MCAST

MCAST PROGRAMMES - PUBLIC INFORMATION TEMPLATE (FULL TIME)

Institute	Institute of Engineering and Transport
Department	Mechanical Engineering Department

Programme Title	ALP+ Extended Diploma in Mechanical Engineering				
Course Code *To be filled in by Admissions Dept.*	ME3-A09-25alp+		**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)*	2 Years	**Mode of Attendance**	Full-time
Total Number of Credits	36 credits at MQF Level 2 and 60 credits at MQF Level 3	**Total Learning Hours** *(25 Total Learning Hours for each ECTS)*	2400 hours		
Target Audience	Ages 16 - 65	**Target Group** *(the type of learners that the educational institution anticipates joining this programme)*	Learners who have successfully completed their studies at the Alternative Learning Programme of the Ministry for 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 course is aimed at learners who have successfully completed their studies at the Alternative Learning Programme of the Ministry for Education, and are interested in pursuing further vocational studies at MQF Level 3, related to mechanical engineering. This course focuses on the knowledge and skills required for eventual employment at assistant technician level in the mechanical sector. The combination of practical experience and theoretical knowledge gained by sucessfully completing the course, will equip learners with the knowledge and skills with which they will be able to access the labour market, or alternatively, they will be eligible to continue their studies at MQF level 4 at MCAST, by selecting one of the various Advanced Diplomas offered by the College, in their preferred area of study. If learners intend to embark on an engineering career specialising particularly in the mechanical sector, then this course is recommended. This MCAST programme is designed to provide basic theory and practice that can be further enhanced through work experience. Learning takes place by attending lectures in the classroom, workshops and laboratories, and by completing projects and assignments that are often based on realistic workplace situations. The course covers the basic knowledge and practical skills, providing a good foundation for future career opportunities in engineering. Learners are exposed to a deeper knowledge in related subjects such as Mathematics, Physics, Engineering Drawing and Information Technology.
Deskrizzjoni tal-Kors *(Refer to Programme Specification)*	Dan il-kors huwa mmirat lejn studenti li jkunu temmew b'suċċess l-istudji tagħhom fil-Programm ta' Tagħlim Alternattiv (l-ALP) tal-Ministeru għall-Edukazzjoni, u huma interessati li jkomplu bit-tagħlim vokazzjonali fil-Livell 3 tal-MQF, relatat mal-inġinerija mekkanika. Dan il-kors jiffoka fuq l-għarfien u l-ħiliet meħtieġa biex eventwalment iwasslu għal impjieg fil-livell ta' assistent tekniku fis-settur mekkaniku. L-esperjenza prattika u l-għarfien teoretiku li jakkwistaw l-istudenti li jispiċċaw il-kors, jgħin biex dawn ikollhom l-għarfien u l-ħiliet meħtieġa biex jaħdmu, jew inkella, ikunu eliġibbli biex ikomplu l-istudji tagħhom fil-livell 4 tal-MQF fl-MCAST, billi jagħżlu wieħed mill-bosta programmi tad-Diploma Avvanzata fil-qasam li jippreferu. Dan il-kors huwa rrakkomandat għal dawk l-istudenti li jkollhom l-intenzjoni li jibdew karriera fl-inġinerija li tispeċjalizza b'mod partikolari fis-settur mekkaniku. Dan il programm tal-MCAST huwa mfassal biex jipprovdi t-teorija u l-prattika f'livell bażiku. Dawn jistgħu jiġu msaħħa permezz ta' esperjenza ta' xogħol. It-tagħlim iseħħ permezz ta' lezzjonijiet fil-klassi, fil-workshops u fil-laboratorji, u bit-twettiq ta' proġetti u assignments li ħafna drabi jkunu bbażati fuq sitwazzjonijiet realistiċi fuq il-post tax-xogħol. Il-kors ikopri l-għarfien u l-ħiliet prattiċi bażiċi, filwaqt li jipprovdi bażi tajba għal opportunitajiet ta' karriera fl-inġinerija fil-futur. L-istudenti huma esposti għal għarfien aktar profond f'suġġetti relatati, bħall-Matematika, il-Fiżika, l-Engineering Drawing u t-Teknoloġija tal-Informazzjoni.
Career Opportunities:	Machine Operator, Technical Operator, Assistant Technician
Entry Requirements *(Refer to Prospectus / Course Page on MCAST website)*	Applicants are expected to have completed the one-year ALP programme and obtained at least an MQF Level 1 in Maltese, English and Mathematics and an MQF Level 2 in TWO vocational subjects forming part of the ALP Programme
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 learner is able to 1. Identify the basic requirements in terms of knowledge, skills and competences related to the vocational subject area chosen. 2. Perform basic techniques related to the vocational subject of choice under supervision. 3. Apply basic techniques related to the vocational subject of choice in a practical setting, either in a laboratory, in a workshop or in a workplace setting. 4. Use standard tools and equipment in line with safety procedures.
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	Unit Code	Unit Title	ECTS	Year	Semester

