

## MCAST PROGRAMMES - PUBLIC INFORMATION TEMPLATE (FULL TIME)

| Institute of Engineering and Transp |            | Institute of Engineering and Transport |
|-------------------------------------|------------|--|
|                                     | Department | Building Services Department           |

| Programme Title                                 | Advanced Diploma in Heating, Ventilation and Air Conditioning   |   |   |            |   |                       |                                    |
|---|---|---|---|------------|---|-----------------------|------------------------------------|
| Course Code To be filled in by Admissions Dept. | BL4-A01-23  |   | If the programme includes a WBL or How is it accredi  |            |   | , Apprenti            | ceship                             |
| MQF/ EQF Level                                  | Level 4   | Type<br>(refer to Appendix<br>1 for Parameters)   | Qualif  | ication    | Awarding Body  Awarding Body  MCAST – Malta College of Arts, Science and Technology |                       | Malta College of Arts, Science and |
| Accreditation Stat                              | tus   | 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 emic Year Semester   | rs or   | 3 Years    |   | Mode of<br>Attendance | Full-time                          |
| Total Number of Credits                         | 120 credits   | Total Learning (25 Total Learning I   |   |            | 3000 h  | ours                  |                                    |
| Target Audience                                 | Ages 16 -<br>65   | (the type of learners t   | Target Group (the type of learners that the educational institution anticipates joining this  Students exiting compulsory education |            |   |                       | education                          |
| Programme<br>Fees                               | Fees apply fo updates it is to applyinternation.  One may con   | 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 |   |            |   |                       | or any exemption                   |
| Date of Next<br>Student Intake                  | For further inf   | formation regard<br>same kindly click   | • .   | oming stud | ent inta  | ke and app            | ications time                      |
| 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<br>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. |   |   |            |   |                       |                                    |



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|---|---|
|   | For more information about how to apply online for a course at MCAST, please visit: <a href="https://mcast.edu.mt/how-to-apply-online-2/">https://mcast.edu.mt/how-to-apply-online-2/</a>   |
| Information for<br>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 <a href="https://www.identitymalta.com/unit/central-visa-unit/">https://www.identitymalta.com/unit/central-visa-unit/</a> .  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 <a href="https://mcast.edu.mt/important-information/">https://mcast.edu.mt/important-information/</a> |
| IMPORTANT<br>note to Non-EU<br>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/ MCAST has four campuses as follows:   |
| Address where                                   | 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   |
| the Programme will be Delivered                 | 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  |
|   | <ul> <li>Online components – from the student's preferred address.</li> </ul>   |



| continue.  |   |
|--|---|
| Course Description (Refer to Programme Specification)                                | This programme of study gives participants the knowledge and skills that are required by the Heating, Ventilation and Air Conditioning (HVAC) industry. Learners will be expected to carry out system modifications and customization. The course is based on College-based training as well as work-based learning. Learners will gain an in-depth knowledge and experience which may lead them to supervisory roles in the HVAC sector. During the course learners are given the opportunity to develop personal skills and attributes essential for a successful performance in related careers. Applicants need to be able to work within the industries concerned.                     |
| Deskrizzjoni tal-<br>Kors<br>(Refer to Programme<br>Specification)                   | Dan il-programm ta' studju jipprovdi lill-partecipanti l-għarfien u l-ħiliet li titlob l-industrija tat-Tisħin, il-Ventilazzjoni u l-Kondizzjonament tal-Arja (HVAC). L-istudenti jkunu mistennija li jwettqu modifiki u adattamenti tas-sistemi. Il-kors huwa bbażat fuq taħriġ li jsir fil-Kulleġġ kif ukoll tagħlim fil-post tax-xogħol. L-istudenti jiksbu għarfien profond u esperjenza li jistgħu jwassluhom għal rwoli ta' superviżjoni fis-settur tal-HVAC. Matul il-kors l-istudenti jingħataw l-opportunità li jiżviluppaw ħiliet u attributi personali essenzjali biex jagħmlu suċċess f'karrieri relatati. L-applikanti għandhom ikunu kapaċi jaħdmu fl-industriji kkonċernati. |
| Career<br>Opportunities:   | Heating, Ventilation and Air Conditioning Technician, Refrigeration Technician, FGAS Licensed Technician (subject to respective authority approval)   |
| Entry Requirements (Refer to Prospectus / Course Page on MCAST website)              | Internal Progression Route Any MCAST MQF Level 3 Diploma  OR  4 SEC / SSC&P or equivalent with a Pass Grade / Level 3  Compulsory: One subject from Engineering Technology OR Design and Technology OR Chemistry OR Mathematics OR Physics  |
| Other Notes<br>related to this<br>Programme, and<br>which are to be<br>taken note of | -   |
| Programme Learning Outcomes (Refer to Programme Specification)                       | At the end of the programme the learner will be able to:  1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task;  2. Carry out installations, repairs and planned maintenance of existing systems within local refrigerant handling legislation;  3. Identify materials, refrigerants and equipment that can be used for specific applications;  4. Prepare HVAC components for operation and commissioning.  |
| Teaching,<br>Learning and<br>Assessment<br>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 <a href="https://www.mcast.edu.mt/college-documents/">https://www.mcast.edu.mt/college-documents/</a>

The Programme Regulations pertaining to this Programme's MQF/EQF level available at: link https://www.mcast.edu.mt/college-documents/, apply.

