UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2018/19
BACHELOR
Physics (Classe L-30)
Enrolled from 2012/2013 Academic Year

HEADING

Degree classification - Denomination and code:	L-30 Physics
Degree title:	Dottore
Length of course:	3 years
Total number of credits required to complete programme:	180
Years of course currently available:	1st , 2nd , 3rd
Access procedures:	Open, subject to entry requirements
Course code:	F63

PERSONS/ROLES

Degree Course Coordinator

Prof. Alberto Pullia (Presidente del Collegio Didattico del Dipartimento di Fisica)

Tutors - Faculty

Prof. Franco CAMERA
Dott. Simone CIALDI
Prof. Gianluca COLO'
Prof.ssa Alessandra GUGLIELMETTI
Prof. Giuseppe LODATO
Prof. Nicola MANINI
Prof. Luca Guido MOLINARI
Prof. Matteo PARIS
Dott. Nicola PIOVELLA
Prof. Paolo PISERI
Prof. Pierre M. PIZZOCHERO
Dott. Massimo SORBI
Prof.ssa Roberta VECCHI
Prof. Alessandro VICINI

Tutors - Students

Jacopo CICCOIANNI
Francesco Saverio DAMBROSIO
Giorgio FRANGI
Giovanni GRANATA
Matteo MILANI
Marco MONTAGNA
Riccardo PANZA
Susanna PROCOPIO
Davide BASILICO (dottorando)
Andrea DI GIOACCHINO (dottorando)

Degree Course website

www.ccdfis.unimi.it

Via Celoria, 16 - 20133 Milano Phone 02.503.17401 Email: cl.fisica@unimi.it

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

The University of Milan supports the international mobility of its students, offering them the opportunity to spend periods of study and training abroad, a unique opportunity to enrich their curriculum in an international context.

Study and internships abroad

The thesis work may be occasionally carried out in prestigious research centers like CERN or GSI, or important Universities worldwide, in the
frame of international collaborations and research programs.

How to participate in Erasmus mobility programs

To gain access to mobility programs for study purposes, lasting 3-12 months, the enrolled students of the University of Milan must attend a public selection that starts usually around the month of February each year through the presentation of specific competition announcements, which contain information on available destinations, respective duration of the mobility, requirements and deadlines for submitting the online application.

The selection, aimed at evaluating the proposed study abroad program of the candidate, knowledge of a foreign language, especially when this is a preferential requirement, and the motivations behind the request, is performed by specially constituted commissions.

Each year, before the expiry of the competition announcements, the University organises information sessions for the specific study course or groups of study courses, in order to illustrate to students the opportunities and participation rules.

To finance stays abroad under the Erasmus + program, the European Union assigns to the selected students a scholarship that - while not covering the full cost of living abroad - is a useful contribution for additional costs as travel costs or greater cost of living in the country of destination.

The monthly amount of the communitarian scholarship is established annually at national level; additional contributions may be provided to students with disabilities.

In order to enable students in economic disadvantaged conditions to participate in Erasmus+ program, the University of Milan assigns further additional contributions; amount of this contributions and criteria for assigning them are established from year to year.

The University of Milan promotes the linguistic preparation of students selected for mobility programs, organising every year intensive courses in the following languages: English, French, German and Spanish.

The University in order to facilitate the organisation of the stay abroad and to guide students in choosing their destination offers a specific support service.

More information in Italian are available on www.unimi.it > Studenti > Studiare all¿estero > Erasmus+

For assistance please contact:
Ufficio Accordi e relazioni internazionali
via Festa del Perdono 7 (ground floor)
Tel. 02 503 13501-12589-13495-13502
Fax 02 503 13503
E-mail: mobility.out@unimi.it
Desk opening hour: Monday-friday 9 - 12

