



**MCAST**

**MQF/EQF Level 2**

**AG2-01-21**

**Foundation Certificate in Horticulture and Animal Care**

**Course Specification**

## **Course Description**

This programme of study is designed to equip learners with a range of basic skills and competences enabling them to become competent in various land-based activities related to the agricultural sector. This programme of studies includes a significant amount of vocational practice that will provide a clear idea of the nature of the area that the learner may wish to follow in the future. Learners will have the opportunity to gain hands-on experience with farm animals, exotic animals and plants. Special focus will be given to soil, crop and animal management, livestock nutrition and farm maintenance.

## **Programme Learning Outcomes**

At the end of the programme the students is able to

1. *Undertake different agricultural methods and understand the principles of health and safety*
2. *Understand procedures and explore measures to improve agricultural skills*
3. *Use and apply correctly various agricultural equipment*
4. *Understand and apply different technical skills relating to the care of animals as well as crops*

## **Entry Requirements**

MCAST Introductory Certificate

OR

Finished Compulsory Education

Initial Assessment Tests (as may be applicable)

## Key Information

Awarding Body - MCAST

Accreditation Status - Accredited via MCAST's Self Accreditation Process (MCAST holds Self-Accrediting Status as per 1st schedule of Legal Notice 296/2012)

Type of Programme: Qualification

MQF Level	Examples of Qualifications	'Qualification' Minimum Credits Required	'Award' Credits Required
Level 8	Doctoral Degree Third Cycle Bologna Process	NA	NA
Level 7	Masters Second Cycle Bologna Process	90-120	Less than 30
	Post-Graduate Diploma	60	
	Post-Graduate Certificate	30	
Level 6	Bachelor <sup>23</sup> /Bachelor (Hons.) <sup>24</sup> First Cycle Bologna Process	180-240	Less than 180
Level 5	Short Cycle Qualification	120	Less than 60
	Undergraduate Higher Diploma	90	
	Undergraduate Diploma	60	
	Undergraduate Certificate	30	
	VET Level 5 Programme <sup>25</sup>	60-120	
Level 4	Pre-Tertiary Certificate	30	Less than 120
	VET Level 4 Programme <sup>26</sup>	120	
	MATSEC Certificate	NA	
Level 3	VET Level 3 Programme <sup>27</sup>	60	Less than 60
	General and Subject Certificate	NA	
Level 2	VET Level 2 Programme <sup>28</sup>	60	Less than 60
	General and Subject Certificate	NA	
Level 1	VET Level 1 Programme <sup>29</sup>	40	Less than 40
	General and Subject Certificate	NA	
Introductory Level A	Preparatory Programme	30	Less than 30
Introductory Level B	Pre-entry Basic Skills Course	30	Less than 30

**Table 1: Minimum number of credits for 'Qualifications' and parameters for 'Awards'**

Fig.1: p56, Ministry for Education and Employment & National Commission for Further and Higher Education Malta (2016). *Referencing Report, 4<sup>th</sup> Edition*. NCFHE.

Total number of Hours: 1500

Mode of attendance: Full Time

Duration: 1 Year

Target audience for MCAST full-time courses is 16 to 65+

The official language of instruction at MCAST is English. All notes and textbooks are in English (except for language courses which will be in the respective language being instructed). International candidates will be requested to meet English language certification requirements for access to the course.

This course will be offered at

MCAST has four campuses as follows:

**MCAST Main Campus**

Triq Kordin, Paola, Malta

All courses except for the Institute for the Creative Arts, Centre of Agriculture, Aquatics and Animal Sciences are offered here.

**Institute for the Creative Arts**

Mosta Campus

Misraħ Ġhonoq Targa Gap,

Mosta

**Institute of Applied Sciences,**

**Centre of Agriculture, Aquatics and Animal Sciences,**

Luqa Road, Qormi

**Gozo Campus**

J.F. De Chambray Street

MCAST, Ġhajnsielem

Gozo

*Teaching, Learning and Assessment*

The programmes offered are vocational in nature and entail both theoretical lectures delivered in classes as well as practical elements that are delivered in laboratories, workshops, salons, simulators as the module requirements dictate.

Each module or unit entails a number of in person and/or online contact learning hours that are delivered by the lecturer or tutor directly (See also section 'Total Learning Hours').

Access to all resources is provided to all registered students. These include study resources in paper or electronic format through the Library and Resource Centre as well as tools, software, equipment and machinery that are provided by the respective institutes depending on the requirements of the course or module.

Students may however be required to provide consumable material for use during practical sessions and projects unless these are explicitly provided by the College.

