foRMAtion teaching material

for the international curriculum for Research Managers and Administrators (IO3)

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Table 1 – Document Control Sheet

Versioning and Contribution History

Version	Date	Author/Editor	Contributors	Descripton/Comments
IO3_v01	17.10.2020	Lídia Vinczéné Fekete Éva Kőváriné Ignáth	Magdolna Daruka Judit Sass Beáta Paragi Judit Fekete Virág Zsár	First draft
IO3_ final	21.01.2021	Lídia Vinczéné Fekete Éva Kőváriné Ignáth	Andreia Domingues Szenkovics Dezső Zsuzsanna Angyal Borbala Schenk, Cristina Oliveira, Margarida Trindade, Carolina Varela, Andreia Domingues Dezső Szenkovics	Final version

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Table 2 – Versioning and Contribution History

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Executive Summary

Intellectual Output 3 (IO3) aims to develop the teaching material for the international curriculum for future Research Managers and Administrators (RMAs), which includes various innovative educational tools, to develop students' professional and transversal skills. In line with the outcomes of the transnational meetings and the main findings of the methodological guide and good practice collection (IO1), the curriculum and the teaching material is based on the "learning outcome approach", fostering a student-centred teaching-learning process, and applying several modern and innovative educational tools and methodologies such as Problem Based Learning.

It provides tools and methods for instructors to develop students' most important soft skills that they might need as RMAs such as cooperation, (written and oral) communication, problem solving, flexibility, time management, networking, negotiation etc. The development of these skills and competences is enhanced not only by the application of innovative teaching methods but also by shaping teachers' attitude and views on their role in the learning process and on the goals of the learning process. Several activities aim to enhance the digital skills of the students and their familiarity with working with different applications and online interfaces. The ability to exploit these tools is becoming increasingly important, as they enable a more flexible and more efficient work and they provide the conditions for a smooth collaboration for teams in an online environment. In some cases, such as applying different applications for writing quizzes or brainstorming, involvement of digital tools serves the purpose of making the teaching-learning process more playful for students, thus contributing to increase their engagement. Each lesson includes activities which require the cooperation of students, and the learner-centred approach facilitates interactivity.

IO3 (teaching material for the international curriculum for Research Managers and Administrators) is one of the first three intellectual outputs of the foRMAtion project. Based on the Application Form, the objective of IO3 is to elaborate a teaching material that gives guidance to the instructors attending the teachers training activity within foRMAtion project (C2, Short-term joint staff training event for teachers and professors) and then teaching the curriculum (see IO2). When elaborating the teaching material, a learner-centred, practice-oriented approach was applied. The activities, tasks included in the lessons aim to improve the transferable skills of the participating students.

The primary dissemination target group of IO3 are the teachers, lecturers at the participating universities and beyond.

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As indirect target groups, researchers and experts involved in higher education course-design will also benefit from the teaching material, as well as RMAs and students participating in the RMA courses. The students in general at the universities and the university management are also target groups from the point of view of dissemination. The methodology of the teaching material for the international curriculum for future RMAs will be adapted to the special needs of the non-formal adult education, thus adults and adult learning providers are also considered as indirect target groups. RMAs already working on the labour market and coordinating teams can also benefit from IO3 when they provide further training for their staff members.

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1. Introduction and methodology

Intellectual Output 3 (IO3) aims to develop the teaching material for the international curriculum for future Research Managers and Administrators (RMAs). The teaching material was elaborated parallel with the IO2 international curriculum, following its modular structure.

Learning outcome approach

The learning outcome approach is a basic principle guiding the elaboration of the teaching material. As a background and starting point for the elaboration of the teaching material, a desk research had been conducted related to the features of the learning outcome approach in HE (guidance to define learning goals and outcomes), and on the identification and formulation of knowledge, skills and attitudes.

Sources such as the European Qualification Framework for Lifelong Learning (EQF, 2008), the homepage of The framework of qualifications for the European Higher Education Area and the Tuning - Educational Structures in Europe (http://www.unideusto.org/tuningeu/) give relevant overview of the competence frameworks. Considering the essential EU policy documents and strategies, for the phrasing of learning outcomes, the ECTS (European Credit Transfer and Accumulation System) Guide[1], as well as the Defining, writing and applying learning outcomes: a European handbook (CEDEFOP, 2017) or the Application of learning outcomes approaches across Europe; a comparative study (CEDEFOP, 2016) proved to be the most adequate and fundamental resources. Research encompassed the academic literature discussing teaching methodology, course/curricula and learning outcome development in HE such as the work of Kennedy et al (2007; 2009)[2] and Bloom taxonomy[3].

Reference of existing frameworks and projects:

- CanMEDS 2015: the most widely accepted and applied physician competency framework in the world; competence framework, learning outcomes with milestones
- EQF (European Qualification Framework)
- ECTS (The European Credit Transfer and Accumulation System)
- EHEA (European Higher Education Area)

[1] https://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf

[2] Kennedy, Declan & Hyland, Áine & Ryan, Norma.: Writing and Using Learning Outcomes: A Practical Guide. https://www.cmepius.si/wp-content/uploads/2015/06/A-Learning-Outcomes-Book-D-Kennedy.pdf, 2007, retrieved: 20 December, 2019; Kennedy, Declan & Hyland, Áine & Ryan, Norma.: Learning Outcomes and Competences. https://supporthere.org/sites/default/files/2._paper_los_and_competences_bologna_handbook.pdf, 2009, retrieved: 15 January, 2020.

[3] Bloom's Taxonomy of Measurable Verbs https://www.utica.edu/academic/Assessment/new/Blooms%20Taxonomy%20-%20Best.pdf; retrieved: 20 December, 2019.

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Hungarian sources compiled on the base of the above mentioned studies also stimulated productive thinking in connection with the teaching material, for example the handbook edited by Lukács&Derényi[4], Éva Tót's study[5] on writing learning outcomes or the manual of Éva Farkas[6]. These sources provided useful information regarding the process of formulating learning outcomes starting with the identification of learning goals, competences, and the way of phrasing relevant learning outcomes (giving hints on active verbs).

Teaching methodology: principles and tools

The main principle guiding the structure of the curriculum and the teaching material is the constructivist interpretation of teaching-learning process, characterized by

- a student centred approach,
- focusing on the *process* and the *outcome*, not on the *input*
- its main goal, namely the development of the necessary *competences,* while the disciplinary *content* is just a tool to achieve this goal.

Main tools: gamification, innovative, various, technology enhanced, interactive tools and methods such as Problem Based Learning (PBL). Flexible learning opportunity and continuous feedback from the teacher are promoted by blended learning and the advanced use of technology.

