MCAST

MCAST PROGRAMMES - PUBLIC INFORMATION TEMPLATE (FULL TIME)

Institute	Institute of Engineering and Transport
Department	Electrical and Electronic Department

Programme Title	Diploma in Electrical Installations				
Course Code *To be filled in by Admissions Dept.*	EE3-A01-25		**If the programme includes a WBL element, How is it accredited?**	Apprenticeship	
MQF/ EQF Level	Level 3	**Type** *(refer to Appendix 1 for Parameters)*	Qualification	**Awarding Body**	MCAST – Malta College of Arts, Science and Technology
Accreditation Status	Accredited via MCAST's Self Accreditation Process (MCAST holds Self-Accrediting Status as per 1st schedule of Legal Notice 296/2012)				
Mode of Delivery	Face to Face	**Duration** *(Academic Years or Semesters)*	1 Year	**Mode of Attendance**	Full-time
Total Number of Credits	60 credits	**Total Learning Hours** *(25 Total Learning Hours for each ECTS)*	1500 hours		
Target Audience	Ages 16 - 65	**Target Group** *(the type of learners that the educational institution anticipates joining this programme)*	Learners who have completed compulsory education.		
Programme Fees	There are no fees applicable to Maltese and other EU Nationals (as will be evidenced by their Identity Document) Fees apply for other International Applicants… for fee information and any related updates it is best to communicate with MG2i International through applyinternational@mcast.edu.mt One may consider checking about possible eligibility or otherwise for any exemption from fees by contacting the relevant section within MEYR (Floriana) – or visit the servizz.gov.mt website here				
Date of Next Student Intake	For further information regarding upcoming student intake and applications time windows for same kindly click here				
Language of Instruction	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.				
Application Method	Applications to full-time courses are received online via the College Management Information System. Applicants can log-in using Maltese Electronic ID (eID) in order to access the MCAST Admissions Portal directly and create one's own student account with the identity being verified electronically via this secure service. Non-EID applicants need to request account creation though an online form after that they confirm that their local Identification Document does not come with an EID entitlement. . Once the identity is verified and the account is created on behalf of the applicant, one may proceed with the online application according to the same				

	instructions applicable to all other applicants. For more information about how to apply online for a course at MCAST, please visit: https://mcast.edu.mt/how-to-apply-online-2/
Information for Non-EU Citizens	Non-EU candidates require a study visa in order to travel to Malta and join the course applied for (on a Full Time delivery mode). For further information re study-visa please access https://www.identitymalta.com/unit/central-visa-unit/. Further information International / TCN applicants should take note of before requesting to being considered for a programme of studies at MCAST, can be obtained through the respective FAQ found on https://mcast.edu.mt/important-information/
IMPORTANT note to Non-EU Nationals / TCNs	In instances where a TCN is applying for an MCAST programme of studies which includes Apprenticeship / Placement / Internship, it is the applicant's responsibility to check with the relevant Maltese Authority whether one would be eligible to have the necessary permits to be able to carry out the accredited Apprenticeship / Placement / Internship, success from which is expected in order to be able to successfully complete the selected programme of studies. Further information can also be obtained through the respective FAQ found on: https://mcast.edu.mt/important-information/
Address where the Programme will be Delivered	*MCAST has four campuses as follows:* **MCAST Main Campus** Triq Kordin, Paola, Malta *All courses except for courses delivered by the Institute for the Creative Arts, the Centre of Agriculture, Aquatics and Animal Sciences and the Gozo Campus are offered at the Main Campus address (above).* *Courses delivered by the Institute for the Creative Arts, the Centre of Agriculture, Aquatics and Animal Sciences, or the Gozo Campus, are offered in one of the following addresses as applicable:* **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 *In the case of courses delivered via Online Learning, students will be following the programme from their preferred location/address.* *Programmes delivered via Blended Learning, and which therefore contain both an online and a face to face component shall be delivered as follows:*

