

Dear Student,

Congratulations on your admission to the Master of Science in Information Technology & Systems programme at MCAST. For nearly 20 years, MCAST has proudly welcomed new students, and we are excited for you to be part of this growing tradition. As a member of the Class of 2018/19, you will join a dynamic student community in a place of endless opportunities. MCAST offers an unparalleled setting for the next chapter of your life. The MCAST family welcomes you, and I personally look forward to working with you throughout your time with us.

Stephen J. Hall

MSc IT&S Programme Coordinator

Programme Overview

MCAST Master of Science in Information Technology and Systems

MQF Level 7 - 90 ECTS

The Master of Science in Information Technology and Systems programme is an effective means of opening up new career possibilities in a broad range of ICT fields. Graduates of this Master programme will have the knowledge and skills to solve complex social, economic and technical problems within the context of information and communication technology. This Master programme will deliver theoretical and practical knowledge in specific areas to establish the academic, engineering and skill proficiency level required and expected by a professional to a productive role at a global level in the development of the Information Technology and Systems industry. The Master of Science in Information Technology and Systems programme provides fundamental skills in a variety of advanced ICT areas such as Big Data; Internet of Things (IoT), with a focus on developing intelligent solutions with a mix of hardware and software; Software as a service infrastructure; Information Management; Enterprise Systems; eLogistics; Systems Strategy and Management; Business Process Innovation; Cyber Security; Network Security and Data Management Technology, as well as Software defined networking, and the new field of distributed hashing and computing, typified by distributed version control systems and cryptocurrency applications. The programme delivers innovative and well-founded qualification and applied skills for the next generation of information systems designers and software architects respecting and integrating relevant aspects of innovation management and entrepreneurship.

Information technology and systems is a composite engineering discipline with the core identity in the design, integration and maintenance of computation, communication and business management systems. All of the three systems are of extreme complexity and as such must be approached in a manner that differs from the traditional engineering disciplines like mechanical or chemical engineering.

This programme is conceptualised as a compact and yet comprehensive and practical body of education and training material necessary to prepare a graduate learner for the cutting-edge information systems and technologies relevant job openings in the labour market of the European Union, with specific attention to the Malta's high tech labour market.

Particular units of the programme are devoted to the development of the entrepreneurship skills, working skills development and understanding of modern business computerised financials and e-commerce. Facing the aggressive expansion of global e-commerce activities, Malta's high tech labour force must be ready for the future developments that may take place faster than anticipated.

Programme Learning Outcomes

Upon successful completion of this Masters Programme, the learner will be able to:

1. Master proficiency in two complementary problem domains; information technology and business management domains;
2. Use the acquired technical and business problem analysis skill set and most effectively propose information system design matched to the documented business needs;
3. Select adequate technical means to design a solution that not only solves the specified technical and business problem, but also be extensible in the future in response to any additional needs of the growing business organisation;
4. Design an information system that optimally matches a specified purpose and business system role while minimising design effort and implementation costs;
5. Build systems features that make the overall system use, administration, and maintenance team-friendly;
6. Perform adequate reengineering of existing information technology powered business systems and design complementary subsystems to enhance business efficiency;
7. Synchronise existing international, European, and domestic standards with the custom developed solutions;
8. Prepare a business plan;
9. Structure a start-up enterprise;
10. Design new product/service marketing plan using modern Web technologies;
11. Use predictive analytical methods and big data processing to define the market for a new product or service;
12. Structure, budget, and execute a fundraising campaign needed for growing a start-up enterprise.