



# Wollongong College Australia

A College of the University of Wollongong

**Australia**  
Wollongong

ITC Education Ltd trading as  
Wollongong College Australia  
CRICOS 02723D  
ABN 14105312329

# Diploma in Business and Diploma in IT

(CRICOS course codes: 057231C, 057232B)

(CRICOS course codes: 057233A, 057234M)

## Subject Outline Summer 2009/10

### WUCB110

## Introduction to Business Information Systems

© Wollongong College Australia. All rights reserved 2009.  
WCA-WUCB110-S0/4

# Introduction to Business Information Systems

---

## Subject Description

This subject is an introduction of theoretical concepts and general principles of business information systems that will provide students with an appreciation of the roles of information systems in modern organisations. The subject is specifically designed to introduce the functions and purposes of various business systems and give hands-on experience in the use of productivity software, thus enhancing students' knowledge and skills that will apply in professional practice in the world of business and commerce.

Overview: computer generations; types of computers; the computer industry.

IT Concepts: functional components of a computer (CPU, Memory, Input/output devices), systems software: operating systems,

Information as an organisational resource, information systems - varieties across organisations, levels of business management, computing centres, MIS, security and privacy.

Typical business systems: Order-entry, Accounts Payable, Accounts Receivable, Inventory, Payroll, Personnel, General Ledger.

Computers in the workplace: office automation, personal computers and workstations, office design and the design of work, ergonomics and human factors; electronic mail and word processing, teleconferencing, desktop publishing, communications, networking and graphics.

Software and programming: developing application software, systems analysis and design, system life cycle, structured programming, top-down design, program control structures, programming languages.

Files and database: file organisation (sequential, random) and access, database management systems, types of database, reporting and ad-hoc queries.

Computers in society: ethics, computer crime, trends and future.

Business productivity tools: DOS, Windows, MS Word, Excel, Access and HTML.

## Subject structure

Introduction to Business Information Systems is delivered in a face-to-face format of 5 (five) hours per week. The subject consists of 1 x 3 hour lecture and 2 x 1 hour laboratory sessions each week. The session is of 14 week's duration with face-to-face classes scheduled for the first 12 weeks and a study/examination period in Weeks 13 and 14.

Theoretical concepts and general principles of business information systems will be introduced through lectures, texts. The content is arranged in modules corresponding to those in the textbooks. For each module students will be expected to read the chapters in each module and attempt the self-assessment test. Your teacher will be available in the laboratory and during the consultation time to answer any questions. The teacher will be contactable by phone and email.

The laboratory sessions involve hands-on use of spreadsheets, database software and internet use. For each package introductory tutorials, graded exercises and practice tests are available. The laboratory teacher will guide the student through these and conduct the assessment test on each. Every student must be allocated a place in a Laboratory Session where they will to be given access to the software and the web.

There is one assignment in nine sections for this subject that relate to both the theory and the laboratory work. Details can be discussed with the teacher.

In addition to scheduled class sessions, students are expected to spend additional time in individual study and research. As a general guideline students will need to spend at least 1 hour in private study (including completing homework and revision) for every two hours of scheduled class time.

Teachers will be available for a consultation time each week. Students will be notified of the time and location of the consultation session during Week 1 of the Session. It is recommended that students experiencing difficulty with this subject arrange to consult with the teacher as difficulties are encountered.

Some students may require tutorial support to improve language/literacy skills. Where this is recommended, students will be advised to use the College's self-access facilities in the Multimedia Centre in their own time. These facilities are located upstairs in building 30.

# Learning resources

## Textbook

For the subject content it is expected that students complete the regular readings from:

Benson, S & Standing, C (2005) *Information Systems: A Business Approach*. John Wiley & Sons, Australia.

## References

There are many introductory texts on business information systems which could be relevant to this subject. It is recommended that students also reference a range of the following titles to obtain a fuller appreciation of the subject. A sample would include:

Laudon, K., Laudon, J., 1998, '*Information Systems and the Internet* (4<sup>th</sup> Edn), Harcourt Brace.

