

General Information	
Academic subject	ELEMENTS OF DIDACTICS OF PHYSICS
Degree course	
Curriculum	
ECTS credits	8+1
Compulsory attendance	
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Augusto Garuccio	augusto.garuccio@uniba.it	FIS/08

ECTS credits details			
Basic teaching activities			

Class schedule	
Period	Semester II, Academic Year 2018/2019
Year	IV year
Type of class	Lecture- workshops- laboratory of physics

Time management	
Hours measured	1h= 60 minutes
In-class study hours	60 + 10 of laboratory
Out-of-class study hours	155

Academic calendar	
Class begins	11 March 2019
Class ends	31 May 2019

Syllabus	
Prerequisite requirements	
Expected learning outcomes	<p><i>Knowledge and understanding</i> The student will acquire knowledge of the main physical phenomena directly perceived by potential students, such as mass, volume, momentum, force, heat, temperature, electricity and sound.</p> <p><i>Applying knowledge and understanding</i> The student will acquire knowledge of experimental methods to acquire qualitative and quantitative information on these phenomena.</p> <p><i>Making informed judgements and choices</i> Within the teaching methods of physics, the student will be able to identify the best strategy for transfer in the context of a specific classroom knowledge and skills acquired.</p> <p><i>Communicating knowledge and understanding</i> The student will acquire mastery of the lexicon of Physics and ability to adapt it to the context of classroom, without creating "misconcepts" that could hinder scientific training in higher cycles of school.</p> <p><i>Capacities to continue learning</i> The student, acquiring elements of the historical-scientific</p>

	method, will develop an attitude to the continuous updating of knowledge and skills in the field scientific knowledge.
Contents	<ul style="list-style-type: none"> The course aims to provide the skills for a correct approach to the teaching of physics in primary education level
Course program	Introduction to the Didactics of Physics. The historical and experimental approach to the Teaching of Physics. Applications to the following topics: measurement and units of measurement; density and Archimedes' principle; the atomic composition of the materials; elements of mechanics and celestial mechanics and astronomy; elements of electrostatics and circuits; heat and temperature; phenomena of thermodynamics; the sound.
Bibliography	A list of possible reference texts will be provided at the beginning of the course.
Notes	Hand-outs, worksheets, excerpts from textbooks of Physics at the university level will be used.
Teaching methods	Lectures with historical introduction to the topics and comments on specific teaching methodology, Experimentations in the classroom, Laboratory of Physics
Assessment methods	Oral examination with discussion of reports on laboratory experiences
Further information	Studio: Dipartimento Interateneo di Fisica, room 181, tel 0805443216