Una Europa Summer School 2026 Exploring Soft Materials: From Molecules to BioMaterials

29 June – 3 July 2026, 9:00 to 16:00

Alma Mater Studiorum – Università di Bologna
Aula Magna, Ue1, Navile Campus
Via della Beverara, 123/1 , Bologna, Italy

The Una Europa Summer School invites doctoral researchers, Master's students and academic staff from Una Europa partner universities for an interdisciplinary learning experience focused on soft materials, spanning from molecular systems to biomaterials.

The Summer School will offer theoretical lectures, case studies, interactive discussions and interdisciplinary learning activities. Participants will engage with topics related to soft materials across different disciplines, including chemistry, physics, materials science, biotechnology, materials engineering and bioengineering.

Participants will take part in an intensive five-day in-person programme hosted at the Navile Campus of the University of Bologna and will receive a certificate of participation as well as 4 ECTS credits, subject to recognition by their home institution.

Further information and application

Co-funded by the European Union

Programme

Attendance is mandatory for all activities, including the virtual mobility sessions scheduled for 19 June 2026 and 10 July 2026. Attendance will be recorded at the beginning of each day.

19 June

- 9.00 Introduction
- 10.30 From Phononic Crystals to Locally Resonant Metamaterials: Applications in Civil Engineering (Farhad Zeighami)
- 11.15 From Photonic Crystal to Acoustic and Mechanical Metamaterials (Muhammad Gulzari)
- 12.00 A Beautiful Sound: Solving the Multivariable Problem of Sustainable Acoustic Metamaterials (Gioia Fusaro)
- 12.45 Conclusion and greetings

29 June

- 9.15 Erosion of Scientific Integrity Fueled by Quantitative Evaluation Metrics (Johannes Gierschner)
- 10.30 Coffee break
- 11.00 Drug Nanoformulation (Robert Luxenhofer)
- 12.15 Dynamic Biomaterials (Zarah Walsh-Korb)
- 13.30 Lunch break
- 14.45 Modelling soft materials at solid-state: structure and dynamics (Daniele Fazzi)
- 16.00 Afternoon activity

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30 June

- 9.15 Modelling polymerization reactions: quantum chemical modelling of polymeric reactions (Beate Paulus)
- 10.30 Coffee break
- 11.00 Inverse Design of Molecules with Artificial Intelligence (Ivan Rivalta)
- 12.15 Functional and Smart Polymers (Chiara Gualandi)
- 13.30 Lunch break
- 14.45 Cytotoxicity of Polymers Intended for Biomedical Applications (Małgorzata Tyszka-Czochara)
- 16.00 Afternoon activity

01 July

- 9.00 Physics of Active Materials (Silke Henkes)
- 10.15 Guided Motion of Magnetic Colloids (Fernando Martínez Pedrero)
- 11.30 Coffee break
- 12.00 Light-based 3D Printing of Soft Materials (Yinyin Bao)
- 13.15 Lunch break
- 14.45 Computational Tools in Biophysics (Nadia Elghobashi-Meinhardt)
- 16.00 Afternoon activity

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02 July

- 9.00 STARTSCIENCE - Metting with companies
- 10.30 Coffee break
- 11.00 STARTSCIENCE - Metting with companies
- 13.30 Lunch break
- 15.00 Poster session
- 20.00 Dinner and Networking Session

03 July

- 9.15 Mechanical features and collective behaviour in soft and active matter (Chantal Valeriani)
- 10.30 Coffee break
- 11.00 Light-fueled Supramolecular Pumps (Stefano Corrà)
- 12.15 Organic Chromophores in Action: From Luminescence to Photocatalysis (Andrea Fermi)
- 13.30 Lunch break
- 15.00-17.00 Poster awards

10 July

- Closing event of the Summer School, dedicated to feedback and the consolidation of learning outcomes. Participants will have the opportunity to reflect on the topics covered and discuss their experience.

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