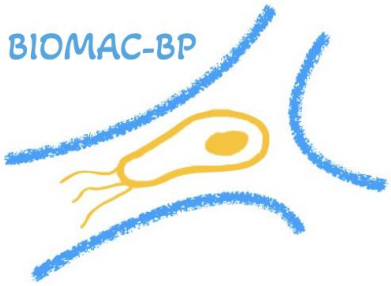

Grant Agreement no. 101168698

BIOMAC-BP

Bio-Stabilized Multi-Phase **Ma**terials as **C**arriers for **B**io**p**esticides

MSCA – Doctoral Network

HORIZON-MSCA-2023-DN-01-01

D.4.1: Report on first training event

Due date of deliverable: 01/08/2025
First draft deliverable date: 13/10/2025

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01.10. 2024

Duration:

48 months

Organisation name of lead beneficiary for this deliverable:

Forschungszentrum Jülich GmbH

Revision [1st]

Project funded by the European Union's Horizon Europe research and innovation programme		
Dissemination Level	Public	PU

Deliverable number:	D.4.1
Deliverable title:	**First annual meeting and training event**
Work package:	WP 4 – Training
Type of deliverable:	R- Document, report
Dissemination:	PU - Public
Due Date:	Month-10, 01/08/2025
Report date:	15/10/2025
Status of the deliverable:	☐ Not yet started ☐ In progress x Accomplished

Work package objective (description of the task objective according to the proposal and grant agreement):

Training events are part of the Training work package (WP4) and are described with some details in the grant agreement (GA). According to the GA, the network-wide training program was designed to provide consortium-wide training events that address certain aspects essential for the research project as a whole. Given the interdisciplinary nature of the planned research and the distinct skill sets required for the individual research projects, network wide training events were deemed necessary to familiarize the DCs with the fundamentals of each other's specialties. These events were also intended to offer and promote networking opportunities. The **first training event T1 Introduction to BIO2PHYM** was proposed to introduce the overall project to the newly recruited DCs and to introduce the specific techniques and background considered as core knowledge for the BIOMAC_BP project. Specifically, the event was planned to cover the following subjects:

- Introduction to the BIO2PHYM network and relevant guidelines like The European Code of Conduct for Research Integrity, the MSCA Green Charter, etc
- Open science and the EU's Open Science Policy
- ChatBots- Utilisation, opportunities and risks
- Career development part I
- Basics of soft matter physical chemistry and Characterization
- Basics of microbiology
- Working with bacteria

Most importantly, the scientific content taught in the lecture room should be reinforced through practical exercises. The training event was also expected to provide the first in person meeting with the recruited DCs and some of the PIs. It was also considered as a great opportunity to have the first annual progress meeting.

Lead beneficiary / person in charge

FORTH / Benoit Loppinet

Description of the work still to be done

Some of the subjects that have not been covered during the week of training in ETH Zürich are covered in the series of BIOMAC-BP online seminars. Subjects relevant to soft skills were introduced in the training week but not covered in depth. This includes open science and open data practices, introduction to Data Management Plan and Career Development.

Deviations from original working plan

Deviation (minor) from the original work plan are the duration of the event and its precise timing:
The first training event was initially scheduled to span two weeks. The duration was reduced to one week, a decision that was made to optimize logistics and budgetary resources. The training days being rather

intense, subjects that could not been addressed in depth during that week were moved to be covered by online sessions, during the BIOMAC-BP seminars.
The event was held from August 24th to August 29th at the ETH Zürich Hönggerberg Campus (M10) though originally planned on M9. The minor shift was decided to permit the participation of more DCs and as the end of August was identified as the most opportune time for organizing it in ETH Zürich.

Identification of the problems

None

Description of the work done

The report regards the organization and implementation of the first BIOMAC-BP training school, entitled "Introduction to BIO2PHYM. It was held from August 24th to August 29th at the ETH Zürich Hönggerberg Campus. We first provide some background information, followed by details on the preparation of T1, the implementation process, and finally the participants' evaluation.

