

Cambridge International Diploma
Advanced Level

Syllabus

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

For assessment in 2008

CIE provides syllabuses, past papers, examiner reports, mark schemes and more on the internet. We also offer teacher professional development for many syllabuses. Learn more at www.cie.org.uk

Special Notice

University of Cambridge International Examinations is withdrawing the Cambridge International Diploma in ICT (at Foundation, Standard and Advanced Levels) at the end of 2009. For on-demand assignment modules the last available session is December 2009.

We will not accept any entries from **new** candidates for the Cambridge International Diploma in ICT after **31 December 2007**. Any candidates who have already made module entries by this date must complete all modules within three years of the successful completion of the first module entered. **Entries will not be accepted after 31 December 2009.**

Important Notice

The **Cambridge International Diplomas in Information and Communication Technology (ICT)** were formerly known as the Cambridge Career Awards in Information and Communication Technology (ICT). Documents available from CIE may still refer to the old title in some places. The content of the syllabuses has not changed in any way.

CONTENTS	PAGE
SECTION 1: INTRODUCTION	1
SECTION 2: OVERVIEW OF THE DIPLOMA.....	2
SECTION 3: SYLLABUS STRUCTURE.....	5
SECTION 4: ICT CORE MODULE (ADVANCED LEVEL)	6
Synopsis	6
Communication.....	7
Data Management.....	8
Systems Management.....	10
SECTION 5: ICT OPTIONAL MODULES (ADVANCED LEVEL)	11
Synopsis	11
Advanced Spreadsheets	12
Relational Databases	14
Website Programming.....	15
Advanced Graphics	16
Automation	17
SECTION 6: ASSESSMENT PROCEDURES	18

SECTION 1: INTRODUCTION

1.0 ICT Skills – The Cambridge Solution to Global Needs

Information and Communication Technology (ICT) influences the lives of everyone around the world. Almost every career now involves using ICT as a key requirement. In the increasingly dynamic employment market, people need to be able to work productively with ICT, to transfer their ICT skills across different contexts and software packages, and to keep their ICT skills up to date. This is true for employees at all levels, whatever their responsibilities and the kinds of organisation and environment in which they work. The global impact of ICT goes beyond the world of work. For example, ICT supports and shapes how we learn, travel, and manage our money. A person's ability to use ICT skilfully and confidently is therefore sure to enhance his or her fulfilment in life.

The Cambridge International Diplomas in ICT recognise achievement of a range of skills in using a variety of ICT applications in practical, work-related contexts. The Advanced Level Diploma provides a framework for developing practical skills in using ICT as an integrated set of 'productivity tools'. Advanced Level competence is recognised in employment as the requirement for people who can be relied upon to work without direct supervision, to handle a range of varied or non-routine tasks. This Diploma has been developed specifically for the international market, recognising the growing importance of employees working across geographic and cultural borders. For example, the business situations given for assessment are international in context.

Successful completion of the Diploma at Advanced Level means that the candidate can use ICT effectively to present, communicate and manage information in both paper and electronic form. The qualification enables students to develop and demonstrate a high level of competence in using applications such as word processing, spreadsheet, databases and e-mail and internet software to produce documents, to manage and manipulate data and to communicate with other ICT users, among other activities. The range of modules available cover the areas most often demanded by employers around the world. The Diploma thus enhances an individual's employability. It builds upon the basic competencies developed through the Foundation and Standard Level Diplomas.

Each module in the ICT Diploma is assessed by means of a CIE-set practical assessment, comprising a number of practical tasks, and taken under controlled conditions at a registered Centre. The documentation and printouts produced in the practical assessment are externally marked by CIE.

Assessment is available at any time throughout the year. This enables assessment to take place at a time suitable for both students and the Centre, fitting in with flexible training patterns.

There are no formal candidate entry requirements for the Advanced Level Diploma.

1.1 The International Dimension

Cambridge International Diplomas in ICT embody performance standards valued in countries around the world. These are global standards. ICT itself transcends differences in place, system and culture. The syllabus and practical assessments provide a framework through which candidates, wherever they might be, can be assessed reliably against the performance standards. Everyone involved can be clear about what is required in the assessment and how it will be assessed.

