



## **Postgraduate Diploma in FinTech and Digital Banking**

MQF/EQF Level 7

### **Course Outline**

Duration: 9 months

## Overall Course Objectives

The learning outcomes presented below have been defined in line with the descriptors for the Level 7 of the Malta Qualification Framework.

### Knowledge:

- Has comprehensive specialised knowledge and understanding of how cultural, economic, political, and technological frameworks affect management practices and how they can be managed effectively;
- Identifies and evaluates theoretical approaches necessary for planning and decision-making in business. These include ideas that support the modelling and management of the decisions across the broad range of functional areas;
- Has relevant knowledge of organisations, and their role in pursuing sustainable business in the context in which they operate and how they are managed in compliance with codes of ethics and Corporate Social Responsibility;
- Has a comprehensive and critical understanding of the principal current research issues in management.

### Skills:

- Performs critical evaluation and analysis of business environment and of the main concepts, structures and approaches of strategic business management with incomplete or limited information;
- Demonstrates capability in using specialised skills to make decisions and create global strategies in different business operations, digital transformation, and finance in order to adapt to fast-changing business environment;
- Demonstrates leadership skills necessary to empower, inspire and manage teams, innovation and creative problem-solving while managing a business;
- Develops new skills in response to emerging knowledge and techniques in the domain of business management including digital skills and use of modern technologies;
- Demonstrates capability in using knowledge and skills of management to conduct research, taking into account the need for synthesis, setting objectives, methodological process and application of strategies;
- Develops an ability to identify and assess risks relating to the business, digital and financial environment and to design strategies to mitigate specific managerial risks;
- Monitors and maintains compliance with appropriate business regulations and formulates practical responses to the legal and external environment challenges associated with operating a business;
- Demonstrates capability in using data referring to business analytics to better forecast and execute business strategies and operations;
- Demonstrates specialised knowledge of management that includes reflecting on social and ethical responsibilities linked to execution of the managerial function;
- Demonstrates capability in using knowledge and skills of management to conduct research within a specific industry or functional area of a personal professional interest, taking into account the need for synthesis, setting objectives, methodological process and application of strategies.

**Competencies:**

- Demonstrates the ability to respond to the main political, economic, social, and technological variables and to formulate the priorities and strategies necessary for an organisation to succeed considering the global outlook and trends;
- Manages business projects by establishing a global vision that incorporates every facet of business development and constructs innovation and cultural diversity as an advantage in business contexts that are complex and unpredictable and require new strategic approaches;
- Is accountable for managing people and practicing management with commitment to democratic values and sustainability adopting the practices based on learning, service and social inclusion;
- Demonstrates autonomy in the direction of personal development and lifelong learning applicable to the business environment;
- Engages in critical analysis in the area of management and demonstrates independent thought, evaluation and problem-solving underpinned by evidence-based arguments;
- Takes responsibility for contributing to professional knowledge in management or a specific industry/functional area of a personal professional interest by identifying an existing business problem and by conducting original research.

## **COURSE OUTLINE**

### **Blockchain and Crypto-Economy Regulation & Governance**

This unit provides students with the regulatory and governance frameworks associated with the emergence of blockchain, crypto-assets, distributed ledger technologies, and fintech. Students analyse and evaluate the development of government regulation and industry self-regulation along with practice standards and codes of conduct in the blockchain industry and in some specific contexts of the crypto-economy. Upon completion of the unit, students will have acquired the responsibility for contributing to professional practice while solving management issues associated with the use of blockchain technology by analysing, synthesising, and evaluating various blockchain and crypto-economy regulatory solutions.

#### **Competencies**

- Manage strategic blockchain projects and demonstrate the ability to respond to the fast-changing regulatory environment around blockchain industries globally by identifying global regulatory needs of different kinds and local approaches to global challenges within emerging xTech industries;
- Take responsibility for contributing to professional practice while solving management issues associated with the use of blockchain technology and analysing, synthesising, and evaluating various blockchain and crypto-economy regulatory solutions;
- Be accountable for integrating knowledge from different legal and technological areas, such as GDPR and cybersecurity in order to make judgements on potential performance of different current and future regulatory changes with incomplete or limited information.

