

## **Energy Performance of Buildings Training Course for Assessors of Dwellings in the Republic of Malta**

### **General Aims**

Attendees who successfully complete an Assessor Training Programme for the Energy Assessment Procedure for Dwellings in Malta should be able to:

- Explain key objectives and the background to the EPBD
- Demonstrate the ability to accurately collect data from plans, specifications and physical surveys to correctly calculate the energy demand of dwellings and the associated CO<sub>2</sub> emissions performance using the EPRDM software for both new and existing dwellings of varying complexity
- Produce Energy Performance Certificates and Advisory Reports for dwellings making recommendations to improve energy performance of dwellings
- Explain the significance of varying the specifications for dwellings.

### **Course Structure**

The course structure is grouped into the following units

#### **Unit 1 The Energy Performance Certificate in Malta**

- 1.1 Background to the EPBD
- 1.2 Overview of LN 261 of 2008
- 1.3 Building Regulations Guide F
- 1.4 Introduction to the Energy Performance Rating of Dwellings Malta, assessment Procedure (EPRDM)
- 1.5 EPC Administration
- 1.6 Assignment 1

#### **Unit 2 Building Construction and Building Energy Performance**

- 2.1 Lighting and Internal Loads
- 2.2 Fabric and Ventilation
- 2.3 Solar Gains
- 2.4 Tutorial on Assignment 1
- 2.5 Assignment 2

#### **Unit 3 Building Systems**

- 3.1 Domestic Hot Water
- 3.2 Heating Systems
- 3.3 Cooling Systems
- 3.4 Solar Water Heating
- 3.5 Tutorial on Assignment 2
- 3.6 Assignment 3

Unit 4 Overall Energy Performance, CO<sub>2</sub> emissions

- 4.1 Renewables
- 4.2 Fuel factors
- 4.3 Tutorial on Assignment 3

Unit 5 Advisory Reports for Dwellings

- 5.1 Format and content of Advisory Reports for Dwellings
- 5.2 Design Advice Opportunities
- 5.3 General revision

## Test

The test is to be conducted by the Building Regulations Office of the Services Division in conjunction with MRA.

## 1 Attendance to Course and Assignments

In order to be able to sit for the test, participants will have to attend to at least 80% of the whole duration of the course.

The three individual assignments will require the participants to produce evidence that demonstrates an understanding and the application of the range of specific learning outcomes. The assignments will be of a sufficiently complex form to ensure that participants demonstrate that they can apply the EPRDM to a variety of dwelling types of varying complexity both new and existing.

### Assignment 1: U-values

Participants would be required to source thermal conductivity information for components of a wall, floor, roof, and either a floor or wall adjacent to an unheated space from any of the sources referenced in the software manual of the EPRDM and calculate the U-values for those building elements from first principles.

### **Assignment 2: Assessment from plans and specifications and achieving a specified improvement**

Participants would be required to complete an assessment of a dwelling from plans and specifications, and produce an Advisory Report for that dwelling. They would then be required to vary the specification to achieve a specified improvement in the EPC. These variations would focus on the most practical and least cost options.

### **Assignment 3: EPC of an existing dwelling (trainer selected dwelling)**

Participants would be required to survey an existing dwelling and produce an EPC for that dwelling. Full supporting evidence in the form of site notes, photographs, sketches and survey notes must be compiled as part of the assignment and participants must provide further information if so required by the trainer.

Participants would then be required to vary the dwelling specification to achieve a specified improvement in the EPC. These variations would focus on the most practical and least cost options.

## **2 TEST**

The test will include the following minimum criteria:

### **Part 1: Short Answer Questions**

The training providers will devise a test consisting of 10 questions that assess participants' understanding of the EPRDM methodology, EPC policy, QA requirements, and surveying dwellings.

The questions would examine the participants' ability to recall, apply theory, define information and identify products and systems in a dwelling that affect an EPC.

The answers would be in written form, including any illustrations and must be categorized as short in length.

The Test will cover all Units of the course. The format of the Test will be short questions of equal marks.

Participants must attempt all questions.

### **Part 2 Practical**

The training providers will devise a practical test that requires learners to demonstrate their ability to use the EPRDM software in a supervised setting for a previously unseen dwelling to



produce an EPC and Advisory Report. The practical test will be of such depth and breadth that will require the candidate to apply all aspects of the EPRDM software.

### **Course Certificate**

A certificate will only be issued to participants who will obtain at least 80 % out of a total 150 marks that will be allotted as follows;

Attendance to the course and completing assignments:	max. marks 50
Test:	max. marks 100