



**MCAST**

**MQF Level 3**

**EE3-A1-21**

**EE3-A1-21G**

**Diploma in Electrical Installations**

**Course Specification**

## **Course Description**

This programme is the first stage for a learner who is interested in a career in electrical systems, such as that of an Electrician within the construction industry. It contributes towards an understanding of the relevant theory and allows learners to develop the practical skills required in this field. The programme consists of twelve modules, out of which six are vocational related and the rest are key skills related. Vocational modules focus on the basics of wiring electrical installation circuits using different cables and containment, electrical installation regulations, and health and safety requirements governing electrical installation processes. The rest of the modules provide an opportunity for learners to have adequate skills in Maltese, English, Mathematics, Information Technology and Science and Technology

## **Programme Learning Outcomes**

At the end of the programme the students is able to

- 1. Interpret and follow safety requirements in compliance with the law for electrical installations in construction environments.*
- 2. Interpret wiring regulations and requirements for domestic electrical installations.*
- 3. Design and implement domestic electrical installations to given requirements.*
- 4. Troubleshoot and repair existing single-phase electrical installations.*
- 5. Explain different ways in which electrical devices operate, and the science behind them.*

## **Entry Requirements**

MCAST Foundation Certificate;

OR

2 SEC/O-Level/SSC&P (Level 3) passes

## **Other Entry Requirements**

All applicants are asked to sit for a Medical Test in view of any Colour Blindness.

## Key Information

Awarding Body - MCAST

Accreditation Status - Accredited via MCAST's Self Accreditation Process (MCAST holds Self-Accrediting Status as per 1<sup>st</sup> 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 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 Ghonoq 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, Ghajnsielem

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

Unit Code	Unit Title	ECTS	Semester
ETELE-306-1401	Principles of Electro-Technology	6	YEAR
ETELE-306-1402	Principles of Electrical Science	6	YEAR
ETELE-306-1403	Installations (Buildings and Structures)	6	YEAR
ETELE-306-1404	Electrical Principles in Building Services Engineering	6	1
ETELE-306-1405	Electrical Installation Standards and Components	6	2
ETH&S-306-1402	Health and Safety in the Engineering Workplace	6	YEAR
CDKSK-304-1921	Mathematics	4	YEAR
CDKSK-304-1922	English	4	YEAR
CDKSK-304-1923	Maltese	4	YEAR
CDKSK-304-2108	Information Technology	4	YEAR
CDKSK-304-2103	Community Social Responsibility	4	YEAR
CDKSK-304-1925	Science	4	YEAR
<b>Total ECTS</b>		<b>60</b>	<b>/</b>

# ETELE-306-1401: Principles of Electro-Technology

Unit Level (MQF/EQF): 3

Credits: 6

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 150

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## Unit Description

This unit covers two areas: fundamentals of electricity and electrical circuit theory. Fundamentals of electricity begin with the simplified electron theory including atomic elements and free electrons, the charge and attraction, Coulomb's law, followed by basic properties of conductors, insulators and semiconductors, and ending with the practical principles of the current, voltage and resistance. Electrical symbols and mathematical prefixes are associated to each of the terms. Based on these fundamentals, a simple electrical circuit theory is defined starting from the Ohm's law. Resistance, voltage and current measurements by digital multi-meter are explained with basic measurement principles.

This is followed by practical workshop including the building of simple electrical circuits calculating the expected value of the current and measuring the actual resistance, voltage and value of the current. DC series and parallel circuits are explained first in theory and then in practice.

Electromagnetism includes explanation of magnetic flux, magnetic characteristics of material, relation between current and magnetic field, Faraday's law and forces in magnetic field. Finally, the basic electronic components (diodes, different types of transistors) are explained. The methods for solving some simple analogue circuits are explained.

## Learning Outcomes

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

1. *Explain the fundamental principles of electricity.*
2. *Understand basic methods for the analysis of electrical and electronic circuits.*
3. *Recognise basic characteristics related to magnetism and simple motor and generator theory.*
4. *Take practical measurements and analyse simple circuits.*

## **ETELE-306-1402: Principles of Electrical Science**

Unit Level (MQF/EQF): 3

Credits: 6

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 150

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### **Unit Description**

This unit covers three main areas and project work.