1st COURSE YEAR Core/compulsory courses/activities common

Learning activity	Ects	Sector
COMPUTER SCIENCE	6	INF/01
ENGLISH 1	2	L-LIN/12
ENGLISH 2	2	L-LIN/12
GEOMETRY 1	7	MAT/03
MATHEMATICAL ANALYSIS 1	8	MAT/05
MATHEMATICAL ANALYSIS 2	8	MAT/05
MECHANICS	7	FIS/01
PHYSICS LABORATORY WITH INTRODUCTION TO STATISTICS	10	FIS/01
WAVES AND OSCILLATIONS	7	FIS/01
Total compulsory credits	57	

2nd COURSE YEAR Core/compulsory courses/activities common

Learning activity	Ects	Sector
CLASSICAL MECHANICS	7	MAT/07
ELECTROMAGNETISM	15	(15) FIS/07, (15) FIS/01
EXPERIMENTAL DATA PROCESSING LABORATORY	6	FIS/01
MATHEMATICAL ANALYSIS 3	6	MAT/05
MATHEMATICAL METHODS IN PHYSICS	7	FIS/02
MODERN PHYSICS AND QUANTUM MECHANICS (MODERN PHYSICS PART)	7	FIS/02

OPTICS,ELECTRONICS AND MODERN PHYSICS LABORATORY		10	FIS/01
THERMODYNAMICS		6	(6) FIS/07, (6) FIS/01
	Total compulsory credits	64	

3rd COURSE YEAR Core/compulsory courses/activities common

Learning activity		Ects	Sector
CHEMISTRY 1		6	CHIM/03
INTRODUCTION TO NUCLEAR AND PARTICLE PHYSICS		9	FIS/04
MODERN PHYSICS AND QUANTUM MECHANICS (QUANTUM MECHANICS PART)		8	FIS/02
STRUCTURE OF MATTER 1		9	FIS/03
	Total compulsory credits	32	

Elective courses

ASTRONOMY LAB	6	(6) FIS/05, (6) FIS/01
COMPUTATIONAL PHYSICS LABORATORY	6	(6) FIS/08, (6) FIS/07, (6) FIS/06, (6) FIS/05, (6) FIS/04, (6) FIS/03, (6) FIS/02, (6) FIS/01
CONDENSED MATTER PHYSICS LABORATORY	6	(6) FIS/03, (6) FIS/01
EARTH PHYSICS LABORATORY	6	(6) FIS/07, (6) FIS/06, (6) FIS/01
ELECTRONICS 1	6	(6) ING-INF/01, (6) FIS/01
ELECTRONICS LABORATORY	6	(6) ING-INF/01, (6) FIS/01
ENVIRONMENTAL PHYSICS LABORATORY	6	(6) FIS/07, (6) FIS/06, (6) FIS/01
GAMMA SPECTROSCOPY LABORATORY	6	(6) FIS/04, (6) FIS/01
INTRODUCTION TO ASTROPHYSICS	6	FIS/05
INTRODUCTION TO GENERAL RELATIVITY	6	FIS/02
INTRODUCTION TO HEALTH AND MEDICAL PHYSICS	6	FIS/07
INTRODUCTION TO STATISTICAL PHYSICS	6	(6) FIS/03, (6) FIS/02
NUCLEAR PHYSICS LABORATORY	6	(6) FIS/04, (6) FIS/01
NUMERICAL SIMULATION LABORATORY	6	(6) FIS/08, (6) FIS/07, (6) FIS/06, (6) FIS/05, (6) FIS/04, (6) FIS/03, (6) FIS/02, (6) FIS/01
OPTICS LABORATORY	6	(6) FIS/03, (6) FIS/01

End of course requirements

FINAL EXAM		9	NA
	Total compulsory credits	9	

COURSE PROGRESSION REQUIREMENTS

The course contains the following obligatory or advised prerequisites

Learning activity	Prescribed foundation courses	O/S
MATHEMATICAL ANALYSIS 3	MATHEMATICAL ANALYSIS 1	Core/compulsory
	MATHEMATICAL ANALYSIS 2	Core/compulsory
MATHEMATICAL ANALYSIS 2	MATHEMATICAL ANALYSIS 1	Core/compulsory
ELECTROMAGNETISM	MECHANICS	Core/compulsory
THERMODYNAMICS	MECHANICS	Core/compulsory