies is widespread in ACT schools. Within the context of national curriculum developments, several concurrent developments at the system level in the ACT are influencing and supporting information technology as well as other curriculum areas. These are:

- the development of curriculum framework documents for each of the core areas identified by the National Curriculum Policy. Each incorporates appropriate applications of information technology;

- the development of perspective statements which address across curriculum areas. Such a statement for Information Technology is being prepared;

- the participation of schools in a formal School Review process every five years. The review includes specific comments on whole curriculum issues including links between subject areas and programs and continuity between year levels and with local 'feeder' schools;

- the growth of groups of networked teachers who are working with information technologies. The benefits of such networks are evident through increased sharing of resources, materials, equipment and ideas, and the working towards a seamless preschool to year 10 curriculum. The 1991 Curriculum Information Technology Networking Project produced a report, trialled and evaluated proposals and made recommendations which are enhancing the integration of several information technology trends including electronic communication;

- the 1991 Curriculum Information Technology Networking Project initiated the re-creation of an ACT Information Technology Committee. One of its subcommittees deals specifically with education and comprises representation of all interested groups including regional networks and the Computer Education Group (CEGACT);

- the likely development, in the near future, of a curriculum framework for technology education reflecting the philosophy of the National Statement.

SENIOR SECONDARY COURSES
The ACT operates under a system of school based curriculum development. Given this, there are no system wide curricula in Information Technology with the exception of 2 courses at the year 11, 12 levels. These courses, Information Technology and Computer Applications, are offered at the year 11, 12 level by most secondary colleges (both government and non-government) in the ACT. The courses have been developed cooperatively by groups of teachers from the colleges in their own time and with little assistance from the Department. Copies of the courses are available from:

ACT Board of Senior Secondary Studies
PO Box 1584
Tuggeranong ACT 2900

Computer Applications
This is an accredited (non-tertiary) course for years 11 and 12 which aims to develop student confidence and competence in the use of a range of common computer applications. The course has a very practical orientation with large amounts of hands-on use. It consists of 10 half semester modules which can be taken in any order. Most Colleges may not offer all of the 10 units available due to resource constraints. Students can complete a unit (1 semester), a minor course (2 semesters) or a major course (usually 4 semesters).

The following half semester units are available:

- Word Processing
- Database Systems
- Spreadsheets
- Computers in Business
- Desktop Publishing
- Computer Graphics, Sound and Animation
- Computer Problem Solving
- Computers and Music
- Computer Games
- Robotics

The course is very popular, particularly with students who are not intending to continue on to tertiary study. In most Colleges at least 25% of students would complete units from this course.

Information Technology
Information Technology is a new tertiary accredited course to be taught for the first time in 1992. It replaces the Computing Studies course which has been taught in the ACT since 1976. The content of the new course represents a major change of direction and has been strongly influenced by
The Queensland Information Processing and Technology course.

Whereas the old Computing Studies course had a major focus on computer problem solving and programming, the Information Technology course involves students in the investigation and development of information systems. The new course is intended to better reflect computer use in the real world and to appeal to a wider range of students.

The aims of the course are:
- To develop in students the ability to:
  - solve problems using appropriate tools;
  - recognise the situations in which a computer solution is appropriate;
  - use computers in a variety of situations relevant to everyday life;
  - adapt with confidence and flexibility to a changing technological environment;
  - appreciate the importance of correct occupational health and safety practices when using computer equipment.

The course is made up of the following ten units:
- Semester units:
  - Information Systems 1
  - Information Systems 2
  - Procedural Language Programming 1
  - Artificial Intelligence
- Half semester units:
  - Data Communications
  - Robotics
  - Procedural Language Programming 2
  - Assembly Language Programming
  - Computer Architecture
  - Information Technology Project

Students can complete a unit (1 semester), a minor course (2 semesters) or a major course (usually 4 semesters). Information Systems 1 & 2 are prerequisites for all the other units. After completing these units and, either Procedural Language Programming 1 or Artificial Intelligence, students can choose from the half semester units.

Information Systems 1 & 2 involve students in the analysis and development of information systems. Activities would include analysing data flows, designing input screens and reports and constructing files. Information systems would be modelled using the NIAM symbolic representation and systems would be implemented using a 4th generation relational database package. The course specifies that a majority of the work will be done in groups thereby modelling real life systems development.

Specifically, Informations Systems 1 focuses on:
- the components of a computer system and the effective use of a microcomputer operating system;
- the analysis of written descriptions of existing information systems;
- the production of a feasibility report and the design of input/output forms for a proposed automated system;
- the development of an application using appropriate software including the preparation of documentation;
- the use of teamwork and project management techniques to plan and document the execution of the task.

Information Systems 2 focuses on:
- the analysis and design of more complex information systems using data representation techniques;
- the use of these techniques to develop and implement a fully functional information system based on a relational model;
- the use of teamwork to plan and document the development of the information system;
- identification of the social and ethical implications of the proposed system with regard to data integrity and security.

Procedural Language Programming 1 focuses on learning to program in a 3rd generation algorithmic language such as Pascal. Procedural Language Programming 2 involves programming in a different procedural language (eg C) to provide a comparison and to extend programming knowledge.

Artificial Intelligence introduces students to the concept of an expert system, the development of such a system using an expert system shell and the use of Prolog to solve artificial intelligence problems.

Data Communications involves the study and experience of data communications networks and electronic communication systems.

Robotics introduces students to the concepts of computer controlled systems, the use of computers for data capture and the design and construction of a computer controlled system.

Assembly Language Programming and Computer Architecture enable students to investigate the computer hardware in detail and programming at a low level.

The Information Technology Project unit involves an individual students or group of students in designing and constructing an information systems or machine or developing a major application of their own choosing.

To support teachers in implementing the course two workbooks have been developed with teaching ideas and suggested student activities for Information Systems 1 & 2.

Prerequisites
There are no prerequisites for entry to either the Computer Applications or Information Technology courses.

Duration
Each semester unit consists of a minimum of 66 hours of timetabled class time.

Assessment
The ACT operates under a system of school based assessment and therefore it is the responsibility of each school to determine procedures to be applied within the guidelines given within the course documents.

Conclusion
Whilst the two courses described above have been almost universally adopted within the ACT college system there is considerable diversity of policy and curriculum practice at the primary school and high school (year 7 to 10) levels. This will continue with the Education Department providing a broad framework and supporting teacher networks to facilitate effective use of information technologies in the learning process.