The first topic covers the principles of waveforms. It shows different waveforms and refers to the different points. It moves to explain the behaviour of ac voltage and current when loads of different nature are connected across ac supply. The topic gives a brief idea of the behaviour of current and voltage when a circuit is connected in series and in parallel. It also deals with ac power and its different behaviour. At this level it is not the intention of this topic to investigate ac theory in detail, but the intention is to give a person working in the electrical field an idea of the performance of ac supply.

This second topic in this unit is three phase systems. Here as well, it is not the intention of this topic to deeply understand the theory behind the issue but to give a learner who is on the field information to operate safely in such environment.

The third topic in this unit deals with motors and gives the basic requirements to a person on the field enough information to skilfully handle motors. In this part, the learner is exposed to different types of motors. The learner is encouraged to recognize the motor as well as to connect different types and configurations of motors.

The last topic in this unit, students are required to produce a small project. The intention is to expose the learners to electronic devices and their applications. It also gives the learner basic experience in the field of electronics.

### **Learning Outcomes**

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

- 1. Indicate differences across loads when connected across ac supply.*
- 2. Identify basic properties of a three phase supply system.*
- 3. Identify and connect different types of electrical machines.*
- 4. Use simple electronic devices to produce a project.*

## **ETELE-306-1403: Installations (Buildings and Structures)**

Unit Level (MQF/EQF): 3

Credits: 6

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 150

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### **Unit Description**

In this unit, learners will revise practical sides of Unit 1: Working Effectively and Safely in The Electro Technical Environment within buildings and structures, with the legal responsibilities, followed by gaining skills in using related sources of technical information and communications. The basic principles of electro - technology are reviewed by applying common technology concepts related to the circuits and cables, used in different tools and equipment for electro - technical applications in construction engineering. It is followed by health and safety consideration at the workplace. Additionally, learners will be introduced to electrical principles with an emphasis on poly-phase or three-phase electrical systems and over current, short circuit and earth fault protection. The main focus is on the installation in buildings and structures, with statutory regulations and codes of practice on electrical installations and wiring systems. Here, the supply systems, electrical installation, components and functions are defined leading to different types of wiring enclosure and the factors that determine the choice of wiring systems. In particular, grounding in apartments and complete buildings, planning and laying electrical installations by using wires and cables, basics of communication and signal installations are going to be demonstrated and guided with supervision in laboratory. Special arrangements required for baths or showers, construction, special installation sites, and agricultural and horticultural premises will be elaborated in detail. A set of practical activities, guided as well as unguided, are going to ensure the knowledge on protection from electric current, such as short circuit protection, over-current protection, hazardous voltages, wiring safety codes, basic protection and fault detection, and additional protection by using Residual-Current Device. These pave the ground for further education towards certification in electrical installations.

### **Learning Outcomes**

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

- 1. Understand the requirements for commissioning electrical systems.*
- 2. Understand different types of wiring enclosure and the factors that determine the choice of wiring systems.*
- 3. Apply wiring and grounding arrangements for domestic applications.*
- 4. Apply the requirements for inspection and testing of electrical installations.*

# ETELE-306-1404: Electrical Principles in Building Service Engineering

Unit Level (MQF/EQF): 3

Credits: 6

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 150

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## Unit Description

Building services engineering comprises mechanical engineering, electrical engineering and plumbing or public health (MEP) engineering, with electrical practice tightly linking them into a functional area of technology.

The use of electricity is an essential part of life in the modern world. Electricity provides people with the means to energise many devices, systems and processes that are a part of our technological environment. Electricity, combined with these technologies, is used to transfer energy, to provide mechanisms for control and to transmit information in a variety of forms. Basic electrical theories need to be understood and considered by all those involved in the design or installation of plant, equipment, machinery, control systems or the electrical circuitry that is required to power both mechanical and electrical services within buildings.

In this unit learners will gain essential underpinning knowledge through studying the form and function of electrical devices. They will investigate various ways of transfer, modification, transformation, and control of electrical energy. Learners will also be able to distinguish between the requirements for single and three-phase circuits, and will develop the understanding of fundamentals such as the difference between analogue and digital signals, and the relevance of these to control systems.

## Learning Outcomes

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

1. *Identify tools and use them safely and carry out simple electrical tasks.*
2. *Carry out preparation and installation of lighting wiring systems for domestic installations.*
3. *Carry out preparation and installation of a power wiring system for a domestic installation.*
4. *Carry out testing procedure.*

# **ETELE-306-1405: Electrical Installation Standards and Components in Building Services Engineering**

Unit Level (MQF/EQF): 3

Credits: 6

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 150

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## **Unit Description**

Nowadays, we understand electricity and how it works, transforming it into a tool that has allowed our world to become a comfortable and civilized place. Television, communications, the Internet, lighting, control technologies and many other things would be impossible without electricity. Yet, it is still dangerous, causing fires or even death by electrocution.

