Malta College of Arts, Science & Technology

MQF Level 5

Key Skills

Units Specification

Current Approved Programme Structure

Unit Code	Unit Title	ECVET
CDKSK-503-1903	Mathematics I	3
CDKSK-503-1904	Mathematics II	3
CDKSK-503-1905	Critical Thinking I	3
CDKSK-503-1906	Critical Thinking II	3
CDKSK-503-1907	English I	3
CDKSK-503-1908	English II	3
CDKSK-503-2005	English Proficiency	3
CDKSK-503-2006	Il-Profiċjenza fil-Malti għall-Għalliema tas-Snin Bikrin u tal-Primarja	3
CDKSK-506-2011	Malti	6
CDKSK-506-2012	Individual and Social Responsibility	6
CDKSK-506-2013	Information Technology	6
Total ECVET		42

Unit: CDKSK-503-1903 – Mathematics I

Unit level (MQF):   **5**

Credits   :   **3**

Unit description

This unit is a continuation of the Key-skills *Mathematics* level 4 Unit and further provides a framework for students to develop their mathematical thinking skills to a higher level in solving problems related to real life situations. Students develop skills and knowledge that further contribute to their personal growth, effectiveness when training, working and within the community. The unit focuses on successful achievement of key competences and skills such as processes and strategies for complex problem solving in areas of graph and game theory to solve problems related to real life situations. Skills are developed through the analysis of relevant mathematical complex tasks. Learners will learn different techniques of evaluation to be able to apply different strategies in order to solve them. Further to this, learners will develop skills for information processing, enquiry, interpretation and reasoning skills, all necessary for solving complex problems. After analysing the scenarios given, the learners will also be able to present results appropriately and communicate conclusions effectively.

On successful completion of the unit, learners will be equipped with mathematical thinking skills which make them work independently and autonomously. Learners will be highly aware of their thought process. They will be able to evaluate, reflect and reassess their strategies to solve problems effectively. They will be equipped with skills for life, to further their future studies and work employability prospects.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Use inequalities in both graphical and solution contexts;*
2. *Apply information and communication skills in representing and solving maximisation problems;*
3. *Know how to investigate and apply game theory in a given scenario;*
4. *Demonstrate evaluation skills in solving problems in a familiar game theory context.*

Unit: CDKSK-503-1904 - Mathematics II

Unit level (MQF):   **5**

Credits   :   **3**

Unit description

This unit is a continuation of the Key-skills *Mathematics I* level 5 Unit - and further provides a framework for students to develop their mathematical thinking skills to a higher level in solving problems related to real life situations. Students develop skills and knowledge that further contribute to their personal growth, effectiveness when training, working and within the community. The unit focuses on successful achievement of key competences and skills such as processes and strategies for complex problem solving in areas of statistics and probability, to solve problems related to real life situations. Skills are developed through the analysis of relevant mathematical complex tasks. Learners will learn different techniques of evaluation to be able to apply different strategies in order to solve them. Further to this, learners will develop skills for information processing, enquiry, interpretation and reasoning skills, all necessary for solving complex problems. After analysing the scenarios given, the learners will also be able to present results appropriately and communicate conclusions effectively.

On successful completion of the unit, learners will be equipped with mathematical thinking skills which make them work independently and autonomously. Learners will be highly aware of their thought process. They will be able to evaluate, reflect and reassess their strategies to solve problems effectively. They will be equipped with skills for life, to further their future studies and work employability prospects.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Describe the function of different statistical and probabilistic tools;*
2. *Use statistical and probability tools to solve complex realistic scenarios;*
3. *Solve statistical and probability scenarios;*
4. *Evaluate problems applied to sampling, estimation theories and significance testing.*

Unit: CDKSK-503-1905 – Critical Thinking I

Unit level (MQF):   **5**

Credits   :   3

Unit description

Critical Thinking is the intellectual discipline of actively and skilfully conceptualising, applying, analysing, synthesising, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication as a guide to belief and action.

This unit equips learners with sought after skills essential to the vocational and academic life. Its main focus is on frameworks of reflective practice and ideology which are exemplified through the building of a critical readership by means of close-reading techniques and reflective writing. By integrating theories of reflective writing and the nature of evidence from sources of information, this unit equips learners with the means to read, interpret, reflect and write critically and reflectively.

The application of close-reading techniques and ideology is also addressed in this unit. Close-reading is the careful, critical analysis of a text that focuses on significant details or patterns in order to develop a deep, precise understanding of the text. Ideology is also addressed, with particular focus on areas of practical research that lie at the confluence of social, political, and technological concerns.

