UNIVERSITÀ DI PAVIA

Anno Accademico 2019/2020

PHYSICS A	
Enrollment year	2019/2020
Academic year	2019/2020
Regulations	DM270
Academic discipline	FIS/01 (EXPERIMENTAL PHYSICS)
Department	DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE
Course	CIVIL AND ENVIRONMENTAL ENGINEERING
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	1st semester (30/09/2019 - 20/01/2020)
ECTS	6
Lesson hours	53 lesson hours
Language	Italian
Activity type	WRITTEN AND ORAL TEST
Teacher	PIRZIO FEDERICO (titolare) - 6 ECTS
Prerequisites	Those required for admission and for understanding basic notions of Calculus, Geometry and Algebra.
Learning outcomes	The basic concepts of kinematics, dynamics of point masses and particle systems will be introduced in the first semester; the second semester deals with rigid bodies dynamics and statics, as well as thermodynamics. Students will be trained to problem solving with simple applicative exercises. The course emphasizes the importance of understanding basic principles, and encourages the students to affine their analytic and algebraic techniques for solving the proposed exercises.
Course contents	Modulo A (first semester) Units and dimensions. Vectors. Kinematics. Forces and Newton’s laws. Work and energy. Angular momentum. Particles systems, momentum and collisions. Introduction to rigid body, basics of statics.

Teaching methods	Lectures (hours/year in lecture theatre): 33 Practical class (hours/year in lecture theatre): 20 Practicals / Workshops (hours/year in lecture theatre): 0
Reccomended or required readings	- Serway Jewett. Fisica per Scienze ed Ingegneria - Vol. 1 (4a edizione). EdiSES. - Halliday Resnick Walker, "Fondamenti di Fisica", Casa Editrice Ambrosiana Alonso Finn, "Fisica / Corso per l'Università", Masson Appunti delle lezioni (mod. A) (A. Agnesi) A. Agnesi. Appunti delle lezioni (mod. A) - available online on the webpage www.unipv.it/fis/fisica1_ca/index.html
Assessment methods	Exam consists in both a written and oral test. The minimum mark for admission to the oral part of the exam is 15/30. The final mark is determined by both the oral and written tests. At the end of the first semester (Module A), only for the student of the degree in Civil and Environmental Engineering, it is possible to sustain a partial written exam. In case of a positive mark, at the end of the second semester (module B) it is possible to sustain a second partial written exam. Ia a minimum mark of 15/30 is achieved after the two partial exams, the student can be directly admitted to the final oral examination.
Further information	Detailed informations about the course, notes and handouts regarding lectures and exercises and the old exams with solutions are on-line for the students enrolled in the Degree in Civile and Environmental Engineering at the url http://www.unipv.it/fis/fisica1_ca. The students enrolled in the "Edile-Architettura" Engineering course, find the same material at the url http://www.unipv.it/fis/fisica_generale
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile