MCAST

MCAST

Full-Time Apprenticeship Programmes

Catalogue

Academic Year 2023/24

MCAST

7th December 2023

Dear Industry Partner,

MCAST Apprentice Onboarding Event

MCAST Apprentices are steadily becoming the future workforce.

Are you looking at recruiting an MCAST Apprentice, with the possibility of retaining the Apprentice as your future employee?

MCAST is inviting you as an Employer to participate in the first edition of the **MCAST Apprentice Onboarding Event.**

This event is a face-to-face 'marketplace' where the prospective Employer meets the prospective Apprentice – **on Campus** !

The event, is being held as follows:

- **MCAST Paola Campus:** From Tuesday 16th to Friday 19th January 2024
- **MCAST Gozo Campus:** From Tuesday 23rd and Wednesday 24th January 2024

This is a **one-stop shop** opportunity intended to simplify your effort to onboard MCAST apprentices. By participating in this event, you will have the opportunity to:

1. Pitch your apprenticeship vacancy(ies) on the **MCAST Paola** and/or **Gozo Campus** directly to the MCAST students who are currently eligible for an apprenticeship work-based learning experience;
2. Hold one-to-one interviews at the **MCAST Campus** to select your prospective Apprentice(s);
3. Enter into an 'Apprenticeship Training Agreement' with your selected Apprentice during the event on the **MCAST Campus**.

This Catalogue will help you identify which MCAST Apprenticeship Programmes and their respective attendance modalities best suit your work environment.

Enquiries regarding the January event are to be sent to apprenticeship.vacancies@mcast.edu.mt

You may also contact us regarding the January event on **7902 9617.**

MCAST has this academic year launched apprenticeship programmes at MQF Level 3. The MQF Level 3 student cohorts are scheduled to start their apprenticeship during **February 2024 and conclude by August 2024**!!

Fill in the 'MCAST Apprentice Onboarding Event Registration Form' via URL link provided in the email. We look forward to hosting you on campus at the **MCAST Apprentice Onboarding Event**!
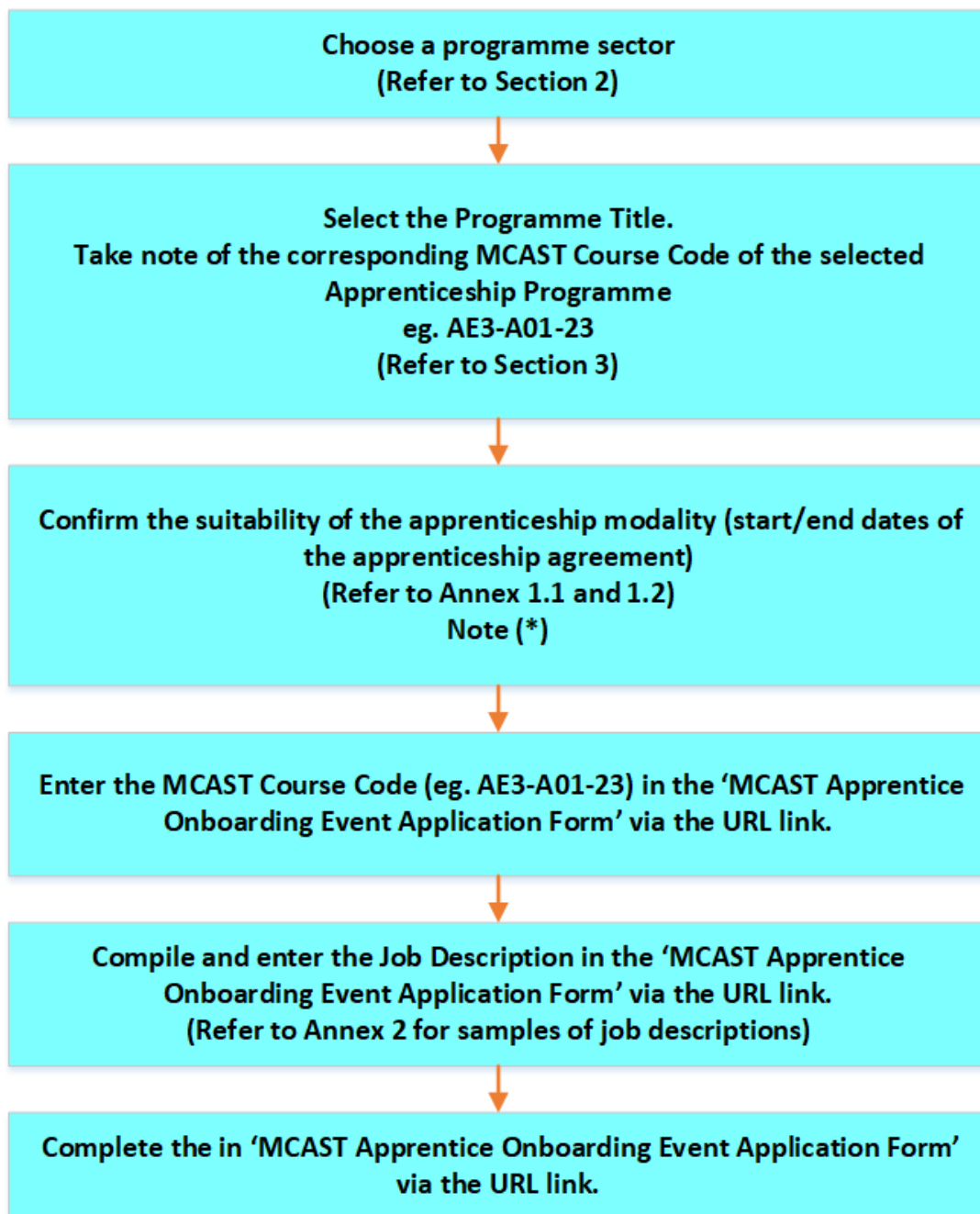

Ing. Pierre Dalmas
Deputy Principal QA, Student Academic Management and Work-Based Learning

Contents

Section 1 : Steps to be followed to fill-in the 'MCAST Apprentice Onboarding Event Application Form' in order to offer apprenticeship vacancies for MCAST students (refer below for URL)

Choose a programme sector
(Refer to Section 2)

↓

Select the Programme Title.
Take note of the corresponding MCAST Course Code of the selected Apprenticeship Programme
eg. AE3-A01-23
(Refer to Section 3)

↓

Confirm the suitability of the apprenticeship modality (start/end dates of the apprenticeship agreement)
(Refer to Annex 1.1 and 1.2)
Note (*)

↓

Enter the MCAST Course Code (eg. AE3-A01-23) in the 'MCAST Apprentice Onboarding Event Application Form' via the URL link.

↓

Compile and enter the Job Description in the 'MCAST Apprentice Onboarding Event Application Form' via the URL link.
(Refer to Annex 2 for samples of job descriptions)

↓

Complete the in 'MCAST Apprentice Onboarding Event Application Form' via the URL link.

Note (*) : MCAST has designed apprenticeship attendance modalities that are flexible for both employer and student (refer to Annex 1.1 and 1.2). Do not hesitate to contact us to discuss these attendance modalities.

The URL link to the 'MCAST Apprentice Onboarding Event Registration Form' is available via the email.

NOTE : Employers with pending apprenticeship vacancies on the College MIS (also called Classter) are advised to resubmit their vacancies via the above Form URL and enter a note in the 'comment' field accordingly.

Section 2: List of Programme Sectors that include an accredited apprenticeship component

Section 3.1 : Institute of Community Services (MCAST Malta Campus)

- Hairdressing

Section 3.2 : Institute of Applied Sciences (MCAST Malta Campus)

- Applied Sciences
- Food Technology

Section 3.3 : Institute of Business Management and Commerce (MCAST Malta Campus)

- Accounting
- Financial Services
- Business Administration
- Insurance
- Marketing

Section 3.4 : Institute of Creative Arts (MCAST Malta Campus)

- Heritage and Conservation
- Fashion and Retail

Section 3.5 : Institute of Engineering and Transport (MCAST Malta Campus)

- Aviation and Aircraft Maintenance
- Automotive Maintenance and Repair
- Construction Engineering
- Mechanical Engineering
- Electrical and Electronics Engineering
- HVAC
- Joinery
- Manufacturing

Section 3.6 : Institute of Information and Communication Technology (MCAST Malta Campus)

- Computer Systems
- Computer Networks
- I Gaming
- Cybersecurity Digital Games Development
- Software Development

Section 3.7 : Apprenticeship Programmes delivered at the (MCAST Gozo Campus)

- Electrical and Electronics Engineering
- Mechanical Engineering
- Accounting
- Finance and Insurance
- Computer and Network Systems

Section 3 : List of Apprenticeship Programme Titles by MCAST Institute

Section 3.1: Institute of Community Services

Course Title : Diploma in Hairdressing
Course Code : CS3-A02-23
Modality : 3.2
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is intended for learners interested in a career of hairdressing. The programme's main aim is to provide the learners with opportunities to develop skills and competences required in the hairdressing field. The programme covers all the hairdressing fundamentals to working effectively and independently in technical tasks such as cutting, styling, colouring, perming, straightening and neutralising of hair. Learners will gain the necessary knowledge and understanding as to provide client consultation for hairdressing services, as well as to be able to promote products and services in the salon. The programme also provides the learner with quality work experience where the learner will be expected to carry out a range of assigned tasks, with an emphasis on the learning aspects of the experience. Moreover, this programme provides learners with the opportunity to further develop their knowledge of key skills, such as English, Maltese, Mathematics, Science Information Technology and Personal Development. The learner is required to purchase hairdressing tools and a black tunic (uniform) and to provide models for salon practice on a regular basis.

