

THE INSTITUTE OF COMMERCIAL MANAGEMENT

SUBJECT SYLLABUS



General Purpose Software

Unit code: GPS-0908

Level: Certificate

Credits: 20

Unit leader: PY

Pre-requisites:

Main Aims of the Unit:

This unit introduces a range of computer packages and applications to the student. The student will be able to select an appropriate package given a specific problem and will be able to utilise off-the-shelf packages to produce solutions. Furthermore, the student is introduced to the role of operating systems in relation to such packages.

Main Topics of Study:

A. Spreadsheet

1. Layout of a spreadsheet screen. Help features. Loading/saving models.
2. Cell formatting. Font/size. Alignment. Column width, Row height. Boxing grouped cells. Moving/copying/deleting cell(s).
3. Data types including NUMBER, TEXT, CURRENCY, SCIENTIFIC, DATE, TIME
4. Data formatting – decimal places. Alignment. Date/time options.
5. Formulae. Cell addresses. Absolute and Relative addressing. Replicating a formula to a block of cells.
6. Functions:
 - a. Number: SUM, COUNT, AVERAGE, MAX, MIN, INT, ROUND, RANDOM, SQRT, ODD, SIN, COS, TAN, POWER.
 - b. Text: CHAR, VALUE, TRIM, RIGHT, LEFT, UPPER, LOWER.
 - c. Decision: IF, AND, OR, NOT.Nesting functions within functions.
7. Lookup tables and their use.
8. Design and construct spreadsheet models for a given problem. Layout design.
9. Print data, Print formulae adjusting column widths as necessary. Print with/without grid lines. Print with/without row/column labels. Fitting to a page.
10. Charts. Pie chart, histogram, bar chart, line graph. Customising output.
11. "What-if" models for the determinations of best results. Practical use in business.
12. Exporting/Importing data to/from other packages.

B. Word Processing

1. Layout of a word processing screen. Help. Loading/Saving documents. Multiple documents.
2. Document formatting. Margins. Alignment. Indentation. Bullet points. Page breaks.
3. Font/font size. Varying fonts/size to add effect to a document. Bold/Italics/Underline.
4. The concept of hidden embedded control characters to format. e.g. underlining.
5. Block editing. Copy/Cut blocks of text. Tabs. Changing case.
6. Search and replace in lengthy documents. Use of previous documents to create an updated version such as a newsletter, catalogue.
7. Spell check and the options IT offers. Grammar checking. Limitations of both. AutoCorrect.
8. Creating a table.
9. Mail merge. Realistic business examples of its use.
10. Quick entry of commonly use/local words/phrases using a few keys. Macros.
11. Final checks on a document. Print preview.
12. Printing. Sections or entire document. Choosing quality of print. Multiple copies.
13. Columns - newspaper style. Choosing column options.
14. Inclusion of clip art. Artistic lettering. Exporting/Importing data to/from other packages

C. Database

1. Concept of a database as a single system with multiple users and uses.
2. Relational databases and their advantages – single entry, consistency, integrity, redundancy, Independence of data and programs.
3. Concept of normalisation of data.
4. Creation of a database. Defining the data structure. Tables/columns.
5. Key fields. Primary key. Secondary key. Foreign key.
6. Data modelling. E-R diagrams.
7. Entering data. Editing data. Searches/enquiries. SQL. Basic SQL statements - SELECT...FROM...WHERE, CREATE TABLE..., INSERT INTO...
8. Report generation. Customisation of reports. Ordering. Column totalling.
9. Printing reports.

D. Graphics and Presentation Packages

1. Means of producing graphics - limited drawing in word processing, charts in spreadsheets to drawing packages and commercial CAD packages.
2. Typical uses of packages by industrial/commercial users.
3. Layout of a graphics package screen. Help features.
4. Main features. Line drawing. Line selection. Boxes. Shapes. Text. Libraries of objects.
5. Manipulating the drawing features. Moving, extending, copying, rotating, hatching.
6. 3-D effects. A drawing as a series of levels.
7. Dimensioning.
8. Printing. Saving/Loading.
9. Presentation package (eg PowerPoint) as a combination of text/graphics.
10. Features of a presentation package. Creating slides and a slide show. Customising to house style.

E. Operating Systems

1. Purposes of an operating system. GUI operating systems. Comparison between GUI and command control.
2. General features of operating systems – folders, files. Types of files for program, data, text, email, pictures etc.
3. File manipulation – copying, moving, deleting, printing.
4. Batch files.
5. Customising the desktop.
6. Installing and customising software packages.

Learning Outcomes for the Unit:

At the end of this Unit, students will be able to:

1. Use a range of applications packages including spreadsheets, databases, and graphics software
2. Describe an operating system and its function
3. Apply packages to a range of real-life business problems

The numbers below show which of the above unit learning outcomes are related to particular cognitive and key skills:

Knowledge & Understanding	1, 2
Analysis	3
Synthesis/Creativity	3
Evaluation	-
Interactive & group Skills	-
Self-appraisal/Reflection on Practice	-
Planning and Management of Learning	3
Problem Solving	3
Communication & Presentation	1, 3
Other skills (please specify)	-

Learning and teaching methods/strategies used to enable the achievement of learning outcomes:

Learning takes place on a number of levels through lectures, class discussion including problem review and analysis. Formal lectures provide a foundation of information on which the student builds through directed learning and self managed learning outside of the class. The students are actively encouraged to form study groups to discuss course material which fosters a greater depth learning experience.

Assessment methods weightings which enable students to demonstrate the learning outcomes of the Unit:

3 hour examination: 100%
Candidates will be required to answer 4 questions from the 5 given.

Indicative Reading for this Unit:

Main text:

Refer to the ICM website for learning material

Alternative texts:

In addition, Computer manuals for specific computer packages can be used.

Guideline for Teaching and Learning Time (10 hours per credit)

Lectures / Seminars / Tutorials / Workshops: 50 hours

Tutorial support includes feedback on assignments and may vary by college according to local needs and wishes.

Directed learning: 50 hours

Practical work/ Advance reading and preparation / Class preparation / Background reading /

Self managed learning: 100 hours

Working through practical exercises on the computer and completing assignments as required will take up the bulk of the learning time. In addition students are expected to engage with the tutor and other students and to undertake further reading using the web and/or libraries.

Guidelines

- Each software package should be taught at a level higher than a casual user who could pick up basic concepts simply by using it. Any person who has ever used a spreadsheet computer will know how to enter data, use simple formulae, set decimal places and total a column. For this module, candidates will need to know how to use more advanced features such as absolute addresses and their use, a wider range of formats (dates etc), look-up tables and other standard functions.
- Students should be confronted with REALISTIC business uses of the software and not just simple exercise (e.g. payroll using a spreadsheet is unrealistic except for a very small business).
- Students should also meet realistic/usable layouts that would be used in business applications. e.g. A spreadsheet layout for an annual breakdown of expenses by different departments against different types of cost would have one layout. An ongoing budget where items are listed in date order with an accumulating balance showing after each would be totally different.
- Tutors will probably obtain the best results if after students are taught the rudiments through simple exercise, they are then given business case studies partially completed and asked to finish them.