DIPARTIMENTO DI SCIENZE

COURSE: **GENERAL AND INORGANIC CHEMISTRY**			
ACADEMIC YEAR: **2019-2020**			
TYPE OF EDUCATIONAL ACTIVITY: **Basic**			
TEACHER: **Prof. Alfonso Bavoso**			
e-mail: **alfonso.bavoso@unibas.it**		website:	
phone: **0971205452**		mobile (optional):	
Language: **ITALIAN**			
ECTS: **10** (lessons and tutorials/practice)	n. of hours: **80** (lessons and tutorials/practice)	Campus: **Potenza** Dept./School: **Department of Sciences** Program: **Pharmacy (LM-13)**	Semester: **I** (01 october 2019 - 20 dicember 2019-20 january 2020)

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

- Understanding of the fundamental aspects of atomic and molecular structure.
- Understanding of the relationships between the structural characteristics of elements and compounds and their chemical properties.
- Understanding of the properties of the solutions. Study of chemical equilibrium.
- Acquisition of skills to solve basic chemical problems .

PRE-REQUIREMENTS

SYLLABUS

Introductory topics (15 hours) A.1 THE MATTER PROPERTIES AND MEASUREMENT - A.2 ATOMS AND ATOMIC THEORY - A.3 CHEMICAL COMPOUNDS - A.4 CHEMICAL REACTIONS - A.5 GASES - A.6 LIQUID AND SOLID B) Atomic and molecular structure (20 hours) B.1 ATOMIC STRUCTURE - B.2 THE PERIODIC TABLE AND SOME PERIODIC PROPERTIES - B.3 THE CHEMICAL BOND - B.4 STRUCTURE AND MOLECULAR GEOMETRY C) Solutions and chemical equilibrium (25 hours) C.1 PROPERTIES OF THE SOLUTIONS - C.2 CHEMICAL EQUILIBRIUM C.3 ACID -BASE EQUILIBRIUM C.4 APPLICATION OF EQUILIBRIUM IN WATER SOLUTIONS Supplementary topics (20 hours) D.1 CHEMICAL KINETICS -D.2 NOTES ON THERMOCHEMISTRY- D.3 ELECTROCHEMISTRY - D.4 NOTES ON SOME CHEMICAL ELEMENTS

TEACHING METHODS

Lectures/ training on numerical exercises

EVALUATION METHODS

Oral exam with exercises

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TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Zumdhal - CHIMICA- Zanichelli ed.

Petrucci , Harwood , Herring- Chimica generale- Piccin ed.

Bertini , Mani, Luchinat – Stechiometria – Zanichelli ed.

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INTERACTION WITH STUDENTS

At the beginning of the course, objectives, program and verification methods are illustrated. The reference texts and student reception methods are indicated. The list of students who intend to attend the course is compiled.

Reception hours

from Monday to Friday following an appointment by e-mail.

EXAMINATION SESSIONS (FORECAST)[1]

7/02/2020; 20/03/2020; 5/06/2020; 10/07/2020; 11/09/2020; 16/10/2020; 4/12/2020;

SEMINARS BY EXTERNAL EXPERTS YES □ NO x

FURTHER INFORMATION

[1]Subject to possible changes: check the web site of the Teacher or the Department/School for updates.