	○ Face to Face components – as per above address instructions ○ Online components – from the student's preferred address.
Course Description *(Refer to Programme Specification)*	This programme serves as an initial step for those who are interested in pursuing a career in electrical systems, such as that of an Electrician within the construction industry. This course is designed to provide basic theory and practice related to electrical installations, that are then enhanced through the work-based learning. The course consists of both key skill units and vocational units, of which mostly are carried out in the workshops and laboratories. This course provides a good foundation for future career opportunities in engineering and may also serve for progression to level 4 engineering courses.
Deskrizzjoni tal-Kors *(Refer to Programme Specification)*	Dan il-programm huwa l-ewwel stadju għal studenti li huma interessati f'karriera f'sistemi elettriċi, bħal dik ta' electrician fl-industrija tal-kostruzzjoni. Il-kors joffri tagħlim biex l-istudenti jifhmu t-teoriji rilevanti u jiżviluppaw il-ħiliet prattiċi meħtieġa f'dan il-qasam. Dawn il-ħiliet jiġu msaħħa bl-esperjenza tax-xogħol, fl-apprentistat. Il-kors jikkonsisti f'numru ta' suġġetti relatati mal-ħilijiet ewlenin u dawk vokazzjonali, li jiġu mgħallma ġol-workshops u l-laboratorji. Dan il-kors jipprovdi bażi tajba ghall-opportunitajiet fl-inġinerija u jista' wkoll iservi bħala progressjoni għall-korsijiet f'livell erbgħa tal-inġinerija.
Career Opportunities:	Assistant Electrician, Assistant Technician, Machine Operator
Entry Requirements *(Refer to Prospectus / Course Page on MCAST website)*	Internal Progression Route… Any MCAST MQF Level 2 Foundation Certificate OR 2 SEC / SSC&P or equivalent with a Pass Grade / Level 3 Applicants must present an official document, showing a positive clearance following a Colour Vision Assessment / Test, as approved by REWS as the Regulatory Authority in this area.
Other Notes related to this Programme, and which are to be taken note of	When submitting online application for this course, a scan of the original and official Colour Vision Test result needs to be uplaoded together with all other documentation required.
Programme Learning Outcomes *(Refer to Programme Specification)*	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.
Teaching, Learning and Assessment Procedures	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 pertaining to this Programme's MQF/EQF level available at: link https://www.mcast.edu.mt/college-documents/, apply.
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. All full time 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 (where applicable) are graded on a Pass/Fail basis only.

	Some units which follow industry standards and regulations may also be graded on a Pass/Fail basis as per programme regulations referred below. Detailed information regarding the grading system may be found in the Programme Regulations pertaining to this programme's MQF/EQF Level available at: https://www.mcast.edu.mt/college-documents/ (Refer to DOC 003, 004 and 005)
Exit Point (where and as applicable)	Where a student will not make it to the Final Certification achievable from this Programme of Studies (as per Programme Regulations), one might wish to look into Exit Point possibilities as may be applicable to this programme for studies. Further information, is available at https://www.mcast.edu.mt/college-documents/, kindly refer to *DOC 077 Procedure for the processing of Claims for Certificates at Interim Exit Points.*
Contact details for Further Learning Opportunities	The MCAST Career Guidance Team, offers the service of qualified and experienced Career Advisers who will be very willing to discuss with potential applicants the course which best achieves one's career ambitions, as well as exploring one's education route, or similar. **MCAST Career Guidance** Tel: 2398 7135/6 Email: career.guidance@mcast.edu.mt
Regulatory Body/ Competent Authority Contact Details *(where applicable - in the case of a programme leading to Regulated Profession)*	Not Applicable