Structure	ETH&S-306-1403	Basic principles and safe working practices in Engineering	6	1	1 & 2
	ETWBL-306-2307	Work Based Learning	6	1	1 & 2
	ETPLN-306-1401	Introduction to engineering services and principles of maintenance technology	6	1	1 & 2
	CDKSK-206-2307	English	6	1	1 & 2
	CDKSK-206-2308	Mathematics	6	1	1 & 2
	CDKSK-206-2309	Il-Malti	6	1	1 & 2
	CDKSK-206-2312	Community Social Responsibility	6	1	1 & 2
	CDKSK-206-2311	Science and Technology	6	1	1 & 2
	CDKSK-206-2310	Information Technology	6	1	1 & 2
	ETMEC-306-1403	Basics of metal forming	6	2	1 & 2
	ETMEC-306-1402	Principles of engineering drawing and welding processes and technology	6	2	1 & 2
	ETMEC-306-1401	Bench fitting techniques and basic machine shop practice	6	2	1 & 2
	CDKSK-304-2313	English	4	2	1 & 2
	CDKSK-304-2314	Mathematics	4	2	1 & 2
	CDKSK-304-2315	Il-Malti	4	2	1 & 2
	CDKSK-304-2501	Community Social Responsibility	4	2	1 & 2
	CDKSK-304-2317	Science and Technology	4	2	1 & 2
	CDKSK-304-2316	Information Technology	4	2	1 & 2

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.

ETH&S-306-1403 Basic Principles and Safe Working Practices in Engineering

Unit Level (MQF/EQF): 3
Credits: 6
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 150

Unit Description

The unit introduces basic principles and safe work in engineering, basics on working practices and the potential hazards involved, including EU regulation adapted for engineering activities. Topics like material and equipment handling will be covered, as well as the classification and use of appropriate personal protective equipment (PPE) for respiratory organs, skin, eyes and hearing.

Learners will be encouraged to learn about working in engineering by using available information to improve their skills and knowledge needed in engineering. This will include the need to apply safe working practices, consideration for the environment and working effectively as a part of a team. It also includes basic materials that engineers use in their everyday work, as well as the related information technology. After completing this unit, learners will be able to work safely using key engineering materials and applying basic engineering processes. They will also understand basic structural concepts in engineering and the importance of maintaining work relationships.

Learning Outcomes

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

1. *Apply safe working practices in basic engineering sectors.*
2. *Prepare personal protective equipment and the working environment.*
3. *Know the key engineering materials and basic engineering processes.*
4. *Know the basic structural concepts in engineering.*
5. *Understand the importance of maintaining work relationships.*

ETPLN-306-1401: Introduction to Engineering Services and Principles of Maintenance Technology

Unit Level (MQF/EQF): 3
Credits: 6
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 150

Unit Description

The learner will be introduced to engineering services as are normally found in manufacturing industries. These would include water systems, compressed air systems and steam. The basic principles of maintenance technology are provided and applied for regular maintenance of mechanical devices and equipment, so as to better understand the problems in maintenance, and processes like friction, lubrication and wear. On the other hand, dismantling, rebuilding and replacing device components are treated as more practical issues. Throughout this unit learners will be encouraged to assess safe and legal work procedures, as well as to operate tools and equipment safely and efficiently with regard to current legislative requirements. Learners will gain safe working practices and the knowledge of engineering environment in regard to routine inspection, lubrication, servicing and maintenance, and understand the importance of maintaining work relationships. Finally, basic knowledge and skills are provided to detect simple faults and carry out appropriate servicing/maintenance in accordance with information from fault finding.