Pearlson, K, Saunders, C, (2006), *Managing and using information systems : a strategic approach*, Wiley.

Shelly, G.B., Cashman, T.J., & Serwatka, J.A.. (2004), *Business Data Communications: Introductory Concepts and Techniques*, Boyd and Fraser Publishing Co.

Steven Alter, 2002, *Information Systems - Foundation of E-Business* -(4<sup>th</sup> edition), Prentice Hall ISBN 0-13-043242-3

Nickerson, R (2001). *Business and Information Systems*, Addison-Wesley

## Subject outcomes

Successful completion of Introduction to Business Information Systems will enable students to:

- demonstrate an understanding of a broad knowledge base incorporating theoretical concepts such as systems, information systems, information systems models, performance standards and information systems in businesses;
- demonstrate and apply understanding of the knowledge of an organisation's structure and the relationships between computer-based information systems and the business;
- define and list types of input, output and storage devices in business systems;
- name, identify and give examples of types of system software and programming languages used in organisations;
- demonstrate understanding of data and information and be able to distinguish between the concepts of files and databases in organisations;
- define and describe types of telecommunications and networks;
- compare and describe the internet and intranet and understand and list the types of models of electronic commerce;
- demonstrate a reasonable understanding of basic business transaction applications and concepts of enterprise systems;
- demonstrate an appreciation of the issues involved in the development and management of information systems;
- discuss privacy and ethical issues in the business and commerce world;
- calculate and create finance reports;
- design database reports;
- apply basic concepts of web development in designing a website for an organisation;
- evaluate information used to design a data flow diagram

## Subject outline in weeks

The following guide to lessons and activities may be adjusted to suit the needs of the group as long as subject outcomes and assessment criteria are met.

### **Week 1 Setting the scene – Introduction to Information Systems**

Introduction to Information Systems, relationship between data, information and knowledge, benefits of I.S., business process re-engineering and enterprise resource planning

**Readings:** Ch. 1

**Laboratory Session:** Introduction to the lab., organisation of the class for group work

### **Week 2 Hardware Fundamentals and Trends**

Early computers, generations of hardware, components of hardware: input, output, CPU, memory, storage. Evolution of the Internet and WWW

**Laboratory Session:** Spreadsheets: basic data entry and editing, using formulae

### **Week 3 Business Software**

Evolution of software

Types of software: application, system, proprietary, opensource

**Readings:** Ch. 2

**Laboratory Session:** Spreadsheets: Vlookup, if functions

### **Week 4 Business Information Systems**

Categories of Business Information Systems and what functions they support.

Types of B.I.S. and how they work in the corporate world.

Types of reports.

Databases: functions and advantages.

Difference between a database and a data warehouse.

Groupware

**Readings:** Ch. 3

**Laboratory Session:** Spreadsheets: PMT function

## **Week 5 Communication and Networks**

Digital vrs analogue communications

Asynchronous vrs synchronous communication

Simplex, half-duplex and full-duplex.

Switching: packet switching vrs circuit switching

Introduction to communication protocols

Transmission media: twisted pair, coaxial cables, optical fibre, wireless.

Intranet, Extranet

Firewalls

Network addresses: domain names, IP.

**Readings:** Ch. 4

**Laboratory Session:** Spreadsheets test

## **Week 6 Systems Integration: Information Systems at Work**

Mid-session exam

Centralised vrs decentralised information system organisation

Funding I.S. function

I.S. jobs

Business trends: outsourcing, ERP, application service providers

**Readings:** Ch. 5

**Laboratory Session:** Database: tables, relationships, forms

## **Week 7 Introduction to Systems Development**

Introduction to Systems Development Lifecycle (SDLC)