Programme Structure	Unit Code	Unit Title	ECTS	Year	Semester
	ETELE-305-2301	Principles of Electro-Technology	5	1	1
	ETELE-305-2302	Principles of Electrical Science	5	1	2
	ETELE-305-2303	Installations (Buildings and Structures)	5	1	Year
	ETELE-306-1404	Electrical Principles in Building Services Engineering	6	1	1
	ETELE-306-1405	Electrical Installation Standards and Components in Building Services Engineering	6	1	2
	ETELE-303-2304	Health and Safety	3	1	Year
	ETWBL-306-2308	Work-Based Learning in Engineering	6	1	2
	CDKSK-304-2313	English	4	1	Year
	CDKSK-304-2314	Mathematics	4	1	Year
	CDKSK-304-2315	Il-Malti	4	1	Year

	CDKSK-304-2501	Community Social Responsibility	4	1	Year
	CDKSK-304-2317	Science and Technology	4	1	Year
	CDKSK-304-2316	Information Technology	4	1	Year

Allocation of Total Learning Hours (per Unit)	The total learning hours required for each unit or module are determined as follows:			
	Credits (ECTS)	**Indicative contact hours[1]**	**Self-Learning and Assessment Hours[3]**	**Total Student workload (hrs)[2]**
	1	5 – 10 hrs	20 - 15 hrs*	25 hrs
	2	10 – 20 hrs	40 - 30 hrs*	50 hrs
	3	15 – 30 hrs	60 - 45 hrs*	75 hrs
	4	20 – 40 hrs	80 - 60 hrs*	100 hrs
	6	30 – 60 hrs	120 - 90 hrs*	150 Hrs
	9	45 – 90 hrs	180 - 135 hrs*	225 hrs
	12	60 – 120 hrs	240 - 180 hrs*	300 hrs
	Note: The 'Self-Learning and Assessment Hours[3]' amount to the difference between the 'Indicative Contact Hours'[1] and the 'Total Student Workload'[2]			

APPENDIX 1

MINIMUM CREDITS FOR QUALIFICATIONS AT DIFFERENT LEVELS

MQF Level	Minimum ECTS Required for a Qualification*
8	
7	30
6	180
5	30
4	30
3	60
2	60
1	40

* Programmes assigned fewer ECTS than indicated will be classified as Awards.

Reference: Fig.1: p48, Malta Further and Higher Education Authority (MFHEA) (October 2024). Referencing Report, 5th Revised Edition.

APPENDIX 2

EXAMPLES OF QUALIFICATION TYPES AT A SPECIFIC MQF LEVEL

MQF Level	Examples of qualification types at a specific MQF level (The list in this column is not exhaustive)	Number of ECTS *
8	Doctoral Programmes:	
	PhD	N/A
	Professional Doctorate	180
7	Master's Degree	90
	Postgraduate Diploma	60
	Postgraduate Certificate	30
6	Bachelor's Degree	180
	Bachelor's Honours	240
5	Undergraduate Higher Diploma	90
	Undergraduate Diploma	60
	Undergraduate Certificate	30
	VET Level 5	60
4	Advanced Diploma	120
	Pre-Tertiary Certificate	30 - 60
	MATSEC Matriculation Certificate (Advanced and Intermediate)	N/A
	VET Level 4	120
3	Certificate	60
	MATSEC Secondary Education Certificate	N/A
	VET Level 3	60
2	Foundation Certificate	60
	MATSEC Secondary Education Certificate	N/A
	VET Level 2	60
1	Introductory Certificate	40
	VET Level 1	40

* Programmes assigned fewer ECTS than indicated will be classified as Awards.

Reference: Fig.2: p48, Malta Further and Higher Education Authority (MFHEA) (October 2024). Referencing Report, 5th Revised Edition.

