MCAST

MCAST PROGRAMMES - PUBLIC INFORMATION TEMPLATE (FULL TIME)

Institute	Institute of Engineering and Transport
Department	Building Services Department

Programme Title	Diploma in Welding and Fabrication				
Course Code *To be filled in by Admissions Dept.*	BL3-A08-25		**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)*	-		
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:* o Face to Face components – as per above address instructions

	○ Online components – from the student's preferred address.
Course Description *(Refer to Programme Specification)*	This Apprenticeship course combines theoretical knowledge with practical training, both in College-based industrial workshops and in industry-based apprenticeships. Learners will be expected to participate individually and in teams to fabricate welded products. Learners will have the opportunity to use hand and power tools as well as welding sets, giving particular attention to health and safety considerations. This course also provides learners with the opportunity to further develop their knowledge of key skills subjects such as Mathematics, Science, English, Maltese, Information Technology
Deskrizzjoni tal-Kors *(Refer to Programme Specification)*	Dan il-kors ta' Apprendistat jikkombina l-għarfien teoretiku mat-taħriġ prattiku, kemm f'workshops industrijali bbażati fil-Kulleġġ, kif ukoll waqt l-apprendistat fl-industrija. L-istudenti jkunu mistennija jipparteċipaw b'mod individwali u f'timijiet biex jiffabbrikaw prodotti wweldjati. L-istudenti jkollhom l-opportunità li jużaw għodod tal-idejn u tal-elettriku, kif ukoll settijiet tal-iwweldjar, filwaqt li tingħata attenzjoni partikolari għal kunsiderazzjonijiet tas-saħħa u s-sigurtà. Dan il-kors jipprovdi wkoll lill-istudenti l-opportunità li jkomplu jsaħħu l-għarfien tagħhom fir-rigward tas-suġġetti tal-ħiliet ewlenin, bħall-Matematika, ix-Xjenza, l-Ingliż, il-Malti, it-Teknoloġija tal-Informazzjoni.
Career Opportunities:	Welding and Fabrication Tradesperson
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
Other Notes related to this Programme, and which are to be taken note of	-
Programme Learning Outcomes *(Refer to Programme Specification)*	At the end of the programme the students is able to 1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task. 2. Produce simple patterns, developments and templates to fabricate from thin steel plates. 3. Identify materials and compare their properties. 4. Carry out Oxy-Acetylene Gas Welding, Manual Metal Arc Welding and Metal Inert Gas Welding.
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
	ETW&F-305-2301	Health and Safety in the Engineering Workplace	5	1	Year
	ETW&F-305-2302	Building Drawings & Setting Out	5	1	Year
	ETW&F-305-2303	MMA Welding Technology and Practice	5	1	Year
	ETW&F-305-2304	Fabrication Technology	5	1	Year
	ETW&F-305-2305	TIG Welding Technology and Practice	5	1	Year
	ETW&F-305-2306	Welding & Fabrication Practice	5	1	Year
	ETAPP-306-2307	Vocational Competences in Welding and Fabrication	6	1	Year
	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.

ETW&F-305-2301: Health and Safety in the Engineering Workplace

Unit level (MQF/EQF): 3
Credits: 5
Delivery Mode: Fully Face-to-Face Learning
Total Learning hours: 125

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

Upon 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.*

ETW&F-305-2302: Building Drawings and Setting Out

Unit level (MQF/EQF): 3
Credits: 5
Delivery Mode: Fully Face-to-Face Learning
Total Learning hours: 125

Unit Description

This unit develops learners' knowledge and skills in using manual drawing equipment like drawing board, rulers pens etc. They will learn how to draw the geometrical elements like lines, angles, parallel and orthogonal line, angle translation, circle, tangent, triangle, rectangle, polygons, ellipse, hyperbola and parabola.

The learners will adopt basic geometrical constructions, orthographic projections and sections of geometrical solids. They will learn three-dimensional presentation of geometrical solids and technical objects. They will practice the development of surfaces and drawing the sections and intersection of solids.