The syllabus and practical assessments are available in English, Greek and Spanish. Please note that the assessments do not directly assess language skills, but are designed to give candidates the opportunity to show they can apply the skills described in the syllabus specification.

SECTION 2: OVERVIEW OF THE DIPLOMA

2.0 Aim

The aim of the Advanced Level Diploma is to assess a candidate's ability to use information and communication technology effectively in realistic, practical, work-related situations, making use of the links between applications, e.g. in producing an integrated document.

Within each application area, candidates will be required to enter, manipulate and manage data to a specified degree of accuracy, and exploit a range of the available application facilities. They will be required to edit, save and print the data according to specifications.

2.1 Target Group

The Advanced Level Diploma is designed for anyone who has already gained a broad knowledge of ICT applications and wishes to be able to draw together a variety of ICT facilities to manage, structure and present information. It is suitable for students, employees and trainees.

Those holding a CIE Standard Level Diploma in ICT will find that the Advanced Level Diploma offers an excellent next stage in their ICT skills development. It is assumed that everyone who starts an Advanced Level Diploma has already reached the level of competence recognised by the Standard Level or equivalent.

Please note that familiarity with and practice of safe and effective file and disk management and use of hardware and software is also assumed (see 3.1 below).

2.2 Award Structure

The modules available are outlined below:

Communication, Data Management, Systems Management	Core Module	2¾ hour practical assessment + 15 minutes reading time
Advanced Spreadsheets	Optional Module	1 hour practical assessment + 15 minutes reading time
Relational Databases	Optional Module	1 hour practical assessment + 15 minutes reading time
Website Programming	Optional Module	1 hour practical assessment + 15 minutes reading time
Advanced Graphics	Optional Module	1 hour practical assessment + 15 minutes reading time
Automation	Optional Module	1 hour practical assessment + 15 minutes reading time

The Core Module assesses the candidate's ability to produce documents through the integrated use of word processing, database and graphics software, and to communicate electronically using the internet and e-mail. It will require a high level of competence in transferring data between applications.

Optional Modules, which allow candidates the opportunity to develop specific skills in other applications, can then be added to form the full Diploma, for which the Core and **three** of the Optional Modules need to be successfully completed.

The range of Optional Modules may be expanded subject to demand and approval by CIE.

2.3 Learning Hours and Course Structures

The Core Module is designed around 40-50 learning hours, and each Optional Module would require a further 12-15 learning hours (around 80-100 hours for the full Diploma). This is a guideline only as different students will often progress at different rates and will start the course with different prior knowledge. Centres should plan the duration of courses based on candidates' prior qualifications and experience.

CIE considers that there are various effective methods of developing information and communication technology skills, including tutorials spread over a period of weeks or months, intensive training programmes, on-the-job training or other supervised work experience, and distance learning. Therefore, there is no single prescribed course structure leading to the CIE ICT Diploma.

Although the normal arrangement for Centres and candidates aiming for the Core Module or Full Diploma will be to start with the Core Module, it is possible for students to start with one of the Optional Modules. This route may be chosen, for example, by a student who is particularly interested in an application covered by one of the Optional Modules. Success in this module is likely to encourage interest in and take up of the other modules in the Diploma. Centres may identify demand for courses linked to particular modules, for example to provide for particular groups or organisations that need to develop or update specific skills. These are just two examples of the flexibility of provision that the Diploma structure supports.

Generally, whatever the method of skills development, students are first taught the skills of appropriate application package(s) for the module. They practise these skills in a variety of contexts until they are fully competent. Then they demonstrate their competence by completing the CIE practical assessment. Centres decide when to assess in terms of their own and the students' readiness.

CIE expects that students preparing to take the ICT Diploma will not be drilled merely to follow particular sequences of keystrokes to achieve particular effects. As well as having value for employment, ICT skills have value for the student as a unique person with individual interests and needs. The most effective ICT teaching highlights such relevance, and inspires interest in the possibilities of ICT.

2.4 Resources

The Diploma aims to give Centres the flexibility to cope with a wide variety of resources and ever-changing technology, and with the appropriate ICT facilities to develop their skills.