Taking into account the conclusions of the second transnational meeting (TM2) and the joint staff training event (C1) in Porto and those of IO1, exploring the academic literature on **Problem Based Learning** was carried out. The application of this **student-centered approach** in the modules of the projects could be convenient, since it "empowers learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem"[7]. Savery also mentioned several benefits of the PBL approach. The Wiley Handbook of Problem-Based Learning also offers a detailed overview of the approach, namely, (i) origin of the

[4] Kézikönyv a képzési programok tanulási eredményeken alapuló fejlesztéséhez, felülvizsgálatához. István Lukács & András Derényi (eds.) Oktatási Hivatal, Budapest, 2017

[5] Éva Tót: Segédlet a tanulási eredmények írásához a felsőoktatási szektor számára. Oktatási Hivatal, Budapest, 2017

[6] Éva Farkas: Segédlet a tanulási eredmények írásához a szakképzési és felnőttképzési szektor számára. Oktatási Hivatal, Budapest, 2017

[7] Savery, J. R.: Overview of Problem-based Learning: Definitions and Distinctions. Interdisciplinary Journal of Problem-Based Learning, 1(1), 2006

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concept and its baseline, (ii) case studies, (iii) proposal of strategies to design PBL and also provides some examples of its application.[8]

The application of the approach in the classroom (examples) is mentioned in the booklet series called "Módszertani füzetek" (Series of Methodological Booklet). The first in the series[9] includes the general methodology, touching upon constructive learning theory and cooperative learning methods, within which PBL is also introduced.

The handbooks of Biggs et al. (2007)[10] and of Fry, Ketteridge and Marshall (2008)[11] provide valuable and useful guidelines regarding the methodology of HE instruction.

Practical cooperative learning techniques (such as expert jigsaw) are described in Spencer Kagan's book on cooperative learning[12], and some possible applications are mentioned in the Methodological Booklets. In addition to the aforementioned resources, a number of websites make available up-to-date, innovative and practical information on HE teaching methodology, such as www.teachthought.com, tanarblog.hu, The Chronicle of Higher Education. The websites of the educational centres of the most prestigious universities like Teaching and Learning Lab of the Massachusetts Institute of Technology, Vice Provost for Teaching and Learning at Stanford University, Derek Bok Center for Teaching and Learning at Harvard University among others offer insight into the innovative teaching practice of these institutions.

[8] Moallem, Mahnaz, Woei Hung, and Nada Dabbagh: The Wiley Handbook of problem-based learning. Wiley Blackwell, NJ, USA, 2019. Examples for other sources on PBL: Gijbels, D., Dochy, F., Van den Bossche, P., & Segers, M: Effects of Problem-Based Learning: A Meta-Analysis From the Angle of Assessment. Review of Educational Research, 75(1), 2005; Baviera-Puig, A., Buitrago-Vera, J., Escribá-Pérez, C., Pons-Valverde, JV.: An Example of Problem-Based Learning (Pbl) from a Collaborative and Multidisciplinary Approach. Conference: International Conference on Education and New Learning Technologies, June 2016; Journal of Problem-Based Learning.

[9] Daruka, M., Pfister, É.: Módszertani Füzet I. Általános módszertan tanár szakos hallgatóknak. CC PRinting Kft., Budapest, 2015.

[10] Biggs, J. B., Tang, C.: Teaching for quality learning at university. Open University Press/Mcgraw-Hill Education, Berkshire, UK, 2007

[11] A handbook for teaching and learning in higher education : enhancing academic practice / [edited by] Heather Fry, Steve Ketteridge, Stephanie Marshall, 2008

[12] Kagan, S., Kagan, M.: Kagan Cooperative Learning. Kagan Publishing, Canada, 2009

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2. Teaching material for the international curriculum for RMAs

Module 1 - Research Methodology and Design

Lesson 1 - Introduction to science - what distinguishes scientific knowledge from other types of knowledge

Include here, according to your needs, the content parts of your output.
Learning outcomes to be developed:

- The student can distinguish and describe the different approaches in scientific theories and epistemological trends, and their scientific history-background (hermeneutical vs scientific, inductive vs. deductive, qualitative vs. quantitative approach, mixed-methods)
- The student is open to perceive and accept the diversity of cultural and social context of research systems and practice
- The student is open for different research methods and is committed to finding consensus in an interdisciplinary research setting

Legend for the use of lesson plans: Grey texts describe useful but optional activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Games helping students to be connected: getting acquainted with each other *15 minutes* • Share a personal fact about yourself and then find something in another student's report to which you can connect in some way. E. g. ○ the teacher starts the game by sharing "I like listening to classical music",		15 mins

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○ the first student says “I have 2 younger brothers and one of them plays the piano” and “My hobby is travelling” - etc. • “Show and tell” see here • OR: “Snowball fight”- see here • OR: Haiku writing with instructions (Instructions for the poem: first line: the title of the poem (the topic itself, according to the expectations of the students, for example: the RMA profession/research projects; second line: describe the topic with two adjectives; third line: three verbs (expressing action) in connection with the topic; the fourth line: a short sentence that expresses feeling about the topic; the fifth line: one-word synonym of the first line that reflects the essence of the topic. • OR see further ideas here • A brief introduction, summary of the modules		
b) Evaluation of prior knowledge and competences - *10 minutes* Exploring the initial competences, knowledge of students: Answers to basic questions by either of the followings • Kahoot test (after registering, at Kahoot homepage, you can create games helping assessment here. Students shall visit kahoot.it page, where they can type in the game pin and then their name. • Closed by teacher’s feedback and oral summary	**(***Results (scores) should **not** be counted into the end of semester grade)*	10 min 35 min
c) Activities helping the understanding of theoretical foundations - *35 minutes* • **Jigsaw method** (A guide for the teacher on the application of jigsaw method is available in Annex 5.1)**:** Topics to be included (and according to the teacher’s preference, can be changed: ○ IO2 on induction and deduction ○ the terms ontology, epistemology, theory (Babbie, SAGE Online Dictionary of Social Research Methods…)		

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• Depending on the number of students, (in the case of a 16 students-class) 4 readings (each of them can be 3-5 pages long) discussing the main theoretical units/part-topics (e. g. scientific theories, epistemological trends and their scientific history background), these are distributed to the 4 teams who read, discuss and present them. OR YouTube videos like https://www.youtube.com/watch?v=8xvpxBVCo0c
• The assignment of the groups: they discuss and summarize the main conclusions of rtheir readings in the form of a commonly edited outline in an online document, shared with the teacher (e. g. Google Document)
• Students go back to their original groups (see the Jigsaw guide) and present the content discussed in the expert groups for their own group. The group members can give the presenter 1-10 points, considering the clarity and attractiveness of their presentation.
• The class creates an online, e. g. Coggle (https://coggle.it/) mindmap with the direction of the teacher, based on the outlines created by the groups with the facilitation of the teacher.
 	