Background

As stated in the grant agreement, the network-wide training program is designed to provide network-wide training events that address aspects essential for the research project that are not covered locally. Given the interdisciplinary nature of the planned research and the distinct skill sets required for the individual research projects, the network-wide training is necessary to familiarize the DCs (and also PIs) with the fundamentals of each other's specialties. The basic scientific training for all DCs (in line with the work package structure of the BIOMAC-BP research plan) to be covered by the training events are:
• Production processes (in line with WP1).
• Fundamental soft matter physical chemistry (in line with WP2).
• Numerical simulation and theoretical description (in line with WP1 and WP2).
• Microbiology and environmental fate (in line with WP3).
Subjects include bio-based materials, microorganism working with microbes, physical chemistry of fluid interfaces, hydrodynamics, encapsulation, spraying and drying, soft-matter characterization techniques, *etc...*
The network-wide training events are designed to provide excellent networking opportunities and strengthen the professional and personal connections between the individual DCs. They also facilitate DCs in expanding their professional network by connecting them with renowned scientists from within and outside the project in a relaxed working environment. Three network wide live events are planned. They will serve venues for the annual network meetings.

Role of first training event **T1 Introduction to BIO2PHYM:**

The first such training event was T**1 Introduction to BIO2PHYM,** planned to be an introductory training event (first planned duration of two weeks) and to take place within 3 months of finalizing recruitment (allowing the DCs will have been introduced to their individual projects). The plan was one week of general and introductory lectures (contributing partners in brackets) covering the following subjects:
o Introduction to the BIO2PHYM network and relevant guidelines like The European Code of Conduct for Research Integrity, the MSCA Green Charter, *etc.*
o Open science and the EU's Open Science Policy
o ChatBots- Utilisation, opportunities and risks
o Career development part I.
o Basics of soft matter physical chemistry and Characterization
o Basics of microbiology
o Working with bacteria

o The event was planned to be complemented by a second week of **practical hands-on training**. For this the DCs should have been split into two groups to attend lab courses on the premises of ESPCI and ETHZ. Instead, these courses were integrated into the first week and all provided in Zürich. They covered the following subjects:

- Working with microorganisms.
- Microfluidics and rheology.
- Soft matter characterization methods

T1 preparation

The consortium appointed a dedicated task force (P. Lang network coordinator, B. Loppinet training WP leader, E. Secchi, ETH Zürich, M. Ripoll) to coordinate the T1 training event. Between March and July 2025, the team convened regularly online to define the curriculum in alignment with the grant agreement, select the venue, determine the event duration, and shape the program. ETH Zürich was chosen as the host location due to its central accessibility and its unique offer to adapted infrastructure in particular regarding access to hands-on experimentation and access to lab space. Dr. Eleonora Secchi offered her expertise in microfluidics as well as microbiology and facilitated access to ETH's infrastructure, Prof. Jan Vermant offered access to labs for rheometry and optical microscopy.

Given the retained location, to optimize logistics and manage budgetary constraints, the team agreed to condense the originally planned two-week format into a single week of in-person sessions. Topics that would not be covered during that week would be addressed through complementary online modules. During subsequent meetings held in June-July 2025, the final program was structured to include:

- A comprehensive overview of key scientific disciplines and methodologies
- Training in rheology, leveraging the host's specialization
- A microbiology module to be led by a UoC together with ETH Zürich
- Practical microfluidics and microbiology sessions with direct experimental engagement

The combination of classroom lessons, and hands-on and demonstration, was designed to ensure efficient delivery of the training objectives while maintaining high educational value. The program also included enough time for social events, allowing the development of networking. That included a get together session on the Sunday afternoon, a BIOMAC-BP dinner on Tuesday evening, and a good-bye session on the Friday afternoon.