All Units of study are assessed throughout the academic year through continuous assessment using a variety of assessment tools. Coursework tasks are exclusively based on the Learning Outcomes and Grading Criteria as prescribed in the course specification. The Learning Outcomes and Grading Criteria are communicated to the Student via the coursework documentation.

The method of assessment shall reflect the Level, credit points (ECTS) and the schedule of time-tabled/non-timetabled hours of learning of each study unit. A variety of assessment instruments, not solely Time Constrained Assignments/Exams, are used to gather and interpret evidence of Student competence toward pre-established grading criteria that are aligned to the learning outcomes of each unit of the programme of study.

Grading criteria are assessed through a number of tasks, each task being assigned a number of marks. The number of grading criteria is included in the respective Programme Specification.

The distribution of marks and assessment mode depends on the nature and objectives of the unit in question.

Coursework shall normally be completed during the semester in which the Unit is delivered.

Time-constrained assignments may be held between 8 am and 8 pm during the delivery period of a Unit, or at the end of the semester in which the Unit is completed. The dates are notified and published on the Institute notice boards or through other means of communication.

Certain circumstances (such as but not limited to the Covid 19 pandemic) may lead Institutes and Centres to hold teaching and assessment remotely (online) as per MCAST QA Policy and Standard for Online Teaching, Learning and Assessment (Doc 020) available via link <https://www.mcast.edu.mt/college-documents/>

The Programme Regulations referenced below apply. (DOC 003 available at: link <https://www.mcast.edu.mt/college-documents/>

### Total Learning Hours

The total learning hours required for each unit or module are determined as follows:

Credits (ECTS)	Indicative contact hours	Total Student workload (hrs)	Self-Learning and Assessment Hours
1	5 - 10 hrs	25 hrs	20-15 hrs*
2	10 - 20 hrs	50 hrs	40-30 hrs*
3	15 - 30 hrs	75 hrs	60-45 hrs*
4	20 - 40 hrs	100 hrs	80-60 hrs*
6	30 - 60 hrs	150 Hrs	120-90 hrs*
9	45 - 90 hrs	225 hrs	180-135 hrs*
12	60 - 120 hrs	300 hrs	240-180 hrs*

\* The 'Self-Learning and Assessment Hours' amount to the difference between the contact hours and total student workload.

### Grading system

All MCAST programmes adopt a learner centred approach through the focus on Learning Outcomes. The assessment of MCAST programmes is criterion-referenced and thus assessors are required to assess learners' evidence against a pre-determined set of Learning Outcomes and assessment criteria.

For a student to be deemed to have successfully passed a unit, a minimum of 50% (grade D) must be achieved. In case of part time programmes, the student must achieve a minimum of 45% to successfully pass the unit.

All units are individually graded as follows:

A\* (90-100)

A (80-89)

B (70-79)

C (60-69)

D (50-59)

Unsatisfactory work is graded as 'U'.

Work-based learning units are graded on a Pass/Fail basis only.

Detailed information regarding the grading system may be found in the following document: DOC 003 available at: link <https://www.mcast.edu.mt/college-documents/>

### Intake Dates

- MCAST opens calls for application once a year between July and August of each year for prospective applicants residing in MALTA.
- Applications to full-time courses from international students not residing in MALTA are accepted between April and Mid-August.
- For exact dates re calls for applications please follow this link <https://www.mcast.edu.mt/online-applications-2/>

### Course Fees

MCAST course are free for Maltese and EU candidates. International candidates coming from outside the EU need to pay fees for the respective course. Course fees are set on a per-level and course duration basis. For access to course fee structure and payment methods please visit <https://www.mcast.edu.mt/fee-payments-for-non-eu-candidates/>.

### Method of Application

Applications to full-time courses are received online via the College Management Information System. Candidates can log in using Maltese Electronic ID (eID) or European eIDAS (electronic identification and trust services) to access the system directly and create an account as the identity is verified electronically via these secure services.

Non-EU candidates need to request account creation through an online form by providing proof of identification and basic data. Once the identity is verified and the account is created the candidate may proceed with the online application according to the same instructions applicable to all other candidates.

Non-EU candidates require a study visa in order to travel to Malta and join the course applied for. For further information re study-visa please access <https://www.identitymalta.com/unit/central-visa-unit/>.

