

SSM PhD Courses - First bimester

Starting from 6th November 2023

MERC area

- **Introduction to Complex Systems**
Lecturer: Prof. Mario di Bernardo
Teaching mode: in-person (Aula 4) | Hours: 24
Thu, Fri 11:00-13:00
Team code: 96slwtj
- **Numerical Methods for Data Mining**
Lecturer: Prof. Constantinos Siettos, Dr Dimitrios Patsatzis
Teaching mode: in-person (Aula 4) | Hours: 24
Mon: 14:00-16:00, Fri: 09:00-11:00
Team code: 0azhvk
- **Seminar lectures: Introduction to Complex Networks**
Lecturers: Prof. Stefano Boccaletti
Teaching mode: in-person (Aula 4) | Hours: 5
Monday 6 November (09:00-12:00), Tuesday 7 November (11:00-13:00)
Zoom link: <https://us02web.zoom.us/j/86774140683?pwd=REt1c0JOS2t2dlp4NFRkcXZieDRIUT09>
Meeting ID: 867 7414 0683
Passcode: zoom-merc

MPHS area

- **Differential Geometry**
Lecturer: Dr. Alessandro Zampini
Teaching mode: in-person (Aula 4) | Hours: 24
Tue: 14:00-16:00, Thu: 16:00-18:00
Team code: 88too8k

SPACE area

- **Introduction to General Relativity**
Lecturer: Prof. Salvatore Capozziello
Teaching mode: in-person (Aula 4) | Hours: 24
Tue, Thu 9:00-11:00
Team code: t93boma

- **Introduction to Cosmology – first part**

Lecturer: Dr. Rocco D'Agostino

Teaching mode: in-person (Aula 1) | Hours: 18

Tue 16:00-18:00, Wed 11:00-13:00

SSM PhD Courses - Second bimester

Starting from 8th January 2024

MERC area

- [An Introduction to Learning and Data-Driven Methods](#)
Lecturer: Prof. Giovanni Russo, Prof. Mirco Musolesi
Teaching mode: in-person (Aula 4) | Hours: 24
Tuesday 11:00-13:00 and Thursday 16:00-18:00 except for 09/01, 06/02, 08/02, 13/02 and 15/02. These lectures will be held on Tuesdays 09/01, 06/02 and 13/02 at 14:00-16:00 (Aula 1) and Wednesdays 07/02 and 14/02 at 16:00-18:00 (Aula 4).
The lectures from 06/02 to 15/02 will be held by Prof. Mirco Musolesi; the last two on 13/02 and 14/02 will be held online.
Team code: **j3z6nha**
- [Probability calculus and elements of stochastic modelling](#)
Lecturer: Dr. Giacomo Ascione, Dr. Caio César Graciani Rodrigues
Teaching mode: in-person (Aula 4) | Hours: 24
Monday 09:00-11:00 and Friday 09:00-11:00 except for 27/01.
This lecture of Friday 26/01 will be held on Tuesday 09/01 at 11:00-13:00 (Aula 1).
Team code: **7jkkepf**
- [Introduction to Python for Machine Learning](#)
Lecturer: Dr. Davide Salzano, Dr. Giuseppe Petrillo
Teaching mode: in-person (Aula 1) | Hours: 12
Monday 11:00-13:00 and Wednesday 14:00-16:00.
The course will last for 3 weeks.
Team code: **4irpjwc**

MPHS area

- [Partial Differential Equations](#)
Lecturer: Dr. Martin Mayer
Teaching mode: in-person (Aula 4) | Hours: 24
Tuesday 9:00-11:00, Thursday 9:00-11:00, except for 09/01, 11/01, 16/01, 18/01. These lectures will be held on Wednesday 10/01 11:00-13:00, Friday 12/01 11:00-13:00, Thursday 18/01 11:00-13:00 and Friday 19/01 11:00-13:00
Team code: **ujsxh7h**

- [Numerical Treatment of Partial Differential Equations](#)

Lecturer: Prof. Francesco Calabrò

Teaching mode: in-person (Aula 4) | Hours: 24

Tuesday 14:00-16:00, Wednesday 9:00-11:00 (Except for 10/01)

The course will end on 20/02.

Team code: **dd2qo1u**

- [Micromagnetics and Spintronics](#)

Lecturer: Prof. Massimiliano D'Aquino and Prof. Claudio Serpico

Teaching mode: in-person (Aula 1-4) | Hours: 12

Monday 29/01, 16:00-18:00 Aula 4, Tuesday 30/01 16:00-18:00 Aula 1, Thursday 01/02

16:00-18:00 Aula 1, Monday 05/02 16:00-18:00 Aula 1, Tuesday 06/02 16:00-18:00 Aula 1,

Thursday 08/02 16:00-18:00 Aula 1,

Team code: **2xu49an**

SPACE area

- [Introduction to Astroparticle Physics](#)

Lecturer: Dr. Ninetta Saviano

Teaching mode: in-person (Aula 1) | Hours: 24

Wednesday 16h30-18h30, Thursday 11h-13h and also Jan. 15 and Jan. 29 at 16h30-18h30. There will be no class on Jan. 18; the Feb. 14 class is moved from 16h30 to 11h on the same day.

