

Unit Outline 2009 – Semester 1

Introduction to Software Technology G – 6694

Faculty: Information Sciences and Engineering

University of Canberra

*Australian Government Higher Education (CRICOS)
Registered Provider number: #00212K*

This Unit Outline must be read in conjunction with:

- a) *Studying at the University of Canberra: A Guide to Policies and Procedures*, which sets out University-wide policies and procedures, including information on matters such as plagiarism, grade descriptors, moderation, feedback and deferred exams, and is available at <http://www.canberra.edu.au/student-services>
- b) *Guide to Student Services at the University of Canberra*, and is available at <http://www.canberra.edu.au/student-services>
- c) Any additional information specified in section 6f.

1. General Information

1a Unit title

Introduction to Information Technology
Introduction to Software Technology G

1b Unit number

4478
6694

1c Semester and year offered

2009, semester 1

1d Credit point value

3

1e Unit level

Introduction to Information Technology, level 1
Introduction to Software Technology G, level G

1f Name of Unit Convenor and contact details (including telephone and email)

Dr. David Clark, 11C49, 6201 2393, david.clark@canberra.edu.au

1g Name of Unit Moderator and contact details (including telephone and email)

Dr. Girija Chetty, 11C48, 6201 2512, girija.chetty@canberra.edu.au

1h Administrative contact details (including name, location, telephone and email)

The School Office, 11B14, 6201 2417, 6201 2153, ise@canberra.edu.au

2: Academic Content

2a Unit description and learning outcomes

Syllabus

This unit provides a gentle introduction to the art of writing software in modern information technology environments. The unit covers the programming logic required to create information system applications regardless of the computer language used. Students develop small event-driven applications using a Graphical User Interface. Data structures include arrays, records and tables. Those parts of the software engineering process, in particular testing, which are applicable to an introductory subject are incorporated. The subject also includes an introduction to graphics and programmatically accessing a database.

Learning Outcomes

On successfully completing of this unit students will be able to write and test small applications using a graphical user interface. They will be able to use a variety of controls for user interaction, programmatically access a database and implement simple graphics functionality. They will employ good programming

principles and know why these principles are important. They will be competent in using arrays and structures.

Generic Skills

A full list of the generic skills expected of UC graduates can be found at <http://www.canberra.edu.au/uc/policies/acad/generic.html>

Those which are relevant to IIT / ISTG are:

Communication

Graduates are expected to be able to:

- express knowledge, ideas and opinions in their professional field, both orally and in written form, with confidence and clarity;
- actively listen and respond to the ideas of other people;

Information Literacy and Numeracy

Graduates are expected to be able to locate, identify, collate, analyse, manipulate, evaluate, interpret and present information and numerical data.

Information and Communication Technology

Graduates are expected to be able to select and use appropriate information and communication technology to retrieve, manipulate and present information.

Problem Solving

Graduates are expected to be able to:

- identify problems and analyse the main features of problems relevant to their professional field;
- apply appropriate problem solving processes, arguments, critical and creative thinking;
- implement and evaluate strategies for the resolution of problems;
- anticipate and define new problems; and
- identify and resolve new problems in new fields.

Working With Others

Graduates are expected to be able to:

- respect the rights of others irrespective of their cultural background, race or gender.

Professional Ethics

Graduates are expected to:

- act responsibly, ethically and with integrity in the context of their profession and their obligations to society; and
- appreciate the social and cultural context of their profession.

Lifelong Learning

Graduates are expected to:

- be independent self-directed learners with the capacity and motivation for lifelong learning;
- be aware of how they best learn;
- possess self-knowledge and the ability to assess their own performance critically and accurately; and

- have an understanding of how to apply their knowledge and abilities to many different contexts and fields.

Personal Attributes

Graduates are expected to:

- show commitment to ongoing self-development;
- value and respect differing views;
- be confident in themselves and their own skills and knowledge.

2b Prerequisites and/or co-requisites

None

3: Delivery of Unit and Timetable

3a Delivery mode

Lectures, tutorials

3b Schedule of topics/lectures/tutorials/practicals/field classes by week

Note: These are subject to change. Any changes will be posted on the subject's url.

Week	Activity
1	Introduction to unit; Visual Studio .NET, VB controls
2	Introductory graphics; Code and data, expressions, assignment statements
3	Selection; Demonstration of building an application
4	Iteration, file IO; Arrays
5	Arrays; Strings, Structures
6	Methods; Editing
7	Undo; Test 1
8 & 9	Class free period
10	Databases, relational databases; Databases in VB .NET
11	Report generation; Manipulating tables
12	Style; Applications tester
13	Testing
14	Sorting; searching
15	Macros in Excel and Word; Review and exam preparation

4: Unit Resources

4a Lists of required texts/readings

“Visual Basic .NET for Students” (2nd ed., 2005), A/W, by Douglas Bell & Mike Parr

4b Materials and equipment

4c Unit website

<http://www.ise.canberra.edu.au/un4478/>

5: Assessment

5a Assessment overview

In IIT / IST G students are required to satisfactorily complete a number of assignments **and** to perform satisfactorily in four tests and an exam.

