

**EUROPEAN COMPUTER DRIVING LICENCE /
INTERNATIONAL COMPUTER DRIVING LICENCE**
SYLLABUS VERSION 5.0
M5 Using Databases



The European Computer Driving Licence Foundation Ltd.

Third Floor, Portview House
Thorncastle Street
Dublin 4
Ireland

Tel: + 353 1 630 6000

Fax: + 353 1 630 6001

E-mail: info@ecd.org

URL: <http://www.ecdl.org>

The official version of ECDL / ICDL Syllabus Version 5.0 is the version published on the ECDL Foundation Web site, which can be found at: www.ecdl.com

Disclaimer

Although every care has been taken by the ECDL Foundation in the preparation of this publication, no warranty is given by the ECDL Foundation as publisher as to the completeness of the information contained within it and neither shall the ECDL Foundation be responsible or liable for any errors, omissions, inaccuracies, loss or damage whatsoever arising by virtue of such information or any instructions or advice contained within this publication. As stated above, the information may not be reproduced in whole or part without permission and acknowledgement. Changes may be made by the ECDL Foundation at its own discretion and at any time without notice.

Copyright © 2007 The ECDL Foundation Ltd.

All rights reserved. No part of this publication may be reproduced in any form except as permitted by the European Computer Driving Licence (ECDL) Foundation¹. Enquiries for permission to reproduce material should be directed to the publisher.

¹ Reference(s) to ECDL Foundation means The European Computer Driving Licence Foundation Ltd.

Module 5 – Using Databases

The following is the Syllabus for Module 5, *Using Databases*, which is the basis for the theory and practice-based test in this module.

Module Goals

Module 5 *Using Databases*, requires the candidate to understand the concept of a database and how it is typically used. He or she shall be able to create a simple database. The candidate shall understand how a database is organised and operated. The candidate shall be able to create a table, define and modify fields and their properties; enter and edit data in a table directly or by using a form and view the database in various modes. He or she shall also be able to sort and filter a table; create, modify and run queries to retrieve specific information from a database. The candidate shall be able create routine reports and prepare outputs ready for distribution.

CATEGORY	SKILL SET	REF.	Task Item
5.1 Understanding Databases	5.1.1 Key Concepts	5.1.1.1	Understand what a database is and what it is used for.
		5.1.1.2	Understand the difference between data and information.
		5.1.1.3	Understand how a database is organised in terms of tables, records and fields.
		5.1.1.4	Know some of the common uses of large-scale databases like: airline booking systems, government records, bank account records, hospital patient details.
	5.1.2 Database Organisation	5.1.2.1	Understand that each table in a database should contain data related to a single subject.
		5.1.2.2	Understand that each field in a table should contain only one element of data.
		5.1.2.3	Understand that field content is associated with an appropriate data type like: text, number, date/time, yes/no.
		5.1.2.4	Understand that fields have associated field properties like: field size, format, default value.
		5.1.2.5	Understand what a primary key is.
		5.1.2.6	Understand what an index is and its benefit for faster data access.
	5.1.3 Relationships	5.1.3.1	Understand that the main purpose of relating tables in a database is to minimize duplication of data.
		5.1.3.2	Understand that a relationship is built by matching a unique field in one table with a field in another table.
		5.1.3.3	Understand the importance of maintaining the integrity of relationships between tables.