Learning Outcomes

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

1. *Understand maintenance objectives, types, and procedures as applied to elements of engineering services.*
2. *Understand the basics of friction, lubrication and wear.*
3. *Plan and prepare for routine maintenance of simple mechanical devices/systems.*
4. *Dismantle, rebuild and replace items.*
5. *Carry out simple servicing/maintenance in accordance with fault finding.*

CDKSK-206-2307: English

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

Unit description

In this unit, the importance of communicating in our second language is highlighted as both a necessity for life as well as for education and work. The unit is built with the view that communicative competencies are the targets of the teaching process. The unit aims to empower and help students to develop communicative competences through a range of meaningful activities presented in the classroom.

Communicating in English considers all four language skills of listening, speaking, reading and writing in meaningful situations or contexts with different objects to meet one's own communication needs or social communication requirements. Communicative competencies are analysed and practised, closely related to themes and topics in a meaningful, contextualised environment. Emphasis is placed on knowing how to use a language rather than just knowing about a language.

This unit is targeted at learners proceeding from Level 1 (therefore considering successful completion of Level 1 English) as well as those whose entry level is directly at Level 2. It is assumed that no entry qualifications such as SEC English (Ordinary Level) are necessary for learners to undertake this unit. This unit is internally assessed and verified. Assessment is carried out through assignments based on the Learning Outcomes below.

Learning Outcomes

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

1. *Listen to connected speech on a range of vocational topics.*
2. *Speak effectively using appropriate register and vocabulary during communication scenarios to deliver a clear message.*
3. *Read a level-appropriate given text to identify suitable responses.*
4. *Produce organised level-appropriate text in paragraphs of simple, complete and syntactical sentences.*

CDKSK-206-2308: Mathematics

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

Unit description

Mathematics is a universal language and an important tool in everyday life. From a vocational education and training perspective, mathematics is an important subject due to its direct and indirect uses in various vocational practices. Mathematics helps students improve their problem-solving skills and supports their logical reasoning.

The aim of this unit is to help students reinforce their basic mathematical knowledge and develop their skills to endure and further their studies in vocational education.

In a supportive environment, students will be challenged to understand mathematical problems, reflect on the solutions that can be used, attempt an answer and check the validity of the answer to the problem.

In addition, considering the importance of technology in today's world, technological tools such as 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 will be able to apply simple mathematical techniques in solving problems and to describe the reasons behind the mathematical arguments used.

Learning Outcomes

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

1. *Use the basics of the number system.*
2. *Carry out numerical calculations.*
3. *Perform basic algebraic manipulations.*
4. *Draw and work with basic shapes and objects.*
5. *Use and convert basic units of measure.*
6. *Collect data and represent it graphically.*

CDKSK-206-2309: Il-Malti

Il-Livell tal-Unità: (MQF/EQF): 2
L-Għadd ta' Kreditu: 6
Mod ta' Tagħlim: Preżenti
Total ta' Sigħat ta' Tagħlim: 150

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 ewlieni 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 f'din l-unità jkompli jibni fuq il-ħiliet miksuba fl-unità tal-ewwel livell. F'din l-unità, l-istudenti se jkunu qed ikopru materjal li ma jibqax bażiku imma li javvanza kemm fil-kontenut u anki fit-tul tiegħu. F'dan il-livell, l-istudenti se jkunu mħeġġa u megħjuna jaħdmu b'aktar responsabbiltà u awtonomija.

Il-kuntest tat-tagħlim u t-tgħallim tal-erba' ħiliet jibqa' 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 tal-ewwel livell, għalkemm xorta waħda jibqgħu temi ġeneralment 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 jkomplu jtejbu l-Malti miktub tagħhom, f'din l-unità se tkompli tingħata importanza lill-ortografija, b'enfasi fuq regoli importanti 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 regoli importanti 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.

Il-Kisbiet mit-Tgħallim

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

1. *Jidentifika t-tifsir primarju ta' testi moqrija aktar impenjattivi.*
2. *Jagħraf il-messaġġi ewlenija ta' kuntesti varji ta' smigħ aktar impenjattivi.*
3. *Jipproduċi kitbiet aktar impenjattivi dwar suġġetti familjari u s-settur vokazzjonali.*
4. *Jikkomunika b'Malti tajjeb u b'mod kunfidenti dwar suġġetti differenti permezz tat-taħdit.*
5. *Japplika regoli importanti tal-grammatika għal aktar tisħiħ fl-ortografija.*

CDKSK-206-2312: Community Social Responsibility

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

Unit description

This key skill presents an opportunity for MQF level 2 learners to work upon their self-awareness, whilst contributing within a contained social environment. Learners will take time in identifying aspects of their personal self which might be seen as advantageous, and others which require attention to promote further growth. This information is to be utilised during the process of community work opportunities identification, as learners will be required to match their skills with a potential preference. The journey of identifying possible opportunities to initiate and conduct a community work experience will be mapped in advance through the development of a plan of action. A particular dedication towards compiling and abiding to classroom ground rules will directly address the need to practice and hone self-management skills and capabilities.

