Master of Science in Information Security

The aim of the course is to acquire critical and in deep knowledge and skills needed to define IT

security strategy, to implement corporate asset protection programs, and to develop and

implement processes about IT risks mitigation. Students will develop an advanced knowledge of

information security and an awareness of the context in which information security operates in

terms of safety, environmental, social, and economic aspects. They will also gain a wide range of

intellectual, practical and transferable skills, enabling them to develop a flexible professional career in IT and IS.

This programme connects various disciplines, from computer science, mathematics and

business, to design and critically analyse concepts, mechanisms and technologies used in the

depth and breadth of cyber security.

Career:

* Information Security Manager
* Information Security Officer
* Information Security Analyst
* Information Security Consultant
* Managers
* Business leaders
* Policy makers

Entry Requirements

Applicants are required to have a:

* Minimum Level 5 qualification or equivalent in either Computer Science, Electrical or

Electronic Engineering, Mathematics, Physics, related disciplines with demonstrable

exposure to programming and mathematics or other alternative subjects related to data

analysis, data science or informatics, or a recognized equivalent international

qualification.

* Relevant work experience in the IT Security sector might be considered if an applicant

doesn’t meet level 5these requirements.

* IELTS 6.0 or equivalent

Methodology

The programme comprises an online interactive approach promoting the building of a

community of practice via peer-to-peer learning through which is asynchronous online

discussions and group-based assignments. Students have the freedom and flexibility to

access the course at a time which is most convenient to them.

Modules

* Governance and Risk Management  
  The module explores the Risk Management and Governance techniques inherent in securing a company’s IT systems.  
  The aim of the module is to study in depth knowledge needed by an IT managing professional for defining the IT security plan and strategy, to implement corporate asset protection programs, and to develop and implement processes about IT risks mitigation.  
  Students of this module will analyse the information security changes, trends, and best practices and cover the information security compliance process and procedures.  
  12 ECTS
* Information Security, Controls, Compliance and Audit Management  
  The module presents the techniques for identifying critical issues, defining documentation and collecting data for securing IT systems.  
  This module presents the techniques used for verifying security and focuses on the areas related to Information Security Controls, Compliance, and Audit Management. The students of this module will critically analyse the concepts of corporate security, its design and implementation to be able to design effective information systems controls that align with operational processes and objectives. In addition, students will gain critical understanding and ability to analyse the IT audit process and IT audit standards.  
  12 ECTS
* Security Programme Management and Operations  
  The module defines the techniques for the realization and qualitative management of an IT project in the security field.  
  This module explores Security Programme Management & Operations covering the development and implementation methodologies of an IT security project from a project management point of view. The students of this module will be exposed to critically analyse project management scope, practices and controls, point out the activities needed to successfully execute the information systems programme, estimate activity duration, and develop a schedule and staffing plan. The content will also cover incompatibilities, challenges, or issues related to project and vendors and how to manage stakeholders’ expectations.  
  12 ECTS
* Information Security Core Competencies  
  The module defines the techniques for “physical” management of security, identification of roles, policies etc. in the security field.  
  The module covers Information Security Core Competencies and explores the methods for identifying useful technologies for securing IT. The objective of this module is to gain the critical understanding and in-depth knowledge of criteria for mandatory and discretionary access control, and to understand the different factors that help in implementation of access controls and design an access control plan. Students will also evaluate various social engineering concepts and their role in insider attacks and develop best practices to counter social engineering attacks.  
  12 ECTS
* Strategic Planning and Finance  
  The module covers implementation of the IT project, compliance with regulations and management of third-party systems used for security management.  
  This module explores the administrative part of an IT security project; defines the strategic objectives, relations with suppliers, compliance with regulations, budget management, relations with stakeholders. The objective of this module is to develop in-depth understanding and critical knowledge of organization’s objectives, strategic plans and targets that support the operational needs of the organization including the assessment of potential risks, linked to the forecasting ability of future scenarios. The students will also identify how to report financial metrics to stakeholders. They will evaluate different procurement such as Statement of Objectives (SOO), Statement of Work (SOW), and Total Cost of Ownership (TCO).  
  12 ECTS
* Research methods  
  6 ECTS
* Dissertation  
  The dissertation is a compulsory element of Master of Science in Information Security. Dissertation is based on a major piece of work that involves applying material encountered in the taught component of the degree, and extending that knowledge with the student&#39;s contribution, under the guidance of a supervisor. This component of Masters degree provides opportunity for students to pursue a single topic in depth and to demonstrate evidence of research ability at a Masters level. The topic is typically a current problem in the broad area of their MSc programme. The dissertation usually involves experimental or theoretical research, or a substantial literature survey on a specific topic.  
  24 ECTS

Total 90 ECTS

Programme can be delivered full and/or part time depending on the availability of students.

Part-time: 32 Months

Semester 1 Module 1, 2

Semester 2 Module 3, 4

Semester 3 Module 5

Semester 4 Module 6 + Dissertation kick off

Semester 5 complete dissertation

Full- Time: 18 Months

Semester 1 Module 1, 2, 3, 4

Semester 2 Module 5, 6 + Dissertation kick off

Semester 3 complete dissertation

Price: €3,000