The presence of water can make it more dangerous. At high voltages, it can leap several feet through the air and kill anyone unfortunate enough to be in the vicinity. In this unit, learners will be introduced to installation standards and components. Installation standards exist to keep electricity safe and prevent harm. In this unit learners will become aware that the installation industry has to comply with a vast number of regulations and standards. Anyone wishing to become competent in this industry must become familiar with the complete range of regulations.

In fact, the industry has a defined title for anyone practicing in this field -a competent person. In these units, learners will cover the range of regulations and practices. This will set them on the path to be competent in using electrical energy safely. In particular, learners will learn about definitions and applications of home, industrial and construction engineering components, such as fuses, switches, circuit breakers, contactors, relays, timers, up to the rules and practice of installing, wiring and engaging PLCs, and UPSs and terminals.

## **Learning Outcomes**

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

- 1. Work safely in an electrical installation environment.*
- 2. Carry out preparation and installation of industrial extra low voltage systems.*
- 3. Carry out preparation and installation of metallic wiring systems.*
- 4. Carry out preparation and installation of low current single / three phase circuits and basic electric motor maintenance.*

# ETH&S-306-1402: Health and Safety in the Engineering Workplace

Unit Level (MQF/EQF): 3

Credits: 6

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 150

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## Unit Description

The unit introduces effective and safe work to learners, focusing on their wellbeing, on prolonged life of tools and equipment and on economic aspects of work. The primary goal of the unit is to introduce basic working practices in engineering and potential hazards involved. The learner will be introduced to EU regulations adopted for engineering activities and for vocational training. This unit provides learners with knowledge of material and equipment handling, as well as the use of appropriate personal protective equipment (PPE), and their classification: protection of respiratory organs, skin, eye and hearing, protective clothing and ensembles. Learners will become aware of the hazards and risks associated with different engineering tasks, working environments (for example working with high voltages, and static-sensitive devices), use of tools and equipment (both common and special), and working with dangerous materials and substances. The unit covers ways of avoiding hazards and ways to respond correctly and swiftly in case of an incident both in theory and in practice. It is important to emphasize that this represents useful knowledge that could be applied in everyday life. Since completing a job might require team effort, this unit builds team spirit as well by delivering related communication skills. Finally, the unit will introduce some important soft skills in applying knowledge and in continued learning needed for successful professional in engineering.

## Learning Outcomes

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

1. *Apply statutory regulations and organizational safety requirements.*
2. *Prepare PPE and working environment according to the task checklist.*
3. *Carry out engineering task according to safety standards.*

## CDKSK-304-2103: Community Social Responsibility

Unit Level (MQF/EQF): 3

Credits: 4

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 100

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### Unit Description

This key skill presents the opportunity for MQF level 3 learners to explore their individual self through the analysis of their core values and behavioural tendencies. This will bestow insight upon the learners, which will assist them in setting and/or recalibrating their future goals. Through the acquisition of different life skills, learners will be empowered to explore their surroundings and become more responsible towards the environment which hosts them. Delving into what constitutes responsibility towards others, the learners will be presented with the opportunity to recognise the significance of developing an adequate personal conduct.

The learners will also be presented with opportunities to develop and/or hone their management and organisational skills, which in return will assist them in becoming more employable and independent. 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 students to analyse their experience, evaluate their own performance and also generate suggestions and recommendations for future good practices.

### Learning Outcomes

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

1. *Examine the relation between personal core values and goal setting.*
2. *Practice organisational skills to establish further independence.*
3. *Identify the practice of proper personal conduct and communication within different communities.*
4. *Evaluate the engagement in a community work experience.*



## CDKSK-304-1921: Mathematics

Unit Level (MQF/EQF): 3

Credits: 4

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 100

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### Unit Description

This unit aims to develop the mathematical knowledge and skills required to apply mathematics in real-life situations. The student should be given the opportunity to engage in problem solving by: *(i)* exploring different approaches to solve a given problem; *(ii)* using appropriate strategies and language to arrive to a solution; and *(iii)* checking the validity and accuracy of the solution. The interconnectivity between different areas of mathematics should be pointed out to the student, even though some areas might require different techniques and tools (including ICT tools). The use of (scientific) calculators and ICT can be integrated in the delivery of the topics listed hereunder. The student should also be helped to develop and appreciate mathematical reasoning and deductive skills by being exposed to short proofs.