d) Activity providing insight into the RMA and researcher professions - *(20 minutes)*
• Introduction to the RMA carrier by inviting an RMA *(10 minutes of self-introduction + 10 minutes of Q&A)*
• *Questions of the teacher previously sent to the RMA as a guide for the presentation, for example*
  ○ *Your education background. What kind of education is useful in the case of an RMA?*
  ○ *How did you choose this profession?*
  ○ *What are your duties?*
  ○ *What are the most exciting or challenging parts of the profession? What do you love in your job?*
  ○ *What are the trajectories of further development / career opportunities?*
  ○ *What are the most important / useful skills for this profession?*
	max. 5 points/person for the outlines
	
	The teacher divides the total score given by the classmates to each presenter by 10
		5 min for individual reading
		
		10 min for group discussion and outline
		,
		
		10 min for presentations (2,5 minutes/presentation)
		
		20 minutes

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• optionally, this conversation can be done via Internet as well **e) Quick end-of-lesson feedback for the teacher** Quiz questions by Socrative or Wordwall game with quiz questions related to the content of the lesson.	+2 points for the 3 students achieving the best results	5 mins

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Lesson 2 - Introduction to research design, research methods and research life cycle

Learning outcomes to be developed:

- The student can distinguish and describe the types and specificities (aims, advantages, limits, appropriateness to certain disciplines) of main research methods that can be applied by different scientific areas (e.g. observation, survey, interview, focus group, experiments, etc).
- The student should understand the research project lifecycle.
- The student can identify the differences between a research design/plan and a research proposal.
- The student can apply the stages of the research project lifecycle to a research plan, identifying the key questions to answer at each stage.
- The student is able to recognise and integrate the motivations, expectations and role of a researcher.
- The student is able to construct logical arguments to present a research idea.
- The student is committed to find a balance between assertiveness and cooperation in the course of teamwork in research as a leader and as team member.
- The student is open to perceive and accept the diversity of cultural and social context of research systems and practices.
- The student is open for different research methods and is committed to finding consensus in an interdisciplinary research setting.

Legend for the use of lesson plans: Grey texts describe useful but optional activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**

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a) Playful activity enhancing recalling prior knowledge: - *5 minutes* **Wordcloud** (https://www.mentimeter.com/)**:** "Answer the following question by typing single words at this link, indicating the following code: …." *Content of the questions will be related to the curriculum, e. g. What are the goals/main features/of science? What are the distinctive features of natural science/human and social research?etc. They can refer to the following terms and concepts: science, inductive and deductive inference, experiments, observation* **b) 10 minutes long presentation by the teacher:** • goal: providing short summary of the first lesson, laying the foundations for research methods, brief explanation of theoretical framework, the main terms such as 1. research question 2. hypothesis 3. literature review 4. qualitative data 5. quantitative data 6. Survey Research 7. Discourse analysis 8. Mixed-methods 9. experimental method **c) Activities helping the understanding of theoretical knowledge** ○ Online option with Padlet (advantage: the result can be downloaded and saved as a graph). See a guide for the use of Padlet in Annex 5.5 but now please select the "Canvas" template ○ The name of each concept is distributed among pairs of students ○ they have to work together on Padlet (https://padlet.com/) ○ A sample Padlet board is already elaborated for this task, see this link: https://padlet.com/vinczelidia/xrwpcamo84926xwz	+2 points for the 3 students achieving the best results Peer grading (giving points to each other) as the group members work together. Providing the correct specificities of the research methods. Suggestion for grading: 10 points maximum for the infographic (the group members receive the same amount of points) ----------	5 mins 10 mins 35 mins

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- Teachers are asked to not use this one, but sign in and then choose the "Remake" option thus using the copy in their lesson.
- Pairs of students have to find
  - the (green) card showing examples for the different concepts/terms
  - and the yellow cards presenting the definition of the given term.
- They have to drag and drop their term, its definition and the example close to each other.
- Offline option with paper and adhesive: printing the texts (see them at this link https://padlet.com/vinczelidia/xrwpcamo84926xwz) and giving them to the pairs of students who stick them on the relevant cell drawn on the whiteboard as follows:

term	definition	example

- Teacher's questions:
  - What can be the risks and the advantages of the survey method?
  - Tell me examples for disciplines which may rely strongly on discourse analysis.
  - Which is the science the typical method of which is experimenting?
  - How would you start a literature review?
- Teachers' short presentation on literature search indicating the most important databases that are free and available for the students of the given university (Web of Science, EBSCO Academic Search Complete, Sage Journals - Social Sciences & Humanities, Scopus, ScienceDirect etc.)
- The teacher continues the compilation of the common mind map on the discussed topics (by using Coggle (http://coggle.it/): the mind map summarizing the content

0-5 points/ student, based on right answers. Extra 1-5 points can be given in the case of active and correct answers regarding the errors in the questions

5 mins

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of the 1st Lesson and compiled by the teacher in Lesson 1 will be further elaborated in the course of the whole Module. d) **Watching a video about the required features of an adequate research question** https://www.youtube.com/watch?v=71-GucBaM8U&feature=emb_logo (Alternatively, the text is available as well at this link https://www.scribbr.com/research-process/research-questions/ but in this case students may find the answers to the questions below. Group work: Which of the research questions is more adequate and what can be the problem with the wrong one? The pairs of students answer the questions by filling in a table together and submitting them through the shared online interface. Worksheet is available in Annex 1.2.A Source and answers for the questions: https://www.scribbr.com/research-process/research-question-examples/ **e) First steps of PBL encompassing Lessons #2-4**: discussing the main and the sub-topic of a research idea. Groups of 2 students can work together - a possible project can be that they are given one main problem, and 4 aspects (political, economic, legal and psychological), they give a report to the group and the entire picture can be achieved by that → mindmap on the whole topic Ideas for pre-defined real problems: • the impact of Covid-19 pandemic ○ economic challenges ○ impact on education ○ impact on health care system ○ impact on labour market, jobs ○ impact on consumption (webshops) ○ impact on international trade relations ○ impact on inter-state relations ○ impact on EU (possible solutions, future of EU, budget) ○ impact on the global powers (geopolitics) ○ legal aspects (restrictive measures, governance)	5 points	5 min 8-10 min

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• climate change
  ○ economic challenges
  ○ energy market, energy policy
  ○ social impact
  ○ impact on health care
  ○ EU - policies, priorities, initiatives
  ○ agriculture
  ○ innovation
  ○ green deal - political sphere
  ○ migration policy
  ○ automobile industry
• aging society
  ○ impact on the economy
  ○ health care / social security system
  ○ society (generations)
  ○ labour market
• migration
  ○ health care / social security system
  ○ labour market
  ○ EU level: policies, politics, member states - political parties
  ○ education
• artificial intelligence
  ○ labour market
  ○ ethical issues
  ○ legal questions
  ○ economy
  ○ innovation
		25 min

• From pre-defined real problems (for example ageing research community, one of the consequence of which is that the emphasis in (financial) management is shifted; generational tensions; coronavirus and digital revolution - new solutions in the workplace, social relations, entertainment, the rearrangement of the education); the class can choose one main topic	10 points	

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○ within which teams of 2 will define research narrower sub-topics (such as financial, environmental, psychological etc. consequences) ○ students make notes on the online interface shared with each other and the teacher. ○ Homework: start a literature review and reference collection		5 mins
e. Introduction of the Template for Research Plan Outline (See Annex 1.1.A) by the teacher on the base of which they will develop their plans		5 mins
f. Quick wrap up by the teacher and end-of-lesson feedback from the students Each student gives a brief answer to the questions: - What did you like in this lesson and why? - What was difficult for you and why?		

