DIPARTIMENTO DI SCIENZE

COURSE: **GENERAL PHYSICS**			
ACADEMIC YEAR: **2019-2020**			
TYPE OF EDUCATIONAL ACTIVITY: : **Basic**			
TEACHER: **Prof. Nicola Cavallo**			
e-mail**: nicola.cavallo@unibas.it**		website: http://oldwww.unibas.it/utenti/cavallo/home.htm	
phone: **0971206066**		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**: II (from 2 March 2020 to 20 June 2020)**

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

- The course aims to provide the fundamentals of classical kinematics, thermodynamics and electromagnetism. The students will learn the fundamental laws of electric and magnetic phenomena, described by means of an adequate mathematical formalism.
- The students will also be able to solve numerical problems on the topics presented in the lectures

PRE-REQUIREMENTS

- none

SYLLABUS

- **Introduction: Why Physics is important**
- **Measurement**
- **Vectors**
- **Motion Along a Straight Line**
- **Motion in Two & Three Dimensions**
- **Force and Motion**
- **Kinetic Energy & Work**
- **Potential Energy & Conservation of Energy**
- **Systems of Particles and Collisions**
- **Rotation, Torque & Angular Momentum**
- **Equilibrium & Elasticity**
- **Biomechanics**
- **Fluids**
- **Temperature, Heat & the First Law**
- **The Kinetic Theory of Gases**
- **Entropy & the Second Law**
- **Thermodynamics of biological systems**
- **Diffusion and Osmosis**
- **Electric Charge**
- **Electric Fields**
- **Gauss' Law**
- **Electric Potential**
- **Capacitance**
- **Current & Resistance**
- **DC Circuits**
- **Magnetic Fields**
- **Magnetic Fields due to Currents**

TEACHING METHODS

- Theoretical lessons

EVALUATION METHODS

- Written Test & Oral Exam

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TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Textbook: Domenico Scannicchio - Fisica Biomedica (terza edizione), Casa Editrice EdiSES

INTERACTION WITH STUDENTS

- Thursday, 10:30-11:30 - (Campus di Macchia Romana, Building 3D, 1° floor, room n.94b)

EXAMINATION SESSIONS (FORECAST)[1]

- 4 february 2020
- 10 march 2020
- 23 june 2020
- 21 july 2020
- 8 september 2020
- 6 october 2020
- 8 december 2020

SEMINARS BY EXTERNAL EXPERTS YES □ NO

FURTHER INFORMATION

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