Hosting was provided for all visitors in a single hotel with cost covered by the network central budget, local budget was used for travel costs.

T1 implementation

The training implementation was flawless, sticking to the program. The event was well attended by DCs, as well as by PIs. The lists of attendees and speakers are given below.

The teaching load was rather intense, but with alternance between classroom and lab session and hands on almost every day. Every tutor provided the slides of their presentation in a cloud folder prior to the event. Lecture duration was mostly 1 hr.

Host: ETH Zürich - Hönggerberg campus

Sunday 24.08.2025 Room "Kleine Bauhalle" HIF Building	• **17:30** Get-together **Self-introduction of the doctoral candidates**
Monday 25.08.2025 ROOM J.498 HCI Building at D-MATL	• **09:00-10:00** "BIOMAC-BP: the organization of the network and its scope " Peter Lang (FZJ) • **10:00-11:00** "BIO2PHIM and their physico-chemical properties" Peter Lang (FZJ) • **11:00-11:15** Coffee break • **11:15-12:15** "General use and fate of pesticides with a special focus on biopesticides" Thomas Pütz • **12:15-13:15** Lunch break • **13:15-14:15** "Active matter to understand biopesticides dynamics" Marisol Ripoll (FZJ) • **14:15-18:00** "Numerical simulations for soft-matter" (lecture and hands on with coffee breaks) Marisol Ripoll (FZJ) / Joost de Graaf (UU)
Tuesday 26.08.2025 ROOM J.498 HCI Building at D-MATL	• **09:00-10:30** "Microscopy techniques, particle tracking and quantitative image analysis, Part 1" Pavlik Lettinga (FZJ) • **10:30-10:45** Coffee break • **10:45-12:15** "Soft Materials: a mechanical perspective" Jan Vermant ETHZ • **12:15-13:15** Lunch break • **13:15-14:00** Lab safety instruction • **14:00-16:00** Lab session Rheology and Microscopy (1-4 in parallel) • **16:00-18:00** Lab session Rheology and Microscopy (1-4 in parallel)
Wednesday 27.08.2025 ROOM J.498 HCI Building at D-MATL	• **09:00-10:30** "Rheometry and Linear Viscoelasticity" Benoit Loppinet (FORTH) / Theo Merland (ESPCI) • **10:30-10:45** Coffee break • **10:45-12:15** "Soft skill lecture 1: AI in scientific writing" Mihalka Reka • **12:15-13:15** Lunch break • **13:15-14:00** "Microscopy techniques, particle tracking and quantitative image analysis, Part 2" Pavlik Lettinga (FZJ) • **14:00-16:00** Lab session Rheology and Microscopy (1-4 in parallel) • **16:00-18:00** Lab session Rheology and Microscopy (1-4 in parallel)
Thursday 28.08.2025 ROOM E11 HIF Building	• **09:00-10:30** "Introduction to Microbiology: Overview of Sterile Techniques and Discussion on Life/Death Assessment and Microbial Metabolism" Vasiliki Michalopoulou/(FORTH) • **10:30-11:00** Coffee break • **11:00-12:30** Lab "Growing Microbes in the Lab" Jeremy Wong (ETHZ) • **12:30-14:00** Lunch break • **14:00-15:00** "Planktonic and Sessile Bacterial Lifestyles: An introduction" Eleonora Secchi (ETHZ) • **15:00-15:30** Coffee break • **15:30-17:00** Lecture "Microbial Genetic Engineering" Jeremy Wong (ETHZ) • **17:00-17:45** Lab "Genetic Engineering in Practice" Jeremy Wong (ETHZ)
Friday 29.08.2025 ROOM E11 HIF Building	• **09:00-10:00** "Introduction: Fluid dynamics at the Microscale" Eleonora Secchi (ETHZ) • **10:00-10:30** Coffee break • **10:30-12:00** "Experimental Microfluidics: Techniques and Applications" Eleonora Secchi (ETHZ) • **12:00-13:30** Lunch break • **13:30-14:30** Lab Work "Microfabrication" Eleonora Secchi/ Ina Damm (ETHZ) • **14:30-15:00** Coffee break • **15:00-17:00** Lab Work "A Microfluidic Experiment: Viscosimeter on Chip" Eleonora Secchi/ Ina Damm (ETHZ)