Systems analysts

Introduction to CASE tools

Data and information gathering techniques

Alternative systems development

**Readings:** Ch. 6

**Laboratory Session:** Database: queries, reports

## **Week 8 Strategic Information Systems Management**

Introduction to strategic planning

I.S. architecture

**Readings:** Ch. 7

**Laboratory Session:** Database test

## **Week 9 Managing the Information Systems Function**

Managing people and relationships

Power, politics and culture in information systems

Information security and privacy

Monitoring I.S. project: Gantt charts

**Readings:** Ch. 8

**Laboratory Session:** Introduction to Internet and Front Page

## **Week 10 E-business**

Features of the Internet for commerce

Types of e-Business: B2B, B2C, C2C

Different forms of systems in e-Business

e-Business strategy

e-Marketplaces

**Readings:** Ch. 9

**Laboratory Session:** Front Page

## **Week 11 Web Commerce Development**

Characteristics of web applications

Scope and complexity of web commerce

Issues in web site design

Attracting visitors to the website

Measuring website effectiveness

**Readings:** Ch. 10

**Laboratory Session:** Internet and Front Page test

## **Weeks 12 Personal Productivity with Information Systems. Revision.**

Moore's law

Knowledge worker

Personal I.S. and technology

Information overload

Ergonomics

***Readings:*** Ch. 12

***Laboratory Session:*** revision

## **Weeks 13 & 14 Final examination Period**

Examination and study period. Please refer to examination timetable for the exact date, time and location of the final exam.

# Assessment

---

## Assessment and plagiarism policy

All written assessment tasks, with the exception of examinations and in-class tasks, must be word-processed unless students are otherwise advised.

Students must keep copies of all assessment tasks submitted for marking with the exception of class tests and examinations.

Plagiarism is a form of cheating or stealing that happens when a student uses someone else's work and presents it as his/her own without showing where it comes from. To avoid this, students are expected to submit their own original work for assessment and to accurately acknowledge all references and sources used in essays and assignments.

For information regarding assessment, plagiarism, acknowledging sources and examination rules, please refer to the Wollongong College Australia Student Handbook <http://www.wca.uow.edu.au/handbook>

## Assessment Schedule

Task	Due	Weighting	Length/Time
Spreadsheets class test	During Week 5 of the Laboratory Sessions	5%	1 hour
Mid Session Test	Week 6	15%	1 hour 30 mins
Data Base class test	During Week 8 of the Laboratory Sessions	5%	1 hour
Major Lab Assignment	During Week 11 of the Laboratory Sessions	15%	Weeks 1-11
Internet class test	During Week 11 of the Laboratory Sessions	5%	1 hour
Final examination	Weeks 13/14	50%	3 hours
Class Participation	Ongoing	5%	Weeks 1-12

Note: A final mark of 50% or higher is required to pass ALL Diploma subjects. A mark between 45% and 49% is NOT a pass.

## Marking Guidelines

WCA best practice is that students can normally expect to have assessment tasks handed back within two weeks, and before the next assessment task is due. On occasion there may be exceptions to this time frame due to, for example, the size of the task, the size of the class, teacher illness or teacher leave.

Where there are several teachers marking a major assessment task, tasks will be handed back by all the teachers within the same week.

## Assessment criteria and explanation of components

Irrespective of awarded marks students must demonstrate to the lecturer/tutor competence in both spreadsheet, data base software and Internet browser in order to pass the subject.

To confirm ownership, the progress of the Major Laboratory assignment must be satisfactorily demonstrated to the lecturer/tutor prior to week 11, with the final printed version completed and delivered to the lecturer/tutor prior to 4pm on the last lab class of week 11.

At the discretion of the lecturer the major assignment may be carried out as either a collaborative effort of two nominated and approved students or as an individual effort.

All assessment components are marked according to set marking criteria.

### **Spreadsheets Class Test** **5%**

This will test your skills with the use of Microsoft Excel spreadsheet software. You will be expected to demonstrate that you are competent using Excel tools taught in class to solve basic business problems.

### **Mid Session Test** **15%**

This will test your understanding on the topics covered in class from week 1 to week 5. It will involve a number of multiple choice, short answer and case study questions.

### **Data Base Class Test** **5%**

This will test your skills with the use of Microsoft Access database management system software. You will be expected to demonstrate that you are competent using Access features taught in class to solve basic business problems.

