BIP PROJECT:

Sustainable Biotechnology Entrepreneurship: Microalgae & Human Food

COORDINATION:

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PARTNER INSTITUTIONS:

- D STUTTGA02 Hohenheim University
- I PARMA01   Università degli studi di Parma
- HR PULA01 Sveuciliste Jurja Dobrile u Puli
- F PARIS012 Universite Paris XII- Val de Marne
- I MILANO 16 Universidad Milano Bicocca (to be confirmed)
- BG VARNA04 University of Economics, Varna, Bulgaria
- PL CZESTOC02 Jan Dlugosz University, Poland
- I ANCONA01 Università Politecnica delle Marche, Ancona, Italy (to be confirmed)
- I FERRARA01 Università degli studi di Ferrara, Italy (to be confirmed)

TARGET GROUPS.

The programme, described in this syllabus, is intended for Undergraduate and Master students from different disciplines related to business, economics, management, chemical engineering, environmental science/engineering, food technology. It is required to communicate well in English.

From another perspective, participation is also open to staff and prospective staff wishing to learn about microalgae culturing, teamworking and BIP´s development. For this purpose, staff will participate in on-line meetings with the coordinator and will attend the in-person training period. Clearly, ECTS recognition is not appliable to this group and attendance is conditional to obtain a STT Erasmus grant or similar. The individually designed learning agreement will describe personalized activities in detail.

OBJECTIVES

Upon completion of this program, participants will be able to:

Knowledge

1. Address the most important aspect to plan a microalgae production project.
2. Recommend the best location for algae culturing and business location from at least two (inter)disciplinary points of view.
3. Modify their production project design according to the main values that underlie the public concern about food biotechnology and products for the different countries (such as perceptions of trust, need, taste and care for a sustainable society and natural balance).
4. Compare different business organizations for the development of microalgae-based products in different countries.
5. Compare legal differences among the different involved countries

Skills

1. Problem-solving skills.
2. Critical-thinking and analytical skills.
3. Time management and tasks prioritization.
4. Understand technical information and clearly explain it through oral and written reports presented to audiences from different cultural backgrounds and disciplines, at different times and for different purposes.
5. Interpersonal skills for teamwork with professionals from various contexts (disciplines, countries) to develop a common biotechnology-based project.
6. Technical skills for microalgae culturing in the lab and in the pilot plant.

Values

1. Identify personal training needs with an open, critical and reflective attitude about professional performance in order to pursue a life-long learning career
2. Intercultural communication
3. Assume a professional role in relation to personal values, behavior, communication styles, and articulate a complex understanding of the cultural environment and welfare
4. Policies in which these are shaped.
5. Be aware of values, customs and practices common in other cultures that might be relevant for student´s performance in a multicultural environment.

Organizational aspects of the BIP

The partner Universities will recruit students from areas related to Economics, Management, Chemical Engineering, Environmental Science, Food technology or any other studies that could participate in the development of the project. One possible strategy could be, for example, to send an open call for students of undergraduate and master studies from disciplines related to those disciplines. The total number of students participating from the partner Universities will initially be 25, to anticipate any possible dropout before mobility. Apart from partner universities, non-European Universities will be invited to participate in the BIP (1 – maximum 2 students) in order to increase, even more, the cultural diversity of the groups. Students from the University of Almeria will also be invited to participate, as it is important for the UAL to make use of this action to promote internationalization within the community.

In figure 1 there is one of the multiple possibilities for distributing participants among different universities and areas considering that 4 partner Universities participate in the BIP (in the example neither students from UAL nor students from third country universities are represented). Students with special needs are encouraged to declare their condition during the application process to prepare specific adaptations for both the online and in-person training periods.

Adaptation to contingencies: In the unlikely case that the number of students at the beginning of the mobility is lower than 16, partner universities will be asked to open a new call and a second set of students will join the BIP in order to balance the groups.