The learners will adopt the technical drawing skills by drawing different mechanical elements: welds, rivets, bolts, nuts, springs, wedges, axles, shafts, pulleys, gears etc. They will use drawing scales, specific views, details, rotated views, and specific symbols and dimensioning. They have to master the use of drawing equipment and media and adopt technical standards and symbols.

The learners will be familiar with workshop design, specific elements, tolerances and roughness. They will learn specific symbols for different technical fields with the purpose of making or understanding sketches.

This unit will provide learners with knowledge and skills which will enable them to understand the building construction drawings in orthographic projections or working sketches, understand the space dimension and positional settings in the selected area, and compare the built environment with elements of the structure as shown in the drawings.

In the construction industry, different drawings are used for presenting the building, crafts-work, installations, details, sections etc. The learners have to be familiar with these presentations in order to understand and participate in engineering communication.

The use of standard modern equipment and techniques is emphasised. Learners should also gain the basic understanding of computer aided drawing. They will learn how to adjust computer settings, adopt basic commands, draw the basic geometrical elements and comprehend the modelling principle. The learners will learn how to prepare themselves for upgrading the knowledge using literature and Internet.

Learning Outcomes

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

1. *Draw geometrical structures.*
2. *Recognise and interpret projections, sections and three dimensional drawings.*
3. *Produce simple drawings of mechanical elements.*
4. *Produce workshop drawings and sketches.*

ETW&F-305-2303: MMA Welding Technology and Practice

Unit level (MQF/EQF): 3
Credits: 5
Delivery Mode: Fully Face-to-Face Learning
Total Learning hours: 125

Unit Description

This unit is designed to provide learners with knowledge and basic skills in MMA welding through a combination of theory, practical learning and workshop experience.
Learners will learn how MMA welding devices and equipment function and how to prepare basic material, adjust the electric arc function and prepare the work place for safe and correct welding. This unit will raise awareness on the hazards in the process of welding and the importance of protection. Learners will learn how to use a variety of personal protective clothing and equipment. They will familiarise with electrical insulation, welding lead, fire and burns, arc-radiation, visible light, infra-red and ultraviolet light and electrical shock.

Learners will prepare the joint to be welded, learn how to produce a T-joint in horizontal and vertical position in two and three runs, and visually check the joint and its measurements. Learners will also learn how to prepare the square butt joint, the butt weld I-shape joint, how to weld joint on both sides and how to control check the joint. In addition, they will understand how and what to prepare for making a V-shape welded joint in the horizontal and vertical position.

Learners will have the opportunity to compare MMA with metal inert gas and Tungsten gas welding. They will learn about heat distribution, distortion and weld defects and other types of welding faults and errors and how to avoid them. They will gain knowledge about welding quality testing.

Learning Outcomes

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

1. *Identify hazards associated with MMA welding.*
2. *Prepare and use equipment and materials for MMA welding whilst applying appropriate terminology.*
3. *Produce welded joints and cuts using MMA welding process.*
4. *Check the weld quality produced by MMA welding.*

ETW&F-305-2304: Fabrication Technology

Unit level (MQF/EQF): 3
Credits: 5
Delivery Mode: Fully Face-to-Face Learning
Total Learning hours: 125

Unit Description

This unit is designed to provide learners with the knowledge of fabrication of simple metal elements and structures. They will learn about the building of metal structures by cutting, bending, and assembling processes.

Learners will learn about the cutting processes by sawing, shearing, or chiselling in manual and powered variants. They will learn about torching with hand-held torches and via numerical control (CNC) cutters. Furthermore, they will become familiar with bending done by hammering (manual or powered) or via press brakes and similar tools. And finally, learners will also learn about assembling by welding, binding with adhesives, riveting and threaded fasteners.

Learners will be familiar with steel, aluminium and copper and their properties. They will learn about different material identification and how to compare its properties. Learners will also learn about the starting materials for fabrication: structural steel and sheet metal, along with the welding wire, flux, and fasteners that will join the cut pieces. They will learn about plate material, thin sheets materials, pipes, circular forms, U bends, and right-angle bends.