In line with self-regulation, the learners will be given the opportunity to practice upon their public speaking skills and the development of any tools which might boost and increase success in conveying one's message. Apart from the regular contact time, opportunities for public speaking will be presented during most of the assessment.

Learners will also be presented with multiple opportunities to conduct self-evaluation exercises – these will be regularly promoted during assessment periods, starting from an individual interview performance, followed by regular behaviour performance, and finishing with a public speaking performance evaluation. Educators will guide the learners into practicing and understanding the importance of self-evaluation, as apart from increasing one's chances for employability, this brings forth numerous opportunities for growth.

Learning Outcomes

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

1. *Execute a plan in preparation for a community work initiative.*
2. *Demonstrate self-reflective capabilities.*
3. *Carry out public speaking in front of a concise audience.*
4. *Demonstrate the real-time practice of rules and regulations.*

CDKSK-206-2311: Science and Technology

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

Unit description

In this MQF Level 2 key skill, the learners will be offered three core learning outcomes. Core learning outcomes are compulsory and will be the same for every course followed at this level. The first part of this unit specification enables learners to explore the role of science in fuelling technology. Because of science, we have complex devices like cars, X-ray machines, computers, and phones. But the technologies that science has inspired include more than just hi-tech machines. The notion of technology includes any sort of designed innovation. Whether a flu vaccine, the technique and tools to perform open heart surgery, or a new system of crop rotation, it's all technology. Even simple things that one might easily take for granted are, in fact, science-based technologies: the plastic that makes up a sandwich bag, the genetically-modified canola oil in which your fries were cooked, the ink in your ballpoint pen, a tablet of ibuprofen — it's all here because of science.

Learners will then go on to deal with sustainable energy in the Maltese Islands. The learner will review different sustainable measures both already available like photovoltaic panels and solar heater and also future possibilities like offshore wind farms.

In the third part of this unit, the learner will be taught how to formulate scientific questions and how to use these questions to understand scientific concepts. The scientific concepts to be investigated will be identified according to the learners' personal and/or vocational interests. The learners will ask scientific questions, make predictions about their findings and learn how to present the results obtained from their investigation.

This unit has five other elective learning outcomes, from which one must be selected by the institute.
Depending on the selection of the elective criteria, the learners may have the opportunity to understand basic chemical formulae. Also, they will understand Investigate the types of science related business in the Maltese islands and their socio-economic impact. Another elective is concerned with safety at the workplace. The learner will appreciate the availability and use of health and safety practices, safety clothing and other equipment. 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 visit, the learners will be empowered evaluate critically the impacts of the area related to their vocational practice. Finally learners may have the opportunity to explore organs and organ systems in more detail while also seeing the effects of daily practices on such systems.

Core Learning Outcomes

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

1. *Apply science to enhance the quality of everyday life (technology).*
2. *Identify the impact of sustainable measures for electricity generation in the Maltese Islands.*
3. *Formulate simple scientific questions to understand scientific concepts.*

Elective Learning Outcomes

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

1. *Recognise basic chemical formulae.*
2. *Investigate the application of science in the agriculture and food business sector in the Maltese Islands.*
3. *Investigate health and safety at the work place.*
4. *Carry out a fieldwork session.*
5. *Identify the link between the living world and everyday life situations.*

CDKSK-206-2310: Information Technology

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

Unit description

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

Learners will also be able to demonstrate basic knowledge skills and values of artificial intelligence, its uses, advantages and disadvantages with special attention to machine learning and computer vision in the real-world.