Team code: **ec5hriw**

- [Quantum Information, Complexity and Black Holes](#)

Lecturer: Prof. Alioscia Hama

Teaching mode: in-person (Aula 4) | Hours: 6

9 -10-11 January 9h-11h

Team code: **ok1fkxd**

- [Black Holes Physics](#)

Lecturer: Dr. Vittorio de Falco

Teaching mode: in-person (Aula 4) | Hours: 6

16 and 18 January 9h-11h, 17 January 11h-13h

Team code: **6gb64cw**

SSM PhD Courses – Third bimester

Starting from 26th February 2024

MERC area

- [Seminar lectures: “Characterization of Crustal Models for Quantitative Ground Motion Estimation”](#)
Lecturer: Prof. Jean Virieux
Email: jean.virieux@univ-grenoble-alpes.fr
Teaching mode: in-person (Aula 4) | Hours: 7
5 hours of oral presentations + 2 hours of computer-oriented training
Tuesday 27/02 (09:00 - 11:00), Wednesday 28/02 (11:00 - 13:00), Thursday 29/02 (09:00 - 11:00), Friday 01/03 (11:00 - 12:00)
Team code: **zkjbe6a**
- [Quantitative Risk Analysis](#)
Lecturers: Prof. Iunio Iervolino, Dr. Pasquale Cito
Email: iunio.iervolino@unina.it, pasquale.cito@unina.it
Teaching mode: in-person (Aula 4) | Hours: 24
01/03, 05/03, 19/03, 26/03, 09/04 (14:00 - 16:00)
08/03, 12/03, 15/03, 22/03, 27/03, 05/04, 12/04 (14:30 - 16:30)
Team code: **vhirpmz**
- [Fundamental of Natural Hazard Forecasting](#)
Lecturer: Prof. Warner Marzocchi
Email: warner.marzocchi@unina.it
Teaching mode: in-person (Aula 4, except Aula 1 on 12/03 and 14/03) | Hours: 12
27/02, 29/02, 05/03, 07/03, 12/03, 14/03 (11:00 - 13:00)
Team code: **y54b8ay**
- [Seminar lectures: “Landslide Hazard: from Local Assessment to National Maps”](#)
Lecturers: Prof. Gianfranco Urciuoli, Dr. Gaetano Falcone
Email: gianurci@unina.it, gaetano.falcone@unina.it
Teaching mode: in-person (Aula 4) | Hours: 6
03/04, 05/04, 10/04 (11:00 - 13:00)
Team code: **8qj0uvj**

MPHS area

- [Physics of matter from the zepto-scale to the macro-scale](#)
Lecturers: Prof. Lorenzo Marrucci, Fabio Ambrosino, Rosario Fazio
Email: lorenzo.marrucci@unina.it, fabio.ambrosino@na.infn.it, rosario.fazio@unina.it

Teaching mode: in-person (Aula 1-4) | Hours: 24

28/02, 01/03, 06/03, 08/03 (Aula 1, 09:00-11:00), 12/03 (Aula 1, 16:30-18:30), 13/03 (Aula 1, 14:00-16:00), 19/03 (Aula 1, 16:00-18:00), 20/03 (Aula 1, 14:00-16:00), 04/04 (Aula 4, 16:00-18:00), 05/04 (Aula 4, 09:00-11:00), 11/04 (Aula 4, 16:00-18:00), 12/04 (Aula 4, 09:00-11:00)

Team code: **pqq9xc5**

- **Soft Matter Modelling**

Lecturers: Prof. Giuseppe Milano, Pierluca Maffettone, Massimiliano Maria Villone

Email: giuseppe.milano@unina.it, p.maffettone@unina.it

Teaching mode: in-person (Aula 1-4) | Hours: 24

06/03 (Aula 1, 11:00-13:00), 07/03 (Aula 1, 09:00-11:00), 11/03 (Aula 1, 14:00-16:00), 13/03 (Aula 1, 16:00-18:00), 14/03 (Aula 4, 16:00-18:00), 15/03 (Aula 1, 09:00-11:00), 20/03 (Aula 1, 16:00-18:00), 21/03 (Aula 4, 16:00-18:00), 25/03 (Aula 1, 09:00-11:00), 26/03 (Aula 4, 11:00-13:00), 03/04 and 04/04 (Aula 1, 09:00-11:00)

