Course description

Winter & Summer Schools

GENERAL DATA			
Course Unit Title	Algorithmic Thinking		
Module			
Course Unit Code	IFLV6597	Type of Course Unit	ILV
Level of Course Unit	Bachelor	Year of Study	1
Semester	Fall 2025	ECTS Credits allocated	5

SPECIAL INFORMATION	
Name of Lecturer	Assoz. FH-Prof. Andrea Corradini, PhD
Objective of the Course (Learning Outcomes)	The main objective of the course is to introduce students to problem solving with a procedural approach using a high-level programming language as a resource for developing software solutions. Upon successful completion of the course, the students will be able to: • discuss the importance of algorithms in the problem-solving process • create algorithms for solving simple problems using procedural and possibly very basic object-oriented techniques • decompose a problem into smaller pieces and/or sub-problems • identify the main properties and drawback of algorithms • decide on the appropriate control flow and data structure for a given problem • basic programming tools
Course Contents	Programming and problem solving are essential skills for all students enrolled in any education program that requires a minimum amount of IT skills. Understanding how a computer is instructed to accomplish tasks and learning how to solve problems using a structured programming language provides a strong foundation of many concepts and ideas for these students. This course introduces, among others, the concept of algorithm, data types, data structures, control structures along with their use in and the use of programming tools.
Recommended Reading	Y. Daniel Liang, "Introduction to Java Programming and Data Structures", 12th edition, Pearson, 2020
Planned Learning Activities and Teaching Methods	asynchronous classes and exercises
Assessment Methods and Criteria	Practical exercises (Portfolio) & test