CIE does **not** prescribe particular software packages for ICT applications. Students will learn to use a particular package, but they should be encouraged to realise that, with the aid of a manual, they can easily transfer their skills to other packages.

2.5 Method of Assessment

Each module in the ICT Diploma is assessed by means of a CIE-set practical assessment, comprising a number of tasks, and taken under controlled conditions at a registered Centre. The documentation and printouts produced in the assessment are externally marked by CIE. Practical assessments submitted to CIE are not returned and Centres are advised to keep a copy of each candidate's submission.

The practical assessments focus on the candidate's ability to carry out practical tasks rather than to explain the theory of how the tasks are completed. Candidates are assessed on their performance of these tasks.

Practical assessments are available at any time throughout the year and may be taken at the end of the course of study or at intervals over the length of the course. Centres can decide when the assessment takes place. There is no fixed timetable.

2.6 Certification

Certification is available at various points in the Diploma.

- A candidate who passes the Core Module will receive a Cambridge Core ICT module certificate.
- Successful completion of the Core Module and an additional three Optional Modules leads to the Cambridge International Diploma in ICT.
- A candidate who passes an individual Optional Module will receive a certificate for that Module.

As an aid to recognition by others of the skills demonstrated by the successful candidate, the certificate records not only the module title but also the principal assessment objectives met.

2.7 Quality Control and Assurance - Protecting Cambridge International Diploma Standards

CIE has to ensure the integrity of its assessment procedures, so that everyone can have full confidence in the Cambridge International Diploma standards. In applying for Registered Centre status, Centre staff acknowledge that they will follow the requirements of the Diplomas, to the standards described in the syllabus and guidelines.

CIE will assess the suitability of staff, premises, resources, and procedures, before allowing Centres to operate the Diploma in ICT. In the first year of application, Centres are required to make a formal written submission to CIE. CIE reserves the right at any time physically to inspect a Centre and its facilities. To allow time to arrange such an inspection, Centres are advised to apply well before the intended start of the course.

As a further guarantee that standards are upheld, Centre registration is granted for one year from the date of approval of an application. Centres must apply for re-registration each year and be available for inspection if necessary.

If CIE has reason to doubt the quality assurance procedures within a Centre, a Centre Inspector will be sent to review the practice of a Centre. If a Centre is granted approval, they may receive an inspection visit periodically as a matter of course.

These procedures are vital to protect the value of the Cambridge qualifications. CIE must be sure that certificates awarded to candidates in one Centre are no harder or easier to obtain than those awarded to candidates in another Centre.

To ensure quality, all assessments are marked externally by CIE. The final decision on a candidate's work will rest with the Principal Examiner for the module.

2.8 Fees

For the latest information on fees for this qualification, contact CIE Customer Services.

SECTION 3: SYLLABUS STRUCTURE

3.0 Assessment Objectives and Performance Criteria

This syllabus includes all the modules needed to complete the Diploma. In each module, all the relevant *assessment objectives* and *performance criteria* are specified.

Assessment Objectives

These define the specific skills, which must be demonstrated to achieve certification in the module. **All Assessment Objectives must be demonstrated for the candidate to successfully complete the module.** Assessment Objectives are sub-divided into

Performance Criteria

which define what must be demonstrated for the achievement of each Assessment Objective. **All the Performance Criteria in an Assessment Objective must be met for the completion of that Assessment Objective.**

3.1 General Principles and Procedures

The ICT Diploma focuses on the skills of using ICT applications. It is assumed that, during their course, candidates will further develop their understanding and practice of general principles and procedures for using the computer and managing files safely and effectively, as listed below.