The virtual period of those students will start before the mobility by studying the different groups ´ project ideas, finding the weaknesses and strengths of the projects, and planning their contribution to the project development. The virtual period for this second group of students will be extended after the mobility takes place and will consist in improving the final project´s product.
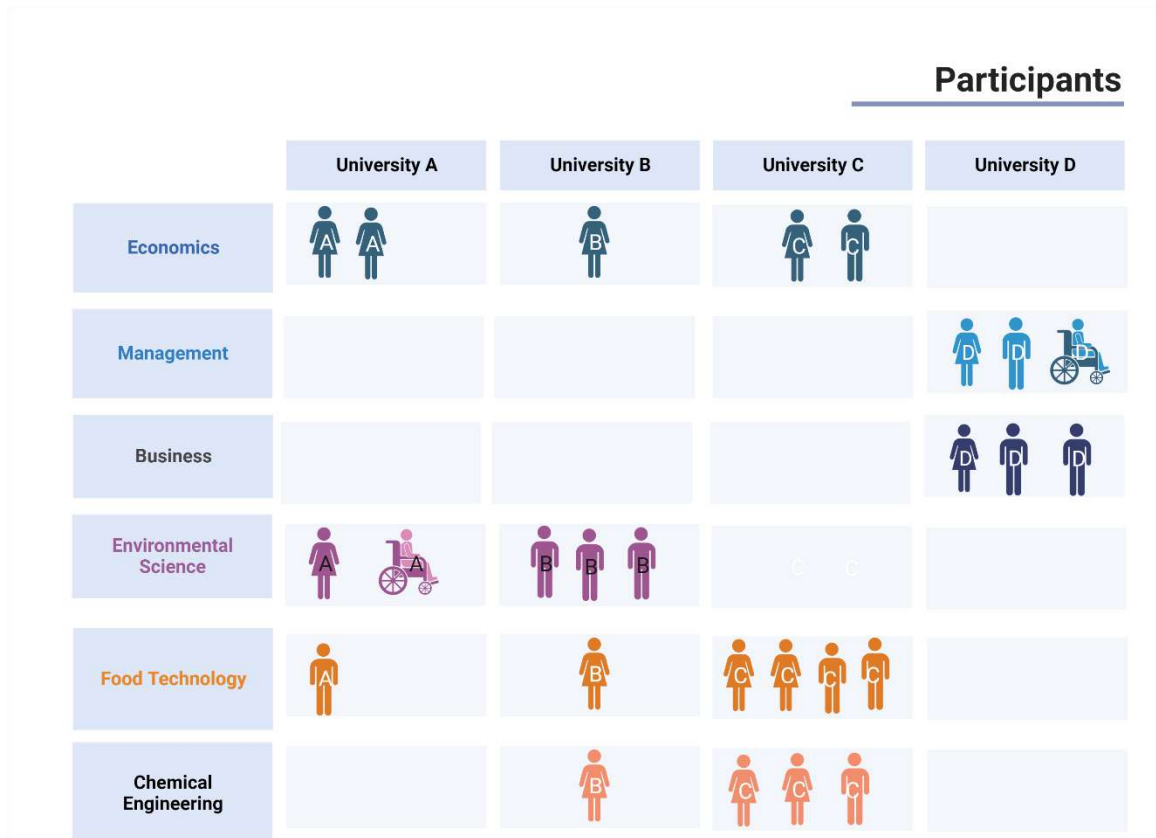

Figure 1- Example of participant distribution among universities and areas. Each University is identified by a letter (A, B, C, D) and all of them are ideally located in different countries. Blue, cyan, and grey symbols identify students from Economics, Management and Business (Disciplinary Area X); Pink, orange and violet symbols identify students from Chemical Engineering, Food technology and Environmental Science (Disciplinary area Z). Furthermore, 3-4 students from University of Almeria and 1-2 students from each of the following third countries: Japan, Canada, Argentina, Perú and Costa Rica, will be asked to participate in order to increase, even more cultural diversity.

Virtual exchange period

Virtual teaching is designed in such a way that at the end of the period the students will gain a deep understanding of a complex problem, with the goal of developing an

idea to address goal 2 of the SDGs (Sustainable Development Goals) "End hunger, achieve food security and improved nutrition, and promote sustainable agriculture" by developing a project using microalgae. At the same time, the online exchange will bring students the opportunity of becoming aware of their initial level of intercultural competence and to develop the skills to be able to cope with the sort of situations they are likely encounter during the physical exchange period.

Brief description of the activities:

Preparation

This is a compulsory part of the course before the official kick-off with the first online general meeting.

All the participants must individually sign in to the platform and explore the different tools. Asynchronous training will take place to get familiar with the online platform for students, mentors and teachers. Mentors will have their own discussion forum and will agree on their mentoring style. Teachers will send the video material to the coordinator to be uploaded to the platform. Students will be asked to complete their initial diagnosis of intercultural competence development. Additionally, students must follow the training for Blackboard use.

Blackboard contents:
- Signing in to the platform (before the first online meeting)
- Accessing the videocall (before the first online meeting)
- Moving through the different groups in the videocall (before the first online meeting)
- Learning how to post in blogs (before the first online meeting)
- Learning to use tool groups.

The assessment will be taken, for example, by a gymkhana-like activity or virtual scape-room challenge.

During the course

Two online synchronous sessions (one at the beginning and the second one around 2 months before mobility) for all the participants with the coordinator, as well as **monthly mentoring sessions** for each interdisciplinary team are proposed for the virtual exchange of the participants. Meanwhile, students will develop the project working as they wish, including online team meetings, to meet the requirements. The formal meetings with coordinators and mentors can be recorded and placed on Blackboard platform. This is not compulsory for team members, only meetings.

