

PIANO DI STUDIO (COORTE 2024-26)

Corso di Laurea Magistrale Internazionale in PHYSICS

FIRST YEAR (57 CFU)

INSEGNAMENTO	COD. ESAME	TAF	AMBITO DISCIPLINARE	SSD	CFU	SEMESTER
Physics Laboratory	A423184	B	Sperimentale e applicativo	FIS/01	10	ANNUAL
Computational Methods for Physics	A423183	B	Microfisico e della struttura della materia	FIS/04	9	2nd
2 Elective courses from Group A		B	Teorico e dei fondamenti della fisica	FIS/02	8+8	1st or 2nd
2 Elective courses from Group B		B	Microfisico e della struttura della materia	FIS/03 FIS/04	6+6	1st or 2nd
1 Elective course from Group C		C			6	2nd
Further linguistic knowledge (Italian Course for non-italian citizens OR Scientific English)	A423999	E	Ulteriori conoscenze linguistiche		4	1st

SECOND YEAR (63 CFU)

INSEGNAMENTO	COD. ESAME	TAF	AMBITO DISCIPLINARE	SSD	CFU	SEMESTER
1 Elective course from Group C		C			6	1st
2 Elective courses from Group D		D			6+6	1st
Curricula Internship	A424520	F	Tirocini formativi e di orientamento		3	2st
Master Thesis and Dissertation		E	Prova finale		42	

GROUP A (8CFU)

Teorico e dei fondamenti della fisica

INSEGNAMENTO	SSD	YEAR	SEMESTER
Theoretical Physics	FIS/02	1st	1st
Theory of Quantum Computation	FIS/02	1st	1st

Statistical Mechanics	FIS/02	1st	2nd
Models and tools for weather prediction and climate	FIS/02	1st	2nd



GROUP B (6CFU)
Microfisico e della struttura della materia

INSEGNAMENTO	SSD	YEAR	SEMESTER
Nuclear and Subnuclear Physics	FIS/04	1st	1st
Quantum Electronics for atomic physics	FIS/03	1st	1 st
Isotope physics and methods	FIS/04	1st	1st
Condensed Matter Physics	FIS/03	1st	2nd
Stochastic processes	FIS/03	1st	2 nd



GROUP C (6CFU)

Affini o Integrative

INSEGNAMENTO	SSD	YEAR	SEMESTER
Machine Learning and AI (First Part)	INF/01;	1st	2nd
Introduction to Optical sensing techniques	FIS/03	1st	2 nd
Astrophysics	FIS/05	1st	2nd
Ecological climatology	FIS/07	1st	2nd
Applied Biophotonics	FIS/07	1st	2 nd
Photonics and Nanotechnologies	FIS/03	2nd	1 st
Modeling of complex systems	FIS/02	2nd	1 st
Nuclear astrophysics	FIS/04	2nd	1 st
Physics for Biomedical applications	FIS/07	2nd	1 st
Aerospace physics methodologies	FIS/07- Ing-Ind/05	1 st	2 nd
Aerothermodynamics and thermostructures for aerospace	Ing-Ind/06	2 nd	1st

Complementary topics of theoretical physics	FIS/02	1 st	2 nd
---	--------	-----------------	-----------------



GROUP D (6CFU)
A scelta libera

INSEGNAMENTO	SSD	YEAR	SEMESTER
Laser spectroscopy	FIS/01	2nd	1 st
Advanced experimental techniques for nuclear and particle physics	FIS/04	2nd	1 st
Particle astrophysics	FIS/04	2nd	1 st
Microscopic Nuclear Structure	FIS/04	2nd	1 st
Astrophysical Techniques	FIS/05	2nd	1 st
Experimental Gravitation	FIS/05	2nd	1 st
Physics of the Sun and of the heliosphere	FIS/05	2nd	1 st
Astrophysics of Galaxies	FIS/05	2nd	1 st
Climate change and related impacts	FIS/06	2nd	1 st

Aerospace Propulsion and plasma physics	ING-IND/05; FIS/03	2nd	1 st
Space access and Earth observation	ING-IND/05; FIS/06	2nd	1 st
Advanced Operational Research	MAT/09	2nd	1 st
Network Analysis	SEC-S/01	2nd	1 st
Numerical Models in Data Processing	MAT/08	2nd	1 st
Physics for Archaeology and Cultural heritage	FIS/07	2nd	2 nd
Machine Learning and AI (Second Part)	INF/01	2nd	2 nd
Advanced and Computational Solid State Physics	FIS/03	2nd	2 nd