Attendees - Doctoral Candidates:

- Aman Vats - FZJ / IBI-4
- Aaron de Clercq - FZJ / HIERN
- Venla Forsell - FZJ/IBG-3
- Vishu Saini - FZJ / IAS 2
- Bahareh Behrouznejad - KUL
- Rohit Khandoori - UU
- Irine Pauly - ESPCI
- Zeyuan Wang - ESPCI
- Maria Miguel Pires – UoC
- Ina Damm - ETHZ
- Iséline Granger – ETHZ
- Bryan Verhoef – Invited UU

Attendees - Supervising Scientists:

- Wim Thielemans, KU Leuven, (Communication-Dissemination-Exploitation Coordinator)
- Eleonora Secchi, ETH Zürich, (Research and Innovation Coordinator), Microfluidics
- Jan Vermant, ETH Zürich, rheology II
- Benoit Loppinet, Foundation for Research and Technology - Hellas (FORTH) (Trainings Coordinator)
- Peter Lang, Forschungszentrum Jülich GmbH, IBI-4 (Network Coordinator)
- Marisol Ripoll, Forschungszentrum Jülich GmbH, IAS-2 (WP-Leader WP2)
- Joost de Graaf, Utrecht University, Cond-Matter Theory, Stat & Comp Phys
- Thomas Pütz, Forschungszentrum Jülich GmbH, Agrosphere, IBG-3, Biopesticides for agronomy
- Théo Merland, Laboratoire de Sciences et Ingénierie de la Matière Molle, ESPCI, Rheology I

Contributors

- Pavlik Lettinga, Forschungszentrum Jülich GmbH, IBI-4, Optical microscopy
- Vasiliki Michalopoulou, Foundation for Research and Technology - Hellas (FORTH), Microbiology
- Mihalka Reka, Department of Management, Technology and Economics of ETHZ, AI for scientific publication
- Jeremy Wong, Group for Soft Materials and Interfaces, ETHZ, Microfluidics II
- Vincenzo Iannello and Julien Bauland, hands on experiments rheology

First Annual Progress meeting

Sunday afternoon and early evening at the start of the event were organised as the network's first annual meeting, during which the DCs and PIs in attendance introduced themselves to each other in short presentations. This event was framed by an opening aperitif and a joint pizza dinner on campus, which facilitated initial contacts and discussions between DCs from different locations as well as between DCs and PIs other than their respective supervisors.

Sunday afternoon aperitif opening the first annual progress meeting

Preparing for the microbiology lab session

List of lectures with a one sentence summary.

"BIOMAC-BP Organisation and scope", P. Lang:
General presentation of the BIOMAC-BP project and consortium

"(Bio)2PHIM and their physico-chemical properties", P. Lang
An introduction on the basic physics and chemistry behind the formation of high interfaces materials

"General use and fate of pesticides with a special focus on biopesticides", T. Pütz
A general introduction on the agricultural challenges to the use of bio-pesticide

"Active matter to understand biopesticides dynamics", M. Ripoll
A physics vision on active matter

"Numerical simulations for soft-matter" J. de Graaf and M. Ripoll
An introduction and review of the different methods of numerical simulations

"Numerical simulations for soft-matter exercises" M. Ripoll and J. de Graaf
Demonstration of some of the methods introduced previously

"Microscopy techniques, particle tracking and quantitative image analysis", P. Lettinga
A general introduction on optical microscopy techniques and

"Rheometry and Linear Viscoelasticity", T. Merland:
Introduction to rheology and rheometry

