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**COURSE: Laboratory of Physical Chemistry I**

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**ACADEMIC YEAR: 2019/2020**

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**TYPE OF EDUCATIONAL ACTIVITY: Basic**

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**TEACHER: Angela De Bonis**

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e-mail: [angela.debonis@unibas.it](mailto:angela.debonis@unibas.it)

website:

phone: 0971206249

mobile (optional): 3472330740

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Language: italian

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ECTS: 6 (3 lessons + 3  
practice)n. of hours: 60 (24 lessons +  
36practice)Campus:Potenza  
Department of ScienceSemester: I  
From 01/10/2019 to  
20/12 -20/01/2020

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**EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES**

The student will acquire basic knowledge for applying major theoretical principles of physical chemistry

Educational goals:

- Vacuum technology and relative systems
  - Mechanical and optical properties
  - Thermal and thermodynamic properties
  - Chemical kinetics
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**PRE-REQUIREMENTS**

Math 1, Math 2, Physics, Physical Chemistry II

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**SYLLABUS**

The thermodynamic definition of temperature and its applications; The experimental evaluation of the specific gravity of a solution with the purpose of assessing the relative partial molar volume; Introduction to vacuum, vacuum technology and apparatuses; Calorimetry for determining thermodynamic parameters of a reaction; Experimental use of viscosimetry for defining molecular weight and flow activation energy of solutions.

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**TEACHING METHODS**

Theoretical lessons, Laboratory tutorials.

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**EVALUATION METHODS**

Oral examination

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**TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL**

P.W. Atkins, J. De Paula, Chimica Fisica, Zanichelli 2004 or following editions

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**INTERACTION WITH STUDENTS**

The teacher is open for discussion and additional teaching during the planned weekly colloquia (Tuesday and Thursday 10-12), by email ([angela.debonis@unibas.it](mailto:angela.debonis@unibas.it)) or by phone (0971 206249)

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**EXAMINATION SESSIONS (FORECAST)<sup>1</sup>**

The same of Physical Chemistry I

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SEMINARS BY EXTERNAL EXPERTS    YES     NO

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**FURTHER INFORMATION**

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<sup>1</sup>Subject to possible changes: check the web site of the Teacher or the Department/School for updates.