During the synchronous **first online session,** students get to know each other by ice-breaking activities. Multidisciplinary work groups are created, including members from most of the universities and involved areas. Once mentors are assigned to each group, all the interdisciplinary groups will separately discuss their project idea proposal. From that point on, the **interdisciplinary teams will work on the development of their project idea on their own**. The philosophy of the BIP is to encourage students from the different disciplines to analyze the project idea under their disciplinary perspective. They must deeply analyze the factors that might affect the effectiveness of the project implementation and explain that perspective to the other members of the team, building together the best possible project idea. The interdisciplinary groups will meet monthly with their team mentor by internal agreement of time availabilities, so the mentor will oversee collaboration between members of the group, delivering support and advice.

The organizational aspects of the teaching methodology are resumed in Figure 2, where the different student aggrupations during the Blended Intensive Program are shown: inter-disciplinary groups (Figure 2 a) for developing the projects´ idea with their correspondent mentor, as well as disciplinary groups (Figure 2 b), to make the best disciplinary contribution to each project development.
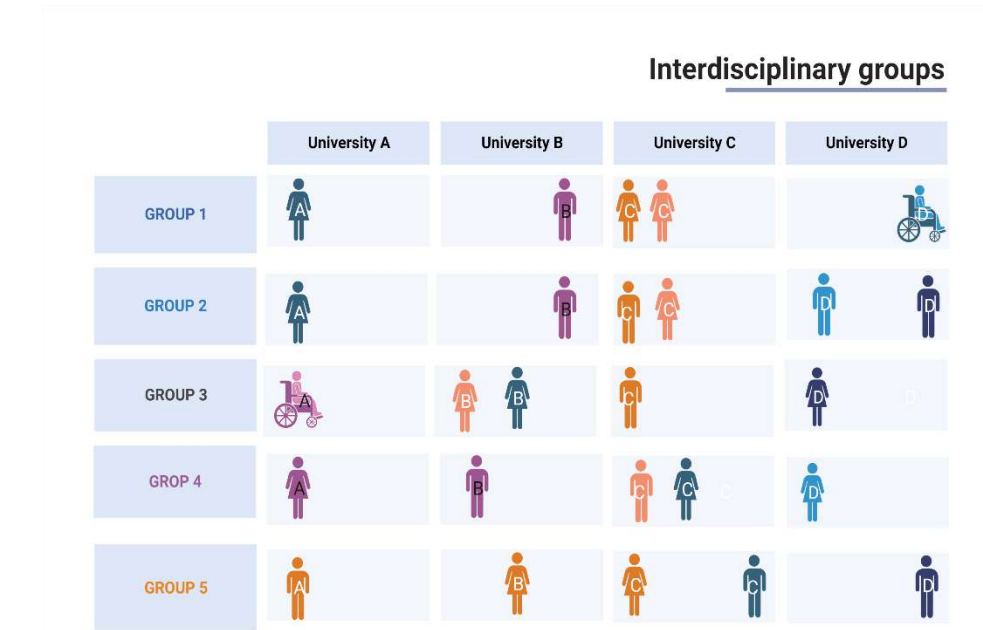
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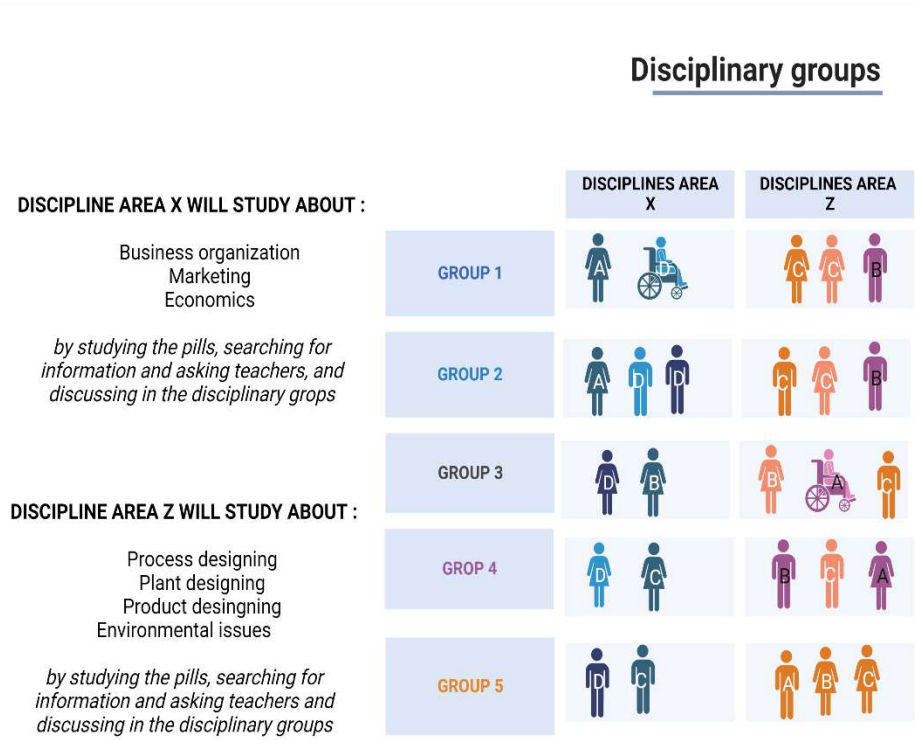
b)

Figure 2: Online part organizational aspects. 2a: Interdisciplinary teams for developing their project ideas. 2b: disciplinary teams for improving the disciplinary approach contribution to the problem solution.