There will be three programming assignments and a testing assignment. The programming assignments each have three parts, A, B and C. In each case, part A is the easiest and part C the most challenging. Students who are content with a pass only have to complete part A of each programming assignment and the testing assignment, whilst students who aspire to a high distinction should do all parts.

The final exam will have two parts, part A and part B. An “exam A” mark will be determined from the three tests and part A of the final exam, with weightings of 10%, 10%, 10% and 70% respectively. An “exam B” mark will simply be the mark on part B of the final exam.

To be awarded a particular grade in IIT / IST G, students must meet **both** the assignment requirements **and** the tests + exam requirements in the table below.

Grade	Assignments	Tests + Exams
Pass	Graphics A Windows A Database A Testing	50% on “exam A”
Credit	Pass + 2 of Graphics B Windows B Database B	70% on “exam A”
Distinction	Pass + 4 of Graphics B, C Windows B, C Database B, C	75% on “exam A” + 50% on “exam B”
High Distinction	Graphics A, B, C Windows A, B, C Database A, B, C Testing	75% on “exam A” + 75% on “exam B”

The test dates and weightings are:

Exam	Date	Weighting
Test 1	Week 7, lecture 2	10 % of “exam A”
Test 2	Week 13, lab	10% of “exam A”
Test 3	Week 15, lab	10% of “exam A”
Final exam, parts A and B	During exam period	70% of “exam A” 100% of “exam B”

If an assignment is not satisfactory, students will be told why and given an opportunity to resubmit it. Submission and resubmission dates for assignments are given below.

Assignment	Submission Date	Resubmission Date
Graphics A	10am, Monday, week 5	lab, week 6
Windows A	10am, Monday, week 7	10am, Friday, week 8
Graphics B	10am, Friday, week 9	lab, week 12
Graphics C	10am, Friday, week 9	lab, week 12
Windows B	10am, Friday, week 9	lab, week 12
Windows C	10am, Friday, week 9	lab, week 12
Database A	10am, Monday, week 13	lab, week 14
Database B	10am, Monday, week 13	lab, week 14
Database C	10am, Monday, week 13	lab, week 14
Testing	10am, Monday, week 15	10am, Monday, week 16

5b Details of each assessment item

Specifications for the assignments and requirements for satisfactory completion are given later in the IIT / IST G handbook.

5c Special assessment requirements

To obtain a particular grade in this subject it is necessary that there are no outstanding resubmissions for that grade at the beginning of week 16.

The lecturer reserves the right to question students orally on any of their submitted work.

5d Supplementary assessment

There will be no supplementary tests or exam.

There are no deferred tests. Part A of the final exam will have an increased weighting for “exam A” for students who miss a test due to illness and who produce a doctor's certificate.

Students who miss the final exam due to illness may be able to sit for a deferred examination. A doctor's certificate stating that the student was not able to sit for the exam should be given to the lecturer in charge as soon as possible - generally within 3 days of the examination. See *Studying at the University of Canberra: A Guide to Policies and Procedures* <https://guard.canberra.edu.au/cocoon/policydb/displayDocument?DocumentId=259> for more details.

Students will only be allowed to sit for a deferred examination if there are no outstanding submissions or resubmissions for the assignments required to pass the subject as specified above.

5e Text-matching software

Your eSubmissions are retained and may be compared with other students' if the need arises.

6: Student Responsibility

6a Workload

The amount of time you will need to spend on study in this Unit will depend on a number of factors including your prior knowledge, learning skill level and learning style. Nevertheless, in planning your time commitments you should note that for a 3cp Unit the total notional workload over the fifteen week semester is assumed to be 150 hours or an average of 10 hours per week. These hours include time spent in classes. The total workload for Units of different credit point value should vary proportionally. For example, for a 6cp Unit the total notional workload over a fifteen week semester is assumed to be 300 hours or an average of 20 hours per week.

6b. Special Needs

Students who need assistance in undertaking the unit because of disability or other circumstances should inform their Unit Convener or the Disabilities Office as soon as possible so the necessary arrangements can be made.

6c. Attendance requirements

Students should attend all lectures and tutorials.

6d. Required IT skills

Familiarity with Windows.

6e. Costs

6f. Additional information

7: Student Feedback

All students enrolled in this Unit will have an opportunity to provide anonymous feedback on the Unit at the end of the Semester via the Unit Satisfaction Survey which will be presented to you on OSIS. Your lecturer or tutor may also invite you to provide more detailed feedback on their teaching through an anonymous in-class questionnaire administered through the University's Teaching and Learning Centre (TLC).

8: Authority of this Unit Outline

Any change to the information contained in Section 2 (Academic content), Section 3 (Delivery of Unit and timetable) and Section 5 (Assessment) of this document, will only be made by the Unit Convener if the written agreement of staff and a majority of students has been obtained; and if written advice of the change is then forwarded to each student enrolled in the Unit at their registered term address. Any individual student who believes him/herself to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.