CATEGORY	SKILL SET	REF.	Task Item
	<i>5.1.4 Operation</i>	5.1.4.1	Know that professional databases are designed and created by database specialists.
		5.1.4.2	Know that data entry, data maintenance and information retrieval are carried out by users.
		5.1.4.3	Know that a database administrator provides access to specific data for appropriate users.
		5.1.4.4	Know that the database administrator is responsible for recovery of a database after a crash or major errors.
5.2 Using the Application	<i>5.2.1 Working with Databases</i>	5.2.1.1	Open, close a database application.
		5.2.1.2	Open, close a database.
		5.2.1.3	Create a new database and save to a location on a drive.
		5.2.1.4	Display, hide built-in toolbars. Restore, minimize the ribbon.
		5.2.1.5	Use available Help functions.
	<i>5.2.2 Common Tasks</i>	5.2.2.1	Open, save and close a table, query, form, report.
		5.2.2.2	Switch between view modes in a table, query, form, report.
		5.2.2.3	Delete a table, query, form, report.
		5.2.2.4	Navigate between records in a table, query, form.
		5.2.2.5	Sort records in a table, form, query output in ascending, descending numeric, alphabetic order.
5.3 Tables	<i>5.3.1 Records</i>	5.3.1.1	Add, delete records in a table.
		5.3.1.2	Add, modify data in a record.
		5.3.1.3	Delete data in a record.
	<i>5.3.2 Design</i>	5.3.2.1	Create and name a table and specify fields with their data types like: text, number, date/time, yes/no.
		5.3.2.2	Apply field property settings: field size, number format, date/time format, default value.
		5.3.2.3	Create a validation rule for number, date/time, currency.
		5.3.2.4	Understand consequences of changing data types, field properties in a table.
		5.3.2.5	Set a field as a primary key.
		5.3.2.6	Index a field (with, without duplicates allowed).

CATEGORY	SKILL SET	REF.	Task Item
5.4 Retrieving Information	5.4.1 Main Operations	5.3.2.7	Add a field to an existing table.
		5.3.2.8	Change width of columns in a table.
		5.4.1.1	Use the search command for a specific word, number, date in a field.
	5.4.2 Queries	5.4.1.2	Apply a filter to a table, form.
		5.4.1.3	Remove the application of a filter from a table, form.
		5.4.2.1	Understand that a query is used to extract and analyse data.
		5.4.2.2	Create a named single table query using specific search criteria.
		5.4.2.3	Create a named two-table query using specific search criteria.
		5.4.2.4	Add criteria to a query using one or more of the following operators: = (Equal), <> (Not equal to), < (Less than), <= (Less than or equal to), > (Greater than), >= (Greater than or equal to).
		5.4.2.5	Add criteria to a query using one or more of the following logical operators: AND, OR, NOT.
		5.4.2.6	Use a wildcard in a query, * or %, ? or ___.
		5.4.2.7	Edit a query: add, modify, remove criteria.
		5.4.2.8	Edit a query: add, remove, move, hide, unhide fields.
		5.4.2.9	Run a query.
5.5 Objects	5.5.1 Forms	5.5.1.1	Understand that a form is used to display and maintain records.
		5.5.1.2	Create and name a form.
		5.5.1.3	Use a form to insert new records.
		5.5.1.4	Use a form to delete records.
		5.5.1.5	Use a form to add, modify, delete data in a record.
		5.5.1.6	Add, modify text in headers, footers in a form.
5.6 Outputs	5.6.1 Reports, Data Export	5.6.1.1	Understand that a report is used to print selected information from a table or query.
		5.6.1.2	Create and name a report based on a table, query.
		5.6.1.3	Change arrangement of data fields and headings within a report layout.

CATEGORY	SKILL SET	REF.	Task Item
		5.6.1.4	Present specific fields in a grouped report by sum, minimum, maximum, average, count, at appropriate break points.
		5.6.1.5	Add, modify text in headers, footers in a report.
		5.6.1.6	Export a table, query output in spreadsheet, text (.txt, .csv), XML format to a location on a drive.
	5.6.2 <i>Printing</i>	5.6.2.1	Change the orientation (portrait, landscape) of a table, form, query output, report. Change paper size.
		5.6.2.2	Print a page, selected record(s), complete table.
		5.6.2.3	Print all records using form layout, specific pages using form layout.
		5.6.2.4	Print the result of a query.
		5.6.2.5	Preview a report.
		5.6.2.6	Print specific page(s) in a report, complete report.