Additional resources for the teacher:

Research question:

- https://methods.sagepub.com/book/social-research-methods
- https://methods.sagepub.com/base/download/BookChapter/social-research-methods/n6.xml

Research theories

https://methods.sagepub.com/base/download/BookChapter/social-research-methods/n2.xml

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Lesson 3: Research integrity and ethical conduct

Learning outcomes to be developed:

- The student should understand the research project lifecycle and the role of RMAs within it.
- The students can discuss, formulate arguments and critically examine their beliefs in the context of real cases of scientific integrity, responsible research, ethical dilemmas that can emerge in the course of a research work project.
- The student is open to perceive and accept the diversity of cultural and social context of research systems and practices.

Legend for the use of lesson plans: Grey texts describe useful but optional activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a. **Playful activity enhancing recalling prior knowledge**: - *5 minutes* **Kahoot:** multiple-choice or true-or-false questions *Content of the questions will be related to the curriculum, e. g. What are the characteristics of a given research method? etc.*	*5 points* *As this is a playful type of test, students have to be informed about it in advance. Results (scores) should be counted into the end of semester grade*	5 mins
b) Presentation of a real and famous research ethics dilemma (5 mins) & some basic rules of the dispute (Milgram, Philip Zimbardo, Laud Humphrey: description of the cases: Babbie, E (2010). *The practice of social research*. Wadsworth Cengage Learning. pp. 3-10. ISBN-13: 978-0-495-59841-1 http://ccftp.scu.edu.cn/Download/e6e50387-38f2-4309-af84-f4ceeefa5baa.pdf) • group formation on the base of individual opinions, and collecting arguments (5 mins) • group level **debate** when the group is represented by one of the members, in rotation (10 mins) Methodological guide for the	10 points	25 mins

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teacher on how to manage a debate in the class: https://www.teachhub.com/classroom-activities/2016/03/classroom-activities-how-to-hold-a-classroom-debate/ • the real solution to the problem is summarized by the teacher (5 mins)		20 mins
c) Presentation by the teacher: Research Ethics (20 mins)		25 mins
d) A new round of debate with a new problem, where students have to apply the arguments, approach and methods included in the teacher's presentation (structure is the same as in the first case) (25 mins) Sources: • Everyday type of case studies for students in university environment, with short descriptions and solutions - special field: physics https://www.aps.org/programs/education/ethics/upload/Ethics-Case-Studies-Teacher-Edition.pdf • Case studies for researchers in academic environment, with short descriptions and solutions - special field: social sciences https://methods.sagepub.com/book/case-studies-ethics-in-academic-research-in-social-sciences Suggested topics among the examples included in the publication: plagiarism, conflict of interest or acquisition of data		
d) PBL tasks **Outline for research plan (15 mins)**: • the groups give a short report on their research focus in front of the class • they present their list of literature • they formulate a broader list of possible research questions (6-8) • Formulating hypotheses	max 20 points / group (5/person)	**15 mins**
Homework: • continuing literature review, • selection and/or fine tuning of one research question, formulating arguments supporting the selection	5 points	

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Readings for the teacher providing examples for the exercises

- Everyday type of case studies for students in university environment, with short descriptions and solutions - special field: physics https://www.aps.org/programs/education/ethics/upload/Ethics-Case-Studies-Teacher-Edition.pdf
- Everyday type of case studies for researchers in academic environment, with short descriptions and solutions - special field: social sciences https://methods.sagepub.com/book/case-studies-ethics-in-academic-research-in-social-sciences
- https://www.unodc.org/e4j/en/integrity-ethics/module-14/exercises/a-case-studies.html

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Lesson 4: RMAs as Professionals at the Interface of Science

Learning outcomes to be developed:

- The student should understand the research project lifecycle and the role of RMAs within the research cycle.
- The student is able to recognise and integrate the motivations, expectations and role of a researcher, and of other professions linked to the research activity.
- The student can predict the needs for research interface activities along the research project lifecycle and identify key RMA roles (e.g. Funding Advisory, Project Manager, Science Communicator).
- The student is committed to find a balance between assertiveness and cooperation in the course of teamwork in research as a leader and as team member.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Conversion enhancing recalling the experiences of the first lesson • What do we know about the RMA profession? • Listening to the interview, what were your impressions, what are the things that the expert enjoys in his work? • What were his challenges? **b) Teacher's presentation** (See Annex 1. 4. A Teacher's presentation) on the development of RMA profession**,** on the base of Lesson 4 and the study of Kerridge and Scott (2018), using questions activating students' prior knowledge and ideas: • What can be the factors in the last two decades that increase the need for their involvement in research? • What kind of challenges do RMAs might face? • What can be the levels of RMA profession? • What do you think, which are the countries where the profession has been known and accepted? What can be the reasons?		5 mins 10 min

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c) **Class activity - the roles and tasks of RMAs** Students find the place of the different roles and tasks of RMAs in the different project lifecycle stages. • Every student gets a piece of paper with one of the roles/tasks listed in Annex 4/A (in case of online learning: students receive the roles in a table where they find a term describing a role besides their name and they fill in the table in the form of a Padlet exercise. Annex 1. 4. B: Description on how to use Padlet for this purpose can be found here. • The teacher draws a half-empty table on the board (using the BESTPRAC RSS Framework , See Annex 4/A • Students stick their pieces of paper in the relevant cell of the table • The class discusses the results • Wrap-up and feedback from the teacher (Alternatively, it can be accomplished by using a virtual whiteboard app, or a drag and drop exercise can be created in Moodle applying HSP activity.)	5 points	10 mins 5 mins 5 min
d) **Introducing the genre of "elevator pitch"** Collecting answers - what makes a presentation effective, enjoyable? Good practices and pitfalls (the visual appearance of the ppt, presentation mode (body language, tone, eye contact), the structure of the content, etc.) - Oral and written completion and summary by the teacher: general guidelines for presentations		15 min
e) **Watching 3-4 elevator pitches (videos) -** see the link to 6 videos in Annex 1.4/B • What can be the purpose of such speeches? • What can be the situations where they are applied? • What are the differences between an elevator pitch and a presentation? • Alternative element: Teacher invites a (science) communication expert who completes the conclusions and gives general and practical advice about the genre - emphasizing the function and the importance of elevator pitch		20 mins