The final aim behind Critical Thinking I is to facilitate a deep, transformative, and unique learning experience.

MCAST Critical Thinking Courses aim to develop the following intellectual attitudes and habits: fair-mindedness, independence, healthy scepticism, care and persistence, confidence in reasoning, effective reflection, intellectual courage.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Identify the different reflective frameworks that can be used to enable critical reflection and thinking;*
2. *Apply the appropriate methodology to write in an analytic reflective manner;*
3. *Apply close-reading techniques to secondary research;*
4. *Explain the importance of ideology in critical thinking.*

Unit: CDKSK-503-1906 – Critical Thinking II

Unit level (MQF): 5

Credits : 3

Unit description

Critical Thinking is the intellectual discipline of actively and skilfully conceptualising, applying, analysing, synthesising, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication as a guide to belief and action.

This unit equips learners with sought after skills essential to the vocational and academic life. Its main focus is on demonstrating how concepts of validity, reliability and credibility of information are highly necessary when formulating objective, analytical arguments and reaching sound conclusions. Furthermore, individuals who can critically interpret information and evaluate its origin, inherent biases, fallacies and strengths are known to be more perceptive, responsive to illogical argument and can formulate arguments more effectively.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Determine the main features and components of explicit arguments;*
2. *Demonstrate effectively basic logical reasoning in a given task;*
3. *Consider common flaws in argumentation;*
4. *Construct objective, analytical arguments and conclusions for chosen issue.*

Unit: CDKSK-503-1907 – English I

Unit level (MQF):   **5**

Credits   :   **3**

Unit description

This unit is intended to be run in the first semester of the first year of undergraduate degree programmes and consolidates prior knowledge, skills and competences in English reading, writing, listening and speaking by further strengthening the more academic functions of the language.

English I is intended to be an EAP (English for Academic Purposes), focusing specifically on improving learners' awareness of, and familiarity, with the core skills necessary for successful academic reading and writing in English, especially preparing them for the rigours of extended writing by research and the reading of academic sources of information.

Learners will become familiar with academic features of style and the principles and mechanics of good text structure. They will also learn how to consult, understand and use secondary material from academic sources within their field of study and effectively integrate it as part of a larger argument or body of work.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Recognise the form, content and style of academic texts;*
2. *Use an academic style of writing when working on assignments and dissertations;*
3. *Reproduce secondary content by means of direct and indirect quoting methods;*
4. *Apply proper referencing conventions when citing secondary content.*

Unit: CDKSK-503-1908 – English II

Unit level (MQF):   **5**

Credits :   **3**

Unit description

This unit is intended to be run in the second semester of the second year of undergraduate degree programmes and consolidates prior knowledge, skills and competences of Academic English by further strengthening reading, writing, listening and speaking skills as determined by the rigours of pre-dissertation research.

English II is targeted at learners who have successfully completed their degree programme's first year and exposes undergraduate students to a higher level of critical reading and writing skills demanded in the second and final years of the degree programme. This usually involves the identification and select reading of academic texts, their review and their eventual use in a research proposal, dissertation and academic presentation.

It is also the objective of this unit to train learners to be more aware of, and proficient in, spoken Academic English as this becomes a key requirement at this level of studies.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Evaluate academic sources of information when working on own dissertation;*
2. *Produce texts of an academic nature using appropriate language and style;*
3. *Communicate verbally in a manner which conveys proficiency of the subject being researched;*
4. *Respond effectively to key questions in relation to research in own field.*

Unit: CDKSK-503-2005 – English Proficiency

Unit level (MQF):   **5**

Credits   :   **3**

Unit description

This unit is intended to focus on the development of Proficiency in English and to equip learners with the knowledge, skills and competences required during their undergraduate studies.