Overall Learning Outcomes

1. Perform hair salon duties safely and effectively.
2. Carry out consultation with the client.
3. Recognise hair, skin and scalp structure of the client.
4. Develop and apply creativity in hairdressing.

Course Title : Advanced Diploma in Hairdressing
Course Code : CS4-A05-23
Modality : 4.3
Delivered at : MCAST Malta Campus only

Course Objective:

This programme of studies provides greater insight on advanced hairdressing techniques and better understanding of the requirements when working as a salon owner/manager. This course is aimed at learners who have obtained certification in the basic skills of hairdressing and want to proceed to more advanced techniques ranging from consulting to colouring, advanced cutting and styling. This course equips learners with the knowledge and skills to provide a holistic hair service to clients. Learners are given ample opportunity to practice through hands-on practical sessions and professional salon experience. As part of the course, the learners are expected to practice hairdressing services within the in-house salon at the Institute of Community Services. The course also equips learners with competences required to manage a professional hairdressing salon including knowledge in areas such as human resources management, legislative measures, basic accounting and marketing concepts. The MCAST Advanced Diploma in Hairdressing also covers men's haircutting and barbering. Learners are required to purchase the necessary hairdressing accessories at the beginning of the academic year.

Overall Learning Outcomes

1. Perform in depth hairdressing consultation services;
2. Apply different hair colouring and lightening techniques;
3. Cut, style and dress hair creatively;
4. Manage a hair salon safely and efficiently.

Section 3.2 : Institute of Applied Sciences

Course Title : Advanced Diploma in Applied Science
Course Code : AS4-A02-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme of study is aimed at learners who wish to embark on a scientific career in a range of industries such as petrochemical, life sciences, health, pharmaceutics and the environment. The programme of study contains a wide range of science and technology study units that reflect aspects of employment within relevant industries. The learners will appreciate how the fundamental principles of science relate to the technological operations of the workplace. They will develop the necessary skills to work in a laboratory environment within the manufacturing industry, and to apply basic principles within the workplace.

Overall Learning Outcomes

1. Follow and communicate procedures in the scientific workplace.
2. Use scientific techniques to understand technological processes within an organisation.
3. Understand how science-based organisations develop products and deliver services.
4. Understand the requirements of science technicians in an organisation.

Course Title : Advanced Diploma in Food Technology
Course Code : AS4-A01-23
Modality : 4.1 and 4.10
Delivered at : MCAST Malta Campus only

Course Objective:
The food and beverage industry is a dynamic sector which requires a number of highly skilled technical people to cope with constantly changing customers' demands and new innovative production technologies. Food technologists monitor day-to-day manufacturing activities; ensure that safety and quality standards are met; improve existing products and design innovative foods and drinks. This is a multidisciplinary programme offered across four Institutes and includes topics on food analysis, product manufacturing, food safety, cost accounting and product design. The programme provides learners with the opportunity to gain knowledge of the industry and insights into the relevant tools and skills through work-based elements. This programme prepares learners for employment within SMEs as well as medium to large organisations which produce a range of food and drink products.

Overall Learning Outcomes
1. Understand how food and beverage organisations operate.
2. Understand the importance of food safety and apply Hazard Analysis and Critical Control Point (HACCP) principles.
3. Apply scientific methods and use fundamental scientific principles to food manufacturing problems.
4. Assist in the development of new innovative food and beverage products.

Section 3.3 : Institute of Business Management and Commerce

Course Title : Advanced Diploma in Accounting
Course Code : BC4-A03-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme aims to give learners a very good grounding in the studying of Accounts. Study areas range from aspects of financial management accounting to the use of accounting software and more generic areas of key skills. The course includes hands-on experience through Apprenticeship where students will learn by doing and gain experience first-hand on the application of the theory. Students who finish the course will have sufficient accounting knowledge and skills to commence employment in an accountancy field, or to enable them to further their studies to obtain qualifications from recognised chartered accountancy bodies.

Overall Learning Outcomes

1. Recognise the nature and role of accounting in the business context;
2. Apply accounting concepts, other regulatory frameworks and legislations to prepare financial statements of various types of organisations;
3. Develop analytical and evaluation skills to understand, evaluate and communicate financial information to various business stakeholders;
4. Apply accounting knowledge and skills to be considered suitable for positions in the accounting field.

Course Title : Advanced Diploma in Business Administration
Course Code : BC4-A01-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme will allow learners to study the different areas of business and office administration. It is aimed either at students who aspire to one day open up their own business or follow in their family business, or else to work in the administration of a company at a junior level. This generic course offers a good basis into the main areas of business administration including office administration, accounts, marketing, recruitment, and health and safety among others. The course, which is assessed through a variety of scenario related assessments, also sees learners go out on Apprenticeship where a holistic hands-on and practical approach is adopted.

Overall Learning Outcomes

1. Understand the range of different businesses, their ownership and their goals.
2. Understand how businesses are organised to achieve their purposes and distinguish between the roles of supporting organisational activities and departments.
3. Understand different types of business information and be able to communicate and present this information effectively and use it critically and creatively.
4. Explain the impact on businesses of the economic, political and finance aspects.

Course Title : Advanced Diploma in Finance and Insurance
Course Code : BC4-A02-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This course is aimed at people who would like to venture in one of the many careers related to financial services. The first year of studies introduces learners to generic areas of financial services including the world of insurance. In the second year of studies, learners will then choose an area of specialisation.

Specialisation can be either in financial services or else in insurance. This approach ensures that any learner following this course is exposed to different areas of the financial services world, thus giving them better flexibility in career prospects. Learners choosing the main area of expertise will be very strong in the specific area chosen, while having a good understanding of the other area.

Overall Learning Outcomes

1. Understand the nature of the insurance or financial market, their structure and main features according to chosen area.
2. Apply literacy, numeracy and soft skills which are considered as a necessity to be an effective team player within a Financial and Insurance Services Organisation.
3. Understand the need for the value of effective customer services within these sectors.
4. Understand the ways in which regulation and legislation impact on and are relevant to an organisation and the financial services and Insurance industry in general.

Course Title : Advanced Diploma in Marketing
Course Code : BC4-A05-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is aimed at giving learners the knowledge and know-how of the main areas related to the different areas of marketing. They will go into the areas of Digital Marketing, Sales, Advertising, Public Relations and Customer Care in some detail. The insight in these different areas provides the student with the ability to work in different areas of marketing. The learner will also have the opportunity to apply the theory learned in class in practice through the Apprenticeship placement.

Overall Learning Outcomes

1. Understand the marketing concept.
2. Explain the full range of marketing activities utilised by different organisations, including the marketing mix elements, market research, and digital tools available for marketing practice.
3. Describe the fundamental techniques applied to the marketing of products in different industries.
4. Use effectively marketing tools and techniques in real life marketing scenarios.

Section 3.4 : Institute of Creative Arts

Course Title : Advanced Diploma in Cultural Heritage Skills
Course Code : CA4-A02-23
Modality : 4.9
Delivered at : MCAST Malta Campus only

Course Objective:

This course addresses needs in the Cultural Heritage sector in order to support the management, conservation, preservation and care of such heritage. Successful candidates will be able to ethically collaborate with relevant stakeholders, and would work under the supervision of a heritage professional. The programme of studies provides the necessary applied theoretical material and ethical background in technical aspects of cultural heritage and heritage skills including stone, wood, metals, books, paper and textiles heritage skills, with training being carried out in workshops, laboratories and on site. The course also has an apprenticeship, which will allow students the opportunity to work alongside professionals and immerse themselves in the world of cultural heritage while getting the necessary training in the learning environment. Graduands of this programme can access the Bachelor in Conservation and Restoration Studies (Hons) course at the same Institute.

Overall Learning Outcomes

1. Demonstrate theoretical knowledge and understanding in various fields of cultural heritage and the ethics of its management, conservation, preservation and care;
2. Build on educational foundations to pursue further studies and training in the field;
3. Demonstrate cognitive and practical skills essential to the basic management, preservation and care of cultural heritage resources;
4. Apply technical and/or craft-based skills to support cultural heritage professionals;
5. Integrate within a team entrusted with the management, conservation, preservation and care of cultural heritage with awareness of personal competencies;
6. Understand the ethical and legal obligations of working in the field of cultural heritage as well as the limitations permitted at law.

