

Phd Program in Materials Science and Nanotechnology
40th Cycle (17 students).

WELCOME DAY, November 7th 2024 (Aula Seminari, U5
building, First floor).

CONTACTS

Prof. Francesco Montalenti, Coordinator, 2nd floor U5
francesco.montalenti@unimib.it

Prof. Cristiana Di Valentin, Vice-coordinator, 2nd floor U5
cristiana.divalentin@unimib.it

Central offices for all UNIMIB Doctorate School:
dottorati@unimib.it

Among people at central offices, the closest to our Program is
Dr. Maria Cristina Fassina
mariacristina.fassina@unimib.it

President of the UNIMIB doctorate School: Prof. Maria Luce
Frezzotti.

E-LEARNING PAGE:

<https://elearning.unimib.it/course/index.php?categoryid=6410>

Didactic activity

A) 8 cfu to gain (in 3 years) from disciplinary courses of our
doctorate

1 cfu = 8 hours with final exam

All disciplinary courses have final exam.

see e-learning webpage of our doctorate
for the list of course in 2024/2025

Theory and Modeling of Epitaxy

2425-116R-M01

Thermal Transport down to the Nanoscale

2425-116R-M02

Scientific Entrepreneurship in Materials Science and Nanotechnology

2425-116R-M03

Disorder Effects in Spintronic Phenomena

2425-116R-M04

Investigation of origin of life and Molecule-surface interaction: an experimental approach between Astrophysics and Surface Physics

2425-116R-M05

Epitaxial Semiconductor Nanostructures: Materials Science and Devices

2425-116R-M06

Principles of Electron Microscopy and Applications to Nanomaterials Research

2425-116R-M07

Technologies for Production and Conversion of Green Hydrogen

2425-116R-M08

Supramolecular Chemistry, Crystal Engineering, and Solid-State Reactions

2425-116R-M09

Light-to-Electricity Devices, from Silicon Integration to Biological Frontiers

2425-116R-M10

The Role of Inorganic Systems in Formulations: Chemistry Insights and Applications

2425-116R-M11

Calendar

(all courses are in Aula Seminari if not stated otherwise)

CALENDAR FOR THE 40-th CYCLE COURSES

ALL COURSES WILL BE IN AULA SEMINARI (U5 building
,first floor) UNLESS DIFFERENT INFORMATION IS
PROVIDED

2024

DICEMBRE/DECEMBER

1. Investigation of origin of life and Molecule-surface
interaction: an experimental approach between Astrophysics
and Surface Physics(*). 1 CFU

Dr. Daniele Fulvio (Inaf) and Prof. Claudio Goletti (Roma 2)

4 Dicembre/December 15.30-17.30 (Daniele Fulvio, Inaf)

5 Dicembre/December 15.30-17.30 (Daniele Fulvio, Inaf)

9 Dicembre/December 15.30-17.30 (Claudio Goletti,

Roma2)

10 Dicembre/December 15.30-17.30 (Claudio Goletti,
Roma2)

()Everybody can follow this course, but only students of the
40th cycle can give the exam*

2025

2. Disorder Effects in Spintronic Phenomena(*). 2CFUs
Prof. Raimondi (Roma 3).

14, 15, 16, 17 Gennaio/January 9.30-11.30

21, 22, 23, 24 Gennaio/January 9.30-11.30

()Everybody can follow this course, but only students of the
40th cycle can give the exam*

FEBBRAIO/FEBRUARY

3. Scientific Entrepreneurship in Materials Science and
Nanotechnology. 1CFU

Prof. Miglio

10/2 14.30-16.30

11/2 14.30-16.30

13/2 11.00-13.00

14/2 14.30-16.30

4. Technologies for Production and Conversion of Green
Hydrogen. 1CFU

Prof. Santoro

18/2 14.30-16.30

19/2 14.30-16.30

20/2 14.30-16.30

21/2 14.30-16.30

5. Principles of Electron Microscopy and Applications to Nanomaterials Research. 1CFU

Prof. Vanacore

03/03 14.30-16.30

04/03 14.30-16.30

05/03 14.30-16.30

06/03 14.30-16.30

6. Epitaxial semiconductor nanostructures: Materials science and devices. 1CFU

Prof. Sanguinetti

17/03 14.00-16.00

18/03 14.00-16.00

24/03 14.00-16.00

25/03 14.00-16.00

7. Light-to-Electricity devices, from silicon integration to biological frontiers. 1CFU

Dr. Bettucci and Dr. Pedrini

14/04 10.30-12.30

15/04 10.30-12.30

16/04 10.30-12.30

17/04 10.30-12.30

8. Supramolecular Chemistry, Crystal Engineering, and Solid-State Reactions. 1CFU

Prof. Silvia Bracco

08/05 11:00-13:00

22/05 11:00-13:00

29/05 11:00-13:00

05/06 11:00-13:00

9. The role of inorganic systems in formulations: chemistry insights and applications. 1CFU

Prof. D'Arienzo and Prof. Scotti

26/5 14:30-16:30

27/5 14:30-16:30

28/5 14:30-16:30

29/5 14:30-16:30

10. Theory and modeling of Epitaxy(*). 2CFUs

Prof. Bergamaschini and Prof. Montalenti.