Soft Materials: a mechanical perspective", J. Vermant
Overview of the different type of viscoelastic materials and their rheological properties

"AI in scientific writing", R. Mihalka
A review of AI tools for scientific writing and what they can be used for

"Introduction to Microbiology: Overview of Sterile Techniques and Discussion on Life/Death Assessment and Microbial Metabolism" V. Michalopoulou
An introduction of microbiology highlighting microbial metabolism

"Microbial Genetic Engineering" J. Wong
Description of methods of modern microbiology, including genetic engineering

"Planktonic and Sessile Bacterial Lifestyles: An introduction", E. Secchi
Overview of the microbial lifestyles

"Introduction to Microfluidics", E. Secchi
An introduction to the capabilities of in-house developed microfluidic devices

Lab session-Hands on experiments:
Numerical simulations for soft-matter exercises
Done on the attendees' computer supervised by **M. Ripoll and J. de Graaf:**

Hands on experiments: Microscopy and rheology:

3 members groups were formed; the microscopy (2 set-ups) and the rheology (2 set-ups) were running in parallel. Each team went through the 4 stations over Tuesday and Wednesday

Exercises on microscopy
Confocal microscopy
Microscopy under shear

Exercises on rheology, hands on rheometers
Discovery of rheometers, assessing viscoelasticity linear and nonlinear of various consumer products

Microbiology lab sessions
demonstration of different type of technique's relative to microbial culture

Lab sessions on microfluidics:
3 members group were formed and given bits and pieces to construct a microfluidic device, mount them on optical microscope and report observation trying to reproduce published work.

Participants of the first training event for the BIOMAC-BP Marie Sklodowska Curie doctoral network in Zürich – Switzerland

Back row: Pavlik Lettinga, Jan Vermant, Benoit Loppinet, Theo Merland, Thomas Putz, Wim Thielemans, Peter Lang, Joost de Graaf, Venla Forsell, Rohit Khandoori, Zeyuan Wang. Front raw: Vassiliki Michalopoulou, Eleonora Secchi, Marisol Ripoll, Maria Miguel-Pires, Bahareh Behrouznejad, Irine Pauly, Aaron de Clercq, Aman Vats, Vishu Saini.

Assessment by attendees

An assessment survey was created and made available to all attendees one week after completion of the event. The questionnaire included assessment of the training event as a whole as well as assessment of the individual contributions. Participants could choose between six ratings for each question ranging from good to bad. 9 DCs answered (on 11 participating) as well as 2 other participants. The detailed answers are given below in Annexe 1.

Overall, very good ratings were returned. Comments noted that some clearer examples of the typical formulation to be used would have been useful, which might have been a bit too much given the amount of material covered. The hands on appeared to be well appreciated. It gave an opportunity to DCs (and PIs) to closely see and use instrument and methods that are quite far from their daily works. This was the intention of the sessions, and it seemed to have been well appreciated.

The detailed result of the survey is attached to this report as Annex 1.

Conclusion

During the week of 24 to 29 August 2025, the BIOMAC_BP network held its first official training event at ETH Zürich, Hönggerberg Campus. This milestone event, entitled “T1-Introduction to BIO2PHYM”, brought together 11 doctoral candidates, 8 scientific supervisors, and 5 invited speakers for an intensive week of scientific exchange, training, and community building. The program combined cutting-edge scientific lectures, hands-on lab sessions, and introduction to open science and research ethics, career development. The DCs also had the opportunity to introduce their individual projects to the network in the first annular progress meeting held on the afternoon of Sunday 24th.