Team code: **2i78klq**

SPACE area

- **Introduction to Aerospace**

Lecturer: Prof. Riccardo Bevilacqua

Email: bevilacr@erau.edu

Teaching mode: in-person (Aula 4) | Hours: 24

11-13-18-19-20-21/03 (10:00 - 13:00)

12-14/03 (9:00 - 12:00)

Team code: **tfz1ded**

- **Introduction to Quantum Mechanics**

Lecturer: Dr. Marco Chianese

Teaching mode: in-person (Aula 1) | Hours: 24

Email: marco.chianese@unina.it

5/03, 26/03, 9/04 (9:00 - 11:00)

4/03, 8/03, 15/03, 22/03, 25/03, 4/04, 8/03 (11:00 - 13:00)

18/03 and 2/04 (15:00 - 17:00)

Team code: **e1ekpbh**

- **Standard Model of Fundamental Interactions**

Lecturer: Prof. Sannino

Email: sannino@cp3.sdu.dk

Teaching mode: in-person (Aula 1) | Hours: 12

10/04 (14:00 - 17:00)

11/04 (9:00 - 12:00 and 16:00 - 18:00)

12/04 (10:00 - 12:00 and 14:00 - 16:00)

Team code: **imd9emy**

SSM PhD Courses - Fourth bimester

Starting from 22th April 2024

CROSS-CURRICULA COURSE

MERC, MPHS and SPACE

- [Scientific Reasoning and Philosophy of Science \(in Italian\)](#)

Lecturer: Prof. Franco Garofalo

Teaching mode: in-person (Aula 4) | Hours: 24

30 April 10:00-12:00

7, 14 May 10:00-12:30

9*, 16 May 16:00-18:30

21, 23, 28 May 10:00-12:30

4 June 10-12:30

11 June 10-12

Team code: sb0vuwt

*(Aula 1)

- [Introduction to Statistical Mechanics](#)

Lecturer: Dr. Giuseppe Petrillo

Teaching mode: in-person (Aula 4) | Hours: 24

23 Apr 10:30-12:30

24, 27, 29 May 10:30-12:30

10, 31 May 14:00-16:00

14 May 14:00-16:00 (online)

16, 17 May 10:30-12:30 (online)

4, 5, 12 June 14:00-16:00

Team code: xomk7tl

MERC and MPHS

- [Theory and Applications of Delay Differential Equations](#)

Lecturer: John Hogan

Teaching mode: in-person (Aula 4) | Hours: 12

24 Apr, 2, 16 May 10:00-12:00

30 Apr, 7, 14 May 14:00-16:00

Team code: la9c436

MERC area

- [Stochastic Differential Equations](#)
Lecturer: Prof. Tiziano De Angelis
Teaching mode: in-person (Aula 4) | Hours: 24
8 May 14:00-17:00
2, 30 May 16:00-19:00
3, 9, 10 May 09:00-12:00
31 May 10:00-12:00
15, 22 May 09:30-11:30 (online)
Team code: aw0oq7d

SPACE area

- [Introduction to Astrophysics](#)
Lecturer: Guido Risaliti
Teaching mode: in-person (Aula 1) | Hours: 24
Tue 14:00-17:00, Wed 9:00-12:00 (starting May 14th)
Team code: m6bu6o6
- [Neutrino Physics Experiments](#)
Lecturer: Antonio Marinelli
Teaching mode: in-person (Aula 1) | Hours: 12
May 13, 15, 20, 22, 27, 29 15:00-17:00
Team code: c40f72a
- [Quantum black holes – part 2](#)
Lecturer: Alioscia Hama
Teaching mode: in-person (Aula 1) | Hours: 6
April 22, 24, 29 9:00 - 11:00
Team code: w1kgwnm
- [Black hole physics – part 2](#)
Lecturer: Vittorio de Falco
Teaching mode: in-person (Aula 4) | Hours: 6
June 6, 20, 27 9:00-11:00
Team code: 6gb64cw

- **Quantum field in curved space**
Lecturer: Massimo Taronna
Teaching mode: in-person (Aula 1) | Hours: 12
May 13, 16, 20, 27, 30 and June 3 10:00-12:00
Team code: 5m0ob7o
- **Relativistic positioning system from first principles**
Lecturer: Prof. Lorenzo Fatibene
Teaching mode: in-person (Aula 4) | Hours: 12
June 10, 11 14:00-17:00 and June 12, 13 9:00-12:00
Team code: 19ocsgf
- **Cosmic Distances in Astrophysics**
Lecturer: Giulia de Somma
Teaching mode: in-person (Aula 4) | Hours: 6
June 25 10:00-12:00 and 26, 27 11:00-13:00
Team code: t228g16