General Information	
Academic subject	Computational thinking and programming
Degree course	Patrimonio Digitale. Musei, Archivi, Biblioteche
Academic Year	2021-2022
ECTS credits	6
Compulsory attendance	No
Language	Italiano

Subject teacher	Name Surname	Mail address	SSD
	Ciro Castiello	ciro.castiello@uniba.it	INF/01

ECTS credits details	Type	SSD	
Basic teaching activities	Lectures	INF/01	

Class schedule	
Period	Second Semester
Year	First
Type of class	Lecture- workshops

Time management	
Hours	150
In-class study hours	42
Out-of-class study hours	108

Academic calendar	
Class begins	February 21, 2022
Class ends	May 13, 2022

Syllabus	
Prerequisites/requirements	
Expected learning outcomes (according to Dublin Descriptors)	*Knowledge and understanding* The student knows the high-level principles, as well as the historical and theoretical backgrounds, for solving problems efficiently by using computational tools and information-processing agents. *Applying knowledge and understanding* The student is able to understand and use the main data structures for organising information, to develop algorithms for addressing computational-related tasks, and to implement such algorithms in a specific programming language. *Making informed judgements and choices* The student is able to appreciate the general principles of computational thinking as well as the techniques to develop and implement algorithms. Informed judgements derive from the study and the critical assessment of texts. Adequate autonomy is verified through the final examination of profit and the possible execution of exercises during the course. *Communicating knowledge and understanding* The student is able to explain the topics included in the course programme using the specific vocabulary of the discipline.

	Capacities to continue learning The student is able to explore the topics included in the course programme independently, also using resources that are not directly involved in the delivery of the teaching hours.
Contents	• Introduction to Computational Thinking • Algorithms • Computability • Programming Languages • Organising Information • Analysis of specific algorithms
Course program	
Bibliography	S. Peroni – Computational Thinking and Programming. Further material that may be suggested or provided by the lecturer during the course.
Notes	
Teaching methods	Lectures and exercises in the classroom
Assessment methods (indicate at least the type written, oral, other)	Oral examination to ascertain the acquired theoretical and technical skills, possibly integrated by a practical test (implementation and discussion of programs).
Evaluation criteria	The examination aims at assessing that the student is able to demonstrate: - the knowledge of the topics covered during the lectures; - the ability to apply the acquired knowledge to problems related to the IT context; - the ability to analyse and compare different and/or alternative solutions; - the ability to explain complex concepts using appropriate terminology and formalism; - the ability to develop and organise ideas in a discriminating and systematic way
Further information	