ETELE-305-2301: Principles of Electro-Technology

Unit Level (MQF/EQF): 3
Credits: 5
Delivery Mode: Face-to-Face Learning
Total Learning Hours: 125

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-305-2302: Principles of Electrical Science

Unit Level (MQF/EQF): 3
Credits: 5
Delivery Mode: Face-to-Face Learning
Total Learning Hours: 125

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-305-2303: Installations (Buildings and Structures)

Unit Level (MQF/EQF): 3
Credits: 5
Delivery Mode: Face-to-Face Learning
Total Learning Hours: 125

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

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

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 our 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.*

ETELE-303-2304: Health and Safety

Unit Level (MQF/EQF): 3
Credits: 3
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 75

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 learner will be able to:

1. *Interpret the basics of occupational health and safety*
2. *Identify a safe working environment whilst using Personal Protective Equipment (PPE) appropriately*
3. *Carry out an engineering task according to safety standards.*

CDKSK-304-2313: English

Unit Level (MQF/EQF): 3
Credits: 4
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 100

Unit Description

This unit is targeted at learners proceeding from a Level 2 vocational programme as well as those whose entry level is directly at Level 3. It therefore takes into consideration both learners who have successfully passed their L2 English unit as well as those who have sat for, or are resitting, their SEC English Language (Y11).

At Level 3, learners are expected to have an intermediate knowledge of English which allows them to independently communicate on topics and scenarios related to everyday situations, these ranging from home, school, and work to social and public settings. For the purposes of bridging linguistic skills with vocational contexts, general emphasis is laid on work and public settings.

English at Level 3 encourages learners to combine their technical knowledge of their vocational subject with their growing knowledge of general English. They will be introduced to specialised vocabulary and information related to their area of vocational interest, to descriptions of materials and their properties, equipment and its usage. They will be exposed to video content and a range of short texts of a technical and non-technical nature, as well as learn how to conduct basic research to produce short but effective work or discipline-specific documents. A fuller understanding of spoken and written English as well as proper association of ideas are also expected at this level.

Learning Outcomes

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

4. *Retrieve and interpret information obtained from spoken conversation, a presentation, or a media source.*
5. *Communicate information and ideas verbally on a range of topics, ranging from the vocational to the discipline-specific.*
6. *Retrieve and interpret information present in vocational or discipline-specific texts.*
7. *Show how ideas, whether complementary or contrasting, are to be organised and presented.*
8. *Write short work-related texts, observing format, tone, and style.*
9. *Write longer vocation or discipline-specific texts based on researched information.*

CDKSK-304-2314: Mathematics

Unit Level (MQF/EQF): 3
Credits: 4
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 100

Unit Description

This unit aims to help students understand key mathematical concepts and gain the necessary skills, to be able to use mathematics as a problem-solving and a communication tool in their everyday life and the vocational area they are studying. This unit comprises of three main components: a compulsory component, an elective component and a compulsory final project.

The compulsory component includes one compulsory learning outcome whose mathematical content and respective criteria are key in everyday life and across all vocational areas. On the other hand, the elective component is made up of a set of elective learning outcomes which include mathematical content and respective criteria whose relevance varies across different vocational areas. Consequently, every Institute can select the learning outcomes (50 marks) whose content and criteria will help students in the particular vocational area.

Moreover, this unit will give students the opportunity to use mathematics in a project related to the vocational area they are studying. Consequently, students will experience the relevance of the subject at first-hand and hence engage better in their vocational studies.

Considering the importance of technology in today's world, technological tools, such as scientific calculators and computer software, will be used to assist students in their work and enhance their understanding and confidence in the subject.

By the end of this unit, students should demonstrate readiness and competency to independently apply mathematical techniques in solving problems and be able to communicate findings using appropriate vocabulary and rigor.

Core Learning Outcomes

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

1. *Compute numerical calculations involving fractions, decimals, percentages and units of measure.*
2. *Apply Mathematics in a practical way.*

Elective Learning Outcomes

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

1. *Apply basic numerical skills in personal, household and business financial contexts.*
2. *Carry out algebraic manipulations.*
3. *Use algebra and graphs to derive information from straight lines and their equation.*
4. *Work with shapes and angles.*
5. *Summarise and interpret statistical data both graphically and numerically.*

CDKSK-304-2315: Il-Malti

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

Deskrizzjoni Ġenerali tal-Unità

Il-Malti huwa l-ilsien nazzjonali tal-pajjiż. Huwa l-ilsien nattiv tal-istudenti li se jkunu qed isegwu din l-unità. Għaldaqstant m'hemmx dubju dwar l-importanza li l-istudenti għandhom ikunu profiċjenti fi lsien pajjiżhom, l-ilsien li ġeneralment iridu jikkomunikaw bih, kemm fil-ħajja tagħhom ta' kuljum u b'mod speċjali fuq il-post tax-xogħol.