## **International Banking, Insurance, and Financial Services**

This unit provides an overview of the international banking system, including such topics as: the role of the banks in the financial system, regulatory and policy aspects, financial services offered by banks, and analysis of bank performance. Additionally, the unit provides students with a thorough understanding of insurance activities, including optimal insurance contract design under information asymmetry and moral hazard. Upon completion of the unit, students will demonstrate specialised knowledge of international banking and insurance that include reflecting on social and ethical responsibilities linked to operations in the financial services industry.

### **Competencies**

- Manage and transform work or study contexts in the financial services industry that are complex and unpredictable and require new strategic approaches considering the changing characteristics of the banking and insurance sectors;
- Create a research-based diagnosis to problems in international banking and insurance by integrating knowledge from interdisciplinary fields such as finance and fintech;
- Has the learning skills to allow continuation to study international banking and insurance in a manner that may be largely self-directed or autonomous;
- Take responsibility for reviewing the performance of major financial organisations with the purpose to determine their financial health and prospects.

## **FinTech in Traditional and Innovative Business Models**

In this unit students explore the challenges and opportunities created by FinTech for digital transformation in the traditional financial organisations as well as the emergence of new innovative business models in various areas of the financial industry and focus on how the technological advances in FinTech are enabling the financial sector innovations. Upon completion of this unit, students will demonstrate capability in using knowledge and skills of FinTech to master a new toolbox required to successfully compete in the financial industry and will be able to adapt to the fast-changing finance industry environment by reflecting on social implications caused by the spread of FinTech.

### **Competencies**

- Demonstrate the ability to respond to the fast-changing financial industry environment affected by continuous emergence and spread of FinTech innovations;
- Create a research-based diagnosis to problems in financial management by integrating knowledge about FinTech solutions when developing new business models or upscaling existing business models in the financial industry;
- Demonstrate autonomy in the direction of learning of emerging FinTech technologies and a high level of understanding of learning processes;
- Manage and transform work or study contexts in business and finance that are complex and unpredictable and require new strategic approaches by integrating and using the most appropriate FinTech solutions suitable to solve a specific problem.

## Algorithmic Finance and Big Data

This unit develops skills and competencies to prepare business students to successfully use algorithmic finance and big data analytics solutions in their professional career in the field of finance and to operate on capital markets affected by continuous digital transformation and automation. The unit examines major aspects of algorithmic finance technology, such as smart contract, crypto trading bots, high-frequency trading signals (HFT) as well as the impact of big data analytics on finance operations and reviews various use cases for applying machine learning or artificial intelligence solutions in financial management. Upon completion of the unit, students will be able to adapt to the fast-changing capital markets environment by relying on algorithmic finance principles and big data analytics in navigating complex psychological trappings in market behaviour and making smarter financial decisions.

### Competencies

- Demonstrate the ability to respond to the fast-changing capital markets environment affected by continuous digital transformation and automation;
- Create a research-based diagnosis to problems in financial management by integrating knowledge from new fields such as blockchain, data science, artificial intelligence and machine learning and make judgements related to these fields with incomplete or limited information;
- Demonstrate autonomy in the direction of learning of emerging technologies used on capital markets and a high level of understanding of learning processes;
- Manage and transform work or study contexts that are complex and unpredictable that require new strategic approaches by using data analytics techniques, machine learning and artificial intelligence solutions for financial management.

## Tokenomics and Cryptocurrency Markets

This unit prepares students to professionally understand tokenomics and cryptocurrency markets. The new informal institutions of international algorithmic interaction are rapidly developing in the digital world; in this environment it is crucial to have a sound awareness of the economic entities' algorithmic relations and of the token value management process. The unit examines major aspects of tokenomics and the cryptocurrency markets, such as market infrastructure, token circulation, and cryptocurrency rating. Upon completion of the unit, students will be able to evaluate risks associated with using tokens and operating on cryptocurrency markets, and to conduct autonomous research about tokenomics and cryptocurrency markets using macroeconomic indicators or benchmarks.

