MCAST

Malta College of Arts, Science & Technology

MQF Level 3

CE3-A4-19

Diploma in Joinery and Furniture Making

Course Specification

Course Description

This course includes both theoretical knowledge and extended practical training both off-the-job and on a work placement. Technological and practical lessons cover measuring, cutting, preparing and assembling timber and timber board products to make interior fittings such as kitchen cabinets, doors and window frames. The practical training is carried out in workshops equipped to industry standards. The students will be expected to participate individually and in teams to produce simple products from solid wood and composite materials. Practical handling of hand and power tools and simple woodworking machines forms an integral part of the course. This course also provides students with the opportunity to further develop their knowledge of key skills subjects such as Mathematics, Science, English, Maltese, Information Technology and Individual and Social Responsibility

Programme Learning Outcomes

At the end of the programme the students are able to

1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task.

2. Manufacture batched interim products out of solid wood and composite materials.

3. Take off dimensions from drawings, nest and prepare cutting lists.

4. Set out to assemble furniture products.

Entry Requirements

MCAST Foundation Certificate
or
2 SEC/O-Level/SSC&P (Level 3) passes

Other Entry Requirements

N/A

Current Approved Programme Structure

Unit Title	ECVET/ECTS
Occupational Safety in the construction industry	6
Technical Drawings, Calculations & Setting Out	6
Woodwork Materials and Technology	6
Alteration, Repair and Renovation of Joinery Products and Structures	6
Practical Joinery Skills	6
Practical Furniture Skills	6
Mathematics	4
English	4
Maltese	4
Information Technology	4
Individual and Social Responsibility	4
Science	4
Total ECVET/ECTS	60

Occupational Safety in the Construction Industry

Unit level (MQF): 3

Credits: 6

Unit Description

This unit provides learners with the knowledge concerning the risks that may arise in the construction process and how to evaluate and predict the necessary safety precautions that will enable them to work safely, efficiently and effectively on the building site.

Learners should understand the need for the necessary safety procedures at work to maintain their health and safety and that of their colleagues, as well as of third parties in the region.

The main topics covered will include how to anticipate possible dangers at the workplace, and how to protect it against harmful consequences by making the right choice of appropriate personal protective equipment and appropriate safety procedures.

Learners will gain the necessary skills for their appropriate behaviour related to the existence of danger at workplace in order to reduce health risks prior to going to work, during work and after work.

Learning Outcomes

Upon completion of this unit the student will be able to:

1. *Know the importance of occupational safety and health at the workplace.*
2. *Identify hazards and risks and assess their impact on workplace.*
3. *Understand the importance of risk assessment and its application through occupational safety procedures.*

Technical Drawings, Calculations & Setting Out

Unit level (MQF): 3

Credits: 6

Unit Description

This unit provides learners with the knowledge of reading, making and recognising drawings, drawing equipment and symbols used in technical drawings. The unit also offers the learner opportunities to understand technical drawings and to develop skills to establish the contours of an area and make simple volume measurements.

This unit is designed to provide the learner with the basic knowledge, understanding and skills required to read and interpret technical drawings from which the site setting out using basic and advanced measuring technics, after which symmetric or non-symmetric buildings/objects can be built/produce, follows.

This unit will provide learners with the knowledge and skills to understand drawings in orthographic projections, space, positioning in the area and comparing the constructed environment with the drawing elements of the structure.

Learning Outcomes

Upon completion of this unit the student will be able to:

1. *Calculate the geometrical computations associated with Technical Drawing.*
2. *Make various sketches and draw final details related to joinery and furniture making.*
3. *Explore various types of drawings; communicate about their use in the construction.*

Woodwork Materials and Technology

Unit level (MQF): 3

Credits: 6

Unit Description

This unit focuses on the properties of wood and wooden materials - solid timber and manufactured boards, and the uses of materials for specific applications. Learners will have the opportunity to identify and select materials and components for specific timber applications.

This unit provides learners with the underpinning knowledge associated with the procedures in the processing technology as well as adhesives used in joining the elements' part items and items that result in the final wood product. Additionally, this unit provides learners with the knowledge associated with the manufacturing of wood-based products using screws, nails and abrasive paper.

Learning Outcomes

Upon completion of this unit the student will be able to:

1. *Know the properties and processing of solid wood and fabricated boards.*
2. *Describe fasteners and ironmongery used in the production of wood products in the joinery and furniture industry.*
3. *Understand wood defects, enemies of wood based products and preservatives in the joinery and furniture industry.*

Alteration, Repair and Renovation of Joinery Products and Structures

Unit level (MQF): 3

Credits: 6

Unit Description

The aim of this unit is to give learners the opportunity to develop skills and knowledge in alteration, repair and renovation joinery and furniture. The focus is primarily set on the development of skills through practical application.

This unit enables learners to become acquainted with joinery products (joinery and furniture) and structures, alteration, repair and renovation required in timber-based products. Also, it will provide learners with the opportunity to use other tools and apply oil and water based paints on surfaces.

Experts will demonstrate practical techniques encouraging learners to use the initiative for solving problems.

Learning Outcomes

Upon completion of this unit the student will be able to:

1. *Describe joinery products and structures for specific application.*
2. *Describe and apply procedures to perform repair, alteration and renovation on timber-based products.*
3. *Reproduce wooden components maintain and preserve wood-based products.*
4. *Prepare wood based products surface coatings.*

Practical Joinery Skills

Unit level (MQF): 3

Credits: 6

Unit Description

This unit will focus on practical activities using woodworking machines.

This unit enables learners to use appropriate hand tools, power tools, woodworking machines, materials and all personal protective equipment (PPE) for joinery tasks and skills used in marking out and producing any forms of wood joints.

This unit acquaints learners with working machines most commonly used in joinery, as well as with processes and techniques necessary to produce joinery products. Learners will draw a setting out rod, which is an accurate template drawing representing the actual size of the joinery item to be produced. They will then use the setting out rod to mark out the wood material and produce the particular joinery product (doors, windows and stairs).

Learning Outcomes

Upon completion of this unit the student will be able to:

1. Identify, select, set and operate woodworking machinery.

2. Operate the woodworking machines safely and effectively.

3. Maintain and change tooling.

4. Create final framed products (doors, windows).

Practical Furniture Skills

Unit level (MQF): 3

Credits: 6

Unit Description

This unit introduces learners to the furniture making processes and techniques and teaches them how to handle power tools most commonly used in furniture production. Learners will draw a setting out rod, which is an accurate template drawing representing the actual size of the furniture item to be produced, which will later be used to mark out wood material in order to produce the furniture product.

The unit also explores the materials, tools, equipment and working techniques used to perform furniture tasks. The focus is on the use of various types of hand/power tools and equipment, safe working techniques and PPE.

The aim of this unit is to provide learners with knowledge of the different types of materials commonly used in the furniture industry. Learners will be able to explore and use various materials and work techniques for given practical applications throughout the unit delivery (setting out, manufacturing, assembling and finishing of framed products, such as beds, tables and kitchen cabinets).

Learning Outcomes

Upon completion of this unit the student will be able to:

1. *Identify, select and use the appropriate hand tools and/or power portable tools for completing the required furniture making tasks in a safe and efficient way.*
2. *Develop and describe the cutting list for the required furniture making tasks.*
3. *Develop and describe the appropriate woodworking joints.*
4. *Set out from a cutting list, mark and produce the elements from wood or plate and make the required pieces of furniture in a safe way.*
5. *Use tools and equipment to take on-site measurements & workshop drawings.*