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• Or: Presentation and wrap-up by the teacher: completion of the answers, general guidelines for presentations - presentation is available in Annex 1. 4. C available at this link Sources, templates, infographics for the elevator pitch are in Annex 4/B **f) PBL situational game** Work in pairs - practicing elevator pitch. Students can use the sources used in Lesson 4 and the information gained in the classroom work **Situation**: The student is an RMA (or researcher) who recognizes that their institution should open an RMA position and he has to convince the management of his university about the necessity and the importance of this investment. Students are working in pairs. 1. Individual work: compile an outline for an elevator pitch, keeping in mind the criteria included in the evaluation form (Annex 1. 4. B) - individual work 2. Pair work: students perform it to each other and record each other's speech by the camera of their cellphone 3. They upload videos to Moodle or send them for the teacher by email. 4. Classroom activity: 2 volunteering students show their video to the class; They are discussed and evaluated publicly by the teacher and the students (and the expert, if he is invited). (In the case of these videos, the teacher may need a written consent from students for the use of the material within the class work so please follow the institution's regulation regarding this question.) 5. Short feedback and evaluation by the teacher 6. Teacher (and the invited observer) evaluate the rest of the pitches for the next week 7. homework: students evaluate their peer's pitch at home, using the evaluation form (Annex 1. 4. B) **PBL task**: the groups finalize their research plan: • conclusions of the literature review, • selecting research questions	Evaluating pitches: - teacher can give them a rating on a 1-10-point scale - if an external observer is invited, (s)he can give them points on a 1-10-point scale - students give their peers points using a 1-5-points scale	Instructions: 5 min Individual work: 5 min Work in pairs / breakout rooms: 7 min (1 pitch+ oral evaluation Coming back & upload: 2-3 min 20 mins

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• selecting research methods • setting goals and a timetable **Homework**: • Preparation for the elevator pitches presenting the research plans. The team members have to cooperate regarding the contents. The recommended way of sharing the work among the pairs of students is the following 1. in each pair, student "A" reports on the ▪ background, ▪ public benefits ▪ the conclusions of the literature published so far regarding the planned research plactivity ▪ research question 2. student "B" reports on the ▪ hypothesis ▪ methods to apply with explanation and supporting arguments ▪ planned dissemination activities Optional task for extra points: the pairs prepare infographics/ppt for their projects **Optional/Alternative homework** Let's imagine that each group of students is a team within an institution, who recognize that their institution should open an RMA position. The task of the group is to compile a job announcement. Background material to be used for the task: ARMA's Professional Development Framework for Research Managers and Administrators, p. 4-8 ○ For this, they have to assemble the competences/tasks of an RMA (educational background, competences, skills, knowledge). ○ Students read and use the text of Lesson 4 for this task ○ After the groups upload the result of their work, the teacher projects them, and the groups evaluate/compare each others' announcements ○ the teacher summarizes and completes them by referring to the results of the previous research.	+10 points	

Sources for the teacher that can be optionally used in the classwork as well

Guides & examples on the method of elevator pitch:

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- https://felician.edu/wp-content/uploads/2019/10/tough-interview-questions.pdf
- https://www.atlassian.com/team-playbook/plays/elevator-pitch
- https://www.cmu.edu/career/documents/quick-tips/elevator-pitch.pdf
- https://onlinebusiness.northeastern.edu/master-of-business-administration-mba/knowledge/elevator-pitch-guide/pitch-examples/

Annex 1. 4. A

Teacher's presentation on the development of RMA profession

Annex 1. 4. B

List of tasks to be distributed for students

- Identifying funding opportunities (finding)
- Disseminating funding
- Advising
- Training
- Gathering non-public information
- Quantitative and qualitative analysis of EU funding and organisational participation
- Providing general information and support regarding proposal submission
- Facilitating and setting up of internal approval and signature process
- Providing budget notes and explaining + enforcing internal budget rules
- Advise on the execution of the writing process and consortium formation and management
- Advise on the content to be written (vs writing process)
- General advising on legal aspects and providing organisational legal documents
- Linking to information or advising on IP, ethics, open access and open data
- Statistics and analysis
- Facilitating the signature of the grant agreement
- Facilitating the internal setup of the project
- Internal and external communication strategies
- Reviewing and discussing the GA and the grant preparation with the PI
- Facilitating the consortium agreement and handling related issues
- Communicating project success (internal and external)- Supporting financial and technical reporting
- Consortium management
- Communicating internal procedures
- Functioning as a helpdesk and providing administrative support
- Contracts management and archiving
- Support for amendments of the Grant Agreement and Consortium Agreement

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Half-empty table to draw on the board

Research lifecycle stage	RMA tasks and roles
Before the proposal	
Proposal	
Grant preparation	

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Project	

Solution:

Research lifecycle stage	Before the proposal	Proposal	Grant preparation	Project
RMA tasks and roles	1. Identifying funding opportunities (finding) 2. Disseminating funding 3. Advising 4. Training 5. Gathering non-public information 6. Quantitative and qualitative analysis of EU funding and organisational participation	1. Providing general information and support regarding proposal submission 2. Facilitating and setting up of internal approval and signature process 3. Providing budget notes and explaining + enforcing internal budget rules 4. Advise on the execution of the writing process and consortium formation and management 5. Advise on the content to be written (vs writing process) 6. General advising on legal aspects and providing organisational legal documents 7. Linking to information or advising on IP, ethics, open access and open data 8. Statistics and analysis	1. Facilitating the signature of the grant agreement 2. Facilitating the internal setup of the project 3. Internal and external communication strategies 4. Reviewing and discussing the GA and the grant preparation with the PI 5. Facilitating the consortium agreement and handling related issues 6. Communicating project success (internal and external)-	1. Supporting financial and technical reporting 2. Consortium management 3. Communicating internal procedures 4. Functioning as a helpdesk and providing administrative support 5. Contracts management and archiving 6. Support for amendments of the Grant Agreement and Consortium Agreement

Annex 1. 4. C

Examples for elevator pitch

1. Connecting two problems to find a common solution: Youth unemployment and mass termination of SMEs https://www.youtube.com/watch?v=gXwewPgLmkE
2. Women users' needs in technology https://www.youtube.com/watch?v=dqIEE-g_-Uc
3. CEO of Podio, a platform for work connections (First 1 minute): https://www.youtube.com/watch?v=UBNJh2rOOlI

