



# UNIVERSITÀ DI PAVIA

Anno Accademico 2020/2021

PHYSICS A	
Enrollment year	2020/2021
Academic year	2020/2021
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 (28/09/2020 - 22/01/2021)
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.

<b>Teaching methods</b>	<p>Lectures (hours/year in lecture theatre): 33</p> <p>Practical class (hours/year in lecture theatre): 20</p> <p>Practicals / Workshops (hours/year in lecture theatre): 0</p>
<b>Reccomended or required readings</b>	<p>- Serway Jewett. Fisica per Scienze ed Ingegneria - Vol. 1 (4a edizione). EdiSES.</p> <p>- Halliday Resnick Walker, "Fondamenti di Fisica", Casa Editrice Ambrosiana  Alonso Finn, "Fisica / Corso per l'Università", Masson  Appunti delle lezioni (mod. A) (A. Agnesi)</p>
<b>Assessment methods</b>	<p>The exam consists in an oral test (in presence or in videoconference). 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 oral exam. In case of a positive mark (a mark of at least 18/30), at the end of the second semester (module B) it is possible to sustain a second partial oral exam. If the student obtains a mark of at least 18/30 in each of the two partial exams, the average mark (properly rounded, if necessary) will be registered as the mark of the exam.</p>
<b>Further information</b>	<p>Detailed informations about the course, notes and handouts regarding lectures and exercises are on-line for the students enrolled in the Degree in Civile and Environmental Engineering at the course KIRO platform web-page. The students enrolled in the "Edile-Architettura" Engineering course, find the same material at the KIRO platform web-page of their physics course.</p>
<b>Sustainable development goals - Agenda 2030</b>	<p><a href="#">\$Ibl legenda sviluppo sostenibile</a></p>