Anno Accademico 2019/2020

SIMULATION OF PARTICLE DETECTORS	
Enrollment year	2019/2020
Academic year	2019/2020
Regulations	DM270
Academic discipline	FIS/01 (EXPERIMENTAL PHYSICS)
Department	DEPARTMENT OF PHYSICS
Course	
Curriculum	Fisica biosanitaria
Year of study	1°
Period	1st semester (30/09/2019 - 17/01/2020)
ECTS	6
Lesson hours	48 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	RIMOLDI ADELE (titolare) - 6 ECTS
Prerequisites	Basic background from completed courses in object-oriented programming
Learning outcomes	Object Oriented programming using a simulation tool for particle detector description and more. This course covers a wide range of applications that can form a solid background to build a self proposed example for the description of an experiment in physics and the detector able to show the physics involved
Course contents	This course is addressed to students interested in developing simulation tools in many branches of subnuclear physics, astrophysics or applied medicine physics. Goal is also be able to manage big OO programs and create new applications by implementing new code by choosing a personal path of development in a friend field of physics.
Teaching methods	Oral lessons with additional seminars on particle detectors and

	programming sessions
Reccomended or required readings	a) Koenig, Moo, Accelerated C++, Addison Wesley b) Adele Rimoldi, Metodi informatici della fisica, Pavia University Press c) Adele RImoldi, La simulazione dei rivelatori di particelle, Pavia University Press, Didattica e Formazione
Assessment methods	Oral examination. Each student should provide a personal C++ project in a selected field of interest or a personal development of a Geant4 example found in the literature.
Further information	Oral examination. Each student should provide a personal C++ project in a selected field of interest or a personal development of a Geant4 example found in the literature.
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile