
COURSE: GENERAL PHYSICS

ACADEMIC YEAR: 2018-2019

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: **971206066**mobile (optional):

Language: **ITALIAN**

ECTS: **8** (lessons e
tutorials/practice)n. of hours: **68** (lessons e
tutorials/practice)Campus: **Potenza**
Dept./School: **Dipartimento di
Scienze**
Program: **CdS Biotecnologie**Semester: **II**
(from **1 March 2019** to
31 May 2019-20 June
2019)

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
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PRE-REQUIREMENTS

- none
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SYLLABUS

- **Part 1 - Introduction (6/80 hours)**
 - Why Physics is important
 - Physics Quantities, Units and Measurement
 - Vectors
 - **Part 2 - Fundamentals of Mechanics (38/80 hours)**
 - Kinematics
 - Forces and Mechanical principles
 - Kinetic energy and work
 - Potential Energy and Conservation of Energy
 - Statics and Rotational Motion
 - Biomechanics
 - Fluids
 - Fluid in biological system
 - **Part 3 - Fundamentals of Thermodynamics (6/80 hours)**
 - Thermodynamics
 - Thermodynamics in biological system
 - **Part 4 - Fundamentals of electro-magnetism 18/80 hours)**
 - Electrostatics phenomena
 - Magnetic phenomena and Electromagnetism
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TEACHING METHODS

- Theoretical lessons
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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
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INTERACTION WITH STUDENTS

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

EXAMINATION SESSIONS (FORECAST) ¹

- 5 February 2019
- 5 march 2019
- 27 June 2019
- 18 July 2019
- 5 September 2019
- 1 October 2019
- 10 December 2019

SEMINARS BY EXTERNAL EXPERTS

- None

FURTHER INFORMATION