For access to instructions on how to apply online please visit <https://www.mcast.edu.mt/online-applications-2/>

*Contact details for requesting further information about future learning opportunities:*

**MCAST Career Guidance**

Tel: 2398 7135/6

Email: [career.guidance@mcast.edu.mt](mailto:career.guidance@mcast.edu.mt)



**Current Approved Programme Structure**

<b>Unit Code</b>	<b>Unit Title</b>	<b>ECTS</b>	<b>Semester</b>
ASHRT-206-1404	Fundamentals of Animal and Fish Science	6	YEAR
ASHRT-206-1405	Animal, Fish Nutrition and Management	6	YEAR
ASHRT-206-1408	Fundamentals of Plant and Soil Science	6	YEAR
ASHRT-206-1409	Applied Horticulture	6	YEAR
CDKSK-206-2006	Mathematics	6	YEAR
CDKSK-206-2004	English	6	YEAR
CDKSK-206-2005	Malti	6	YEAR
CDKSK-206-2107	Information Technology	6	YEAR
CDKSK-206-2102	Community Social Responsibility	6	YEAR
CDKSK-206-2008	Science	6	YEAR
<b>Total ECTS</b>		<b>60</b>	<b>/</b>

## **ASHRT-206-1404: Fundamentals of Animal and Fish Science**

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### **Unit Description**

The aim of this unit is to introduce learners to the basics of animal and fish science, which are necessary to understand concepts of biology, genetics, breeding principles and nutrition.

Learners will learn to identify and name animals and fish, which are common in Maltese agribusiness, in English, Maltese and Latin.

Learners will be acquainted with the basic anatomy with special emphasis on reproductive organs, digestive organs and organs important for production and animal or fish performances. Learners will also learn about animal and fish feed and water requirements, as well as those for accommodation and care.

This unit will introduce learners to the main phases of the reproductive cycle of the most common animals and fish.

In addition, learners will get essential information about animal health care, animal nursing and welfare, relationships between animals, plant production and the environment.

### **Learning Outcomes**

**On completion of this unit learners should be able to:**

- 1. Understand the basic principles of animal and fish taxonomy and related terminology.*
- 2. Understand the basic animal and fish anatomy.*
- 3. Understand the basic principles of animal and fish nutrition.*
- 4. Explain the animal and fish reproductive cycle.*
- 5. Know care and nursing measures for the most common animals and fish.*

## **ASHRT-206-1405: Animal, Fish Nutrition and Management**

Unit level (MQF/EQF): 2  
Credits: 6  
Delivery Mode: Face to Face  
Total Learning Hours: 150

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### **Unit description**

In this unit, learners will be introduced to different animal and fish feeds according to their nutritional value, that is. energy, proteins, fibres, macro- and micro-elements. This knowledge will be connected to animal and fish feed intake requirements and nutritional elements according to particular species, age, reproduction phase and condition. Special attention will be given to the needs of fish and young animals. Learners will also learn about different forms of meals as well as blending different feedstuffs.

In this vocationally oriented unit learners will become familiar with the feeding and watering tools and equipment, and the way to use them in a safe and efficient way. In addition, using previous knowledge gained from other units, learners will learn to plan animal housing on a small scale. In connection to this, they will be acquainted with typical housings, armatures and materials used in animal breeding and aquaculture.

### **Learning Outcomes**

**On completion of this unit learners should be able to:**

- 1. Know the nutritional values of different types of animal feed and meals.*
- 2. Recognise the nutritional needs of different types of animals.*
- 3. Describe the working principles of feeding and watering equipment.*
- 4. Identify different types of common rabbit, birds and pet fish housings.*
- 5. Understand simple building and construction plans for animal accommodation units.*

## **ASHRT-206-1408: Fundamentals of Plant and Soil Science**

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### **Unit Description**

Horticulture is one of the most prevailing agribusiness sectors in Mediterranean countries. It is based on growing fruit, vegetables, grapevine, olives, and similar varieties. In some countries, agribusiness makes relatively high share of a country's GDP and, in some cases, the products are recognised as national brands.

This unit will start with an introduction and description of the main plants and their identification in the plant kingdom. Learners will become familiar with the terminology used in Maltese, English and Latin in order to be able to communicate internationally. In addition, the unit will give learners a general overview of plant morphology, biology, and physiology, to introduce learners to the basic terms used for the main horticultural varieties.

Learners will become familiar with the most important factors in plant production, environmental conditions and soil. Therefore, learners will be given an overview of the physical properties, composition, fertility, formation and erosion of common soil types. In addition, learners will be given a basic knowledge about photosynthesis and various plant propagation methods. Learners will also understand how environmental factors affect plants and how important it is for plants to have the appropriate environment to grow in. In addition, learners will be given an overview about general plant care and the techniques used. In addition, learners will be given an overview of general plant care techniques.

