UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione
ACADEMIC YEAR	2021/2022
MASTER'S DEGREE (MSC)	PRIMARY EDUCATION
SUBJECT	CHEMISTRY FOR PRIMARY AND CHILDREN'S SCHOOL
TYPE OF EDUCATIONAL ACTIVITY	B
AMBIT	70011-Discipline chimiche
CODE	16031
SCIENTIFIC SECTOR(S)	CHIM/03
HEAD PROFESSOR(S)	BARONE GIAMPAOLO Professore Ordinario Univ. di PALERMO SCOPELLITI MICHELANGELO Ricercatore Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	4
INDIVIDUAL STUDY (Hrs)	73
COURSE ACTIVITY (Hrs)	27
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	4
TERM (SEMESTER)	1° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**BARONE GIAMPAOLO** Tuesday 15:00 17:00 Sede del Consorzio Universitario, corso Vittorio Emanuele, 92, 93100 Caltanissetta Wednesday 15:00 17:00 Studio del docente, viale delle Scienze, Edificio 17, 90128 Palermo **SCOPELLITI MICHELANGELO** Wednesday 14:00 17:00 Studio del docente - Edificio 17

DOCENTE: Prof. MICHELANGELO SCOPELLITI- *Lettere A-L*

PREREQUISITES	Knowledge of mathematics required for being admitted to the degree course and verified through the admission test.
LEARNING OUTCOMES	Knowledge and understanding: knowledge of the basic concepts of chemistry to be used as an interpretative key in the teaching of physical and natural sciences. Applying knowledge and understanding: knowing the concepts, techniques and chemical methods to describe the behavior of real systems. The future teacher will act as director and coordinator urging the possible questions and will to know about topics concerning the matter and its transformations. Making judgements: to be able to evaluate simple chemical issues to be taught to prospective students, by following critical and effective pathways for understanding simple phenomena related to the matter and its transformations Communication skills: knowing how to argue in strict terms on the concepts acquired in written and oral form in order to transmit these skills to prospective students Learning skills: knowing how to interpret and rework new superior knowledge to basic concepts acquired during the course.
ASSESSMENT METHODS	The final examination consists of a written test and of an oral exam. The written test, of the duration of about 2 hours, concerns the design of a Chemical lecture The oral test consists of a short interview on theoretical and practical aspects of the topics covered in the course. Evaluation criteria: 18-23: the student must demonstrate a basic achievement of the objectives, namely the acquisition of a basic knowledge of the topics argued and the ability to operate minimal links, and to expose them with a basic linguistic-communicative skills. 24-26: the student must demonstrate a good achievement of the objectives, namely the acquisition of a robust knowledge of the topics argued and the ability to operate well-briged links, and to expose them with good linguistic-communicative skills. 27-29: the student must demonstrate to have surely achieved objectives: full knowledge of subjects, reflexive mastery, significant expressive skills. 30-30 cum laude: the student must demonstrate to have achieved excellent objectives: full knowledge of subjects, critical mastery, ability to transfer acquired skills, linguistic-communicative skill, both general and specific, absolutely pertinent and definitely noteworthy; creativity and originality.
EDUCATIONAL OBJECTIVES	The aim of the course is to provide students with a thorough knowledge of basic chemistry concepts, in order to teach prospective students how to: observe, ask questions and discuss about possible hypotheses; propose investigation pathways; logically connect the investigated phenomena; justify and defend their choices; acquire the meaning of words and terms; acquire expertise on the considered phenomena, both in everyday life and in laboratory; use learning objects and e-books.
TEACHING METHODS	Teaching takes place in the first half of the year and consists of lectures and of classroom exercises.
SUGGESTED BIBLIOGRAPHY	* V. Domenici, "Insegnare e apprendere la chimica", Mondadori Education * L. Cipolla, "Metodi e strumenti per l'insegnamento e l'apprendimento della chimica", EdiSES * S. Passannanti, C. Sbriziolo "L'ora di chimica", Tramontana RCS education * A. Meiani "Il grande libro degli esperimenti", De Agostini

SYLLABUS

Hrs	Frontal teaching
3	Observation and description of a phenomenon: the experimental method
8	Matter: characteristics of matter; physical states of matter; the microscopic nature of matter
8	From mixtures to pure substances: mixtures and their separation; solutions and separation techniques; properties of the substances; analysis of certain substances
8	Chemical reactions: simple chemical reactions; distinction between physical and chemical changes; the combustion reaction; chemical reactions and energy