Fakultät für Ingenieurwesen
Facoltà di Ingegneria
Faculty of Engineering

COURSE DESCRIPTION – ACADEMIC YEAR 2024/2025

Course title	**Management of System Security and Networks**
Course code	76437
Scientific sector	ING-INF/05
Degree	Bachelor in Informatics and Management of Digital Business (L-31)
Semester	2
Year	1
Credits	6
Modular	No

Total lecturing hours	40
Total lab hours	20
Attendance	Attendance is not compulsory but recommended. Non-attending students have to contact the lecturer at the start of the course to agree on the modalities of the independent study. Exam modalities for non-attending students are the same as for attending students.
Prerequisites	Students should be familiar with basic programming concepts, data structures and algorithms. These prerequisites are covered in any Bachelor degree in Informatics and Management of Digital Business.
Course page	https://ole.unibz.it/

Specific educational objectives	The course belongs to the type "caratterizzante - informatica". The main aim of this exam is to provide an introduction to the field of information security. The students learn about the technical as well as the management side of security in information systems. They acquire knowledge about fundamental principles of security and also about practical approaches to securing information systems.

Lecturer	Fabrizio Maggi
Contact	Office B1.5.43, Faculty of Engineering, NOI Techpark, Via Bruno Buozzi 1, maggi@inf.unibz.it
Scientific sector of lecturer	ING-INF/05
Teaching language	Italian
Office hours	By previous appointment via email, maggi@inf.unibz.it, Office POS 3.08, 3rd floor, Faculty of Engineering, piazza Domenicani 3
Lecturing assistant (if any)	--
Contact LA	--
Office hours LA	--
List of topics	• Key concepts of system security and networked systems, threats and data security • Basic mechanisms of cryptography • Identification, authentication and biometrics • Chip cards • Security infrastructures and certificates • Web and internet security
Teaching format	Frontal classroom lecture and lab sessions

Learning outcomes	Knowledge and understanding: • D1.7 - Know the main concepts of computer networks and security in distributed systems. Applying knowledge and understanding: • D2.3 - Ability to analyse business problems and to develop proposals for solutions with the help of IT tools. • D2.4 - Ability to formalise and to analyse procedures and operational processes, to recognise and use optimisation potentials. • D2.10 - IT infrastructure and project management capabilities. Making judgments • D3.2 - Be able to work independently according to your level of knowledge and understanding, also taking responsibility for development projects or IT consulting. Learning skills • D5.3 - Ability to follow rapid technological developments and to learn about innovative aspects of the latest generation of information technology and systems.

Assessment	• Project work to test knowledge application skills and communication skills • Oral exam with verification questions and questions to test knowledge application skills
Assessment language	Italian
Assessment Typology	Monocratic
Evaluation criteria and criteria for awarding marks	Assessment 1: project work (30%) Assessment 2: oral exam (70%) Relevant for assessment 1: ability to work in teams, skill in applying knowledge in a practical setting, ability to summarize in your own words. Relevant for assessment 2: clarity of answers, ability to recall principles and methods used in system security, skill in applying knowledge about information security.

Required readings	CompTIA Security+ Guide to Network Security Fundamentals 6thEdition, Mark Ciampa ISBN 978-1337288781 Material provided in the form of slides and scientific papers provided by the teacher.
Supplementary readings	Principles of information security 6th edition, Michael E. Whitman, Herbert J. Mattord, ISBN 978-1337102063
Software used	Provided by teacher and tutor during lectures/lab sessions