### **Internet Class Test** **5%**

This will test your skills with the use of Microsoft FrontPage web editing software. You will be expected to demonstrate that you are competent using FrontPage tools taught in class to create simple web sites.

## Major Lab Assignment

15%

You will be required to work on a Project exercise in a group of 3 - 4 students. Specific information about this exercise will be given in class.

### Aim:

This task aims to enable students to develop interpersonal skills as well as test some of the research and technical skills learned in class.

### Objectives:

After completing this task, students should be able to:

Explain how the WWW can be used to successfully supplement an existing business operation.

Demonstrate their capability to plan a small project while working in a group.

Demonstrate their ability to identify and address various technical and management constraints in setting up a small business.

Apply HTML programming skills to develop simple web sites.

## Final examination

50%

The Examination will usually be of 3 hours duration. At the discretion of the lecturer the examination will be a combination of multi-choice and essay questions. The percentage (50%) of final marks will be allocated appropriately. Some variation in the relative exam percentages may occur at the discretion of the lecturer.

Non-English speaking background students in the Diploma Programs may use foreign language dictionaries for their final exams. Diploma students who wish to use a dictionary must complete the Dictionary Use Application Form available at reception.

This form and the dictionary must be submitted to reception **no later than 5pm Friday week 11** for approval.

### Please note the following regulations regarding dictionary use:

- The only dictionaries permitted are language dictionaries, with word to word translations only.
- English-English dictionaries, Electronic dictionaries, Terminology dictionaries, or other are not permitted. The dictionary **must not** include English translations or explanations. Any dictionary that includes English explanations or phrases is not acceptable and will not be approved.

## **Class Participation**

**5%**

Active participation in tutorials is expected of all students in all classes. Participation in class discussions will help develop the student's confidence in questioning and commenting on material presented, encourage critical thinking and allow the tutor to evaluate the student's progress.

Participation marks may be allocated according to the following criteria:

- Constructive contribution to general class discussion
- Constructive feedback and contribution to discussions following presentations
- Active participation in tutorial support classes where recommended
- Proactive consultation with class teacher and/or tutorial support where relevant
- Completion of non-assessable tasks including homework and other tasks
- Preparedness for class sessions
- Active participation in group work

## 1 BEFORE YOU START

**USB:** All students should bring with them to every laboratory session a USB. You will store files containing your work throughout the session on this USB so you are advised to keep them safe. This USB should be clearly labelled with your name and student number. Even so, if you lose a USB or leave it in the laboratories it is unlikely that you will get it back.

## 2. THE OPERATING SYSTEM

you need to know how to manage your USB and the files on IT. The way you do this depends on the operating system.

### 2.1. Windows

Most PCs now operate under one of the Microsoft Windows environments. All machines in the Micro-Laboratories on-campus currently operate Windows XP.

#### Exercise 2 : Using Windows

Make sure you are familiar with the windows concepts and operation of the following:

*open, close, maximise, minimise, restore, resize, scrolling and setting focus.*

If you are not familiar with using Windows you should go through the Introduction to Windows Tutorial, available from your tutor.

#### Exercise 3: File Housekeeping (VERY IMPORTANT!!)

Windows 95, 98, 2000 and NT have a **Windows Explorer** utility, which enables you to create a directory or folder system where you can store your files. It is important that you learn to use this utility as soon as possible.

From the **Start** button, access the **Windows Explorer** under the list of **Programs**. Do not confuse this with **Internet Explorer**. In the left pane observe the entries under **My Computer** (expand this if necessary by clicking on the +). Insert a USB and double click on drive E. The contents of this USB will appear in the pane on the right. If there are file and/or folders on the USB they will be listed in this pane. Go to the left pane and double click on another drive that does contain files and folders. Select different options from the **Views** button and see the changes that this makes to the right pane. Leave this set on the **Details View** where you can see the name, size, type and date last modified for each file.

Make sure you understand how to create a new folder, as well as how to delete, move and copy files. The following exercise demonstrates these operations.

Open **Microsoft Word** by double clicking on the **Word** icon.