It addresses some of the difficulties learners often encounter when speaking and writing in a specific area of study. Besides, it also aims to familiarise and prepare learners with the necessary tools to consolidate and improve English reading and listening competence. In this respect, this unit recognises the necessity to meet two linguistic demands at this threshold level: strengthening learners' linguistic competences to be able to communicate within their specific area of study and to prepare them for more rigorous academic thinking, research and writing as demanded by tertiary education.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Communicate in clear, effective and appropriate spoken English in a given context;*
2. *Read texts on contextualised topics in a critical manner to infer, analyse and evaluate information;*
3. *Explain the accurate use of English by relating it to particular grammatical structures;*
4. *Produce texts of a discursive nature using appropriate language and style.*

Unit: CDKSK-503-2006 - Il-Profiċjenza fil-Malti għall-Għalliema tas-Snin Bikrin u tal-Primarja

Unit level (MQF):   **5**

Credits   :   **3**

Deskrizzjoni tal-Unità

Din l-unità hija mmirata biex issaħħaħ il-profiċjenza fil-Malti ta' dawk il-parteċipanti li wara li jtemmu l-kors tagħhom fl-MCAST, ikunu jixtiequ jkomplu l-istudji tagħhom fl-Università ta' Malta, speċifikament fil-kors għall-Għalliema tas-Snin Bikrin u tal-Primarja fil-Fakultà tal-Edukazzjoni.

Il-professjoni ta' għalliem titlob li flimkien mal-għarfien ta' suġġetti oħra, wieħed għandu jkollu bażi tajba ħafna fil-Malti, l-ilsien nattiv ta' pajjiżna. Fil-fatt, għada pitgħada l-għalliema prospettivi li se jkunu qed jagħmlu din l-unità se jkunu f'pożizzjoni huma wkoll li jgħallmu l-Malti lil studenti oħra fil-klassijiet futuri tagħhom. Għaldaqstant, m'hemm l-ebda dubju li dan il-qasam jitlob mill-għalliema prospettivi ħafna responsabbiltà, inkluż ħakma tajba fil-Malti mitkellem u miktub, u li dawn ikunu profiċjenti u kunfidenti meta jużawh.

Biex jiksbu profiċjenza fil-Malti din l-unità taħseb biex twassal lill-parteċipanti tagħha taħriġ kontinwu u intensiv fil-qasam tal-kitba, b'mod partikulari fil-qasam tal-ortografija u tal-grammatika. Dan jinkludi b'mod partikulari (iżda mhux biss) l-għarfien u l-prattika ta' taħriġ dwar id-deċiżjonijiet meħuda mill-Kunsill Nazzjonali tal-Ilsien Malti fuq il-varjanti ortografiċi (Deċiżjonijiet 1) (2008) u fuq il-kitba ta' kliem mill-Ingliż fil-Malti (Deċiżjonijiet 2) (2018). Importanti wkoll li l-għalliema prospettivi ta' għada jkunu familjari mat-terminoloġija grammatikali tal-Malti li se jkunu qed jużaw 'il quddiem fil-professjoni tagħhom.

It-taħriġ intensiv fil-qasam tal-ortografija li din l-unità se toffri lill-parteċipanti tagħha għandu jwassal ukoll biex dawn jipproduċu kitbiet profiċjenti marbuta mal-professjoni prospettiva tagħhom. Dan se jkun qed isir b'enfasi fuq tħaddim tajjeb ta' stili xierqa, użu wiesa' ta' vokabolarju u użu tajjeb ta' punteġġjatura fost elementi oħra tal-kitba.

F'din l-unità l-parteċipanti se jkunu qed jitħarrġu wkoll fil-Malti mitkellem. F'dan il-komponent il-parteċipanti jridu juru li huma kapaċi jibnu diskussjoni tajba dwar suġġett

relatat mal-professjoni prospettiva tagħhom u/jew dwar tema kurrenti. L-użu ta' Malti tajjeb, mingħajr il-ħtieġa ta' kliem mill-Ingliż jew minn lingwi oħra bla bżonn, huwa meħtieġ biex tintlaħaq il-profiċjenza fil-parti orali ta' din l-unità. Biex l-għalliema prospettivi jgħallmu tajjeb il-Malti mitkellem lill-istudenti tagħhom, għandhom l-ewwel u qabel kollox ikollhom u juru ħakma tajba huma stess fit-taħdit tagħhom billi jużaw il-Malti b'mod xieraq u profiċjenti.