Learners will learn to organize simple joining procedures and individually perform joining works taking into account safety regulations. They will learn how to read typical workshop drawing and transfer it into practice.

In addition, learners will learn about different techniques of pipe joining, types of joints and joints preparation. They will learn capillary and compression fitting, pressure and vacuum gauges, removing gases, spring supports, anchors and stops, cathodic protection, flanges, blinds and spacers.

The unit will acquaint them with basic properties of welding joints, stresses and strains in welding joints as well as faults and their rectification.

Learners will also learn how to produce templates, how to make use of standard parts and tools, and how to produce and install simple parts of structures and pipe runs.
Finally, learners will become aware of basic reasons for metal corrosion, its prevention and protection.

Learning Outcomes

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

1. *Describe the range of common methods used in fabrication engineering.*
2. *Select metals for a given application.*
3. *Determine the tolerances and bending allowance for fabricated forms.*

ETW&F-305-2305: TIG Welding Technology and Practice

Unit level (MQF/EQF): 3
Credits: 5
Delivery Mode: Fully Face-to-Face Learning
Total Learning hours: 125

Unit Description

This unit is designed to provide learners with knowledge and professional welding terminology, welding principles and techniques related to TIG welding. The learners will understand the risks of welding process, the effects of welding processes and health hazards associated with different types of welding. They will adopt the standard symbols in drawings for welded elements.

Learners will learn about function of a TIG welding machine. They will deal with the arc voltage, welding current, shielding gases and their influence.

Learners will gain knowledge about welding joints, elements, shapes and dimensions. They will learn about the function of the electrical arc, additional welding materials, and the transfer of melted material within the welded joint.

Learners will also have the opportunity to compare manual metal arc, metal inert gas and basics in Tungsten gas welding.

The unit will explain the types of welding faults and errors, technological, chemical and human factors as well as principles of avoiding such faults in TIG welding. Learners will understand the heat distribution, distortion control and weld defects.

Learning Outcomes

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

1. *Identify hazards associated with TIG welding.*
2. *Prepare and use equipment and materials for TIG welding and apply appropriate terminology.*
3. *Produce welding joints and cuts using TIG welding process.*
4. *Check the weld quality produced by TIG welding.*

ETW&F-305-2306: Welding and Fabrication Practice

Unit level (MQF/EQF): 3
Credits: 5
Delivery Mode: Fully Face-to-Face Learning
Total Learning hours: 125

Unit Description

This unit is designed to enable learners to organise the workplace in accordance to operation's plan of fabrication.

Learners will gain basic skills in cutting of metal elements by sawing, shearing, abrasive cutting and cutting by torches. They will practice metal bending by hammering and press brakes. They will practice using drilling tools, files and other fabrication tools, nibblers, guillotines, power punch. Learners will also learn steelwork assembling by welding, binding with adhesives, and riveting and threaded fasteners. They will use nuts and bolts, washers, spanners and drifts in bolted connections.

Learners will learn about access platforms, decking, walkways, stairways, ladders, railings, support-saddles, brackets, cleats, and frameworks and will acquaint themselves with gates, guards, barriers, fencing and cages.

Learners should also improve their welding skills and learn how to deal with practical fabrication tasks. Furthermore, they will learn how to ensure that welding processes are carried out in all positions using single and double V-shape joints.

The unit will also provide learners with the knowledge of dealing with practical situations to realign joints and control the welding gap if increased. Learners will also learn how to make use of metal inert gas welding after adopting its principles and techniques.

In this unit, learners will also be taught how to deliver the knowledge of oxy-acetylene gas welding and cutting techniques and procedures, how to use and handle flame cutting torches, about factors affecting product results and basics of bending and straightening.

Finally, preparation and use of equipment, tools and materials will be delivered through production of prefabricated steelwork.

Learning Outcomes

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

1. *Prepare equipment and tools for working out a steelwork.*
2. *Use equipment safely for fabricating steelwork.*
3. *Produce fabricated steelwork.*

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:

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