Course Title : Advanced Diploma in Fashion and Retail
Course Code : CA4-A01-23
Modality : 4.6
Delivered at : MCAST Malta Campus only

Course Objective:

This course is designed to address the skills shortages in the fashion design and production sector. Learners undertaking the course learn important skills required for the fashion retail sector, together with basic entrepreneurial knowledge to support those learners who would like to set up their own atelier in the future. The first year of the programme offers learners the cultural, theoretical and creative aspects of the subject. Another important area is pattern drafting and sewing techniques in preparation for the second year. The second year of studies provides learners with the opportunity to develop further their knowledge and skills in the specialisation. They will participate in Apprenticeship as well as present their own design concepts in a fashion collection as their final major project.

Overall Learning Outcomes

1. Generate designs using the elements and principles whilst following the design process.
2. Provide an understanding of the commercial side of the fashion industry.
3. Demonstrate understanding when selecting materials, technique and equipment for a body of work.
4. Demonstrate design and manufacturing skills that have reached exhibiting standard.

Course Title : Bachelor in Conservation (Honours)
Course Code : CA6-A12-23
Modality : 6.4
Delivered at : MCAST Malta Campus only

Course Objective:

This full-time undergraduate course in conservation-restoration studies provides the learner with the opportunity to obtain the fundamental knowledge, skills and competences in conservation-restoration in a particular area of studies on offer. After an initial common year, learners then have the possibility to focus on a specific area. During the three years, which include practice-led formation and internships, the learner appreciates the complex nature of conservation-restoration as an interdisciplinary endeavour in which the conservation-restoration graduate collaborates with other members of a multidisciplinary team under the supervision of a warranted conservator restorer, for the benefit of the heritage. Through the final-year dissertation project of choice the learner has the opportunity to delve into further detail within the area of focus.

Overall Learning Outcomes

1. Outline the Conservation-Restoration actions based on the examination and diagnosis of the cultural heritage and assessment of its needs under the supervision of a warranted Conservator-Restorer.
2. Identify the necessary Conservation-Restoration actions according to the required legal, logistical and operational standards under the supervision of a warranted Conservator-Restorer.
3. Apply the Conservation-Restoration actions established by a warranted Conservator-Restorer under the supervision and direction of such professional.
4. Relate the result of the Conservation-Restoration actions, outlining advice and recommendations for care and possible future actions based on the direction of a warranted Conservator-Restorer.

Course Title : Bachelor of Arts (Honours) in Fashion
Course Code : CA6-A01-23
Modality : 6.3
Delivered at : MCAST Malta Campus only

Course Objective:

This degree programme aims to respond to the demand for fashion professionals within the fashion industry, including fashion/costume design and production, retail and marketing. Learners are supported with contextual studies to understand how fashion designers inspire their creativity. The degree programme provides learners with the specialist skills to create patterns using traditional techniques as well as modern software (CAD/CAM) within fashion production processes on small and mass production scales. Moreover, the programme offers specialist units addressing the retail and marketing content. The course is targeted towards individuals who wish to set up their own firm with the required entrepreneurial skills, as well as towards those who wish to progress in the vast fashion business.

Overall Learning Outcomes

1. Identify the requirements of the fashion industry, including retail and production.
2. Practice the production process from designing, to finishing actual fashion collections.
3. Identify the role of good customer service, fashion marketing and merchandising.
4. Prepare to be competent in the creative industry of fashion.

Section 3.5 : Institute of Engineering and Transport

Course Title : Diploma in Aircraft Maintenance (incorporating EASA Part-66 Category A Basic Course)
Course Code : AE3-A01-23
Modality : 3.4
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is designed specifically to equip learners with the necessary theoretical understanding of aircraft maintenance and related systems and is backed by practical experience in dedicated workshops at mechanic level. The course incorporates the EASA Part-66 Category A basic course which will allow a student to sit for the license examinations. Also, subject to authorisation by the Part-145 Organization, the license will permit the holder to issue Certificates of Release to Service following minor scheduled works that may include line maintenance, defect rectification and component changes.

Overall Learning Outcomes

1. Develop basic theoretical knowledge of the aircraft's applicable systems, structure, operations, maintenance, repair, and troubleshooting according to the approved maintenance data.
2. Understand how to use correctly the manuals and the approved procedures.
3. Make decisions in respect of fault diagnosis and rectification to the maintenance manual level.
4. Prepare for the examinations organised by the Transport Malta Civil Aviation Directorate with regards of Part-66 Category A license.

Course Title : Diploma in Aircraft Structures and Repairs
Course Code : AE3-A05-23
Modality : 3.3
Delivered at : MCAST Malta Campus only

Course Objective:

This MCAST diploma is intended to train the learner in competences related to Aircraft Structures and Repairs which are essential for structure repair mechanics. This training course will include Basic Aircraft Sheet Metal, Structures Repair Procedures and Human Factors, amongst other modules. It is divided into three main areas, namely: the theoretical element, the practical experience and on-the-job exposure. This is an opportunity for individuals to commence or develop their career in the aviation industry.

Overall Learning Outcomes

1. Outline the safety procedures required when conducting repairs.
2. Interpret source documents to be able to perform a repair successfully.
3. Use appropriate materials for a given specific application.
4. Follow the appropriate repair procedure guidelines and techniques.

Course Title : Diploma in Automotive Repair (Body and Paint)
Course Code : MV3-A01-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is intended for learners with or without knowledge and experience of the automotive industry. Learners will learn how to work on vehicle accident repair tasks on body work under minimal supervision. The course will also provide the learners with the skills required to carry out paint repairs to the manufacturers' specifications. They will thus gain a combination of theoretical knowledge and practical skills in automotive accident repair (panel beating) together with body paint principles. Learners will be expected to carry out effective housekeeping practices to work effectively within the automotive industry. They will also learn how to work safely when carrying out removal and replacement of exterior vehicle panels and paint jobs. Learners will also be expected to improve their knowledge of key skills subjects such as Mathematics, English, Maltese, Information Technology and Individual and Social Responsibility.

Overall Learning Outcomes

1. Use correct personal and vehicle protection within the automotive environment.
2. Understand how to carry out removal and fitting of non-permanently fixed motor vehicle body panels.
3. Understand how to carry out the preparation of bare metal and pre-painted surfaces to accept foundation materials and paint topcoats.
4. Understand how to identify, mix and apply fillers and foundation materials in vehicle refinishing.

Course Title : Diploma in Construction Engineering
Course Code : CE3-A02-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This course consists of College-based training on various skills related to the building and construction industry. It enables the learners to work in the sector or to continue their studies in related vocational areas, including Construction, Civil Engineering or Building Services. During this course of study learners will be introduced to different types of technical drawings used in the construction industry. They learn how to apply construction drawing standards and conventions to produce sketches and professional working drawings. This course also provides learners with the opportunity to further develop their knowledge of key skills subjects such as Mathematics, Science, English, Maltese, Information Technology and Individual and Social Responsibility.

Overall Learning Outcomes

1. Understand the importance of health, safety and welfare in the construction industry;
2. Understand the diversity of the construction industry and the contribution to society by those who work within it;
3. Apply construction drawing standards and conventions;
4. Describe the methods and techniques associated with pre-construction, ground works, and substructure, superstructure and building services systems of low-rise domestic buildings.

Course Title : Diploma in Electrical Installations
Course Code : EE3-A01-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme serves as an initial step for those who are interested in pursuing a career in electrical systems, such as that of an Electrician within the construction industry. This course is designed to provide basic theory and practice related to electrical installations that are then enhanced through the work-based learning. The course consists of both key skill units and vocational units, of which mostly are carried out in the workshops and laboratories. This course provides a good foundation for future career opportunities in engineering and may also serve for progression to MQF Level 4 engineering courses.

Overall Learning Outcomes

1. Interpret and follow safety requirements in compliance with the law for electrical installations in construction environments.
2. Interpret wiring regulations and requirements for domestic electrical installations.
3. Design and implement domestic electrical installations to given requirements.
4. Troubleshoot and repair existing single-phase electrical installations.
5. Explain different ways in which electrical devices operate, and the science behind them.

Course Title : Diploma in Engineering (Electronics)
Course Code : EE3-A02-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme serves as an initial step for those who are interested in pursuing a career in electronics. This course is designed to provide basic theory and practice related to electronics that are then enhanced through the work-based learning. The course consists of both key skill units and vocational units, of which mostly are carried out in the workshops and laboratories. This course provides a good foundation for future career opportunities in engineering and may also serve for progression to MQF Level 4 engineering courses.

Overall Learning Outcomes

1. Work safely, efficiently and effectively in the engineering workplace.
2. Use mathematical principles related to science and engineering principles.
3. Assess the function and operation of electrical and electronic system components.
4. Identify basic PC and networking systems.
5. Maintain and troubleshoot basic electronic circuits.

Course Title : Diploma in Heating, Ventilation and Air-Conditioning
Course Code : AE3-A03-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This course provides learners with the essential knowledge related to heating, ventilation and air-conditioning (HVAC). It will enable learners to work as assistant technicians engaged in servicing and carrying out maintenance on refrigeration compressors, condensers, evaporators and other accessories.

Overall Learning Outcomes

1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task.
2. Set out and form pipe runs for small commercial installations.

Practical training is carried out in workshops equipped to industry standards. Learners are expected to participate individually and in teams to operate refrigeration and air conditioning equipment. This course also provides learners with the opportunity to further develop their knowledge of key skills subjects such as Mathematics, Science, English, Maltese, Information Technology and Community Social Responsibility.

3. Set out equipment and accessories to fit for particular situations.
4. Follow working procedure to ensure quality during installations, servicing and maintenance.

Course Title : Diploma in Joinery and Furniture Making
Course Code : AE3-A04-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This course of study includes theoretical knowledge and practical training both in College-based industrial workshops and also on work placements. Technical and practical lessons cover measuring, cutting, preparing and assembling timber and timber board products to make interior fittings such as kitchen cabinets, doors and window frames. The learners will be expected to participate individually and in teams to produce simple products from solid wood and composite materials. Learners will be trained in the practical handling of hand and power tools and simple woodworking machines. This course also provides learners with the opportunity to further develop their knowledge of key skills subjects such as Mathematics, Science, English, Maltese, Information Technology and Individual and Social Responsibility.

Overall Learning Outcomes

1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task.
2. Manufacture batched interim products out of solid wood and composite materials.
3. Take off dimensions from drawings, nest and prepare cutting lists.
4. Set out to assemble furniture products.

Course Title : Diploma in Light Vehicle Servicing
Course Code : MV3-A02-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is intended for learners who would like to start developing a strong grounding in the field of motor vehicle engineering and maintenance. Through the various aspects of training that this course provides, learners should be able to gain a good understanding of the basic systems found in light vehicles and how to handle tools safely. Learners will also develop the essential skills of the trade, including the carrying out of basic routine checks, the replacement of parts as required in the periodic

Overall Learning Outcomes

1. Carry out checks and maintenance according to safety and road worthiness regulations;
2. Identify fault location and service needs;
3. Maintain appropriate service and repair records;
4. Carry out repairs by replacement faulty basic parts and components.

servicing of vehicles, and the maintenance of appropriate service records. In this programme, learners will also follow studies in key skills subjects, such as English, Maltese, Mathematics, Information Technology and Individual and Social Responsibility.

Course Title : Diploma in Mechanical Engineering
Course Code : ME3-A03-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

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.

Overall Learning Outcomes

1. Undertake basic mechanical engineering tasks in a safe and effective manner.
2. Interpret mechanical engineering related information, such as drawings and diagrams.
3. Perform basic machining and fabrication processes.
4. Use own initiative to solve basic mechanical engineering problems.

Course Title : Diploma in Welding and Fabrication
Course Code : AE3-A08-23
Modality : 3.1
Delivered at : MCAST Malta Campus only

Course Objective:

This Apprenticeship course combines theoretical knowledge with practical training, both in College-based industrial workshops and in industry-based apprenticeships. Learners will be expected to participate individually and in teams to fabricate welded products. Learners will have the opportunity to use hand and power tools as well as welding sets, giving particular attention to health and safety considerations. This course also provides learners with the opportunity to further develop their knowledge of key skills subjects such as Mathematics, Science, English, Maltese, Information Technology and Individual and Social Responsibility.

Overall Learning Outcomes

1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task.
2. Produce simple patterns, developments and templates to fabricate from thin steel plates.
3. Identify materials and compare their properties.
4. Carry out Oxy-Acetylene Gas Welding, Manual Metal Arc Welding and Metal Inert Gas Welding.

Course Title : Advanced Diploma in Aircraft Maintenance (Aeroplanes-Turbine Engines)
Course Code : AE4-A03-23
Modality : 4.7
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is designed to equip learners with the necessary theoretical knowledge of aircraft maintenance and related mechanical systems at technician level. This is also backed by practical experience in our workshops. Learners attending this course will be prepared to sit for the relative examinations organised by awarding bodies, and which may lead to being awarded the EASA Part-66 Category B1.1 license. Subject to authorisation by the Part-145 Organization, the license will permit the holder to issue Certificates of Release to Service following scheduled works that may include line maintenance, defect rectifications, aircraft structure, power plants and mechanical and electrical systems. Throughout the course, Civil Aviation Directorate examination fees will be paid by the learner.

This course is a highly innovative programme in the sector and gives the learner the opportunity to obtain an Advanced Diploma apart from sitting for the EASA examinations. Successful learners can then progress to the Level 5 Undergraduate Diploma in Foundations of Engineering which will allow them to have access to the IET BEng in Mechanical Engineering or Electronics.

Overall Learning Outcomes

1. Develop a theoretical knowledge of the aircraft's applicable systems, structure, operations, maintenance, repair, and troubleshooting according to the approved maintenance data.
2. Understand how to use correctly the manuals and the approved procedures.
3. Make decisions in respect of fault diagnosis and rectification to the maintenance manual level.
4. Prepare for the examinations organised by the Transport Malta Civil Aviation Directorate with regards of Part-66 Category B1.1.

Course Title : Advanced Diploma in Aircraft Maintenance (avionics)
Course Code : AE4-A04-23
Modality : 4.7
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is designed to equip learners with the necessary theoretical knowledge of aircraft maintenance and related electrical and avionics systems at technician level. This is also backed by practical experience in dedicated workshops. Learners attending this course will be prepared to sit for the relative examinations organised by awarding bodies, which may lead to being awarded the EASA Part-66 Category B2 license. Subject to authorisation by the Part-145 Organization, the license will permit the holder to issue Certificates of Release to Service following maintenance on electrical and avionics systems. This training programme includes work-related training and practice. Applicants have to be able to work within the industries concerned.

Overall Learning Outcomes

1. Develop a theoretical knowledge of the aircraft's applicable systems, structure, operations, maintenance, repair, and troubleshooting according to the approved maintenance data.
2. Understand on how to use correctly the manuals and the approved procedures.
3. Make decisions in respect of fault diagnosis and rectification to the maintenance manual level.
4. Prepare for the examinations organised by the Transport Malta Civil Aviation Directorate with regards of Part-66 Category B2 license.

This course is a highly innovative programme in the sector and gives the learner the opportunity to obtain an Advanced Diploma apart from sitting for the EASA examinations. Successful learners can then progress to the Level 5 Undergraduate Diploma in Foundations of Engineering which will allow them to have access to the IET BEng in Mechanical Engineering or Electronics.

Course Title : Advanced Diploma in Aviation Operations
Course Code : AE4-A06-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This study programme is designed to equip learners with the necessary understanding and an all-round introduction to the aviation industry for those who wish to further their career in one of its occupational areas. This course may lead to roles in airports such as passenger liaison, ramp work, cargo operations and ground handling, aircraft operations and customer service. The course is structured to give learners an overview of aviation operations in preparation for the specialised areas that interest career aspirations within the sector. The course covers the appropriate fundamentals for progression onto further aviation specialisation in the sector. The theoretical elements are supplemented with practical elements. Successful learners can progress to the Bachelor of Arts (Honours) in Business Enterprise. This course includes work related training and practice. Applicants have to be able to work within the industries concerned.

Overall Learning Outcomes

1. Understand the basic operations in the aviation industry.
2. Apply the necessary theoretical and practical understanding of operation in airport terminals and aircraft operation environments.
3. Understand the legal requirements in the aviation industry.
4. Gain competence and develop skills in the principal areas of the Aviation Operation Industry.

Course Title : Advanced Diploma in Construction Engineering
Course Code : CE4-A20-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This course is based on both off-the-job and on-the-job training and gives an in-depth knowledge and experience of the general requirements and specialist areas related to the field of building and construction namely, Construction design, Civil and Road Engineering, Land Surveying and Quantity Surveying. Knowledge gathered throughout the course program will enable the learner to carry out duties, at a professional and technical level, that are continuously required in an architect's office or firms dealing in the

Overall Learning Outcomes

1. Explain the responsibilities of employers and employees under current health, safety and welfare legislation;
2. Identify main equipment, media and techniques used in the production of drawings to detail building/construction techniques and processes;
3. Calculate final quantities from dimensions and descriptions of construction and civil engineering works;

building construction and civil engineering projects related to Design, Quantity Surveying, Land Surveying, Geospatial Engineering, Road Engineering, Geographical Information, Infrastructural Projects and Project Management.

4. Interpret and evaluate building techniques including surveying and setting out of small engineering projects.

Course Title : Advanced Diploma in Electrical Systems
Course Code : EE4-A02-23
Modality : 4.8
Delivered at : MCAST Malta Campus only

Course Objective:

This course is intended for learners who wish to embark on a career as technicians in electrical power systems in both the domestic and the industrial sectors. The course includes the requirements set by the Regulator for Energy and Water Services (REWS) for the Electrical Wireman's Authorisation A and Authorisation B. This ensures a solid technical competence and understanding of the regulations and health and safety requirements governing the electrical installation industry. This course contains modules related to Photovoltaic Systems, Building Services Engineering and Electronic Control Systems that give candidates a solid grounding in the engineering involved in the building services industry. Candidates will also receive exposure to Mechanical Workshop practice.

Overall Learning Outcomes

1. Work safely, communicate effectively in a team and take responsibility of work in an engineering context
2. Understand domestic and industrial electrical principles to apply them in real electrical installation situations
3. Design, perform and test domestic and electrical installations and machinery according to regulations and requirements
4. Troubleshoot, repair and modify existing domestic and industrial electrical installations, motors and switchgear.

Course Title : Advanced Diploma in Heating, Ventilation and Air-Conditioning
Course Code : AE4-A01-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

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 customisation. 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.

Overall Learning Outcomes

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.

Course Title : Advanced Diploma in Industrial Electronics
Course Code : EE4-A20-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This course provides a comprehensive understanding of electronics including different aspects through classroom and hands-on workshops and projects. Learners are introduced to the design and development of electronic systems in various fields, such as industrial electronics, transportation, manufacturing, computer technology, communications and embedded systems. In the first and second year of the course, core aspects of various electronic technologies are covered, while in the final year, learners must choose elective modules from the following areas: Computer Technology, Biomedical Technology, Telecommunications Technology, Control Technology, Electrical Power Technology, domestic installation, and Manufacturing of Electronic Circuits. The availability of certain elective modules depends on a minimum number of applications.

Overall Learning Outcomes

1. Work safely, communicate effectively in a team and take responsibility of own work in engineering.
2. Identify technologies currently in use in the wider electronics sector.
3. Work on installation and maintenance of electronics equipment and systems.
4. Develop and debug cutting edge electronic systems, and programing code.

Course Title : Advanced Diploma in Joinery, Furniture Design and Manufacturing
Course Code : AE4-A02-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This diploma course is aimed at students intending to embark on a career in the woodworking industry. It combines theoretical knowledge and practical training. The practical training is conducted both in College-based industrial workshops and in an industry-based apprenticeship or work placement. Learners will learn how to analyse and provide solutions to typical joinery and furniture products using solid wood and composite materials. Learners will be expected to participate individually and in teams to produce solid wood and composite material manufactured products.

Overall Learning Outcomes

1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task;
2. Organise to manufacture batched interim products out of solid wood and composite materials;
3. Take off dimensions from drawings to calculate cost, nest and prepare cutting lists;
4. Perform site setting out to assemble complex products.

Course Title : Advanced Diploma in Light Vehicle Maintenance
Course Code : MV4-A07-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This qualification is for candidates wanting to develop some of the essential skills and understanding in motor vehicle systems. Learners will be able to identify hazards and risks in the automotive environment and work safely with equipment, materials and products. Learners should also gain a good knowledge of tools and measuring devices as well as of routine light vehicle maintenance. Learners will be expected to develop an understanding of the construction and operation of common steering, suspension engines and many important systems (including mechanical and electrical) as well as procedures involved in the inspection, serviceability, adjustments, removal and replacement of components and the evaluation of their performance. This course includes work-related training and practice. Applicants have to be able to work within the industries concerned.

Overall Learning Outcomes

1. Work effectively within the organisational structure of the automotive work environment.
2. Work safely when carrying out light vehicle engine diagnostic and rectification activities.
3. Understand how light vehicle transmission and driveline systems operate.
4. Understand how light vehicle auxiliary electrical systems operate.

Course Title : Advanced Diploma in Manufacturing
Course Code : ME4-A08-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This programme provides the necessary knowledge, understanding and skills to those learners who wish to start an interesting career as a technician in today's highly technological area of manufacturing engineering. This qualification provides access to more specialist units and therefore broadens and deepens the experience in preparation for actual work situations. The learner will learn how to perform basic engineering operations in a safe and efficient manner, whilst safeguarding the environment. The learner will understand basic scientific and mathematical theories and how to apply these to manufacturing engineering processes such as drafting, design, problem solving, and machining. This course includes work-related training and practice. Applicants have to be able to work within the industries concerned.

Overall Learning Outcomes

1. Describe and identify health and environmental risks related to certain processes as well as the measures that are adopted to control them.
2. Communicate and Interpret drawings and manuals in the technical fields concerned.
3. Choose appropriate tools and manufacturing processes for the implementation of work projects.
4. Apply mathematical and scientific principles to solve engineering related problems.

Course Title : Advanced Diploma in Marine Engineering
Course Code : MS4-A04-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This programme is the first step for those who wish to embark on a career in the maritime sector, with opportunities being available both locally and internationally. The course introduces the basics of engineering related to marine vessels and is ideal for those who wish to be introduced into this sector and obtain a formal vocational qualification. After successful completion of the course, the learner will have formed sound theoretical and practical competences. This course includes work-related training and practice.

Overall Learning Outcomes

1. Be familiar with relevant Shipping Industry Regulations and Legislation and Standards
2. Identify elements of marine engineering plant
3. Understand the application of mechanical engineering theory in a marine engineering environment
4. Follow operations and maintenance procedures as applicable to marine engineering.

Course Title : Advanced Diploma in Operations and Maintenance
Course Code : ME4-A05-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This programme provides the necessary knowledge, understanding and skills for the future to those learners who wish to start a fulfilling career as a technician in the area of operations and maintenance engineering. Learners will have the opportunity to learn basic scientific and mathematical methods to apply in subjects such as thermodynamics and heat engines. Learners will be exposed to the different materials used in common engineering situations and their properties. This qualification not only provides access to more specialist units but it also broadens and deepens the learners' experience in preparation for the real world of work. This course includes work-related training and practice.

Overall Learning Outcomes

1. Describe and identify health and environmental risks related to certain processes and what measures are adopted to control these risks.
2. Communicate and interpret drawings and manuals in the technical fields concerned.
3. Monitor and diagnose faults in engineering systems.
4. Analyse mathematically engineering situations to provide scientific solutions.

Course Title : Advanced Diploma in Robotics, Drone Design, Automation and AI
Course Code : EE4-A09-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

This course presents learners with introductory knowledge about artificial intelligence and machine-learning techniques, followed by automation systems, robots, and drone functionality. Learners will have the opportunity to use various AI hardware and software tools to control a range of input and output devices, apply various forms of signal conditioning, use embedded systems and apply communication standards. Through practical experiments, this course is structured in a way that supports learners in understanding the operational characteristics and concepts of drones, automation and robotic systems. Additionally, students are guided to develop the skills required to design, install, troubleshoot, maintain and programme such systems.

Overall Learning Outcomes

1. Program an industrial robotic, automation and drone system.
2. Recognise the purpose, functionality and need of a robotic, drone and automation system.
3. Construct and test analogue and digital electronic circuits to the required specification.
4. Apply and use 3D technologies for an engineering system.
5. Identify the basic principles of a mechatronic system.

Course Title : Advanced Diploma in Welding and Fabrication
Course Code : AE4-A05-23
Modality : 4.5
Delivered at : MCAST Malta Campus only

Course Objective:

This course combines theoretical knowledge and practical training carried out in College-based industrial workshops. Learners will be expected to participate individually and in teams to fabricate welded products. They will learn how to analyse and generate solutions related to typical fabrication using thin plates and pipes. Learners will also be given the opportunity to follow an Apprenticeship to improve their hands-on experience. In order to be able to appreciate the importance of good production management, supervised visits to complex production set-ups are organised during the course. Applicants need to be able to work within the industries concerned.

Overall Learning Outcomes

1. Carry out a risk assessment of the surrounding working environment before and after executing an assigned task;
2. Use tools and equipment related to steel fabrication;
3. Use tools and equipment to prepare and weld steel by a suitable process;
4. Identify and select common engineering materials fit for specific applications.

Course Title : Bachelor of Science (Honours) Construction Engineering
Course Code : CE6-A02-23
Modality : 6.2
Delivered at : MCAST Malta Campus only

Course Objective:

This degree course gives the learners opportunities to explore management skills and technical knowledge associated with the diverse and challenging tasks that are in continuous change with the introduction of new materials to meet zero energy building requirements and various integrated design concepts including precast techniques. In addition, the programme trains the learner in the necessary design and evaluation techniques to be able to make professional judgements on technical, social and ethical issues during the planning and execution of construction projects. By the end of the programme, the learner will be able to work independently, with a significant amount of research and self-directed learning, both within and outside the Institute environment.