DISCIPLINARY SUBGROUPS

Didactic material (15 minutes video pills) related to each main concept required to understand the complexity of the project will be available on the platform. Following the philosophy of the BIP, at some moment of the BIP, the mentor will ask students to subdivide the interdisciplinary teams by disciplines. Students will be encouraged to deeply analyze the factors that might affect the effectiveness of the project implementation. For this they will study the pills related to their discipline, and after that, will explain their perspective to the other members of the interdisciplinary team. As the main activity of the groups must be discussing and interacting, only around 4 to 6 pills will be proposed for each by discipline. Potential titles are shown in table 1. The coordinator will create disciplinary working areas on the platform. The **teaching team** responsible for the didactic material will be **available at the platform, synchronously** at least once as well as asynchronously for answering students' questions. As a result, there will be disciplinary teams working together around each related topic.

Table 1: Potential pills available for students at the Blackboard platform (example).

CODE	TITLE	
OT1-	Potential commercial products from microalgae with emphasis on food.	
OT2-	Factors influencing algae growth.	
OT3-	Bioreactors for microalgae culturing: pros and cons.	
OT4-	Techniques for cell separation: pros and cons.	
OT5-	Safety regulations in microalgae for human consumption and animal feed.	
OT6-	Nutritional biodiversity of microalgae and microalgae effluents.	
OT7-	Factors to consider when profiling consumer segments.	
OT8-	Defining marketing strategies according to the target groups.	
OT9-	Strategic planning and management systems.	
OT10-	Small scale farming: Collective vs familiar farming organization.	
OT11-	Large scale farming: potential business organizations.	
OT12-	Food production and environment.	
OT13-	The right to food and the right food.	
OT14-	Factors influencing consumer´s acceptance of food products.	
OT15-	Consumer´s acceptance.	

FIRST FORMAL ONLINE MEETING

(First General session: 1GS)

Participants: all the students and the coordinator

Lecturer's name: Tania Mazzuca Sobczuk; Date: 15/03/23 (Wednesday); **Day 0**, Kick-off Day

Course: Sustainable Biotechnology Projects based on Microalgae

Duration: 1:15h; synchronous; whole group of students (around 25 students).

Topic: 1.1 Team formation and project aim plan.

Aims of the lesson:

- Icebreaking
- Creating the multidisciplinary teams
- Explaining the dynamic of the BIP and defining the aim of the BIP

Lesson objectives: Students will be able to...

- Become familiar with each other
- Assess projects´ ideas according to the United Nations´(UN) Sustainable Development Goals (SDG)

Assumed prior knowledge:

Using Google Meet and Blackboard (PRE-COURSE)

Resources:

Computer, Google Meet, Flipgrid, Blackboard

Handouts:

- Microalgae for culinary art.
- Inspiring new: http://www.fitoplanctonmarino.com/np-fm-150202-fitoplancton-madrid-fusion.html?idCumbre=014&seccion=5
- Microalgae for fighting world hunger

- Inspiring new: https://theconversation.com/world-hunger-is-increasing-thanks-to-wars-and-climate-change-84506

Assessment (how learning will be recognized)

Team discussion in class; tutor observation; produced video and project idea evaluation

Differentiation (addressing all learners' needs)

Undefined

Planned groups:

Multidisciplinary- multinational.

Different learning styles

- Visual: handouts;
- Auditory listening & speaking in pairs & class discussion. Targeted questioning

Skills for Life / Key Skills to be addressed

- Communication: analyzing information about hunger and nutrition from in-developing areas related to this microalgae-based food project; speaking & listening in groups; selecting ideas according to a common criterion; knowledge regarding typical names for each country.
- Information Technology: Video to be produced on Flipgrid. Videocall to be accessed on Google Meet/Blackboard.

Activities

Time [min]	Content & Teacher Activity	Student Activity	Resource
0	Teacher introduction	Listening	Blackboard/ Google meet
10	Icebreaking. 1- To create groups in Blackboard by nationality	a. Each student introduces himself by saying his name.	