### Competencies

- Create a research-based diagnosis to the role of base accounting units (tokens) in business processes and to problems related to cryptocurrency markets operations by analysing the role of tokens in the business model through appraisal of the technological, legal and economic forces that affect business performance;
- Demonstrate autonomy in the direction of learning by identifying the theoretical approaches and tools necessary for planning and decision-making in the context of economic tokenisation at micro and macro level;
- Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches by choosing the most effective ways to implement the token in business processes;
- Demonstrate the ability to respond to the fast-changing business environment when working in complex and unpredictable situations related to cryptocurrency exchanges, decentralised exchange services and OTC exchanges.

## **Economics and Geopolitics**

This unit aims at developing skills and competencies to prepare students to apply and criticise economic theories and data and their impact on the operation of markets, and to envision their role on making economic predictions about market outcomes. The unit also offers a comprehensive treatment of economic theory and analysis, using both qualitative and quantitative tools and techniques associated with the theory, and teaches the participants how to use geopolitical categories in order to understand the international economic and political environment, how to analyse reasons and consequences of international political and economic decisions, how to use geopolitical and geo-economic knowledge in order to understand the global market.

### **Competencies**

- Create a research-based diagnosis to problems in economics and geoeconomics by integrating knowledge from an interdisciplinary field of geopolitics and make judgements with incomplete or limited information;
- Demonstrate the ability to respond to the fast-changing business environment by analysing and interpreting diverse forms of economic information from both the environment and the organisation;
- Demonstrate autonomy in the direction of learning of economics and geoeconomics by conducting independent research and analysis of economic data, articles, news, and expert opinions.

## **Digital Transformation, Innovation and Technology**

This unit will equip students with a fundamental knowledge of the new digital economy and will provide an understanding of how the digital economy is shaping strategic options for managers, including the new technological driving forces, digitalisation, and the new challenges. Students will analyse the impact of digital transformation on society and businesses and assess to what extent technology can be used to create meaningful and positive innovative solutions to different issues. Upon completion of the unit, students will have knowledge and skills of digital transformation, innovation and technology and will be able to find solutions to the challenges of leading and managing innovative and transformational processes in modern organisations.

### **Competencies**

- Manage and transform work contexts that are complex and unpredictable and require new strategic approaches based on innovation and digital transformation, understanding of technology, and analysis of internal and external environment;
- Demonstrate the ability to respond to the fast-changing business environment by analysing emerging and disrupting technologies and by having a vision to detect technologies that are yet in an early maturity stage but have a potential to become disruptive;
- Demonstrate autonomy in the direction of learning of digitalisation and innovation processes by conducting independent research and analysis of economic data, articles, news, and expert opinions.

## **Final Project (Capstone)**

A Final Project (Capstone) is a multifaceted assignment that serves as a culminating academic and intellectual experience for Master students. Students take what they have learned throughout the course of their Master's programme and apply it to examine a specific idea/problem within their area of specialisation. A Final Project involves the identification of an existing problem in a real-world setting and the application of learned skills and methods to develop a solution that addresses the problem directly. There are several options among which students can choose for developing their Final Project: either it may be geared toward research or may be more oriented toward problem-solving. Solutions offered by students are usually interactive and realistic, meaning they can be implemented and used either in professional life or in further research and study.

### **Competencies**

- Create a research-based diagnosis to problems by integrating knowledge from new or interdisciplinary fields and make judgements with incomplete or limited information;
- Take responsibility for contributing to professional knowledge in a specific industry or functional area of a personal professional interest by identifying an existing business management problem and by developing theoretical approaches to possible solutions;
- Demonstrate autonomy in the direction of learning and a high level of understanding of learning processes in a specific industry or functional area of a personal professional interest;
- Have the business research skills to allow continuation to study a specific business management problem in a manner that may be largely self-directed or autonomous.