Overall Learning Outcomes

1. Evaluate and design management techniques in the construction and built environment sector;
2. Analyse and evaluate sustainable design options for buildings;
3. Understand and compare construction materials in terms of properties, behaviour and characteristics;
4. Examine and coordinate installation, design and maintenance requirements of building services in domestic, commercial and industrial buildings; of construction and of civil engineering projects.

Section 3.6 : Institute of Information and Communication Technology

Course Title : Advanced Diploma in IT (Computer Systems and Networks)
Course Code : IT4-A01-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

The Advanced Diploma in Computer Systems and Networks offers a diversity of units with innovative learning material and labs. The course provides ample hands-on experience to engage learners in acquiring practical skills and knowledge to assist them with establishing a career within the IT field. The duration of this programme is spread over two years the first entailing units are common to all IT streams. The intent is to ensure that learners broaden their knowledge beyond the central area of study. Lastly, the second focuses on the core aspects of routing, switching, infrastructure design principles and virtualisation techniques to implement and manage a small to a medium-sized enterprise network environment. Finally, work-based learning is also delivered utilising apprenticeship schemes to ensure that learners are adequately prepared and competent for the industry. This essentially empowers them and allows them to apply their skills in real-life environments and obtain knowledge to aid them in their studies.

Overall Learning Outcomes

1. Identify the ideal infrastructure components for a given requirement.
2. Diagnose and solve problems in an existing computer network.
3. Deploy and manage virtual infrastructure services.
4. Monitor and document network infrastructures.

Course Title : Advanced Diploma in IT (iGaming)
Course Code : IT4-A05-23
Modality : 4.1
Delivered at : MCAST Malta Campus only

Course Objective:

The Advanced Diploma in iGaming is the next level up from the diploma route, and provides hands-on experience to learners targeting junior roles in this innovative sector. It can also serve as a precursor to Software Development, iGaming, Digital Games or Business Analytics degrees. This two-year programme provides a balance of core software, web and mobile app/game development skills alongside advanced digital marketing, SEO, database design and implementation, advanced Mathematics, Data Analytics and Visualisation. The first year of this programme focuses on providing learners with core development skills whereas the second year provides further specialisation and puts the core skills to good use through work-based learning (subject to eligibility), real-world implementations and projects. Upon

Overall Learning Outcomes

1. Identify the appropriate software infrastructure for given requirements;
2. Recognise the core design, mathematical and development concepts required to perform data analysis and convey it through software applications;
3. Design, plan and produce content that is compliant to organisational and legal standards;
4. Implement bespoke software applications that target a web / desktop and mobile platforms.

completion of this programme, skilled individuals targeting this sector will be in a position to build a comprehensive portfolio.

*Apprenticeship is subject to iGaming legal requirements. Please note that applicants who are not yet 18 years of age can still apply for the course and will be doing a replacement unit.

Course Title : Bachelor of Science (Honours) in Applied Data Sciences
Course Code : IT6-A08-23
Modality : 6.1
Delivered at : MCAST Malta Campus only

Course Objective:

The Degree in Applied Data Sciences is designed for individuals who are interested in utilising data to solve complex challenges in various fields. With a focus on applied methodology, analytical skills, and hands-on experience, students will learn how to use advanced analytical tools and techniques to uncover hidden trends and patterns that can lead to business success. The programme covers a range of topics related to software engineering, data organisation, and data analysis using the latest technologies in business intelligence, reporting, machine learning, and big data. In addition, the Degree includes a strong emphasis on text mining and natural language processing (NLP), which are key tools for extracting insights from unstructured data. The programme also covers critical thinking skills, building strategies for promoting businesses, understanding consumer behaviour, computational linguistics and the laws governing business processes. A work-based component provides an opportunity for students to gain valuable industry experience and learn from real-world professionals. At the end of the programme, students will undertake a research component in the form of a dissertation. The Degree is ideal for individuals who are passionate about leveraging technology to drive business performance and make data-driven decisions.

Overall Learning Outcomes

1. Acquire knowledge and skills in various areas of information technology, business, and finance.
2. Evaluate and solve problems in a diverse range of data contexts.
3. Apply theoretical knowledge to real-world situations and develop practical solutions to address business and technological challenges.
4. Develop a strong ethical and professional foundation to be able to apply ethical principles and best practices to a variety of situations, including data governance, security, privacy, and social responsibility.

Course Title : Bachelor of Science (Honours) in Computer Systems and Networks
Course Code : IT6-A01-23
Modality : 6.1
Delivered at : MCAST Malta Campus only

Course Objective:

Computer systems and networks are a growth area in today's business environment due to the fact that there is a strong demand for highly skilled technical persons who can devise original solutions for complex problems in the context of IT and network implementation using modern techniques. This hands-on degree programme is intended for learners who wish to pursue a career in the world of computer systems and networks. In this course learners will be exposed to enterprise network technologies, data centre operations, service provider networks, information security, virtualisation, DevOps and cloud computing technologies. Due importance will also be given to emerging technologies which learners will find being implemented when they start working within the industry. A hands-on practical approach is adopted throughout the course. This course does not entitle the successful candidates to apply for an engineering warrant with the Engineering Profession Board of Malta on successful completion of the course.

Overall Learning Outcomes

1. Understand key technologies and protocols used in enterprise systems and networks;
2. Design enterprise computer systems and networks according to a given specification;
3. Implement enterprise computer systems and networks according to a given specification;
1. 4. Evaluate current and emerging network technologies.

Course Title : Bachelor of Science (Honours) in Creative Computing
Course Code : IT6-A03-23
Modality : 6.1
Delivered at : MCAST Malta Campus only

Course Objective:

The degree in Creative Computing is tailored for learners who are passionate about developing cutting-edge, interactive software applications across a wide range of platforms. The comprehensive taught component covers a diverse array of skills, including front-end, UX/UI design principles, full-stack, cross-platform, and mobile app development. Learners will gain expertise in client-side and server-side technologies, as well as other areas like software development, audio/visual content creation, data organisation and persistence, machine learning, computer vision, web optimisation, utilisation of third-party tooling/libraries, and research methodologies. The work-based component of the programme provides invaluable, hands-on experience on real-world projects within an organisation. Finally, the research component in the form of a dissertation will give prospective graduates the opportunity to identify,

Overall Learning Outcomes

1. Recognise the theoretical and conceptual underpinnings of Design.
2. Apply the acquired knowledge in real-world prototypes.
3. Produce a solid Portfolio that is relevant to Front-End/Full-Stack/Mobile-Apps development companies.
4. Carry out work-based learning within the local ICT Industry.

investigate, and devise solutions for complex problems in their chosen field. The Creative Computing Degree programme is designed to help individuals excel in various fields and stay ahead of the curve and in line with front-end, full-stack, cross-platform and mobile apps development.

Course Title : Bachelor of Science (Honours) in Cybersecurity
Course Code : IT6-A07-23
Modality : 6.1
Delivered at : MCAST Malta Campus only

Course Objective:

The Cybersecurity Degree is a 3-year programme that provides students with a comprehensive understanding of concepts, techniques, and tools required to secure software applications, computer systems and networks. Students will increase their proficiency in the usage of open source operating systems, network security, database programming, digital forensics, and offensive security. They will also develop practical skills in mitigating cyber threats. The programme includes work-based component, whereby one's own skills are put to good use by working alongside experienced cybersecurity professionals. Additionally, the programme has a research component, whereby the student would undertake a dissertation. This applied research will draw on the skills and knowledge gained throughout the course to explore a specific area of cybersecurity in depth.

Graduates of this programme will gain sufficient hands-on experience to thrive in the dynamic field of cybersecurity. The expertise acquired will enable them to pursue careers in the cybersecurity sector, including roles such as cybersecurity specialists, information security analysts, network security engineers, penetration testers, and digital forensic experts alongside others.

Overall Learning Outcomes

1. Identify fundamental concepts and principles of computer platforms, networking and security.
2. Apply critical thinking and problem-solving skills to design, implement and secure computer systems, databases and networks.
3. Evaluate digital evidence, and apply forensic techniques to investigate breaches in a context of security.
4. Communicate ethical and professional behaviour in the domain of cybersecurity.

Course Title : Bachelor of Science (Honours) in Digital Games Development
Course Code : IT6-A04-23
Modality : 6.1
Delivered at : MCAST Malta Campus only

Course Objective:

The degree in Digital Games Development offers learners the extra edge when it comes to the creation of entertainment software. The taught component provides insight on the various stages involved in game design and development. Students will learn to utilise

Overall Learning Outcomes

1. Recognise the underpinnings of Game Design.
2. Apply the acquired knowledge in real-world prototypes.
3. Produce a solid Portfolio that is relevant to Digital Games companies.

state of the art tools and technologies for implementing digital games. Such artefacts require a variety of skills alongside 3D game engines. These skills include UX/UI design, game level design, software development, software testing, content creation (through audio/visual tools), 3D modelling, networking, game logic, AI, mathematics, physics, etc. Additionally, work placements will not only allow learners to understand the roles and responsibilities in an organisation. They will work on real-world problems and will understand the importance of decision-making, problem solving, whilst being effective team players. Finally, through the research component, students will explore how to investigate, resolve, and present findings related to a research problem in a given domain. There is also a "double Degree route" for those aspiring game developers who would like to extend their studies and work experience abroad, and take their existing qualification in Digital Games Development, Multimedia Software Development, or Software Development to the next level.

4. Carry out work-based learning locally.

Course Title : Bachelor of Science (Honours) in Software Development
Course Code : IT6-A02-23
Modality : 6.1
Delivered at : MCAST Malta Campus only

Course Objective:

The degree in Software Development is intended to prepare learners to work in the industry of application development and engineering and explores the skills required for designing IT enterprise solutions, building robust backend systems, and solving complex problems using the latest paradigms and modern technologies. The programme covers aspects related to software engineering, frontend and backend software technologies, data organisation, persistence and data analysis, software development of portable devices and software quality aspects such as security and testing. Modern trends such as Cloud, Devops, Blockchain, Machine Learning and Computer Vision are also explored. The degree includes work-placements that will allow students to gain experience within the industry and work in a professional environment. At the end of the degree, the students culminate their studies with a research dissertation in an area of their interest. The course is intended for individuals who are keen in solving problems through technology and would like to pursue an exciting career in one of the fundamental pillars of the economy.

Overall Learning Outcomes

1. Design, implement and document the underlying data infrastructure to support software applications;
2. Design, implement and document the back-end of enterprise applications for a given requirement;
3. Revise a software design/implementation to optimise its use of resources;
4. Test and secure the software application and its content to conform to industry standards

Section 3.7 : Apprenticeship Programmes delivered at the MCAST Gozo Campus

Course Title : Diploma in Electrical Installations
Course Code : EE3-A01-23G
Modality : 3.1
Delivered at : MCAST Gozo Campus Only

Course Objective:

This programme serves as an initial step for those who are interested in pursuing a career in electrical systems, such as that of an Electrician within the construction industry. This course is designed to provide basic theory and practice related to electrical installations, that are then enhanced through the work-based learning. The course consists of both key skill units and vocational units, of which mostly are carried out in the workshops and laboratories. This course provides a good foundation for future career opportunities in engineering and may also serve for progression to MQF Level 4 engineering courses.

Overall Learning Outcomes

1. Interpret and follow safety requirements in compliance with the law for electrical installations in construction environments.
2. Interpret wiring regulations and requirements for domestic electrical installations.
3. Design and implement domestic electrical installations to given requirements.
4. Troubleshoot and repair existing single-phase electrical installations.
5. Explain different ways in which electrical devices operate, and the science behind them.

Course Title : Diploma in Mechanical Engineering

Course Code : ME3-A03-23G

Modality : 3.1

Delivered at : MCAST Gozo Campus Only

Course Objective:

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.

Overall Learning Outcomes

1. Undertake basic mechanical engineering tasks in a safe and effective manner.
2. Interpret mechanical engineering related information, such as drawings and diagrams.
3. Perform basic machining and fabrication processes.
4. Use own initiative to solve basic mechanical engineering problems.

Course Title : Advanced Diploma in Accounting

Course Code : BC4-A03-23G

Modality : 4.1

Delivered at : MCAST Gozo Campus Only

Course Objective:

This programme aims to give learners a very good grounding in the studying of Accounts. Study areas range from aspects of financial management accounting to the use of accounting software and more generic areas of key skills. The course includes hands-on experience through Apprenticeship where students will learn by doing and gain experience first-hand on the application of the theory. Students who finish the course will have sufficient accounting knowledge and skills to commence employment in an accountancy field, or to enable them to further their studies to obtain qualifications from recognised chartered accountancy bodies.

Overall Learning Outcomes

1. Recognise the nature and role of accounting in the business context;
2. Apply accounting concepts, other regulatory frameworks and legislations to prepare financial statements of various types of organisations;
3. Develop analytical and evaluation skills to understand, evaluate and communicate financial information to various business stakeholders;
4. 4. Apply accounting knowledge and skills to be considered suitable for positions in the accounting field.

Course Title : Advanced Diploma in Electrical Systems
Course Code : EE4-A02-23G
Modality : 4.8
Delivered at : MCAST Gozo Campus Only

Course Objective:

This course is intended for learners who wish to embark on a career as technicians in electrical power systems in both the domestic and the industrial sectors. The course includes the requirements set by the Regulator for Energy and Water Services (REWS) for the Electrical Wireman's Authorisation A and Authorisation B. This ensures a solid technical competence and understanding of the regulations and health and safety requirements governing the electrical installation industry. This course contains modules related to Photovoltaic Systems, Building Services Engineering and Electronic Control Systems that give candidates a solid grounding in the engineering involved in the building services industry. Candidates will also receive exposure to Mechanical Workshop practice.

Overall Learning Outcomes

1. Work safely, communicate effectively in a team and take responsibility of work in an engineering context
2. Understand domestic and industrial electrical principles to apply them in real electrical installation situations
3. Design, perform and test domestic and electrical installations and machinery according to regulations and requirements
4. Troubleshoot, repair and modify existing domestic and industrial electrical installations, motors and switchgear.

Course Title : Advanced Diploma in Finance and Insurance
Course Code : BC4-A02-23G
Modality : 4.1
Delivered at : MCAST Gozo Campus Only

Course Objective:

This course is aimed at people who would like to venture in one of the many careers related to financial services. The first year of studies introduces learners to generic areas of financial services including the world of insurance. In the second year of studies, learners will then choose an area of specialisation.
Specialisation can be either in financial services or else in insurance. This approach ensures that any learner following this course is exposed to different areas of the financial services world, thus giving them better flexibility in career prospects. Learners choosing the main area of expertise will be very strong in the specific area chosen, while having a good understanding of the other area.

Overall Learning Outcomes

1. Understand the nature of the insurance or financial market, their structure and main features according to chosen area.
2. Apply literacy, numeracy and soft skills which are considered as a necessity to be an effective team player within a Financial and Insurance Services Organisation.
3. Understand the need for the value of effective customer services within these sectors.
4. Understand the ways in which regulation and legislation impact on and are relevant to an organisation and the financial services and Insurance industry in general.

Course Title : Advanced Diploma in IT (Computer Systems and Networks)
Course Code : IT4-A01-23G
Modality : 4.1
Delivered at : MCAST Gozo Campus Only

Course Objective:

The Advanced Diploma in Computer Systems and Networks offers a diversity of units with innovative learning material and labs. The course provides ample hands-on experience to engage learners in acquiring practical skills and knowledge to assist them with establishing a career within the IT field. The duration of this programme is spread over two years the first entailing units are common to all IT streams. The intent is to ensure that learners broaden their knowledge beyond the central area of study. Lastly, the second focuses on the core aspects of routing, switching, infrastructure design principles and virtualisation techniques to implement and manage a small to a medium-sized enterprise network environment. Finally, work-based learning is also delivered utilising apprenticeship schemes to ensure that learners are adequately prepared and competent for the industry. This essentially empowers them and allows them to apply their skills in real-life environments and obtain knowledge to aid them in their studies.

Overall Learning Outcomes

1. Identify the ideal infrastructure components for a given requirement.
2. Diagnose and solve problems in an existing computer network.
3. Deploy and manage virtual infrastructure services.
4. Monitor and document network infrastructures.

Annex 1.1: Apprenticeship Attendance Modalities (days/hours),

How to interpret this Annex, using Modality 4.1 as an example:

Modality 4.1 is an MQF Level 4 MCAST full-time apprenticeship programme of 2-year duration. The Apprentice attends at the Employer's workplace for a total of 134 days (8 hours work per day) equivalent to 1,072 hours of apprenticeship.

Modality	Qualification	Academic Year 2023/24					Academic Year 2024/25					Acadmeic Year 2025/26		Total Days/hrs on apprenticeship	
		Sem 1	Sem 2	July	Aug	Sept	Sem 1	Sem 2	July	Aug	Sept	Sem 1	Sem 2	Days	Hrs
Modality 3.1	Level 3 (1-year duration)	Taught units	24	44										68	544
Modality 3.2	Level 3 (1-year duration)	18	25	44										87	696
Modality 3.3	Level 3 - (1-year duration)	Taught units	63	54										117	936
Modality 3.4	Level 3 (2-year duration)	Taught units	41	64			38	45	63					251	2,008
Modality 4.1	Level 4 (2-year duration)	Taught units	24	64			21	25						134	1,072
Modality 4.3	Level 4 (2-year duration)	18	25	64			21	28						156	1,248
Modality 4.5	Level 4 (3-year duration)	Taught units	Taught units	64			38	45				Taught units	Taught units	147	1,176
Modality 4.6	Level 4 (2-year duration)	Taught units	Taught units	64			21	Taught units						85	680
Modality 4.7	Level 4 (2-year duration)	Taught units	41	64			38	45	63					251	2,008
Modality 4.8	Level 4 (3-year duration)	Taught units	Taught units	26			17	23	25			17	22	130	1,040
Modailty 4.9	Level 4 (3-year duration)	Taught units	Taught units	64			21	25						110	880
Modality 4.10	Level 4 (2-year duration)	Taught units	26	64			17	24						131	1,048
Modality 6.1	Level 6 (3-year duration)	Taught units	24	64			21	25				Taught units	Taught units	134	1,072
Modality 6.2	Level 6 (3-year duration)	Taught units	Taught units	64			21	25	44			Taught units	Taught units	154	1,232
Modality 6.3	Level 6 (3-year duration)	Taught units	Taught units	64			Taught units	Taught units				Taught units	Taught units	64	512
Modality 6.4	Level 6 (3-year duration)	Taught units	Taught units	64			21	25	63			17	21	211	1,688

Annex 1.2: Apprenticeship Attendance Modalities (Start date, end date, release days).

How to interpret this Annex, using Modality 4.1 as an example

On **Modality 4.1**, the Apprentice attends at the Employer's workplace on a 1-day release starting the apprenticeship on 12th February 2024 and with the last day being 27th June 2025, including attendance during Easter 2024, Christmas 2024, Easter 2025 holidays.

MCAST AWBL FLEXIBLE APPRENTICESHIP MODALITIES / COHORTS STARTING INTAKE OCTOBER 2023					
Modality	**Qualification**	**Days release**	**Apprenticeship start date**	**Apprenticeship end date**	**Modality**
Modality 3.1	Level 3 (1-year duration)	1	12/02/2024	30/08/2024	1-day release including Easter and Christmas holidays, July and August
Modality 3.2	Level 3 (1 -year duration)	1	20/11/2023	30/08/2024	1-day release including Easter and Christmas holidays, July and August
Modality 3.3	Level 3 - (1-year duration)	Block	01/04/2024	13/09/2024	Block Release
Modality 3.4	Level 3 (2-year duration)	2	12/02/2024	26/09/2025	1-day release including Easter and Christmas holidays, July, August and September
Modality 4.1	Level 4 (2-year duration)	1	12/02/2024	27/06/2025	1-day release including Easter and Christmas holidays, July, August and September
Modality 4.3	Level 4 (2-year duration)	1	20/11/2023	27/06/2025	1-day release including Easter and Christmas holidays, July, August and September
Modality 4.5	Level 4 (3-year duration)	2	01/07/2024	27/06/2025	2 day release, including Easter and Christmas holidays, July, August and September
Modality 4.6	Level 4 (2-year duration)	1	01/07/2024	31/01/2025	1 day release including Easter holidays, July, August and September
Modality 4.7	Level 4 (2-year duration)	2	12/02/2024	26/09/2025	2 day release, including Easter and Christmas holidays, July, August and September
Modality 4.8	Level 4 (3-year duration)	1	01/07/2024	03/07/2026	1 day release during Academic Year excluding Christmas and Easter Holidays and 2 day release during July, August and September
Modailty 4.9	Level 4 (3-year duration)	1	01/07/2024	27/06/2025	1 day release including Easter and Christmas Holidays and July, August and September
Modality 4.10	Level 4 (2-year duration)	Block	15/04/2024	27/06/2025	15/4/24 to 31/5/24 : 1-day release; 3/6/24 to 27/9/24 : block release; 30/9/24 to 31/1/25 : 1-day release + Christmas shutdown); 5/5/25 to 30/5/25 : 1-day release; 2/6/25 to 27/6/25 : block release
Modality 6.1	Level 6 (3-year duration)	1	12/02/2024	27/06/2025	1-day release including Easter and Christmas holidays, July, August and September
Modality 6.2	Level 6 (3-year duration)	1	01/07/2024	29/08/2025	1-day release including Easter and Christmas holidays, July, August and September
Modality 6.3	Level 6 (3-year duration)	Block	01/07/2024	27/09/2024	Block Release (July, August, September)
Modality 6.4	Level 6 (3-year duration)	1	01/07/2024	03/07/2026	1-day release including Easter and Christmas holidays, July, August and September

Annex 2: Samples of a Job Description for an Apprenticeship Vacancy to be provided by the Employer (via the 'MCAST Apprentice Onboarding Event Application Form' via the URL link provided)

Samples of Job Descriptions are provided below for guidance purposes when submitting MS Form.

Sample 1 of an Apprenticeship Job Description to be provided by Employer

The Apprenticeship will be as part of the Quality Management Systems Department. The main responsibilities are:

- Conducting, reporting and following up on GMP audits. GMP audits are carried out in the brewery; and the packaging lines.
- Dealing with customer complaints, investigating complaints, internal reporting
- Support the department during external audits
- Pest Control audits, reporting and follow-ups
- Document maintenance on the company document control system
- Supplier evaluation and approval
- Equipment calibration
- Finished product inspections if/when required
- Product / raw material traceability studies if/when required.

Sample 2 of an Apprenticeship Job Description to be provided by Employer

The Company is looking for a passionate software developer apprentice with knowledge in databases who loves technology and gets energy from creating amazing real-world solutions based on Industry 4.0 and Industrial IoT.

What do we offer?
- Chance to work with a highly intelligent and passionate team of engineers and experts.
- Opportunities for professional development and training.
- A flexible working environment & schedule.
- Career opportunities in a growing business.

Sample 3 of an Apprenticeship Job Description to be provided by Employer

Our company has been connecting customers to opportunities. Our network covers established and emerging markets. We serve customers ranging from individuals, families and start-ups, to medium-size companies, major international businesses and governments.

We offer the Apprentice the opportunity to develop a fulfilling career within a supportive and inclusive environment. We aim to be a place where everyone can achieve their full potential.

We shall be offering a paid salary, above the Apprenticeship remuneration, and we have multiple vacancies across different areas.

Annex 3: General Notes re MCAST Apprenticeship Programmes

1. The MCAST revised apprenticeship attendance modalities (launched in October 2022) provide a **flexible baseline (**both for the Employer and the Apprentice) **that can be customised by sector. Employers are encouraged to contact the MCAST Apprenticeship Department to discuss different apprenticeship (attendance) modalities.**

2. Apprentices are required to **attend 100%** of the assigned apprenticeship hours to achieve the assigned work-based unit (apprenticeship) credits, if necessary, by attending any balance of missing days in the fallback periods, in agreement with the Employer and the MCAST Apprenticeship Department.

3. Timetables for all programmes that include a WBL apprenticeship component shall nominally allow for **1-day release** throughout the College semesters and block release during Easter, Christmas and summer holidays.

4. Apprentices are not obliged to attend apprenticeship hours beyond the amount established in the 'Apprenticeship Training Agreement' that is signed by the Employer, Student and MCAST.

5. MCAST encourages employers to **offer and extend part-time employment** to students beyond the mandatory apprenticeship period. Beyond the mandatory period, the Employer must guarantee (as a minimum) the minimum wage to the students.

MCAST has published an '**MCAST Apprenticeship Guidebook for Employers'** (November 2023). This guidebook is meant to help Industry Partners who are considering to onboard an apprentice(s) as well as companies who are already employing MCAST apprentices. The guidebook has four main sections.

Section 1: Deciding to Employ an MCAST Apprentice

This section provides a general overview of how to identify the need for an apprentice and how to reach out to MCAST.

Section 2: Ensuring a Profitable Apprenticeship Experience

This section provides suggestions on how the Industry Partner can achieve maximum return on its investment from onboarding an apprentice(s) while at the same time ensuring that each student gains the experience they require for their training.

Section 3: Effective Introduction of the Apprentices at Your Work Place.

This section outlines how to implement an effective apprenticeship onboarding process.

Section 4: Assisting Apprentices in Learning to Work - Effective Mentoring

This section provides tips on how to structure the mentoring process to encourage a long-term partnership between the Industry Partner and its apprentices.

If you require a copy of the MCAST Apprenticeship Guidebook, please email apprenticeship.vacancies @mcast edu.mt

The Malta College for Arts, Science & Technology
Apprenticeship and Work-Based Learning Department
Reno C Borg Building
Triq Kordin Paola, PLA 9032

Dedicated email for January 2024 event enquiries: apprenticeship.vacancies@mcast.edu.mt
Dedicated telephone number for January 2024 event: **7902 9617**