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4. Leader and founder of Pitch Academy (first 20 seconds): https://pitch-professionals-academy.teachable.com/p/pitch-to-win-investment-and-resources/?product_id=909872&coupon_code=XSO60
5. Mamma I want to write - ghost writers https://www.youtube.com/watch?v=U0_NYHT9f50
6. Mission and values behind a Coffee Shop https://www.youtube.com/watch?v=4CgkXZmqINE

Background resources about elevator pitch:

- https://www.indeed.com/career-advice/career-development/perfect-elevator-pitch
- https://elevatorpitchgenerator.com/
- https://hbr.org/2014/12/your-elevator-pitch-needs-an-elevator-pitch
- https://www.valuer.ai/blog/why-your-elevator-pitch-sucks
- https://www.atlassian.com/team-playbook/plays/elevator-pitch
- https://www.cmu.edu/career/documents/quick-tips/elevator-pitch.pdf
- https://onlinebusiness.northeastern.edu/master-of-business-administration-mba/knowledge/elevator-pitch-guide/pitch-examples/

Evaluation table for the elevator pitch				
		Number of points given by		
		peer student 0-5	observer 0-10	teacher 0-10
1.	**Style and performance:** How adequate is the style with the audience's expected preferences?			
2.	**Language :** Is the text coherent, linguistically correct and easy to follow?			
3.	**Arguments:** What is your opinion about the selected arguments?			
4.	**Content:** Does it contain the necessary and sufficiently detailed data?			
5.	**Overall Persuasiveness:** Overall, how convincing and effective is the pitch?			

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	Sub-total			
	Total			

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Lesson 5: Presentation and discussion of research plans

Learning outcomes to be developed:

- The student can apply the stages of the research project life cycle to a research plan, identifying the key questions to answer at each stage.
- The student can predict the needs for research interface activities along the research project lifecycle and identify key RMA roles (e.g. Funding Advisory, Project Manager, Science Communicator).
- The student is committed to find a balance between assertiveness and cooperation in the course of teamwork in research as a leader and as team member.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**

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Reporting on research plans: • Pairs of students present their research plan in the frame of an international webinar • Every student holds a presentation using the tool of “elevator pitch” and infographics to present the results of their work. • Way of sharing the work among the pairs of students: in each pair, student “A” reports on the ▪ background, ▪ public benefits ▪ the conclusions of the literature published so far regarding the planned research plactivity ▪ research question ○ student “B” reports on the ▪ hypothesis ▪ methods to apply with explanation and supporting arguments ▪ planned dissemination activities **Homework**: submission of the final versions of the research plans, corrected and completed according the feedback received in the lesson	Combination of peer-, self- and teacher evaluation based on predefined categories. Evaluation of the homework is carried out by the teacher. *Template with and evaluation criteria is available in Annex 1.4.C (See above, at the end of Lesson 4.)*	

Sources for the teacher

Thody Angela (2006): Writing and Presenting Research
http://elearn.luanar.ac.mw/odl/public/Files/Angela%20Thody's%20Writing%20and%20Presenting%20Research.pdf

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Lesson 1 Policy drivers, research agendas, european research policy

Learning outcomes to be developed:

- The student can identify major policy drivers (e.g. UN developmental goals, cross-cutting issues) and assess their influence in shaping research agendas.
- The student can identify examples of societal and economic drivers impacting and defining research policy (e.g. the COVID 19 situation).
- The student can differentiate between policy and strategy and identify suitable examples in the context of research institutions and processes.
- The student can discuss and formulate arguments and confront opinions in the context of real cases of scientific policies
- The student demonstrates curiosity and interest for systemic approaches and for the organization of the research ecosystem.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Evaluation of prior knowledge and competences - *10 minutes* Answers to basic questions assessing the understanding of the main topics discussed by Lesson 1 of Module 1 (students have to read it in advance, at home) Application to use: Kahoot test (after registering, at Kahoot homepage, you can create easily games helping assessment here (Choose "Kahoot for formative assessment)	**(***Results (scores) should **not** be counted into the end of semester grade)*	**10 mins**

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b) Presentation by the teacher (15 mins) on the base of Module 2, Lesson 1 and the answers provided by the students**:** Goal: providing a framework for the lesson (general information about the policy drivers, european research policy for example), also laying down the foundations regarding the definition and characteristic features of the concepts of policy and strategy		**15 mins**
Activities helping the understanding of theoretical foundations **c) Brainstorming** on external and internal drivers of research policy using word cloud by Mentimeter (5 min) + short summary of the lecturer (of the external and internal drivers) (5 mins)		**10 mins**
d) think-pair-share (or *write-pair-share*) using the "A renewed European Agenda for Research and Innovation - Europe's chance to shape its future" excerpt from the EC's document. The students get a short list of questions, which they think of while reading the excerpt (3 mins), then form pairs and answer the question(s) (5 mins). Afterwards they share their ideas in class (5 mins). A template can be created before the class including the question, place of the individual answers, then answer of the group, and also leaving space for those elements that the group did not include. (appr. 15 mins) + short summary of the lecturer (of the external and internal drivers) (5 mins) **or** students work in pairs: based on the given dates of the source indicated, the students collect the contemporary trends, policy drivers. (Collect minimum 5 (?)) (10 mins)+ short summary of the lecturer (of the external and internal drivers) (5 mins)	*10 points*	**35 mins** **or 20 mins**
e) Snowballing: starting with groups of two - one pair discuss either policy or strategy (characteristics) - based on the reading assigned, then they form groups of four (one 2-member group was discussing policy, the other strategy), they "teach" each other of the characteristic features, and list those. The class discusses the findings together, then the groups receive examples of documents on research and innovation in Europe, and they assign them to either categories. (cca. 25 mins)+ short summary of the lecturer (of the external and internal drivers) (5 mins)	*10 points*	**30 mins**

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Texts recommended to compare: A policy and a strategic document providing guidance regarding the same goals, in the same environment and time. **f) PBL 2, for Lessons #6 to #12: Preparation of an tender application to a call as project teams** of 4 (with rotating team roles, working in an existing online application interface, https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home) **Forming groups of 4** from, out of the groups of 2 formed, according to the similarities of their research project ideas. **g) Quick end-of-lesson feedback for the teacher** - *5 minutes* Competition by Socrative or Wordwall game with quiz questions related to the content of the lesson. *Results (scores) should be counted into the end of semester grade* **Homework:** The groups work on discussing and setting the **common research questions** that can be interesting for the group members aims, goals for potential research projects	*20 points/group*	**10 mins** **5 mins**

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Lesson 2: The Funding research framework: funding programmes and calls