	2- To navigate between groups to check that they clearly understood the task	b. Students design one representative for presenting the work to the total group. c. Each group creates a list of the most popular names (10 names) in their University´ country (indicating the corresponding genre if appliable).	
20	3- To merge the groups in Blackboard, to ask the leader of each group to introduce themselves and to ask them to post the list on the main forum of the online session. 4- To write the name of each leader per nationality.	a. Each leader introduces himself b. Lists from the different countries are read online by each group leader. c. The responsible answer that understood where to post the list.	
30	5- Teacher input on criteria for creating the groups (6 members if possible): • *The team members will be chosen by the students attending to the criterion of heterogeneity.* • *At least 1 student from each university and discipline per team (compulsory when possible)* 6- Teacher creates an appropriate number of working groups 7- Teacher asks students to move through the groups until meeting the group criteria and to take notes of names, studies and nationalities of each member.	Listening a. Moving through the breaking rooms to meet the criteria of heterogeneity and multidisciplinary.	

		b. Writing names and nationalities of the different members of the group c. Remember their group number.	
40	8- To merge the groups in Blackboard. 9- To copy the link to the inspiring news in the chat. Tell students to check access to the material that they need to read before their next meeting. Tell them, as well, where they can access the pdf copy in Blackboard: • *Microalgae for fighting world hunger* *Inspiring new:* *https://theconversation.com/world-hunger-is-increasing-thanks-to-wars-and-climate-change-84506* • *Microalgae for animal feed.* *Inspiring new (1/2):* *https://www.feedstrategy.com/feed-mill-of-the-future/microalgae-based-animal-feeds-could-fill-protein-gap/* *Inspiring new (2/2):* **https://www.allaboutfeed.net/animal-feed/feed-additives/microalgae-a-sustainable-food-source-for-fish/** • *Microalgae for culinary art.* *Inspiring new:* *https://www.planctonmarino.com/en/*	Listening To copy and paste the links and to try to access To assure they can have access to the inspiring news	
45	10-Break up the general room and create again the multidisciplinary rooms again 11-Ask the students to meet their breaking rooms and to discuss time zones and	To find their multidisciplinary groups and to discuss time zones in their countries. To find with the other members three different	

	availability for meetings. There must be at least 3 different possible times for meeting during 1 hour once a month. The first one should be after approximately 7 days.	opportunities for meeting in a month. To write a list of all the members than can attend the meeting (ideally all of them, but at least one member should be able to attend to at least 2 of the sessions)	
55	12-Recap the activities and homework • To check that the mentor herself has the name of the representative per nationality of activity 1, by saying their names out loud. • To remind them to post the list of most common names by nationalities.	Homework **Today/tomorrow: the representative of each group by nationality** will post the list of the most common names in each country.	
	• To check that the mentor herself has taken notes of the number of multidisciplinary groups and their representative of the group in this session, by saying names and groups out loud.	**Today/tomorrow: the representative of the multidisciplinary group** will send to the tutor by the internal Blackboard email (preferable): • The list of the components of his/her group.	

	• Explain the homework to the representative of the "same nationality" and "multidisciplinary" different groups	• The discipline of study of each member • The name of their corresponding universities • The 3 different time availabilities for meeting	
	• Tell the students about their individual homework • Giving an example of the video	Listening and asking questions **Each student:** To produce an individual video (1 min) introducing your own name and your avatar´s names in the different countries (Flipgrid) and to upload it. (**Deadline: in 5 days**)	
	• Giving an example of the comments to post • Giving examples of the type of project to develop	**Each student:** to post nice comments to other student´s videos. (**Deadline in 7 days**) **Each student:** to read the inspiring news and to think of the type of project they would like to develop. **Each student:** to record all the experiences and	

		anecdotes in the personal portfolio.	
	• Tell the students that the mentor will create the groups in Blackboard and each group will have their own videocall room for having their first meeting group. • Explain to students the planning of session 1IT	**Each multidisciplinary group** will meet **(**without mentors, Session 1IT) on the platform and will share ideas about the inspiring news and try to agree about the type of project they would like to develop. (Ideally 30-60 minutes meeting, no matter if they reach a conclusion or not) (**Deadline: in 14 days)**	
	• Tell the students that they will be assigned to at least one mentor per group to help them with the project. They will call them for their first student-mentor meeting • Explain to students the session 1IT-M	**Each multidisciplinary group** will meet with their mentors in the platform (Session 1IT+M, **Deadline: in 21 days, preferable in one of the times proposed by the students)** with the following agenda: Introducing themselves I. A brief resume of the team meeting: who attend the meeting and what happen in the meeting II. To explain the idea, they have	

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agreed on for the project **or** to ask for help if they cannot agree.

III. The mentor explains the homework, which is to record a video explaining the idea of the project (no Power Point required, no development required, only the title of the project and the main goal of the project). All the members must participate in the video and the video will be posted in the forum and commented on by the other groups. (Video realization deadline is within 28 days, and posting comments two days more)

IV. **Setting the new meeting (without mentor)** for doing the video

V. **Setting the new meeting (with mentor)** for evaluating the video and start the writing.

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<td>**After meeting**</td>
<td>To check every day and until days 5-6, that all the students have uploaded their videos</td>
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introducing themselves to the others.

To check every day and until day 7-8 that students posted comments to the others. Encourage students to do so.

To assign a mentor to each group (no more than 14 days after kick off)

To check that mentors and their teams have met within 21 days from day 0 or kick off date.

SECOND FORMAL ONLINE MEETING Session 1IT+M

Participants: each mentor and team (IT-M: interdisciplinary teams and mentors)

Lecturer's name: Mentor name; Date: between the 15th and 21st days **from the** Kick-off Day.