Disk and file care and management

- Directory or folder - creating, renaming, deleting
- Browsing a directory or folder, and understanding different file types
- Moving, renaming, copying and sorting files
- Formatting a blank disk
- Making back-up copies

Basic functions

- Handling passwords
- Using keyboard combinations
- Switching between windows, working with more than one window

Adjusting the program

- Changing the settings, changing the desktop or window

Printouts

- Choosing a printer
- Changing paper size, loading and adjusting paper
- Starting a printout, cancelling a printout
- Changing page set-up
- The print queue - access and function

SECTION 4: ICT CORE MODULE (ADVANCED LEVEL)

4.0 Synopsis

In this module, the candidate demonstrates skills in using word processing, database/spreadsheet and graphics software to produce a multi-page integrated document, and to use e-mail and internet software to communicate with other ICT users and to search the internet. The tasks involved in the assessment are set in the same international business context and represent a logical and purposeful sequence of activities. They reflect the realities of using ICT at work, where it is expected that employees will be able to demonstrate versatility in the use of applications to gather and represent data, to solve problems, and to communicate with colleagues. In the ICT Diploma, the productive **outcomes** of using ICT applications competently are the prime focus of assessment, and this is reflected in the titles of the elements in the Core Module.

The module comprises:

Communication (4.1)

Send and receive e-mail. Use the internet to retrieve information both from a given URL and by searching.

Data Management (4.2)

Use word processing, spreadsheet and/or database applications in an integrated fashion to manage and present information. Use advanced formatting facilities to present information appropriately.

Systems Management (4.3)

Use the operating system or application facilities to copy files, delete files or move files. Organise files in folders and produce listings of files on a disk.

4.1 Communication

Using the internet and e-mail facilities, the candidate must demonstrate the ability to:

Assessment Objectives		Performance Criteria		Skills
1. Communicate with other ICT users				
1.1	Read e-mail	1.1.1	Specified message is read	Open message New message, address, subject, reply, forward, carbon copy, blind carbon copy
1.2	Send e-mail	1.2.1	Specified message is sent	
1.3	Send a file	1.3.1	Send a file to another ICT user electronically	Attach file, compress file File attachments, save attached file, extract compressed files
1.4	Receive a file	1.4.1	Receive a file from another ICT user electronically	
2. Use the internet				
2.1	Locate information from a website	2.1.1	Specified information from a given URL	Simple search, refined search
2.2	Search for information	2.2.1	Specified information is found using a search engine	
2.3	Download information	2.3.1	Download and save specified information	

4.2 Data Management

Using word processing, spreadsheet and database facilities, the candidate must demonstrate the ability to:

Assessment Objectives		Performance Criteria		Skills
3. Enter data from different sources				
3.1	Load data from existing files	3.1.1	Specified file is loaded	Locate file, identify file type, csv, txt, rtf
3.2	Key in data	3.2.1	Data is entered with 100% accuracy	Enter text, enter numbers, enter date
3.3	Import image from external source	3.3.1	Place image as specified	Import clip art, import from a digital source, import from website, import from file
		3.3.2	Manipulate as specified	Move image, resize image, crop image, graphic manipulation, text wrap
3.4	Include information downloaded from the internet	3.4.1	Specified data only, positioned as required	Text, numeric data, graphic image, table, chart
4. Document format and layout				
4.1	Set up a page format	4.1.1	Page size as specified	Portrait, landscape Set start page number, continuous numbering through document sections, positioning of numbering: left, right, centre, outside of pages. Top margin, bottom margin, left margin, right margin, rulers Number of columns, width, spacing, column break
		4.1.2	Page orientation as specified	
		4.1.3	Page numbering as specified and positioned consistently	
		4.1.4	Margins set as specified	
		4.1.5	Columns as specified	
4.2	Styles	4.2.1	Create and use styles to a given specification	Font (serif, sans serif), point size, bold, italic, underscore, paragraph formats, spacing before paragraph, spacing after paragraph, hyphenation, indentation, tabulation
4.3	Headers and footers	4.3.1	Create headers and/or footers as specified	Headers, footers, file information, text, page numbers, date, position
4.4	Automate paragraph numbering	4.4.1	Using the specified style	Numbered list, lettered list, bulleted list
		4.4.2	Applied to the specified data only	
4.5	Table	4.5.1	Table created as specified	Specified number of rows and columns, borders, position as specified
		4.5.2	Table manipulated as specified	Insert row(s)/column(s), delete row(s)/column(s), emphasise row/column headings, adjust row/column width
4.6	Control pages	4.6.1	Breaks inserted as specified	Page break, column break, section break

5. Reorganise data to meet needs			
5.1	Sort data	5.1.1 On more than one criterion as specified	Ascending, descending, alphanumeric, numeric, date, time
5.2	Select subsets of data	5.2.1 Using more than one criteria as specified (using numeric, text or Boolean operators)	LIKE, AND, OR, NOT, >, <, =, >=, <=, data range, wildcards, to select specified data items only
6. Perform calculations on numeric data			
6.1	Enter formulae	6.1.1 Use arithmetic operations to perform calculations	Addition, subtraction, multiplication, division
		6.1.2 Use numeric functions to perform calculations	Sum, average, maximum, minimum, counting
		6.1.3 Use absolute cell references with arithmetic operations or with functions	
		6.1.4 Use conditional functions to return values depending upon the conditional contents of other fields	If, lookup, count if, within current data set, within an external data set
7. Present data in a graphical form			
7.1	Present numeric data as a graph or chart	7.1.1 Select appropriate chart type	Bar chart, pie chart, line graph, comparative bar chart, comparative line graph
		7.1.2 Include labels as specified	Chart title, value axis label, category axis label, series label, segment label
		7.1.3 Select specified data only	Selecting from within a data range, selecting filtered data, controlling the y-axis range, select from contiguous and non-contiguous data
		7.1.4 Place and manipulate chart as specified	Place chart, move chart, resize chart
8. Integrate data from several sources			
8.1	Combine text, image and numeric data in one document	8.1.1 Ensure consistency of display	Import text, import from a spreadsheet, import clip art, import from a scanner, import from website, position image/chart, resize image/chart, crop
		8.1.2 Repaginate to ensure page breaks are positioned appropriately	Widows, orphans, no isolated headings, no split within a table
9. Output data			
9.1	Save and print document	9.1.1 One or more pages of draft document are saved and printed as specified	Print document, print selected text only
		9.1.2 Final copy is saved and printed as specified	
9.2	Print directories/folders	9.2.1 Specified directory/folder structure	File name, file size, date, time

4.3 Systems Management

Using the operating system or application facilities, the candidate must demonstrate the ability to:

Assessment Objectives	Performance Criteria	Skills
10. Organise electronic data storage systems		
10.1 Save data	10.1.1 Save data file	New file, existing file
10.2 Delete data	10.2.1 Specified file(s) only	
10.3 Copy data	10.3.1 Specified file(s)	
10.4 Move data	10.4.1 Specified file(s) relocated as specified	
10.5 Set up directories/folders	10.5.1 Specified directory structure	

SECTION 5: ICT OPTIONAL MODULES (ADVANCED LEVEL)

5.0 Synopses

The Optional Modules are designed to enable candidates to develop a set of skills in the application area concerned which provide a multi-purpose 'tool kit' for using the application productively.

The following Optional Modules are currently available:

Advanced Spreadsheets (5.1)

Work with formulae using both absolute and relative cell references. Manipulate text, dates and times as well as numbers. Use lookup functions. Control the appearance of the spreadsheet

Relational Databases (5.2)

Create a number of tables in a database and establish relationships between them. Extract data from these tables and present it as clear, attractive reports

Website Programming (5.3)

Creating web pages to allow data entry on the internet

Advanced Graphics (5.4)

Manipulating multiple images and layers to create graphical documents

Automation (5.5)

Using appropriate applications to automate routine tasks

5.1 Advanced Spreadsheets

Using spreadsheet facilities, the candidate must demonstrate the ability to:

Assessment Objectives	Performance Criteria	Skills
1. Create a spreadsheet		
1.1 Import data	1.1.1 Import data into spreadsheet 1.1.2 Import from another file to working file	Use common interchange formats
2. Edit the spreadsheet model		
2.1 Add and delete data	2.1.1 Add and/or delete row(s)/column(s) as specified.	Insert row, insert column, delete row, delete column
2.2 Name data	2.2.1 Name range	Named cell, named range
2.3 Manipulate data	2.3.1 Rearrange cells and/or manipulate their contents	Transpose cells, split strings, join strings, extract from strings, convert string values to numeric values, concatenate cells
2.4 Calculate using formulae	2.4.1 Formulae entered which produce correct results	Add, subtract, multiply, divide, indices, manipulating date/time values, percentage values
	2.4.2 Use cell referencing as specified.	Relative referencing, absolute referencing
	2.4.3 Replicate formulae	Cut/paste, drag/drop, edit/fill down
2.5 Calculate using functions	2.5.1 Functions entered which produce correct results	Integer, rounding (modulus), manipulating strings
	2.5.2 Statistical functions entered which produce correct results	Sum, average, maximum, minimum, counting, subtotal, conditional counting
	2.5.3 Lookup data	If, lookup using horizontal/vertical referencing