The highlights of the week included:

- Introduction to the BIOMAC-BP Network and its scope
- Fundamentals of soft matter and microbiology, including rheology, microscopy, and microbial growth techniques
- Microfluidics at the microscale, with hands-on experiments on chip-based viscometers
- Artificial intelligence in scientific writing and career development sessions to boost transferable skills

ETH Zürich provided the ideal setting for this first training week. The Hönggerberg campus offered state-of-the-art facilities for lectures and lab work, where participants moved from lecture halls to labs in HCI and HIF buildings, exploring topics ranging from biopesticide dynamics and numerical simulations to microbial genetics and microfabrication.

Beyond the technical program, the event fostered connections among early-career researchers and senior experts. A welcoming get-together on Sunday evening was organised that allowed mutual presentation. The daily group lunches offered further space for networking.

This combination of scientific depth and informal exchange created an inspiring atmosphere for collaboration. Overall, the T1 training event proved to be a great success, setting the standard for the subsequent events in the BIOMAC-BP training series.

Annex 1:
Results of the assessment survey for the first BIOMAC-BP networkwide training event T1

We conducted a survey to evaluate the training event as a whole and the individual contributions.
Participants could choose between six ratings for each question:
(1) poor
(2) below expectations
(3) reasonable
(4) good
(5) very good
(6) outstanding
The average responses to each question are listed below. A total of 11 people took part in the survey, including 9 DCs (on 11) and 2 lecturers. Participants also had the opportunity to submit free-text comments on the questions. These comments are provided in the relevant sections.

Training Event as a whole:

How would you assess the event as a whole?	DC only	others	All
Duration (1) too short (6) too long	2.7	5.5	4.0
Accommodation	4	5	4.2
Accessibility of event venue	4	5	4.2
Administrative organisation	4.9	6	5.1
General level of contents (1) too low (6) too demanding	4	5	4.2
Possibility to discuss with PIs	4.8	6	5
Possibility for peer networking	5	6	5.2
Social events	4.4	6	4.7
Overall usefulness of the event	5.2	6	5.4

Free text comments

The event as a whole was outstanding, especially the lectures, lab sessions and PIs–DCs interactions. However, citing some reference formulations for biopesticides in emulsions, gels, and foams could provide a clearer idea.

Thank you for organizing the event, regarding the administrative work and schedule everything was great. Lectures were high quality, and I enjoyed especially on the practical training. Theory is crucial, but implementation and applications are extremely important to understand also.
For the future, I would appreciate the private rooms for every DC even though I understand that there is budget limitations involved.
Additionally, it could be useful to share the lecture slides or preliminary material, for instance at least two weeks before hand, so there would be possibility to study more about the relevant topic.

I really enjoyed the event as a whole. I learnt a lot about other fields and other doctoral candidates' projects. This event was great way of bringing together all the doctoral candidates and supervisors together. ETH-Z was a very nice location for the event.

In a whole, the event was very fruitful, but regarding the accommodation, it was better if everyone could have their own room in the hotel. Moreover, if more specific and relevant lectures regarding diverse formulations and novel characterizations of biopesticides in recent years were incorporated, it could be very didactic. All in all, I highly appreciate all the efforts put into organizing and preparing this holistic training.

"BIOMAC-BP Organisation and scope", P. Lang:

How would you assess the lecture by P. Lang: "BIOMAC-BP Organisation and scope"	DC only	others	All
Level of contents: (1) too simple (6) too high	4	5.5	4.3
Density of contents: (1) too low (6) too high	3.9	5	4.1
Quality of slides	4.8	5.5	4.9
Style of presentation	4.9	5.5	5

"(Bio)2PHIM and their physico-chemical properties", P. Lang:

How would you assess the lecture by P. Lang: "(Bio)2PHIM and their physico-chemical properties"	DC only	others	All
Level of contents: (1) too simple (6) too high	4.3	5.5	4.5
Density of contents: (1) too low (6) too high	4.2	5	4.4
Quality of slides	4.9	5.5	5
Style of presentation	5.1	5	5.1

"General use and fate of pesticides with a special focus on biopesticides", T. Pütz:

How would you assess the lecture by T. Pütz: "General use and fate of pesticides with a special focus on biopesticides"	DC only	others	All
Level of contents: (1) too simple (6) too high	3.11	5	3.5
Density of contents: (1) too low (6) too high	3.4	5.5	3.8
Quality of slides	4	5	4.2
Style of presentation	4.1	5	4.3

"Active matter to understand biopesticides dynamics “, M. Ripoll

How would you assess the lecture by M. Ripoll: "Active matter to understand biopesticides dynamics"	DC only	others	All
Level of contents: (1) too simple (6) too high	4.1	5.5	4.4
Density of contents: (1) too low (6) too high	3.9	6	4.3
Quality of slides	4.9	5.5	5
Style of presentation	5.1	5.5	5.2

"Numerical simulations for soft matter” J. de Graaf

How would you assess the lecture part by J. de Graaf: "Numerical simulations for soft matter"	DC only	others	All
Level of contents: (1) too simple (6) too high	4.3	5.5	4.5
Density of contents: (1) too low (6) too high	4.1	6	4.5
Quality of slides	5	6	5.2
Style of presentation	5.1	5.5	5.2

Free text comments
amazing lecture, maybe a little bit too much info for the audience even though it is basics

"Numerical simulations for soft matter" M. Ripoll

How would you assess the lecture part by M. Ripoll: "Numerical simulations for soft matter"	DC only	others	All
Level of contents: (1) too simple (6) too high	4	5.5	4.3
Density of contents: (1) too low (6) too high	3.8	6	4.2
Quality of slides	4.8	5.5	4.9
Style of presentation	5	5.5	5.1

"Microscopy techniques, particle tracking and quantitative image analysis", P. Lettinga

How would you assess the lectures by P. Lettinga: "Microscopy techniques, particle tracking and quantitative image analysis" parts 1 and 2	DC only	others	All
Level of contents: (1) too simple (6) too high	4.3	5.5	4.5
Density of contents: (1) too low (6) too high	4.1	5.5	4.4
Quality of slides	4.9	6	5.1
Style of presentation	5	6	5.2

"Rheometry and Linear Viscoelasticity", T. Merland:

How would you assess the lecture by T. Merland: "Rheometry and Linear Viscoelasticity"	DC only	others	All
Level of contents: (1) too simple (6) too high	4	5	4.2
Density of contents: (1) too low (6) too high	4.1	5.5	4.4
Quality of slides	4.8	4.5	4.8
Style of presentation	5	4.5	4.9

"Soft Materials: a mechanical perspective", J. Vermant

How would you assess the lecture by J. Vermant: "Soft Materials: a mechanical perspective"	DC only	others	All
Level of contents: (1) too simple (6) too high	4.4	6	4.7
Density of contents: (1) too low (6) too high	4.4	5.5	4.6
Quality of slides	5.1	6	5.3
Style of presentation	5.4	5.5	5.4

"AI in scientific writing “, R. Mihalka

How would you assess the lecture by R. Mihalka "AI in scientific writing"	DC only	others	All
Level of contents: (1) too simple (6) too high	4	5.5	4.3
Density of contents: (1) too low (6) too high	4	6	4.4
Quality of slides	5.1	6	5.3
Style of presentation	5.3	5.5	5.3

Free text comments
Very useful lecture.

"Introduction to Microbiology: Overview of Sterile Techniques and Discussion on Life/Death Assessment and Microbial Metabolism" V. Michalopoulou

How would you assess the lecture by V. Michalopoulou "Introduction to Microbiology: Overview of Sterile Techniques and Discussion on Life/Death Assessment and Microbial Metabolism"	DC only	others	All
Level of contents: (1) too simple (6) too high	4	6	4.2
Density of contents: (1) too low (6) too high	3.9	6	4.1
Quality of slides	4.8	6	4.9
Style of presentation	4.6	6	4.7