### **Learning Outcomes**

**On completion of this unit learners should be able to:**

- 1. Understand the basic principles of plant taxonomy and related terminology.*
- 2. Explain the morphology of different plants.*
- 3. Understand the basic principles of plant physiology, reproduction and propagation.*
- 4. Understand the basic principles of soil fertility and erosion.*
- 5. Outline the main properties of the most common soil types including physical properties, composition and formation.*

## ASHRT-206-1409: Applied Horticulture

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Unit description

Learners will be introduced to the most common horticultural plants with special regard to different propagation methods such as grafting and budding). Learners will learn how to apply general knowledge about plants in the horticultural business. Moreover, the requirements and rules for pruning and/or disbudding will be considered. Great attention will be devoted to the nutritional requirements, such as fertilizers and soil nutrients, plant requirements for pest protection and pathogens. In addition, learners will be presented with the cultivation requirements, harvesting and storage. Moreover, learners will learn about different types of soil and other media for growing plants. They will also be introduced to soil analysis and interpretation of its results.

This unit will enable learners to use basic tools and equipment safely and effectively as well as enabling them to deal with basic management in horticultural production such as calculating optimal nutrients and water intake.

### Learning Outcomes

On completion of this unit learners should be able to:

1. *Use a variety of sexual and asexual techniques to propagate a range of plants.*
2. *Follow instructions to prune a range of trees under supervision.*
3. *Select the main factors needed for appropriate plant care.*
4. *Describe different media and the different roles they play in mixes.*
5. *Use tools and equipment safely to undertake a range of horticultural tasks.*

## CDKSK-206-2004: English

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Unit Description

In all Foundation Certificate programmes across MCAST, the ability to communicate in our second language becomes both a necessity for life as well as for education and work.

The speaker of English should be aware of the importance and daily use of English as a tool for interacting in the immediate community, whether domestic, public or professional. English is also the main language of instruction in higher education nowadays.

Communicating in English takes into account all the four language skills of listening, speaking, reading and writing according to the prescribed level. Emphasis is placed on knowing how to use a language, rather than just knowing about a language.

This unit is targeted at learners proceeding from Level 1 (therefore taking into account successful completion of Level 1 English) as well as those whose entry level is directly at Level 2.

It is assumed that no entry qualifications such as SEC English (Ordinary Level) are necessary for learners to undertake this unit.

This unit is internally assessed and verified. Assessment is carried out through assignments based on the Learning Outcomes below.

### Learning Outcomes

On completion of this unit a learner will be able to:

1. *Listen to connected speech on a range of vocational topics.*
2. *Speak clearly during interactive communication scenarios and deliver a clear message.*
3. *Read to identify and comprehend information presented textually in formal, vocational and familiar contexts.*
4. *Organise and write text in paragraphs of simple, complete and syntactical sentences.*

## CDKSK-206-2005: Malti

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Ir-Razzjonal

Fil-korsijiet preliminari tat-Tieni Livell tal-Kulleġġ Malti tal-Arti, ix-Xjenza u t-Teknoloġija, l-ilsien Malti jintgħallem għax:

- 1 ninqadew bih biex nikkomunikaw u nirrelataw man-nies ta' madwarna;
- 2 nużawh biex b'mod kreattiv nesprimu l-emozzjonijiet, ħsibijietna u xewqatna;
- 3 jintuża fl-oqsma vokazzjonali u għandu reġistru tekniku Prattiku u funzjonali;
- 4 jgħorbi fih l-identità lingwistika u kulturali ta' ġensna.

### L-Għanijiet

Biex l-istudenti jkunu din l-unità jridu juru li kapaci:

1. jwieġbu mistoqsijiet, jikkellmu b'Malti tajjeb kif ukoll jieħdu sehem f'taħditiet u f'diskussjonijiet.
2. jifhmu dak li jsimgħu
3. jaqraw u jifhmu testi varji
4. jiktbu b' Malti tajjeb skont ir-regoli tal-ortografija u s-sintassi.

## CDKSK-206-2107: Information Technology

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Unit Description

This unit is made up of a number of competences including the competence to use personal computers; the competence to manage efficiently a personal computer; the competence to operate effectively within the operating system and the competence to make productive, creative, and efficient use of the main office application software packages: word processing software, spreadsheet software, presentation software, web-browsing software & e-mail management software.

This unit is designed to ensure that learners are not only taught the knowledge and skills associated with productive, creative, and effective use of personal computers but should be given sufficient opportunities to find, exchange and share information. This should also ensure that learners develop the proper and correct attitudes associated with the use of information and ICT.