3. Use display features		
3.1 Align data	3.1.1 Cells aligned as specified	Left, right, centred, word wrap
3.2 Column width	3.2.1 Column width changed as specified	Ensure that all data and labels are visible, hide row, hide column, unhide row, unhide column
3.3 Adjust numeric formatting	3.3.1 Format data as specified	Strings, numeric data, integer, decimal (e.g. 2dp), percentage, currency (various), date, time, short date, long date, 12 hour clock, 24 hour clock
3.4 Display formulae	3.4.1 Display formulae as specified	
3.5 Cell emphasis	3.5.1 Emphasise cell contents as specified	Colour, shading, bold, italic, underline, font size, font style
4. Page layout		
4.1 Cell format	4.1.1 Format cells as specified	Integer, decimal places, strings, date, time
4.2 Page layout	4.2.1 Page orientation as specified	Landscape, portrait
	4.2.2 Use headers and/or footers as specified	Header, footer, page numbering
	4.2.3 Display row and column headings as specified	Row/column headings visible or hidden
5. Reorganise data to meet needs		
5.1 Sort data	5.1.1 Using one criterion or two criteria as specified	Ascending, descending
5.2 Select subsets of data	5.2.1 Using one criterion or two criteria as specified	Numeric, text, date, time
6. Output data		
6.1 Save and print data	6.1.1 Data is saved and printed as specified	Formulae, values, extracts, test data

5.2 Relational Databases

Using database facilities, the candidate must demonstrate the ability to:

Assessment Objectives	Performance Criteria	Skills
1. Create database		
1.1 Create database file	1.1.1 Save as new file in appropriate location	Use specified or meaningful field names, keep field names short Text, number, decimal places, integer, real number, date/time, yes/no, Boolean Use common interchange formats
1.2 Define table	1.2.1 Specify field names	
	1.2.2 Specify field types and sizes	
1.3 Import data	1.3.1 Import data into database tables	
2. Establish relationships		
2.1 Link tables	2.1.1 Set primary key/s	Primary key, foreign key
	2.1.2 Create and use relationship/s	One-to-many relationship, one-to-one relationship
3. Select and Sort		
3.1 Select records	3.1.1 Using one criterion	=, <, >, =<, >=, <>, LIKE, NOT AND, OR
	3.1.2 Using multiple criteria	
3.2 Sort records	3.2.1 Using one or more fields	Ascending, descending, alphabetic, numeric
4. Produce reports		
4.1 Extract simple lists	4.1.1 Select specified fields only	Query
	4.1.2 Group data as specified	Group header, group footer
	4.1.3 Apply headers and footers as specified	Page header, report header, section header, report footer, page footer, section footer, run-time calculations – sum, count, max, min
4.2 Create summary reports	4.2.1 Summarise data	Pivot table (cross-tab query), count, sum, average, first
5. Output data		
5.1 Save and print data	5.1.1 Data is saved and printed as specified	Replace existing file, create new, tables, print queries, reports, relationships, screen shots, e.g. field types

5.3 Website Programming

Using suitable software, which includes a web server with database, a web browser and a script editor, the candidate must demonstrate the ability to:

Assessment Objectives	Performance Criteria	Skills
1. Form Creation		
1.1 Create data entry form	1.1.1 Text entry 1.1.2 List box 1.1.3 Option buttons 1.1.4 Check box 1.1.5 Submit button	Single line, multiple line <code><text area=areaspecification></code> <code><input name=inputname></code> <code><select name=selectname><option value=value 1>Item1</option></select></code> <code><input type=radio name=radio1 value=val1></code> <code><input type=checkbox name=checkbox1 value=check1></code> <code><input type=submit value=Submit></code>
2. Manipulate data		
2.1 Validate data	2.1.1 Validate strings 2.1.2 Validate numbers	Server side scripting using functions to work with: Strings – length, mid, right, left, val (convert string to number), instr (find one string in another) existency check Numbers - Range check, =, >, >=, <=, <>, existency check
2.2 Extract data	2.2.1 Simple web report 2.2.2 Extract data as specified	Use a server side database to produce a report in HTML format Records, fields e.g. <i>Select surname, forename where code >23</i>
2.3 Display data	2.3.1 Report errors 2.3.2 Display selected data as specified	Re-direct to error page, display error Specified fields
3. Data Storage		
3.1 Store data	3.1.1 Create database 3.1.2 Write to existing table	Create database/data table Insert or update data in server side database e.g. <i>insert into students surname, forename values "john", "smith"</i> or <i>update students set yearcode= "2002" where set=5</i>
4. Output data		
4.1 Save and print document	4.1.1 Document is saved and printed as specified 4.1.2 Display required elements of code	Browser view, source code Highlight or suitable annotation

5.4 Advanced Graphics

Using suitable graphics software and a colour printer, the candidate must demonstrate the ability to:

Assessment Objectives	Performance Criteria	Skills
1. Acquire images from external sources		
1.1 Import images	1.1.1 Acquire images	Scanner, digital camera, file
2. Edit images		
2.1 Control images	2.1.1 Transform objects	Rotate, flip, stretch, skew, scale
	2.1.2 Manipulate objects	Copy, crop, resize, mirror, erase
	2.1.3 Arrange objects	Position, grids, combine, group, ungroup
	2.1.4 Apply layers	Order, re-arrange, flatten
2.2 Enter text	2.2.1 Use text tools	Enter, edit, colour, size, orientation, appearance
	2.2.2 Position text	Order, position within layer
2.3 Control colour	2.3.1 Sample colour	Colour sampling and adding to palette
	2.3.2 Apply/remove colour	Fill, colour, palette, mixing, texture, spot colours, colour separations
	2.3.3 Adjusting colour	Brightness, contrast, hues, saturation, density, gradations
3. Output data		
3.1 Save images	3.1.1 File formats	Deleted, image size (memory), changing file formats
3.2 Output images	3.2.1 To printer as specified	Paper, film, slide, screen shot to show layers
	3.2.2 To file	
3.3 Print directories/folders	3.3.1 Specified directory/folder structure	File name, file format, file size, date, time

5.5 Automation

Using suitable software, the candidate must demonstrate the ability to:

Assessment Objectives	Performance Criteria	Skills
1. Create merged documents		
1.1 Set up and run a mail-merge routine	1.1.1 Import text file	Master document, data file
	1.1.2 Set up variable fields as specified, for automatic completion	Identify and use correct field names
	1.1.3 Set up fields for manual completion	Ask, fillin, bookmark
	1.1.4 Create appropriate prompts to the user for manual completion	Prompt
	1.1.5 Use merge functions as specified	
1.2 Create a document which selects and summarises data	1.2.1 Automatically select required fields	If, next, skip if
	1.2.2 Automatically select required records	Query
1.3 Set up an automated procedure which enables the user to select both the required document and the data to merge with it	1.3.1 Select a software application suitable for the task	The exact techniques, functions etc. involved will depend on the application software chosen and the methods employed by the candidate to achieve the required result. Making such choices is part of the assessment.
	1.3.2 Set up a suitable selection facility which allows the required document to be selected	Drop down menu, hyperlink, push button, list box, combo box, command button, radio buttons
	1.3.3 Set up a further facility to enable the user to select the data to be merged with the document already chosen	Note: facilities used will depend on the software available to candidates.
2. Output data		
2.1 Save and print data	2.1.1 Documents saved and printed as specified	Selected document/s, merged documents, source documents (merge codes, macros, procedures), screen shot

SECTION 6: ASSESSMENT PROCEDURES

6.0 Form of Assessment

The Core Module practical assessment is designed to be completed within 2¾ hours, under supervised conditions. To conform with safe working practices in using display screen equipment, it is recommended that candidates be allowed to take short approved breaks from working at their screen (5-10 minutes every hour), without leaving the assessment room. Such breaks may naturally form part of the working pattern as candidates study the practical assessment material. The Centre is responsible for maintaining security during this break period.