Course: Sustainable Biotechnology Projects based on Microalgae

Duration: 30-45 minutes; synchronous.

Topic: Discussing the project idea.

Aims of the lesson:

To supervise teamwork production

To define the general idea of the project

Lesson objectives: Students will be able to...

- Assess the connections between project´s ideas and the Sustainable Development Goals (SDG) of the ONU

Assumed prior knowledge:

Using Google Meet and Blackboard (PRE-COURSE)

Resources:

Computer, Google Meet, Flipgrid, Blackboard

Handouts:

- **Tips for the video and session planning**

Assessment (how learning will be recognized)

Team discussion in class; tutor observation

Differentiation (addressing all learners' needs)

Unknown

Planned groups: whole interdisciplinary team and mentor

- Auditory listening & speaking in pairs & class discussion. Targeted questioning

Skills for Life / Key Skills to be addressed

- Communication: speaking & listening; selecting ideas according to a common criterion.
- Information Technology: Video to be produced by Flipgrid. Videocall to be accessed on Google Meet/Blackboard.

Activities

Time [min]	Mentor activity	Student activity	Resource
0	Introducing himself/herself and his/her role. Ask for student permission to record the session.	Listening	
5	To ask the students to introduce themselves	Personal presentation	
10	To tell students to inform about their team-alone meeting (Session 1IT) regarding attendance, project ideas discussed and, in case, agreements.	Talking to the mentor	
15	To help the students to agree on their project idea, giving them tools to select the best ideas to develop, based on their expected	Discussion	

	viability and ability to create a benefit according to the SDG 2.		
30	To ask the student to inform the date the next team-alone meeting (Session 2-IT) within 28 days from day 0. To explain the TIPs about the video(1) To agree on a date for the next mentor-team meeting (Session 2-IT+M) within 35 days from day 0	Discussion	Flipgrid/others
After meeting	To let the coordinator know if there are any issues that prevent students from working well as a team. To remind the students that they will have a general meeting after around 49 days from the day 0: to prepare the mobility to Almeria Second General session: 2GS	Preparing the video explaining the project idea	

TIPS FOR THE VIDEO:

- *Duration: 3-5 minutes*

- *<u>Introduction</u>: how the development of the project will help to fight hunger in the world*
- *<u>Body:</u> title of the project, who the project is intended for, and, in case, where facilities will be placed.*
- *<u>End</u>: how will each member of the team contribute to the development of the project.*

THIRD FORMAL ONLINE MEETING Session 2IT+M

Participants: each mentor and team (IT-M: interdisciplinary teams and mentors)

Lecturer's name: Mentor name; Date: between the day **29th and 35th from the** Kick-off Day.

Course: Sustainable Biotechnology Projects based on Microalgae

Duration: 45-60 min; synchronous.

Topic: The project template.

Aims of lesson:

To supervise teamwork production

To define the objectives of the project

To introduce the disciplinary teams and pills

Lesson objectives: Students will be able to…

- Assess the video produced and the individual contributions to the video
- Be aware of the knowledge needed to write the objectives of the project
- Find the pills on the platform to be studied by each member of the team

Assumed prior knowledge:

Using Google Meet and Blackboard (PRE-COURSE)

Resources:
Computer, Google Meet, Flipgrid, Blackboard

Handouts:

- **Project template**

Assessment (how learning will be recognized)

Team discussion in class; tutor observation; fill-in the template coherently

Differentiation (addressing all learners' needs)

Unknown

Planned groups: the whole interdisciplinary team will identify their individual strengths for studying the pills proposed by the mentor. Two disciplinary teams will be created in the group for studying the pills.

Different learning styles

- Visual: handouts;
- Auditory listening & speaking in pairs & class discussion. Targeted questioning

Skills for Life / Key Skills to be addressed

- Communication: analyzing information; speaking & listening in groups; selecting ideas according to a common criterion; knowledge regarding typical names for each country.
- Information Technology: Videocall to be accessed on Google Meet/Blackboard.

Activities

[min]	Mentor activity	Student activity	Resource
0	To tell students to inform about their team-alone meeting (Session 2IT) Main aspects to inform: attendance to the meeting and video development	Talking to the mentor	
10	To introduce the project template (APPENDIX 1)	Listening	
15	To work on project template defining items 1 to 7	Discussion	
25	Introducing the main ideas of the pills to the students:	Listening and asking questions	

	Each student must watch at least two pills related to their own discipline Each student must write a brief report of the pill and share it with his/her IT group Students can join other students from the same discipline to discuss the pills in the forum In the next IT meeting each student must introduce their report to the others to discover new and fresh ideas for the project		
30	To ask the student to inform the date the next team-alone meeting (Session 3-IT) within 42 days from day 0. More meetings can take place if necessary To agree on a date for the next mentor-team meeting (Session 3-IT+M) within 62 days from day 0	Discussion	Flipgrid/others

| After meeting | To let the coordinator know if there are any issues that prevent students from working well as a team. | Watching at least two pills per student

Discussing with each pill´s professor as well as with other students that have watched the same pill

Writing at least one short report per student in the project template

Bringing ideas from the pills to the project and discussing it with the IT group during the IT meetings | |
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FOURTH FORMAL ONLINE MEETING (Second General session: 2GS)

Participants: all the students and the coordinator

Lecturer's name: Tania Mazzuca Sobczuk; Date: 60-68 days after the **Day 0**, Kick-off Day

Course: Sustainable Biotechnology Projects based on Microalgae

Duration: 1:00h; synchronous; whole group of students (around 25 students).