In a new document, type a line or two of text. Once you have done this, select **Save as** from the **File** menu.

Save the file as “**TestFile.doc**” into the **My Documents** folder (check with your tutor if you are having problems with this). Then close **Microsoft Word**.

Open **Windows Explorer** and click on the **My Documents** folder on the left hand side of the screen. In the right hand side you should see your new file **TestFile**.

Click and drag the file **TestFile** from the right hand side of the screen to the **E:\** drive on the left hand side. This will copy the file from the hard drive to your USB.

Click on the **E:\** drive on the left hand side of the screen. The file **TestFile** should appear on the right hand side of the screen.

From the **File** menu, select **New** and then **Folder**. This creates a new folder on your USB. The words “**NewFolder**” should be highlighted next to the folder icon. Type in the name that you wish to call the folder, for example “**TestFolder**”, and press **Enter**.

Click and drag the file **TestFile** on top of the new folder that you have created. This moves the file into the folder. Double click on your new folder to show your file.

Using the right mouse button click **once** on the **TestFile** file and a menu should appear. This gives you a number of options that can be performed on the file. Chose the **delete** option.

A box will pop up and ask if you are sure that you want to delete the file. Click on the **OK** button and the file should disappear from the screen.

This is the end of this part of the tutorial activities, however, it is recommended that students continue to explore **Windows Explorer** as it is a very useful tool for your assignments and tests.

## 2.2. Using DOS commands

Your tutor will tell you how to access the **DOS Command Prompt**, which brings up a window with a blinking cursor after a prompt like this: **C:\>**

This means you are on C Drive. If there is a different letter, you are on another drive.

### Exercise 4: DOS basics

Place a diskette in the floppy drive and bring up the **Command Prompt** window to make sure you understand and complete, where necessary, the following procedures:

**(Note:** DOS commands are not case sensitive so you can type in either upper or lower case.)

Viewing the Drive	Type <b>dir</b> to see the files on the current drive: (also try <b>dir/w</b> and <b>dir/p</b> )
Changing Drives	eg: Type <b>a:</b> to change to the drive containing you diskette
Formatting a disk	If you could not change to drive a because your disk was not formatted type <b>format a:</b>
Creating a file	On drive A: type <b>edit atest.txt</b> Type some text into the file, save and exit.
Creating a directory	On drive A: type <b>mkdir buss110</b> . Type <b>DIR</b> to view the directory entry.
Copying a file	On drive A: type <b>copy atest.txt c:</b> Change to drive C: and use DIR to check that the copy was successful.
Moving a file	On drive C: type <b>move atest.txt a:\buss110</b> Use DIR to check that the file has moved and then change to drive A: and type <b>chdir buss110</b> Check to see if the file has moved into this directory.

Another command driven operating system is **UNIX**, which you may encounter on the machine that holds your email.

### 3. MS OFFICE APPLICATIONS

Over the next few weeks you will be doing exercises using the word-processor, spreadsheet and database in the Microsoft Office 2000 application suit. Your tutor will give you more information about using these packages.

**Exercise 5:** Make sure you can open each of the Office packages that you will be using: Word, Excel and Access.

**Optional Exercise:** You may have different versions of this software if you have your own computer at home or work. If so you will probable be able to transfer files between the versions but you should check this with your tutor as soon as possible.

### 4. THE WEB BROWSER

There is a large amount of material that has been prepared to supplement your textbook and is available through the browsers **Netscape Navigator** or **Internet Explorer(IE)**.

**Exercise 6:** Open **Netscape** or **Internet Explorer** and go to the University's home page. URL: <http://www.uow.edu.au>. Click (single) on the **Faculties** link and go through the Commerce Faculty to the Department of Information Systems. Then use the **Back** facility to get back to the University's home page. Your tutor will tell you how to get to more pages concerned with this subject.

**Note:** In most cases when you click on a link to a new page, that new page opens in the Netscape/IE Window already open, replacing the old page you were viewing. Sometimes however a new window is opened and you will find that you have two copies of Netscape/IE. You then cannot use the **Back** facility to retrace your path.