By the end of this unit, the student should demonstrate readiness and competency to independently apply mathematical techniques in solving problems, and be able to communicate findings using appropriate mathematical vocabulary and rigour. These problems will involve:

- (a) numerical calculations,
- (b) algebraic manipulation,
- (c) geometrical properties,
- (d) basic statistical analysis and
- (e) probabilistic techniques.

## Learning Outcomes

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

1. *Compute further numerical calculations;*
2. *Construct and manipulate formulae and algebraic expressions;*
3. *Construct linear equations using graphical techniques;*
4. *Apply geometrical properties of lines, shapes and solids to find lengths, angles, areas and volumes;*
5. *Summarise statistical data both graphically and numerically;*
6. *Determine the probability of single events and of the combination of independent events.*

## CDKSK-304-1922: English

Unit Level (MQF/EQF): 3

Credits: 4

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 100

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### Unit Description

This unit is targeted at learners proceeding from a Level 2 vocational programme (therefore taking into account completion of Level 2 Key Skills English) as well as those whose entry level is directly at Level 3.

In line with the Malta Qualifications Framework for Level Descriptors, English for Diploma Programmes takes into account the learning of English in terms of knowledge, skills and competences. Knowledge seeks to assess recognition of facts, principles and general concepts in a field of work or study, while skills assess the application of that knowledge in the accomplishment of tasks by employing basic methods, materials and information. In turn, competences empower the learner by giving him/her full responsibility for their accomplishment.

At Level 3, learners are expected to have sufficient knowledge of English in order to deal with everyday situations in scenarios ranging from home, work, social and public settings. General emphasis is laid on work and public settings. In their application of this knowledge, learners are required to listen to or read a range of short texts of a technical and non-technical nature, as well as information broadcast through the popular media. General understanding as well as association of ideas and inference of meaning are expected at this level. Learners should be capable of communicating in English by discussing familiar topics or vocational topics previously exposed to.

This unit encourages learners to combine their technical knowledge with their growing knowledge of general English. They will be introduced to specialised vocabulary related to their area of vocational interest: to materials and their properties, equipment and its usage, processes, tools, devices, customer service and item servicing and general workshop/laboratory practice. In addition, learners are expected to be able to write and produce short but effective work-related memoranda, personal letters, letters of application and curriculum vitae. Writing practice will be contextualised according to the various exigencies of the various institutes.

## Learning Outcomes

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

1. *Listen to and understand information obtained from a media source;*
2. *Identify and comprehend information presented textually in vocational and technical contexts;*
3. *Identify, comprehend and interpret information presented visually;*
4. *Speak and communicate ideas effectively on a range of topics ranging from the personal to the technical/vocational;*
5. *Write short, work-related correspondence in the form of memoranda, letter of application and curriculum vitae;*
6. *Research and organise information for extended technical/vocational writing.*

## CDKSK-304-1923: Malti

Il-Livell tal-Unità: (MQF/EQF): 3  
L-Għadd ta' Kreditu: 4  
Mod ta' Tagħlim: Preżenti  
Total ta' Sigħat ta' Tagħlim: 100

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### Deskrizzjoni tal-Unità

L-ilsien huwa essenzjali fl-iżvilupp intellettuali, emozzjonali u soċjali ta' kull individwu. Il- Malti mhux biss jigbor fih identità lingwistika u kulturali iżda huwa għodda ta' komunikazzjoni u interazzjoni. Permezz ta' l-ilsien Malti l-individwu jista' jesprimi dak kollu li jhoss u jkun kreattiv fil-messaġġ li jrid iwassal filwaqt li jkun espost għal oqsma oħra ta' tagħlim. Il-Malti huwa lsien ħaj li ssawwar mill-poplu Malti u għadu qiegħed jissawwar biex jibqa' għodda ta' kreattività għal kull min jużah.