23/06 14.30-16.30

24/06 14.30-16.30

25/06 14.30-16.30

26/06 14.30-16.30

27/06 14.30-16.30

30/06 14.30-16.30

03/07 14.30-16.30

04/07 14.30-16.30

*(*Everybody can follow this course, but only students of the 40th cycle can give the exam*

11. Transport down to the nanoscale. 2CFUs

Prof. Antonini.

01/10 14.30-16.30

03/10 14.30-16.30

07/10 14.30-16.30

10/10 14.30-16.30

14/10 14.30-16.30

17/10 14.30-16.30

21/10 14.30-16.30

24/10 14.30-16.30

Lectures will be given in person in the seminar room, if not specified otherwise.

Streaming is possible under request for justified reasons, but you are strongly encouraged to attend in person. Also, attend seminars which will be organized within the Department and extra Courses (don't need to give the exam).

B) 3 cfu to gain (in 3 years) from interdisciplinary courses of the University Phd school

Interdisciplinary courses of the University Phd School

<https://elearning.unimib.it/course/index.php?categoryid=6324>

Secondment abroad

- 6 months compulsory for all students in Materials Science and Nanotechnology
- talk with your tutor about it. Not before 6 months from start.
- 50 % increment of the scholarship (if you have a scholarship)
- additional funding by applying at Erasmus+ (Europe) or Extra (extra EU) programs (about 4000 euro).

Erasmus: silvia.bracco@unimib.it

- Authorization needed in advance, relevant documents available at

<https://www.unimib.it/didattica/offerta-formativa/dottorato-ricerca/carriera/modulistica-dottorandi>

FUNDS FOR TRAVELING, TO PARTICIPATE AT Schools/Conferences

Approximately 1600 euro/year/student “research funds” granted by the Phd School for the whole cycle for all students.

Please keep track of your expenses not to go over your budget.

Please do not ask us to check the amount of money you spent, we do not have a separate fund for each of you and we check seldomly the amount spent by each student, we trust on your strictness.

Do not worry about the funds on which you are authorized or on which your reimbursements will be charged. This will be set by the coordinator depending on cash availability on the different doctorate funds. You must just keep track of the total amount you spent.

For authorization for missions and reimbursement you have to get access to a doctorate fund on the UGOV platform for mission. Ask your supervisor how to access the platform. In case of problems with the fund please ask the Coordinator. Please ask your supervisor for instructions on how to fill the mission request (the procedure is the same for staff members).

The PhD board of the program in Materials Science and Nanotechnology has decided that the budget can be spent **only** for missions to conferences/workshops, no purchase of goods or consumables.

Admission to the 2nd and 3rd year

Evaluation yearly in September: oral presentation (15 minutes) in English of the results acquired during the year, summary of the activities/publications to be uploaded on the university website

Scientific records

- Upload on BOA-IRIS your publication and also your communications to congresses. Ask your supervisor, in case of co-authored papers with your supervisor, he is supposed to upload the document on BOA-IRIS.
- You must all have an ORCID (orcid.org)
- You must have your account set at the site of the italian ministry of research and education:
<https://loginmiur.mur.gov.it/front.php/login.html>
Instruction on this point sent by email

Final exam

Thesis to be submitted by the end of October 2027.
Final exam in February 2028.

If major revisions are requested by the referees, a revised version of the thesis must be submitted to referees and the final exam is postponed by six months.

Additional degrees

- Doctor PCAM - European Doctorate in Physics and Chemistry of Advanced Materials: a minimum of six months in one of the European partner universities.

<http://www.pcam-doctorate.eu/>

Most information on all issues above available in the **vademecum** (Italian version also available)

Board of the Phd school

you must elect one representative of students of your cycle who will take part to the meeting of the board (around 6 meetings per year).

Other representatives:

Riccardo Nardin (cycle 39) r.nardin@campus.unimib.it

Marta Colombo (cycle 38) m.colombo270@campus.unimib.it

CHECK YOUR CAMPUS EMAIL EVERY DAY

- Problems with your tutor/supervisor? Talk to the Coordinator/The Vice Coordinator/A student representative
Tutors/supervisors must provide you continuous help in forming your ability to do research. If this is not the case let us know, we'll keep it confidential while looking for a solution.
- Central School Welcome day on November 20th, you should definitely go!