Din l-unità hija msejsa fuq l-erba' ħiliet prinċipali tal-lingwa: 1) il-Qari; 2) is-Smigħ; 3) il-Kitba u 4) it-Taħdit. L-għan prinċipali ta' din l-unità huwa li l-istudenti jiġu mħarrġa f'dawn l-erba' ħiliet biex jibnu fuq dak li diġà jafu u jkomplu jtejbuh. Fil-fatt, il-livell ta' din l-unità jkompli jittarraġ fuq il-livell miksub fl-unità tat-tieni livell. F'din l-unità, il-materjal kopert ikun aktar kumpless mill-materjal tal-unità preċedenti partikularment fejn jidħol vokabolarju tekniku marbut mal-qasam vokazzjonali. F'din l-unità l-istudenti huma mistennija wkoll jaħdmu b'aktar awtonomija u responsabbiltà u jkunu mħeġġa jieħdu aktar inizjattiva waħedhom.

Il-kuntest tat-tagħlim u t-tgħallim tal-erba' ħiliet huwa ġeneralment marbut mal-qasam vokazzjonali tal-istudenti. Għaldaqstant, f'din l-unità l-istudenti se jkunu preżentati prinċiparjament b'materjal bil-Malti li jinteressahom mill-qrib u li se jkompli jkabbar l-għarfien ġenerali tagħhom dwar il-qasam vokazzjonali magħżul minnhom. Temi kurrenti oħra dwar il-ħajja ta' kuljum jistgħu wkoll jiġu preżentati u mistħarrġa. It-temi mistħarrġa f'dan il-livell jitolbu aktar impenn minn dawk tat-tieni livell u l-kuntesti tat-temi jistgħu ma jkunux dejjem ta' natura familjari mal-istudenti.

Il-qari, is-smigħ, il-kitba u t-taħdit huma l-qofol tal-komunikazzjoni. Kull persuna Maltija għandha tħossha kunfidenti meta tiġi biex tikkomunika bil-Malti, kemm verbalment u kemm bil-kitba. Biex l-istudenti jtejbu l-Malti miktub tagħhom, f'din l-unità se tkun qed tingħata wkoll importanza lill-ortografija, b'enfasi fuq ir-regoli tal-grammatika. L-għan mhuwiex li l-istudenti jsiru familjari ma' listi ta' termini grammatikali jew li l-istudenti jaħdmu eżerċizzji ripetuti tal-grammatika. L-għan hu li jkunu jafu jħaddmu r-regoli tal-grammatika biex jiktbu b'Malti ortografikament tajjeb. Dan se jkun qed isir dejjem f'kuntest, b'mod partikulari f'kuntest marbut mal-qasam vokazzjonali tal-istudenti. F'din l-unità, se tkun ukoll qed tingħata importanza partikulari lid-deċiżjonijiet meħuda mill-Kunsill Nazzjonali tal-Ilsien Malti fl-2008 (Deċiżjonijiet 1) u fl-2018 (Deċiżjonijiet 2).

Il-Kisbiet mit-Tgħallim

Biex l-istudent jikseb din l-unità irid juri li kapaċi:

1. *Jidentifika t-tifsir primarju u sekondarju ta' testi moqrija aktar kumplessi.*
2. *Jagħraf il-messaġġi diretti u indiretti ta' kuntesti ta' smigħ aktar kumplessi.*
3. *Jipproduċi kitbiet b'temi tekniċi u aktar kumplessi.*
4. *Jikkomunika b'Malti tajjeb dwar suġġetti tekniċi u aktar kumplessi permezz tat-taħdit.*
5. *Japplika r-regoli tal-grammatika tajjeb għal tisħiħ fl-ortografija.*

CDKSK-304-2501: Community Social Responsibility

Unit Level (MQF/EQF): 3
Credits: 4
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 100

Unit Description

This key skill presents an opportunity for MQF level 3 learners to work upon their analysis and evaluation capabilities, whilst working upon various employability skills. Through the compilation of a write-up, the learners will be drafting a personal biography, which highlights some of their achievements and future aspirations. The write-up will also feature the rationale behind the selection of a specific community work experience. Additional information, descriptions and anecdotes related to the community work will be provided via visual and written means.