### L-Għanijiet

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

1. *Jifhmu diskors standard li wieħed juża u jiltaqa' miegħu fil-ħajja ta' kuljum, kif ukoll jifhmu suġġetti marbuta ma' ġrajjet kurrenti u suġġetti personali u ta' interess professjonali u vokazzjonali;*
2. *Jifhmu testi li jikkonsistu f'diskors użat fil-ħajja ta' kuljum u fid-dinja tax-xogħol filwaqt li jifhmu deskrizzjoni ta' avvenimenti, fehmi u opinjonijiet permezz tal-qari;*
3. *Jaffrontaw sitwazzjonijiet f'kuntast ta' konverżazzjoni u jikkellmu fuq suġġetti li huma familjari jew ta' interess personali kif ukoll marbuta mad-dinja ta' kuljum u l-qasam tax-xogħol;*
4. *Jiformolaw testi fuq suġġetti li huma familjari għalih u ta' interess personali u vokazzjonali b'mod preċiż u relevanti f'dak li għandu x'jaqsam mal-lingwa Maltija;*
5. *Jhaddmu ħiliet varji għal skop ta' tagħlim, li jmorru lil hinn mil-lingwa.*

## CDKSK-304-2108: Information Technology

Unit Level (MQF/EQF): 3

Credits: 4

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 100

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### Unit Description

This unit aims to develop basic computer knowledge and skills needed in real-life situations. In a supportive environment, the learner will be challenged to understand how to use various real-life applications belonging to a productivity suite with the aim of providing to our learners the necessary skills required to use common computer applications necessary during their studies. By the time learners complete this unit they will be increasingly independent users of personal computers and will have a broad understanding of how ICT can help their learning, their work, and their social life. They will have a well-developed ability to decide when and how to use ICT and will be aware of the limitations associated with this use.

Through this unit the learners will achieve a broad knowledge of ICT and will be able to use ICT to carry out several increasingly complex tasks. They will be competent in using word processing, spreadsheet, and presentation software to create, format and finish documents, workbooks and slide shows that contains various elements. Finally, this unit also introduces the use of online communities and online tools to build and maintain an online presence.

### Learning Outcomes

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

- 1. Use a word processing application to create everyday letters and documents.  
Use a spreadsheet to produce accurate work outputs.*
- 2. Use presentation software.*
- 3. Utilise online collaboration tools.*
- 4. Use internet presence management tools.*

## CDKSK-304-1925: Science

Unit Level (MQF/EQF): 3

Credits: 4

Delivery Mode: Face-to-Face Learning

Total Learning Hours: 100

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### Unit Description

In this Level 3 key skill, learners will increase their awareness about the importance of science in our everyday life. The focus will be on natural sciences, mainly the three different areas; the living world, the physical world and the world of technology.

The focus of the living world will be on interactions between living organisms in a given environment, the dependence of animals on plants for their survival via food chains and food webs, and human life. Topics related with human life will include the position of the main body organs, anatomy and physiology of at least two organ systems, and physical health (importance of healthy food, clean water and unpolluted air; importance of balanced diet and regular exercise for physical and emotional well-being; adverse effects of drugs, alcohol and smoking; ways to avoid contamination of bacteria and viruses; role of white blood cells and misuse of antibiotics).

As part of the physical world, the learner will be more familiar with physical properties of materials, classifying objects and materials based on their physical properties, and linking the uses of objects and materials with their physical properties. Furthermore, they will enhance their knowledge on renewable and non-renewable sources of energy, using sources of energy in the immediate environment safely and economically, and energy-saving measures that can be applied at home and at work.

Related with the world of technology, the learners will discuss health and safety issues at home and in the workplace including recognising situations of risk and ways how one can avoid accidents. Also, the learners will familiarise themselves with issues related to costs and efficiency of everyday life processes by carrying out an analysis of a particular process or task in terms of energy and efficiency.

Learners will enhance their investigative skills via a project (which includes a site visit designed specifically for different institutes) in collaboration with BirdLife Malta. During a training session, lecturers will be given teaching resources and suggestions for sites to deliver the field teaching aspect and project themes. Via this learning outcome,

the learner will be empowered to take action to develop a project that addresses an environmental issue. S/he will have to analyse the data, interpret and evaluate findings and then communicate them to their colleagues. The learner should realise that everyone can do something which will make a difference and that action can take place not only at the personal level but also at other levels such as community, national and international levels. Learners should understand ecosystem services and recognise that they can be used in all careers to save time, money, resources etc. but that they need to be respected for this to be possible.

## **Learning Outcomes**

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

- 1. Observe and classify objects in the immediate environment;*
- 2. Link scientific knowledge with everyday life situations;*
- 3. Research local environmental issues and use problem solving skills to investigate sustainable solutions;*
- 4. Use scientific knowledge to improve everyday life.*