"Microbial Genetic Engineering" J. Wong

How would you assess lectures by J. Wong on "Microbial Genetic Engineering"	DC only	others	All
Level of contents: (1) too simple (6) too high	4.1	6	4.5
Density of contents: (1) too low (6) too high	4.4	5.5	4.6
Quality of slides	4.9	6	5.1
Style of presentation	4.9	5.5	5

Exercises-Hands on – Lab sessions:

"Numerical simulations for soft-matter exercises" M. Ripoll and J. de Graaf:

How would you assess the simulation exercises by M. Ripoll and J. de Graaf: "Numerical simulations for soft-matter"	DC only	others	All
General usefulness	3.7	5.5	4
Duration: (1) too short (6) too long	3.7	6	4.1
Level of exercises: (1) too simple (6) too high	4.1	6	4.5
Method of implementation	3.6	5.5	4

Free text comments

maybe fewer exercises. Also, it felt more like a python than simulation exercise

In general, I enjoyed the simulation exercises. It gave a good outlook what they are about and how they are constructed.
However, in my opinion there was too little time to get more proper understanding how simulations work. Also, it was difficult to understand the aim of the exercise.
It would have been nice to have an actual simulation presenting from start to finish which is related to the biopesticide field in detail.
I understand that people come from different backgrounds, therefore I want to thank the patience and help of the assistants of the simulation exercises.

Exercises on microscopy

How would you assess the laboratory exercises on microscopy	DC only	others	All
General usefulness	5	5.5	5.1
Duration: (1) too short (6) too long	3.9	5.5	4.2
Level of exercises: (1) too simple (6) too high	3.9	6	4.3
Method of implementation	4.9	6	4.1

Free text comments

All the teaching assistants involved with the labs did a wonderful job to make the exercises fun and knowledgeable at the same time.

Exercises on rheology

How would you assess the laboratory exercises on rheology	DC only	others	All
General usefulness	5.1	6	5.3
Duration: (1) too short (6) too long	4.1	5.5	4.4
Level of exercises: (1) too simple (6) too high	4.3	5.5	4.5
Method of implementation	4.6	5	4.7

Free text comments

All the teaching assistants involved with the labs did a wonderful job to make the exercises fun and knowledgeable at the same time.

Microbiology lab sessions

How would you assess the microbiology lab sessions	DC only	others	All
General usefulness	4.6	6	4.9
Duration: (1) too short (6) too long	3.8	6	4.2
Level of exercises: (1) too simple (6) too high	3.8	5.5	4.1
Method of implementation	4.9	6	5.1

Free text comments
Exercises were well thought and very nicely prepared for doctoral candidates from diverse academic backgrounds.

"Planktonic and Sessile Bacterial Lifestyles: An introduction", E. Secchi

How would you assess the lecture by E. Secchi "Planktonic and Sessile Bacterial Lifestyles: An introduction"	DC only	others	All
Level of contents: (1) too simple (6) too high	4.1	5.5	4.4
Density of contents: (1) too low (6) too high	4.1	5.5	4.4
Quality of slides	5.4	6	5.5
Style of presentation	5.7	6	5.7

Microfluidics, E. Secchi

How would you assess the lectures by E. Secchi on Microfluidics	DC only	others	All
Level of contents: (1) too simple (6) too high	4.3	5.5	4.5
Density of contents: (1) too low (6) too high	4.2	6	4.5
Quality of slides	5.2	5.5	5.3
Style of presentation	5.4	6	5.5

Lab sessions on microfluidics

How would you assess the lab sessions on microfluidics	DC only	others	All
General usefulness	5.2	6	5.4
Duration: (1) too short (6) too long	3.7	5.5	4
Level of exercises: (1) too simple (6) too high	4	6	4.4
Method of implementation	5.5	5.5	5.5

Free text comments
I really liked the lab sessions on microfluidics. Exercises were well prepared. I received lots of generous help from teaching assistants and my peers.