MQF/EQF Level 2

IT2-01-21
IT2-01-21G

Foundation Certificate in ICT

Course Specification

Course Description

The ICT industry is a dynamic sector which requires a number of technical people to cope with the constantly evolving computing technologies. IT persons offer support in these technologies and help other IT specialists in their daily job. The Foundation Certificate in ICT offers knowledge in basic skills as well as knowledge in the fundamentals of computer systems, programming skills, computer graphics, and the creation of ICT projects. This programme of study is not intended to prepare the learner for immediate employment, however it is the first in a string of programmes that will eventually prepare the learner to embark on a career within the computing industry.

Programme Learning Outcomes

At the end of the programme the learner is able to

1. *Identify the main hardware components of a computer system;*
2. *Carry out simple programming tasks using a high level language;*
3. *Use multimedia applications to present information;*
4. *Provide a solution for a given IT project.*

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[23]/Bachelor (Hons.)[24] 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[25]	60-120	
Level 4	Pre-Tertiary Certificate	30	Less than 120
	VET Level 4 Programme[26]	120	
	MATSEC Certificate	NA	
Level 3	VET Level 3 Programme[27]	60	Less than 60
	General and Subject Certificate	NA	
Level 2	VET Level 2 Programme[28]	60	Less than 60
	General and Subject Certificate	NA	
Level 1	VET Level 1 Programme[29]	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, 4th Edition*. NCFHE.

Total number of Hours: 1500 hours

Mode of attendance: Fully Face-to-Face Learning

Duration: 1 Year

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

Target group: Learners who have completed compulsory education.

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 Għonoq Tarġa Gap,
Mosta

Institute of Applied Sciences,
Centre of Agriculture, Aquatics and Animal Sciences,
Luqa Road, Qormi

Gozo Campus
J.F. De Chambray Street
MCAST, Għajnsielem
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 though 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 joint 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

Current Approved Programme Structure

Unit Code	Unit Title	ECTS	Semester
ITCGR-206-2002	Computer Graphics	6	YEAR
ITSFT-206-1602	Programming	6	YEAR
ITSYS-206-2002	Computer Systems	6	YEAR
ITPRJ-206-2010	ICT Project	6	YEAR
CDKSK-206-2004	English	6	YEAR
CDKSK-206-2006	Mathematics	6	YEAR
CDKSK-206-2005	Malti	6	YEAR
CDKSK-206-2102	Community Social Responsibility	6	YEAR
CDKSK-206-2008	Science	6	YEAR
CDKSK-206-2107	Information Technology	6	YEAR
Total ECTS		60	/

ITCGR-206-2002: Computer Graphics

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

Unit Description

The learners will learn about two-dimensional graphics and image manipulation. Learners will be introduced to main concepts of computer graphics underlying digital image properties, image file formats and colour models. They will gain practical skills of image capturing from various sources, such as digital cameras, scanners, screen capturing, etc. as well as processing of digital images in raster graphics application. Learners will also be introduced to digital images creation and processing with vector graphics application.

Learning Outcomes

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

1. *Understand the specific terms related to computer graphics.*
2. *Perform image capturing using various methods.*
3. *Perform basic operations in raster graphics application software.*
4. *Performs basic operations in vector graphics application software.*

ITSFT-206-1602: Programming

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

Unit description

The aim of this unit is to introduce learners to the basic principles of computer programming, through the use of a visual drag and drop programming environment. The learners will have the opportunity to learn and develop basic problem-solving skills, so as to effectively apply coding principles, according to the problem definition. Learners will ensure the proper use of syntax and semantics in a programming language, once the solution has been designed.

The unit will cover basic programming concepts related to the design and implementation of event-driven applications. This will comprise the use of procedures and control structures (sequence, selection, and iteration), variables, data types, operators and arrays to reach a programming solution. Learners will be able to test and debug solutions, whilst documenting the results.

Learning Outcomes

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

1. *Understand the principles of software design and development.*
2. *Understand the basic features of event driven programming.*
3. *Use basic data structures to create an event-driven application.*
4. *Perform testing and debugging of an event-driven application.*

ITSYS-206-2002: Computer Systems

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

This unit represents the extension of Level 1 units The aim of this unit is to provide learners with a deeper understanding and practical knowledge about computer hardware, computer network connections, operating systems and application software as well as about common computer operations.

The learners will be introduced to features, application and the practical skills in upgrading, assembling, connecting, installing and configuring of the computer components and software applications. It will provide learners with the opportunity to gain basic understanding of network connections and various method of connecting to the Internet taking into consideration health and safety precautions at the workplace.

Learning Outcomes

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

1. *Practice the assembly and upgrade of an appropriate computer system.*
2. *Setup basic network interfaces and devices.*
3. *Perform operating system setup.*
4. *Perform peripheral installations.*

ITPRJ-206-2010: ICT Project

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

Unit description

The primary aim of this unit is to teach learners how to identify and solve a simple problem using ICT skills. The learner will be able to combine the two designed units at this level; mainly Programming and Computer Graphics. The learner will analyse, develop, test and document the project using a development life cycle. This course is mainly designed to give learners experience in identifying the requirements and use what they learnt to solve the problem. The project will be individually evaluated and learners will be guided to achieve the necessary scenario content to fulfil the project requirements.

Learning Outcomes

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

1. *Define a suitable problem for a basic ICT project.*
2. *Propose an ICT solution for the identified problem.*
3. *Design, implement and test the proposed ICT solution.*
4. *Present the developed ICT solution and its educational findings.*

CDKSK-206-2102: Community and Social Responsibility

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

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 learner 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-206-2004: English

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

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 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 the 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

Il-Livell tal-Unità: (MQF/EQF): 2

L-Għadd ta' Kreditu: 6

Mod ta' Tagħlim: Preżenti

Total ta' Sigħat ta' Tagħlim: 150

Deskrizzjoni tal-Unità

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

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

L-Għanijiet

Biex l-istudenti jiksbu din l-unità jridu juru li kapaċi:

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

CDKSK-206-2006: Mathematics

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

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 learner 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.*

CDKSK-206-2107: Information Technology

Unit Level (MQF/EQF): 2

Credits: 6

Delivery Mode: Fully Face-to-Face Learning

Total Learning Hours: 150

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 the 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: Fully Face-to-Face Learning

Total Learning Hours: 150

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 learner 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.*