Each Optional Module practical assessment is designed to be completed within 1 hour.

In all modules, for the assessment candidates are permitted 15 minutes reading time before beginning the practical tasks. During the reading time, candidates are not permitted to use their computers.

The practical assessments must be completed under supervised and controlled conditions (see 6.2 below). The Centre should provide a “quiet, business-like atmosphere” for the assessment. It is possible to carry out the assessment during normal timetabled periods during the normal working day, as long as all procedures are followed.

During the assessment candidates are not permitted access to their own files or to retain a copy of the assessment and/or any printouts produced during the assessment. **No tuition can be given after** the candidate has commenced the assessment.

6.1 The Practical Assessments

The Centre must ensure that only live assessment material as issued by CIE is used for the assessment of the Cambridge ICT Diploma.

The CIE-set practical assessments are referenced with the year of publication, the module, and the version.

Centres can choose the particular assessment for the candidate(s) in question, from the versions issued to them by CIE. A different version needs to be used if different candidates are being assessed on consecutive days and when a candidate is retaking an assessment.

6.2 Currency of Assessment Material

Live practical assessments are issued in January and are valid for 12 months. Candidate work derived from practical assessments which have been withdrawn will not be accepted for certification after the date of withdrawal.

Live practical assessments may only be used as practice material AFTER their withdrawal date. Centres will only receive a master copy of the current CIE-set practical assessments when they have been registered. **No amendments may be made to CIE-set practical assessments without the written approval of CIE.**

6.3 Preparation

Before using a practical assessment, tutors must work through it using similar hardware and software to that used by the candidates, to

- ensure the hardware/software at the Centre will enable the candidates to achieve all the Assessment Objectives
- ensure the terminology will be understood by their candidates
- produce the tutor worked copy of the assessment, which must be included with the submission to CIE of candidates' work

Any requests for special assessment requirements should be put in writing to CIE at least two months prior to the planned date for assessment.

If no colour printers are available in the centre, tutors should arrange that colour displays are visibly distinct when printed in black and white.

6.4 Administering the Assessment

Centres are responsible for ensuring that the hardware and software to be used by candidates is in full working order and will enable them to fulfil all the Assessment Objectives in the module as specified in this syllabus. Errors as a result of faulty software or hardware will not be taken into consideration during the appeals procedures.

In the event of a system crash, power cut or damage to equipment during the assessment, candidates may be allowed a fresh attempt at a different assessment. Advice should be obtained from CIE.

Centres should ensure that stationery is available to their candidates. Candidates can use dictionaries, spellcheckers, their own notes, the software's Help facility, Centre-prepared manuals on the software package or manufacturers' manuals during assessment. No other help can be given to candidates during the assessment, unless there is an equipment failure.

Invigilators will need to observe certain Assessment Objectives within all modules, such as 'save data' or transitions and animations in presentations. Where appropriate, this can be done by checking the candidates' files after the assessment has been completed.

Candidates should present the invigilator with the printouts they wish to submit at the end of the assessment. Each printout should include the candidate's name and the date on which the assessment was carried out. It is recommended that this information is printed, not hand-written. It is also recommended that the module title and/or assessment reference is printed, along with the printout number.

6.5 Security Issues

A suitably competent invigilator, who may be the tutor, must be present throughout to supervise the assessment.

Candidates must not communicate with one another in any way and security of the individual candidate's files must be ensured. They cannot ask for, or be given, help from the invigilator or tutor, except in the case of a systems failure.

All assessment material must be treated as confidential. It should only be issued at the time of assessment.

All work stored on the network or hard disk must be kept secure. Centres are advised to consider setting up passwords to control login procedures and ensure only authorised access to files.

Centres must ensure that :

- potential candidates do not have access to assessment material
- at the end of each session all assessment material, i.e. the CIE practical assessments and candidates' completed work, is collected by the invigilator
- all draft copies and rough work not to be submitted is destroyed

Candidates' Assessment Record Folders with completed practical assessments must be kept securely by the Centre between assessments and before submission to CIE. In no circumstances should they be left in the custody of the candidates.