Topic: Check list and preparing the mobility.

Aims of lesson:

- To prepare student´s mobility
- To design the in-person training according to the learning needs of the students

Lesson objectives: Students will be able to…

- organizing their mobility to Almeria

Assumed prior knowledge:

Using Google Meet and Blackboard (PRE-COURSE)

Resources:

Computer, Google Meet, Flipgrid, Blackboard

 Handouts:

Assessment (how learning will be recognized)

Team discussion in class; tutor observation; video produced and project idea evaluation

Differentiation (addressing all learners' needs)

Unknown

Planned groups:

All the students together

<u>*Different learning styles*</u>

- Visual: handouts;
- Auditory listening & speaking in pairs & class discussion. Targeted questioning

<u>*Skills for Life / Key Skills to be addressed*</u>

- Communication: analyzing information; speaking & listening in groups; selecting ideas according to a common criterion; knowledge regarding typical names for each country.
- Information Technology: Videocall to be accessed on Google Meet/Blackboard.

<u>*Activities*</u>

Time	Content & Teacher Activity	Student Activity	Resource
0	Teacher introduction about Almeria, UAL and their grants	Listening and asking questions	Blackboard/ Google meet
10	Commenting on the learning needs the students have sent to the tutor for preparing the in-person training. Introducing the contents that are reflected in the learning agreement	Listening and asking questions	
20	Introducing the personal assessing form (appendix 2).	Listening and asking questions	
30	Answer additional questions		
After meeting	Checking the assessment forms Sending the learning agreements	Completing the assessment form Signing the learning agreements	

	Preparing the in-person lessons according to learning needs	Preparing the mobility Continue with the development of the project online	

FIFTH FORMAL ONLINE MEETING Session 3IT+M

Participants: each mentor and team (IT-M: interdisciplinary teams and mentors)

Lecturer's name: Mentor name; Date: between the 56th and 62nd day **from the** Kick-off Day.

Course: Sustainable Biotechnology Projects based on Microalgae

Duration: 30 Min; synchronous.

Topic: The project template.

Aims of lesson:

To supervise teamwork production

To assess coherence of the project

Lesson objectives: Students will be able to...

- Assess coherence of their project

Assumed prior knowledge:

Using Google Meet and Blackboard (PRE-COURSE)

Resources:

Computer, Google Meet, Flipgrid, Blackboard

Handouts:

- **Project template**

Assessment (how learning will be recognized)

Team discussion in class; tutor observation; fill-in the template coherently

Differentiation (addressing all learners' needs)

Unknown

Planned groups: the whole interdisciplinary team

Different learning styles

- Visual: handouts;
- Auditory listening & speaking in pairs & class discussion. Targeted questioning

Skills for Life / Key Skills to be addressed

- Communication: analyzing information; speaking & listening in groups; selecting ideas according to a common criterion; knowledge regarding typical names for each country.
- Information Technology: Videocall to be accessed on Google Meet/Blackboard.

Activities

[min]	Mentor activity	Student activity	resource
0	To tell students to inform about their team-alone meeting (Session 3IT) Main aspects to inform: attendance to the meeting and work development	Talking to the mentor	
10	To ask questions to find the "needing attention" points of the project	Answering the questions Reflection and discussion Are the production objectives of the project defined? (Product and level of production) Is your activity generating profit or	

		improving society? Is the proposed business organization in line with the activity? Is it there any conflict between the production objectives and selected organization to develop the activity? Have you sized the facilities? Which data/knowledge you need to size the facilities? Is there any problem between the country where the project will be held and legal regulations? Do you have any concerns about safety and consumer acceptance of the food addressed? Etc.…	
25	Tell the students that they need to write and send their learning needs to the coordinator, to design lessons for the in-person training	Discussion for defining their learning needs Writing the learning needs	

30		Discussion

To date the next meeting/s no later than 75 days from day 0 | Flipgrid/others |
| After meeting | To let the coordinator know if there are issues that prevent students from working well as a team. | Other relevant deadlines from the day 0 are:

Assessment form 76 days

Learning needs: 76 days

Learning agreements: 81 days

Attendance reconfirmation: 88 days

Portfolio: 108 days

Autobiographic form 2: 115 days | |

IN-PERSON TRAINING

FROM 12/07/2023 al 21/07/2023 (10 days)

General description of activities

At every morning, the students will have preferably no more than 3 hours of workshops and lectures (specifically no more than 1 hour of traditional lecture, being the others workshops), at demand, teamworking time, and other learning experiences (such as visits, cooking sessions, etc....). After lunch students will need to prepare some activities for the next day.