L-Għanijiet tat-Tagħlim

Fi tmiem din l-unità l-istudenti għandhom ikunu kapaċi:

1. *Japplika b'mod profiċjenti r-regoli ortografiċi u grammatikali tal-lingwa f'kuntesti differenti;*
2. *Jidentifika l-ismijiet tat-terminoloġija grammatikali użata fil-professjoni prospettiva tiegħu;*
3. *Jipproduċi kitbiet profiċjenti skont ir-regoli ortografiċi u grammatikali tal-lingwa, b'użu ta' vokabolarju wiesa' u tħaddim ta' stili xierqa;*
4. *Ifisser ruħu tajjeb u b'mod effettiv bil-Malti mitkellem kemm għal skop ta' komunikazzjoni produttiva kif ukoll dik interattiva.*

Unit: CDKSK-506-2011 – Malti

Unit level (MQF):   **5**

Credits   **:**   **6**

Deskrizzjoni tal-Unità

Lingwistikament Malta dejjem aġġornat ruħha mal-ħtiġijiet tal-Ewropa u l- Mediterran. Ġeografikament pajjiżna kien u għadu iżolat mill-bqija, u propju kien dan l-istess iżolament li ħalla impatt daqstant qawwi fuq l-iżvilupp tal-ilsien Malti. Bl-avvanz fit-teknoloġija Malta ma baqgħatx iżolata mill-bqija tad-dinja, iżda wieħed jista' jgħid li d-dinja saret villaġġ wieħed. Il-komunikazzjoni saret aktar faċli u propju għalhekk li l-Ingliż sar wieħed mill-mezzi l-aktar importanti filkomunikazzjoni internazzjonali.

Is-sħubija ta' Malta bħala membru sħiħ tal-Unjoni Ewropea f'Mejju tal-2004 reġgħat qajmet, filwaqt li kkonfermat l-imporanza tal-ilsien Malti kemm f'kuntest lokali kif ukoll dak internazzjonali. Malta huwa pajjiż li jgħix il-bilingwiżmu l-ħin kollu. Studji riċenti sabu li l-għażla tal-lingwa tagħmel differenza kbira fil-livell ta' aċċettazzjoni, emozzjonijiet li jiġu ġġenerati u r-rabta ma' prodott partikolari.

Għaldaqstant l-iskop ta' din l-unità huwa li jħejji lill-istudenti bl-aħjar mod possibli sabiex ikunu jistgħu jużaw il-lingwa Maltija b'mod tajjeb minn kull aspett biex iċċittadin Malti ma jiġix imċaħħad mill-użu tal-ebda servizz u/jew prodott mhux preżentati bil-lingwa nattiva ta' pajjiżu wkoll. L-istudenti jilħqu l-livell mixtieq ta' pproċessar u produttività lingwistika marbuta mal-ħajja ta' kuljum f'Malta llum il-ġurnata – il-qari, il-kitba, it-taħdit interattiv u l-komunikazzjoni inġenerali marbuta mad-dinja immedjata tagħhom.

Mat-tmiem ta' din l-unità, l-istudenti jkunu żviluppaw kif ukoll tgħallmu kif japplikaw firxa wiesgħa ta' kompetenzi lingwistiċi billi jkunu esperjenzaw attivitajiet lingwistiċi li jinvolvu l-ipproċessar u l-produzzjoni ta' testi ġeneriċi kif ukoll tekniċi bil-Malti, l-interazzjoni ta' taħdit u diskors ma' klijenti varji, filwaqt li japplikaw dawk l-istrateġiji meħtieġa fil-ħajja vokazzjonali tagħhom f'Malta. Għaldaqstant l-istudenti jkunu mgħammra b'dawk l-abbiltajiet meħtieġa għallħajja – kemm mil-lat akkademiku kif ukoll dak marbut mad-dinja immedjata tax-xogħol.

L-Għanijiet tat-Tagħlim

Fi tmiem din l-unità l-istudenti għandhom ikunu kapaċi:

1. *Jaqraw testi tekniċi kumplessi b'mod effettiv u effiċjenti filwaqt li jkabbru lgħarfien tagħhom fuq is-suġġett;*

2. *Jifhmu informazzjoni teknika u kumplessa ppreżentata b'mod orali fil-forma ta' diskussjonijiet, taħditiet u preżentazzjonijiet;*

3. *Jirrappurtaw informazzjoni ġenerika u teknika b'mod dettaljat u koerenti filwaqt li juru għarfien tajjeb ħafna tas-suġġett innifsu permezz tal-kitba;*

4. *Jitkellmu b'mod tajjeb ħafna f'dan il-livell filwaqt li juru għarfien tajjeb ħafna tas-suġġett innifsu permezz ta' preżentazzjonijiet orali.*

Unit: CDKSK-506-2012 – Individual and Social Responsibility

Unit level (MQF):   **5**

Credits   :   **6**

Unit description

In the contemporary society, youngsters and adults who embark on a professional programme of studies in the sector of Vocational Education and Training are expected to be well prepared to face diverse challenges arising from the rapid changing societies in which they live, both as part of their study programme in view of their employment in industry and their role as members of their society.