Learning outcomes to be developed:

- The student can understand and contextualise European research funding frameworks and main European funding programmes and schemes to support research and innovation activities (e.g. Horizon Europe).
- The student can analyse a given European call for funding from the perspective of its underlying policy (need for the call) and proposal (goals, activities, and expected outcomes and impact).
- The student can distinguish and discuss at which stage of policy and strategy development intervene pre-award and research policy/strategy related professions.
- The student demonstrates curiosity and interest for systemic approaches and for the organization of the research ecosystem.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a. Short revision of the main points of the first lesson (5 mins): • Kahoot test (after registering, at Kahoot homepage, you can create easily games helping assessment here • OR virtual whiteboard (linoit.com for example) **b) Presentation by the teacher (20-25 mins):**	*5 points Results (scores) should be counted into the end of semester grade*	**5 mins** **25 mins**

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• The goal of the presentation is to give an insight to the context of EU funding schemes, and on the general characteristic features of calls. See the ppt usable for this presentation in Annex 2.2.A • **short presentation with the use of a call for tender** (see Annex 2.2.B) helping students to show them the most important parts, details of the rather long texts (see table in text). How to find the most important parts of them - it will help them to be able to find the most relevant bits of information. Specific questions can give help for the students to accomplish the task. **c) Short analysis of a typical funding call for proposal** (15 mins) • **short presentation** helping students to show them which are the most important parts, details of the rather long texts (see table in text). How to find the most important parts of them - it will help them to be able to find the most relevant bits of information. Specific question can give help for the students to accomplish the task. • **Idea for gamification**: Quiz competition with Mentimeter Questions are taken in the frame of a competition and a ranking can be seen immediately according to the right answers ○ The text of the call used for this task is available in Annex 2.2.B ○ Guide for teachers for the compilation of a Mentimeter quiz is available in Annex 5.2). In the case of the exercise below, it is recommended to select the option "Faster correct answers get more points" and to set 20 seconds as a time limit for answering. ○ Instructions for the students: 1. On your computer: Open the Call for proposal called "Annex 2.2.C CALL ERC-2020-STG for Mentimeter quiz" 2. Preview the text for 2 minutes 3. On your phones: please open www.menti.com 4. Enter the quiz with the code 6960436 5. Find the answers on the base of the document as quick as possible! The sooner you submit the right answer, the more points you receive.	+2 points for the 3 students achieving the best results	**15 mins** **25 mins**

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○ Quiz questions: (Questions and answers are available in ANnex 2.2.D, at this link or the quiz can be duplicated by using the original one available here). ▪ What is the deadline for submission? ▪ What is the maximum amount of the grant? ▪ Is any own contribution needed or does it provide full financing? ▪ Can any equipment be procured? ▪ How long is the project period? ▪ Does it require partnership? ▪ Main purpose of the grant • **Peer learning**: The teacher asks the students achieving the highest scores to share their methods with the class by asking each of them the following question: "What did you do to find the right answers so quickly?" *Call for proposal has to be chosen in advance* **d) In-depth analysis of calls for proposal in individual and group work (25 mins):** <u>Individual work</u> • Students review the documentation of a call for proposal (the teacher can select from the calls available in Annex 2.2.E). • They fill in the table below, based on the logical framework matrix. • Note for the teacher: It is recommended that students submit their answers in the form of an online questionnaire as Google Forms because it is more visible and thus increases students' activity and can be used for evaluating classroom activity. Guide for the teacher for the use of Google Forms for classroom activities is available in Annex 5.5. In this case, it is recommended ○ to start the questionnaire with the indication of student's name (enabling identification of the answers) ○ to uncheck in the Settings the "Edit after submit" option ○ to check the "See summary charts and text responses" option	10 points	**15 mins** **5 mins**
Need (policy context): the higher level objective(s) towards which the project is expected to contribute		10 points

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Objectives: The effect which is expected to be achieved as the results of the project	
Activities that have to be undertaken by the project in order to produce outputs	
Outcomes & Impact: the wider effects of the project's outputs that can happen after the project ends	
Funding: Which organization is providing the financial support for the activities?	
Partnership: What are the requirements related with partners? E. g. Does it require partnership? At least how many? Do you need international partners?	

- the teacher can show and the classcan discuss the answers collected by the class according to the tips shared in Annex 5.5.

Group work:

- Discussion of the following questions:
  - What can be the risky elements of the future projects based on this call?
  - In case you were the manager of a project supported by this call, which 5 key "result" elements would you select as the most important ones that you would pay special attention?

e) **Classroom work:** The teacher briefly introduces the Funding and Tenders portal

- on the base of Module 2, Lesson 2 of the curriculum
- as well as the portal's different guides:
  - https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/how-to-participate/1/1
  - https://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm
  - https://ec.europa.eu/research/mariecurieactions/node_en
  - https://erc.europa.eu/

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e) PBL - Activities developing students' skills (10-15 mins) Forming groups of 4, out of the groups of 2 formed in Module 1, according to the similarities of their research project ideas. Tasks for this lesson: - discussing and setting the common research questions that can be interesting for the group members: aims, goals for an ideal research project - browsing the Funding and Tenders Portal's database and searching at least 2-3 calls for tender which can be suitable for the realization of some of their main research aims. It is recommended that students choose "Open for submission" option in the "Submission status" field. **f) Quick end-of-lesson feedback for the teacher** - *5 minutes* Competition by Socrative or Wordwall game with quiz questions related to the content of the lesson. **Individual homework:** • For the first part of the week: Each student has to identify at least one further call that seems to be suitable for the research aims of the group. Students should be encouraged to select calls where international consortium is required and they should select from different funding programmes and instruments to see the diversity • Write a sentence why the specific call would be suitable for the research topic of the group (Teacher's homework: take a look at the calls and reasonings of students before the next lesson, and prepare feedback on them (before the lesson), also can choose the most appropriate one.)	10 points +2 points for the 3 students achieving the best results	

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Lesson 3 - Funding proposals and evaluation criteria

Learning outcomes to be developed:

- The student can identify examples of societal and economic drivers impacting and defining research policy (e.g. the COVID 19 situation).
- The student can understand and contextualize European research funding frameworks and main European funding programmes and schemes to support research and innovation activities (e.g. Horizon Europe).
- The student is familiar with the general process and principles of evaluation and assessment criteria of research proposals: what do funding agencies prefer, what they dislike, vocabulary required, how to interpret what is required in a specific call, aspects meaning advantage in the context of EU funded calls
- The student is able to recognize the main components of a funding proposal and link them to the evaluation criteria of a given call for funding.
- The student can explain the pre-award work and how it fits into the research cycle.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Short discussion of the main points of the previous lesson (5 mins): **b) Presentation by the teacher (20-25 mins):** The goal of the presentation is to provide the essential information regarding the structure of the calls, pointing out the main parts of them. The evaluation of the funding proposals is also relevant to introduce. The		**5 mins**