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 predetermined 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:

# Grading System

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.



|   | Regulations p  | mation regarding the grading system may be found in the Programme pertaining to this programme's MQF/EQF Level available at: ncast.edu.mt/college-documents/ (Refer to DOC 003, 004 and 005)   |  |  |
|---|--|--|--|--|
| Exit Point<br>(where and as<br>applicable)  | here and as this programme for studies. Further information, is available at |  |  |  |
| Contact details for Further Learning Opportunities  MCAST Care Tel: 2398 713  |  | Career Guidance Team, offers the service of qualified and d Career Advisers who will be very willing to discuss with oplicants the course which best achieves one's career as well as exploring one's education route, or similar.  Per Guidance  15/6  15/6  15/6  15/6  15/6  16/6  17/6  18/6 |  |  |
| Regulatory Body/ Competent<br>Authority Contact Details<br>(where applicable - in the case of a programme<br>leading to Regulated Profession) |  | Not Applicable   |  |  |

| Programme | Unit Code          | Unit Title  | ECTS | Year | Semester |
|-----------|--------------------|---|------|------|----------|
| Structure | ETHVA-405-<br>2307 | Science and Measurement within the HVACR Industry     | 5    | 1    | Year     |
|           | ETHVA-406-<br>1506 | Material, Refrigerant Handling and Pipework (Brazing) | 6    | 1    | Year     |
|           | ETHVA-405-<br>2308 | Electrical Theory and Installation Technology         | 5    | 1    | Year     |
|           | ETRFG-406-<br>1501 | Refrigeration Technology                              | 6    | 1    | Year     |
|           | ETHVA-405-<br>2309 | Schematics and Installation Coordinated Drawings      | 5    | 1    | Year     |
|           | ETHTG-406-<br>1502 | Heat Pumps  | 6    | 1    | Year     |
|           | ETHVA-405-<br>2310 | Occupational Safety in the Construction Industry      | 5    | 1    | Year     |
|           | CDKSK-406-<br>2320 | Mathematics   | 6    | 1    | Year     |
|           | CDKSK-406-<br>2319 | English   | 6    | 1    | Year     |
|           | ETRFG-406-<br>1502 | Industrial RAC Technology and Plant                   | 6    | 2    | Year     |
|           | ETPAM-406-<br>1501 | Planning and Administration                           | 6    | 2    | Year     |
|           | ETHVA-405-<br>2311 | HVAC Electrical and Control Wiring Systems            | 5    | 2    | Year     |



| CDKSK-404-     | Entrepreneurship Essentials | 4  | 2     | Year |
|----------------|-----------------------------|----|-------|------|
| 2325           |                             |    |       |      |
| CDKSK-402-     | Community Social            | 2  | 2     | Year |
| 2324           | Responsibility              |    |       |      |
| ETHVA-406-     | Ventilation and Air         | 6  | 2     | Year |
| 1509           | Conditioning Technology     |    |       |      |
| ETHVA-405-     | Programmable Logic          | 5  | 3     | Year |
| 2312           | Controllers and BMS         |    |       |      |
| ETPRJ-412-1507 | HVACR Synoptic Project      | 12 | 3     | Year |
| ETHVA-406-     | HVACR Commissioning,        | 6  | 3     | Year |
| 1507           | Alternation and Repair      |    |       |      |
| ETHTG-406-     | Heating Technology          | 6  | 3     | Year |
| 1501           |                             |    |       |      |
| ETAPP-412-     | Vocational Competences :    | 12 | 1/2/3 | Year |
| 2309           | Apprenticeship in HVAC      |    |       |      |

| Allocation of | The total learning hours required for each unit or module are determined as follows:  |                            |                               |                             |  |  |
|---------------|---|----------------------------|-------------------------------|-----------------------------|--|--|
| Total         | Credits (ECTS)  | Indicative                 | Self-Learning and             | Total Student               |  |  |
| Learning      |   | contact hours <sup>1</sup> | Assessment Hours <sup>3</sup> | workload (hrs) <sup>2</sup> |  |  |
| Hours (per    | 1   | 5 – 10 hrs                 | 20 - 15 hrs*                  | 25 hrs                      |  |  |
| Unit)         | 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' amount to the difference between the 'Indicative Contact Hours' and the 'Total |                            |                               |                             |  |  |
|               | Student Workload' <sup>2</sup>  |                            |                               |                             |  |  |



#### 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   |

<sup>\*</sup> 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, 5<sup>th</sup> 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 * |
|-----------|---|------------------|
| _         | Doctoral Programmes:  |                  |
| 8         | PhD   | N/A              |
| ·         | Professional Doctorate  | 180              |
| _         | Master's Degree   | 90               |
| 7         | Postgraduate Diploma  | 60               |
|           | Postgraduate Certificate  | 30               |
|           | Bachelor's Degree   | 180              |
| 6         | Bachelor's Honours  | 240              |
|           | Undergraduate Higher Diploma  | 90               |
| 5         | Undergraduate Diploma   | 60               |
|           | Undergraduate Certificate   | 30               |
|           | VET Level 5   | 60               |
|           | Advanced Diploma  | 120              |
| 4         | Pre-Tertiary Certificate  | 30 - 60          |
|           | MATSEC Matriculation Certificate (Advanced and Intermediate)  | N/A              |
|           | VET Level 4   | 120              |
|           | Certificate   | 60               |
| 3         | MATSEC Secondary Education Certificate  | N/A              |
|           | VET Level 3   | 60               |
|           | Foundation Certificate  | 60               |
| 2         | MATSEC Secondary Education Certificate  | N/A              |
|           | VET Level 2   | 60               |
|           | Introductory Certificate  | 40               |
| 1         | VET Level 1   | 40               |

<sup>\*</sup> 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, 5<sup>th</sup> Revised Edition.