This unit should guide the learners to have a broad understanding of how ICT can help their learning, their work, and their social life. Learners will start to develop the ability to decide when and how to use ICT and be aware of the limitations associated with this use.

### Learning Outcomes

On completion of this unit a learner will be able to:

1. *Identify the main concepts of ICT and computer management.*
2. *Use a word processing application to accomplish basic everyday tasks.*
3. *Use a spreadsheet application to input, format data and prepare charts.*
4. *Create basic presentations using presentation software.*
5. *Apply essential web browsing and electronic communication concepts and skills.*



## CDKSK-206-2008: Science

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Unit Description

In this Level 2 key skill, learners will enhance their knowledge on the aspect of natural sciences, mainly via focusing on three different areas which consist of the living world, the physical world and the world of technology.

As part of the living world, learners will learn about the basic unit of which all living things are composed of - the cell and its components. Furthermore, they will become familiar with the differences and similarities between plants, animals and fungi based on their physical characteristics and the way they obtain food. Learners will also enhance their knowledge on the organisation of the human body - different organs that carry out different functions, are located in different areas of the body and are grouped forming body systems. Also, learners will increase their awareness on factors that affect the overall well-being of an individual, including diet and lifestyle.

In the case of the physical world, learners will become familiar with different materials found in the immediate environment. They will observe and describe their physical properties and then be able to compare and classify objects/materials/tools based on their physical properties. It is strongly suggested that lectures refer to objects/materials/tools that are related to the learners' area of study so as to increase the relevance of the topic. Learners will discuss advantages and disadvantages of local energy sources, combustion of fuels, associated hazards and action to prevent accidents, methods via which heat is transferred and the importance of insulation.

The main focus of the area 'the world of technology' will be on health and safety whereby the learner will describe and explain ways of reducing exposure to threats to health and safety at home and in the workplace, discuss how one can increase the body's resistance to disease, and recognise situations of risk to safety and increase awareness about how to avoid accidents.

The remainder of the unit will consist of an investigation related to the environment; with one of these investigations completed in collaboration with Birdlife Malta.

### Learning Outcomes

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

1. *Communicate scientific information by using the scientific process skills of observing and grouping.*
2. *Apply science to enhance the quality of everyday life.*
3. *Promote sustainable living by exploring the link between the natural world and human behaviour.*
4. *Investigate the impact of anthropogenic activities on the environment.*

## CDKSK-206-2102: Community Social Responsibility

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Unit Description

This key skill presents the opportunity for MQF level 2 learners to explore their individual self and their social environment whilst also reflecting about future goals. Learners will identify and understand different aspects of their personal self, whilst reflecting upon what composes their self-confidence. Learners will also become familiar and grasp different life skills that would empower them to explore their surroundings and become responsible and inclusive members in society.

The learners will also be presented with tools and techniques, which will assist them in becoming more employable whilst honing their organisational skills. Through the completion of a compulsory community work experience, learners will recognise the benefits of self-management skills towards the acquisition of balance within one's lifestyle. The completion of the compulsory community work project will also present the ideal opportunity for the learners to analyse their experience and evaluate their own performance.

### Learning Outcomes

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

1. *Identify personal attributes and experiences that influence the development of the self.*
2. *Examine ways and means towards becoming more employable.*
3. *Recognise responsible interactions between the individual and the surrounding communities.*
4. *Explain duties and requirements for engaging in a community work experience.*

## CDKSK-206-2006: Mathematics

Unit level (MQF/EQF): 2

Credits: 6

Delivery Mode: Face to Face

Total Learning Hours: 150

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### Unit Description

This unit aims to develop basic mathematical knowledge and skills needed in real-life situations. In a supportive environment, the student will be challenged to understand mathematical problems, reflect on different plans that could be used to solve the given problem, attempt an answer and check the validity of an answer to the problem. By the end of this unit, students will be able to describe orally or in writing the reasons behind the mathematical arguments used and to break down complex problems into smaller and simpler problems. These problems will involve:

- (a) numerical calculations,
- (b) classification of shapes,
- (c) understanding and simple application of symbolic notation,
- (d) communication in graphical form,
- (e) manipulating simple algebra, and
- (f) extraction and interpretation of information from statistical tables and charts.

### Learning outcomes

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

1. *Compute numerical calculations by showing all the necessary working.*
2. *Carry out harder numerical calculations.*
3. *Collect data and represent it graphically.*
4. *Use simple algebraic formulae.*
5. *Draw and work with lines, shapes and objects.*
6. *Read and use measurement scales.*