Fakultät für Informatik
Facoltà di Scienze e Tecnologie informatiche
Faculty of Computer Science

SYLLABUS
COURSE DESCRIPTION

COURSE TITLE	**Information Security**
COURSE CODE	75041
SCIENTIFIC SECTOR	ING-INF/05
DEGREE	Bachelor in Computer Science and Engineering
SEMESTER	2nd semester
YEAR	3rd year
CREDITS	8

TOTAL LECTURING HOURS	48
TOTAL LAB HOURS	24
PREREQUISITES	Students should have a solid mathematical foundation and be familiar with basic programming concepts, data structures and algorithms. These prerequisites are covered in any Bachelor degree in Computer Science.
COURSE PAGE	https://ole.unibz.it/

SPECIFIC EDUCATIONAL OBJECTIVES	• Type of course: ”caratterizzante” for L-31 and L-8 • Scientific area: “discipline informatiche” for L-31 and “fingegneria informatica” for L-8 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	Andrea Molinari
SCIENTIFIC SECTOR OF THE LECTURER	ING/INF05
TEACHING LANGUAGE	English
OFFICE HOURS	POS 2.14, previous appointment
TEACHING ASSISTANT	Same as lecturer
OFFICE HOURS	-

LIST OF TOPICS COVERED	• Basic definitions (CIA, threat, attack, vulnerability, control) • Risk assessment • Basic of Cryptography • Cryptographic Protocols • Network Attack and Defense • Usability • Social Engineering • Security Policies
TEACHING FORMAT	Frontal classroom lecture plus lab sessions

LEARNING OUTCOMES	**Knowledge and understanding:** • know critical security aspects of information systems, the basic concepts of security and techniques for the development of secure systems; **Applying knowledge and understanding:** • be able to evaluate the quality of information systems and to identify critical aspects • be able to apply the own knowledge in different working contexts; **Making judgements** • Must have the ability to independently select the documentation required to keep abreast of the frequent technological innovations in the field by using a wide variety of documentary sources: books, web, magazines. **Communication skills** • Must be able to coordinate the work of a project team and to interact positively with members of the group. **Learning skills** • Must also be able to independently keep up to date with developments in the most important areas of Computer Science

ASSESSMENT	• Project work to test knowledge application skills and communication skills • Written exam with verification questions and questions to test knowledge application skills
ASSESSMENT LANGUAGE	English
EVALUATION CRITERIA AND CRITERIA FOR AWARDING MARKS	Assessment 1: project work (30%) Assessment 2: written examples (70%) Relevant for assessment 1: ability to work in teams, skill in applying knowledge in a practical setting, ability to summarize in own words. Relevant for assessment 2: clarity of answers, ability to recall principles and methods used in system security, skill in applying knowledge such as testing the security of systems.

REQUIRED READINGS	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 CompTIA Security+ Guide to Network Security Fundamentals 6thEdition, Mark Ciampa ISBN 978-1337288781

SOFTWARE USED	Provided by teacher and tutor during lectures / lab sessions