Individual responsibility encapsulates the most basic attitudes, preparation and character formation that both enhance and facilitate an individual's contribution to his personal development and to the well-being of his society. Psychology, sociology, ethics and spirituality have a leading role to play within this context.

As a departing point, learners should be introduced to an exercise of deep self-awareness which brings them in touch with who they really are; biological factors, family influences, lived experiences, cultural and religious influences, ethics and spirituality, traditions, identity formation and many others. This will lead to a realisation that each individual inhabits various social positions and not all those positions are valued or privileged in the same way.   Hence it is the responsibility of every individual to become critical and to seek social justice for himself and for others.

Therefore, individuals have a wider role in society, which they have to fulfil in a responsible manner. General knowledge and critical reflection on local, EU and global issues regarding health and safety, employment and the economy, education and social justice are an essential departing point for ensuing individual and social responsibilities. This can be possible through the acquisition of skills and competences that make such critical reflection translatable into concrete actions that enrich the individual personal growth and in turn positively affect the micro and macro environments inhabited by those same individuals.

Within a VET context, learners need to be prepared to be good citizens as well as good members of organisations within the industry sector. This is highly important since in

today's modern societies, organisations, which are sub-societies made up of complex interacting individuals – managers, investors, employees, customers, and so on, are also required to be ethical and act responsibly. Hence this requires that managers, employees, investors, customers and all stakeholders who influence the organisation's decisions are themselves more "socially responsible". Social responsibility is best reflected and achieved by any society when its individuals are responsible citizens who look beyond their immediate, personal interests and are willing to abide by the law and regulations of that same society, as well as respect the traditions, culture and the minority groups among them.

Above all, social responsibility requires that individuals engage in informed critical discussions about major issues that are affecting societies at large: environmental issues, multiculturalism, the threat of cultural, social and religious fundamentalism, the increasing challenge of poverty, the impact of irregular migrants reaching Europe through North African countries, the impact of technology on education and the impact of financial crisis on workers and employment opportunities, amongst several others. Provided with the right skills, youths and adults may become active participants in society so that through innovative and creative ideas and initiatives they may transform such problems into healthy opportunities for development and progress.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Demonstrate the way better understanding of the effects of psychology, sociology, ethics and spirituality in one's existence improve awareness of personal identity and positionality within Individual and Social Responsibility;*
2. *Understand the importance of critical engagement with local, EU and global issues in order to become active and responsible citizens;*
3. *Discuss contemporary major issues that affect 'societies' at large and the possible contribution of individuals at a micro and macro level in the resolution of such issues.*

Unit: CDKSK-506-2013 – Information Technology

Unit level (MQF):   **5**

Credits   :   6

Unit description

The unit aims to give the student advanced IT skills and the ability to use advanced IT tools in their day-to-day work, to analyse information and leverage other skills in real life and real work environments.

The unit builds on the IT Key Skills level 4 Unit and basic IT knowledge. Most of the outcomes within this unit require basic understanding of IT and it is highly recommended that students are already practiced in IT. Furthermore, the outcomes within this unit can be used to support each other.

On successful completion of the unit students will possess skills to keep learning more IT skills online in order to achieve their work related goals. They will also be able to use IT for a variety of advanced work related tasks.

Amongst the outcomes of this unit, the student will be able to use tools and online sources to accomplish tasks that require collaboration between people. Examples of such tasks include learning through the use of a Virtual Learning Environment; uploading and/or sharing of material produced, such as screenshots or screencasts. The student will also be able to participate in online discussions.

The student will also be able to use a tool of choice to be able to store data using some form of database. The student will later be able to retrieve that data later for manipulation and analysis.

The student will also be able to automate common and repetitive tasks using IT. This will be done through the use of a scripting language. For example, this scripting may be done through the use of macros or other scripting language related to the programs associated with the chosen task.

The last outcome will enable to student to create an online presence that enables the student to carry out some online activity with other people in an asynchronous manner. This may be achieved through the use of social media or online publishing platforms.

Learning Outcomes

On completion of this unit learners should be able to:

1. *Use IT tools for collaboration with others;*
2. *Store, retrieve and manipulate data for analysis;*
3. *Utilise IT tools and a scripting language to automate tasks;*
4. *Create and maintain an interactive online presence by making use of one or more tools to host the student's work.*