A tentative working plan is:

DAY 1 (Wednesday):

- Icebreaking (UAL)
- Visiting UAL CAMPUS: Sport and recreation center, Dining halls, etc....(UAL)
- Cultural activity: Spanish breakfast (UAL)
- Visiting Chemical Engineering Department facilities: Naves, Pilot Plant and inoculum´s camera. Lecture: Type of bioreactors. (UAL)
- Teamwork: Preparing Project template presentation. (UAL)
- After lunch: individual work (UAL if classrooms are available)

DAY 2 (Thursday)

- Visiting a microalgae production plant (UAL -IAPA)
- CANVAS MODEL (workshop) (UAL)
- Presentation of the main project´s idea (5-10 minutes/group) and analysis of learning needs. (UAL)
- Teamwork. Planning lab activities. (UAL)
- Afternoon: cultural activity visiting the city (Alcazaba, Cathedral, etc....) (City center)

DAY 3 (Friday)

- Visiting a fish feed production facility (UAL)
- Lab session: culturing microalgae and harvesting techniques. (UAL)
- Teamwork. (UAL)
- Cultural activities: introducing tips for enjoying the city (UAL)
- Afternoon: individual work (UAL if classrooms are available)
- Cultural activities

WEEKEND

- Individual work and teamwork

DAY 6 (Monday)

- Tips for designing the microalga facilities (lesson) (UAL)
- Teamwork (UAL)
- Lab work (UAL)
- Afternoon: teamwork (UAL if classrooms are available)

DAY 7 (Tuesday)

- Cost estimating(lesson-workshop) (UAL)
- Cooking with microalgae (workshop) The main idea is to use and taste microalgae in different dishes and to learn how the use of microalgae affects the quality of the fish and its preparation (by testing and taking samples for further lab analysis) (UAL- dining room facilities)

DAY 8: (Wednesday)

- Expert talk and workshop: Sustainability Marketing (UAL)

- Lab work: analysis of fish samples in the lab (samples had been taken from the cooking session) (UAL)
- Teamwork (UAL)
- Afternoon: teamwork (UAL if classrooms are available)

DAY 9: (Thursday)

- Social activity: kayak (Cabo de Gata)

DAY 10: (Friday)

- Final lecture (UAL)
- Final project presentation (UAL)
- External Assessment of the BIP (UAL)

Integration and assessment

Students are expected to actively participate in online meetings and discussions, as well as in the mobility period. The responsibility of the students over their learning will be increasing from the beginning of the project to its end.

Professor will supervise the first meeting and most of the following, in order to facilitate the introductions and communication, and will also give feedback about the different documents, videos, etc.... produced during the experience

Students will **write a portfolio** narrating their experience, keeping records of experiences that have contributed to their progress and reflecting on the knowledge acquisition process.

At the beginning of the course, **Biographical Information** about previous intercultural experiences will be recorded as well as at the end of the BIP (both on-line and in-person periods). During the course, evidence of intercultural competence acquisition will be described and by the end of the course, an assessment session will be held detailing the experience (number of new multicultural contacts, acquired knowledge, assessment of the communication, shared expressions in the wiki, etc.).

Finally, students will design and develop the way in which they will share their experience with other students of their home/host Universities, in order to disseminate the benefits of their multinational/multidisciplinary experience.

GRADING AND COMPULSORY ACTIVITIES TO GET THE

4 ECTS PROPOSSED

- In-person training period of 10 days (never shorter than 5 days) is compulsory.
- Before the in-person training the student will fill in the personal assessment form. There, they will check that they have completed all the required activities (Appendix 2). It comprises the assessment of the activities during the meetings with the coordinator and mentor as well as the teamwork.
- Mentors and coordinator will need to approve the student assessment according to their records.
- Students need to obtain at least a mark of 50% to receive the learning agreement to attend the in-person training (2,5 p).

The highest possible mark FOR THE ONLINE PERIOD is 5P, proportionally to the punctuation in the assessment form.

During the in-person training period:

- Attendance (1P)
- Participation (2P)
- Final reports (2P)

Highest possible mark FOR THE IN-PERSON TRAINNG PERIOD is 5P.

RESUME OF STUDENT DEDICATION´S TIME

Online period:

- Meetings/teaching: 2 hours/month
- Teamwork 2 hours/month
- Individual work: 5 hours/month

Per month: 9 hours; March-June: 4 months; Total: 36 hours

In person training:

- 8 hours/day
- 8 lective days (excluding weekend):

Total: 64 hours

Total student dedication´s time: 100 hours, included 48 teaching hours:

Equivalent to 4 ECTS

APPENDIX 0-BIOGRAPHICAL INFORMATION

APPENDIX 1- project template

APPENDIX 2- ASSESSMENT FORM