As each learner goes through this educational journey, opportunities for social interactions and practical groupwork activities will also be presented. Through these opportunities, students will further grasp the essence of teamwork and its relevance towards becoming more competitive and employable.

Following the delivery of a selected number of educational topics, some of which targeting 'The 2030 Agenda for Sustainable Development', the learners are to select a topic of preference and deliver relating information through a public speech. The main essence of the contents of the speech are to be acquired through referenced research. The learners are to increase the success rate of their speech delivery through the proper structuring and compilation of a visual medium compiled via software, such as PowerPoint / Canva.

Additionally, learners will also be presented with multiple opportunities to conduct self-reviews and evaluations during assessment periods. This practice is embedded within all of the assessments, these being the write-up, the teamwork activity, and the presentation. Educators will guide the learners into practicing and understanding the importance of analysing and evaluating information and oneself, as, apart from increasing one's employability skills, this brings forth numerous opportunities for growth.

Learning Outcomes

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

1. *Organise selections of information within a write-up.*
2. *Shows the ability to work in teams.*
3. *Elaborate upon a topic and/or issue in front of an audience.*
4. *Appraise the quality of one's own effort and contributions within assigned tasks.*

CDKSK-304-2317: Science and Technology

Unit Level (MQF/EQF): 3
Credits: 4
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 100

Unit Description

This unit enables learners to explore the role of science in a wider context. **This unit has eight elective learning outcomes, from which four must be selected by the institute.** Depending on the selection of the elective criteria, this unit enables learners to explore the role of science in a wider context. The learning outcomes will focus on the ethical issues in science and health literacy. Learners will understand the meaning of ethics and the importance of ethics in scientific research and development. They will also learn about the importance of health literacy and to understand and use information to make decisions about their health. The learners may also more familiar with the physical and chemical principles related to their individual vocational area. Also, they will understand the connection between climate change and human health. This learning outcome will help the learner understand how our vocational area and everyday life contribute to climate change. Furthermore, the impact of climate change on own personal life will be assessed. Learners may also enhance their investigative skills through a site visit applicable to vocational areas, for example to include option to visit – quarry, scrap yard, waste disposal area, amongst other. During this session, the learners will be empowered to take action to develop a project that addresses, for example, an environmental issue.

Elective Learning Outcomes

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

1. *Investigate ethical issues in science and scientific developments.*
2. *Use information and services to make informed health-related decisions.*
3. *Investigate processing of materials relevant to individual vocational area.*
4. *Apply chemistry principles to vocational area of practice.*
5. *Identify basic chemical reactions.*
6. *Identify the connection between climate change and human health.*
7. *Carry out a fieldwork session related to scientific research and development.*
8. *Identify the link between the physical world and everyday day life situations.*

CDKSK-304-2316: Information Technology

Unit Level (MQF/EQF): 3
Credits: 4
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 100

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 become competent in using word processing, spreadsheet, and presentation software to create, format and finish documents, workbooks and slide shows that contain various elements. This unit also introduces terms related to artificial intelligence and how it is being used in real life situations, information literacy and the use of online communities and online tools to build and maintain an online presence.

Elective Learning Outcomes

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

1. *Use Office Productivity Essentials to create documents and presentations.*
2. *Identify concepts related to Artificial Intelligence.*
3. *Use Online Essentials Tools.*
4. *Identify concepts related to Information Literacy.*
5. *Use a spreadsheet to produce accurate work outputs.*