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

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

Learning Outcomes

Only 5 electives from 6 learning outcomes need to selected

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

1. *Manage computer essentials and file management.*
2. *Recognise online essentials and tools for students.*
3. *Use a word processing application to accomplish basic everyday tasks.*
4. *Use a spreadsheet application to input, format data and prepare charts.*
5. *Create basic presentations using presentation software.*
6. *Use Artificial Intelligence and realize its applications in everyday and industry use.*

ETMEC-306-1403: Basics of Metal and Plastics Forming

Unit Level (MQF/EQF): 3
Credits: 6
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 150

Unit Description

This unit will provide learners with the basic knowledge of a large group of modern manufacturing processes in which plastic deformation is used to change the shape of metal work pieces. In these processes the tools apply stresses that exceed the yield strength of the metal, and metal takes a shape determined by the geometry of the die which is held within a machine or a press. The fundamental knowledge of desirable material properties for metal forming and of basic types of deformation processes is covered. Special attention is given to sheet metalworking processes and accompanying bulk deformation. After completing this unit, learners will know about the principles of metal forming, machinery or presses used, tools and material used, sheet metalworking processes and bulk deformation, as well as about friction and lubrication in metal forming. The learner will also be provided with an introduction to the different types of plastics and the processes involving plastics forming.

The unit shall be covered in a descriptive manner only, excluding any calculations. In addition, given that this unit covers only industrially-based manufacturing processes; hence any workshop craft or artisan methods or related hand tools are excluded from scope.

Learning Outcomes

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

1. *Know and understand the principal types of metal working and plastics forming processes.*
2. *Know the different materials and presses used in metal forming.*
3. *Know and understand sheet metalworking processes and associated tooling/gauging.*
4. *Know and understand bulk deformation processes and associated tooling.*
5. *Know about friction and lubrication in metal forming processes.*

ETMEC-306-1402: Principles of Engineering Drawing and Welding Processes and Technology

Unit Level (MQF/EQF): 3
Credits: 6
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 150

Unit Description

Learners will be introduced to engineering communications systems such as drawings and CAD. The basic principles of welding processes and technology are explained as the most suitable way to produce complex constructions and to perform a variety of other jobs (repair, surfacing, cutting). The most common processes, Manual Metal Arc (MMA), Metal Inert/Active Gas (MIG/MAG), Tungsten Inert Gas (TIG) and Oxy-acetylene welding, will be learned and applied to the low carbon steel, as the most widely used structural material. A range of joints and simple welding positions, as used in industry, will be covered. Learners will be able to select the appropriate tools and working methods to achieve the desired outcome for each of the processes. After completing this unit learners will be capable of producing simple joints using MMA, MIG/MAG, TIG and Oxy-acetylene welding and state the risks involved, as well as how to mitigate them. This will include the safe use of equipment for MMA, MIG/MAG, TIG and Oxy-acetylene welding and application of quality assurance procedures. Learners will also learn CAD and its application to produce engineering drawings.

Learning Outcomes

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

1. *Understand and apply the conventions as used in engineering communications systems and applied to principles of welding technology.*
2. *Prepare MMA, MIG/MAG, TIG or Oxy-acetylene welding equipment and tools for safe use.*
3. *Use equipment safely for MMA, MIG/MAG, TIG and Oxy-acetylene welding of low carbon steel.*
4. *Produce welded joints safely using MMA, MIG/MAG, TIG and oxy-acetylene welding of low carbon steel.*
5. *Carry out quality assurance procedures in welding.*
6. *Produce engineering drawings using CAD software.*

ETMEC-306-1401: Bench Fitting Techniques and Basic Machine Shop Practice

Unit Level (MQF/EQF): 3
Credits: 6
Delivery Mode: Fully Face-to-Face Learning
Total Learning Hours: 150

Unit Description

The basic knowledge of simple manufacturing techniques applied to basic engineering materials is covered, including principles of manufacturing processes, machinery, tools, instrumentation, and product quality. The basic skills and knowledge needed to produce mechanical parts complying with required accuracy and surface finish are also provided. Toward this end, measurement methods and equipment are applied in accordance with manufacturing techniques used. Learners will acquire basic production engineering knowledge, and be able to carry out simple manufacturing projects. After completing this unit learners will be able to classify and apply basic manufacturing techniques; as well as to select and use appropriate measurement methods and equipment.

Learning Outcomes

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

1. *Understand and classify basic tools and tool materials.*
2. *Know and apply turning techniques.*
3. *Know and apply basic milling techniques.*
4. *Know and apply bench fitting techniques.*
5. *Apply measurement methods and use measurement equipment.*

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.

Learning Outcomes

To choose 4 Learning Outcomes out of 5:

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.*