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evaluation criteria based on the 2018-2020 self-evaluation form are the following: excellence, impact, quality and efficiency of the implementation. The scoring is also included in the following document (as is indicated in the text as well: https://ec.europa.eu/research/participants/data/ref/h2020/call_ptef/ef/2018-2020/h2020-call-ef-ria-ia-csa-2018-20_en.pdf) Further documents including evaluation criteria for EU funding proposals: • https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/massimo-burioni-h2020-proposals-submission-evaluation.pdf • https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/from-evaluation-to-grant-signature/evaluation-of-proposals/elig_eval_criteria_en.htm • https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf		**25 mins**
c) Work in groups of three (35 mins): Part B of selected funding proposals is given to the groups. The groups have to find the answers to the questions (pg. 28). (15 mins) The members share their findings (8 mins), then they answer the questions in the class (12 mins) - the teacher asks one question from one group, but the member answering it should not be the same who worked on the question.	10 points	**35 mins**
d) Short feedback (10 mins) on the homework (the students choose the proper call for application with the help of the teacher) and provide the tasks of the **next (individual) homework** (5 mins), which is: • identifying potential partner institutions (with the availabilities of the given institution) with a detailed justification explaining the reasons of the involvement of the given partner (max 4 partners) • compiling a letter of invitation / expression of interest to the project. • start filling out the logframe for the project applying the logframe matrix provided in lesson 2.		**15 mins**

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Teacher's short presentation on: "project concept" and "expression of interest": features, function. Homework should be uploaded to the given platform prior to the class. Teacher's homework: prepare for providing feedback on the uploaded materials, especially the letter of invitation for next class. **e) Quick end-of-lesson round-table feedback for the teacher** - *5 minutes* Which were the most interesting issues you learnt at this lesson?		**5 mins**

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Lesson 4 - Preparation of a project proposal

Learning outcomes to be developed:

- The student is familiar with the general process and principles of evaluation and assessment criteria of research proposals: what do funding agencies prefer, what they dislike, vocabulary required, how to interpret what is required in a specific call, aspects meaning advantage in the context of EU funded calls
- The student can analyse a given European call for funding from the perspective of its underlying policy (need for the call) and proposal (goals, activities, and expected outcomes and impact).
- With the help of the teacher, the student can draft a simple budget for a proposal, according to the activities planned for the different project phases and milestones.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Short revision of the main points of the previous lesson (5 mins): revision of the main points. **b) Visiting an online brokerage event (30 minutes)** • Teachers' brief introduction of this type of event, presentation of the functions provided by the concrete online interface to be visited • Guiding questions for the observation: "What are the similarities and differences between this event and the online database browsing? What added value of a brokerage event can you identify?"	Guiding questions for the observation: "What are the similarities and differences between this event and the online database browsing? What	5 mins 30 mins

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• Signing in (with the teachers login) the event, collecting observations • Discussing the conclusions **b) Presentation by the teacher (20 mins):** The goal of the presentation is to provide the essential information regarding the formulation of work packages (how to formulate them; good and bad examples). The other part of the presentation touches upon the financial provisions: major cost categories, their basic characteristics, etc. **c) PBL - Activities developing students' skills (40 mins):** • For this lesson, the students identify maximum 4 potential project partner institutions, provide the availabilities of the institutions and also explain the reasons why to involve that partner. In class, the final common **decision on the partners** in the frame of a negotiation process takes place (10 mins) • Introduction of the previous research conducted, developments of the research focus, research questions, brief rationale for the project idea (5 mins) • setting project **work plan**, and activities based on them (10 mins) The activity will focus on how the work plan is built • Work Packages, • tasks / activities; • deliverables / outputs, etc. • What roles partners can be dedicated, how you plan the activities (running in parallel or built on each other, etc.) - drafting & negotiating on a simple **budget** (15 mins) **Homework**: • Groups finish the budget, phases and activities.	added value of a brokerage event can you identify?" - students take individual notes on virtual whiteboard (save them individually) 10 points 10 points	20 mins 40 mins

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Lesson 5 - Institutional proposals, research strategy and governance

Learning outcomes to be developed:

- The student can differentiate external from internal drivers of research policy.
- The student is able to recognize the main components of a funding proposal and link them to the evaluation criteria of a given call for funding.
- The student can explain the main governance structure of a given research institution.
- The student can distinguish and discuss at which stage of policy and strategy development intervene pre-award and research policy/strategy related professions.
- The learner interiorizes and commits to the values and the mission of the institution.
- The student demonstrates curiosity and interest for systemic approaches and for the organization of the research ecosystem.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a. Short revision of the main points of the previous lesson (5 mins): Kahoot test (after registering, at Kahoot homepage, you can create easily games helping assessment here OR virtual whiteboard (linoit.com for example) **b) Brainstorming**: what kind of research performing institutions are there according to the students?	5 points *Results (scores) should be counted into the end of semester grade*	**5 mins** **10 mins**

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The teacher can apply virtual whiteboard (i.e. linoit) as a platform for brainstorming; word cloud (i.e. mentimeter) can also be applied (5 min) + short summary of the lecturer on the results (5 mins) **b) Presentation by the teacher (20-25 mins):** The goal of the presentation covers information regarding the research institutions, their general description. Quality assessment can also be mentioned. The general introduction of the institutional proposal is covered.		**25 mins**
c) Groups of 3 students can work on the followings: first, students divide the tasks among each other, and gather the necessary information **(15 mins**) • find the values and missions of the University - prepare a short list of them • what kinds of research projects are there at the University (list 5-10 of them) • when elaborating an institutional proposal, on what areas RMA support can be detected? Students dealing with the same question come together, see what they found. Those working on question 3 prepare a mindmap together. They discuss the results in class. **(15 mins)**	10 points	**20 mins** **15 mins**
d) **Homework (10 mins)**: Short feedback on homework. Continuing the elaboration of the call for tender (according to the guidance of the teacher)		**10 mins**
e) Quick end-of-lesson round-table feedback for the teacher - *5 minutes* Which were the most interesting issues you learnt at this lesson?		**5 mins**

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Lesson 6 Conflict of interests between policy, funding and research

Learning outcomes to be developed:

- The student can identify examples of societal and economic drivers impacting and defining research policy (e.g. the COVID 19 situation).
- The student can understand and contextualise European research funding frameworks and main European funding programmes and schemes to support research and innovation activities (e.g. Horizon Europe).
- The student can discuss and formulate arguments and confront opinions in the context of real cases of scientific policies.
- The student can effectively communicate, negotiate terms and persuade different target audiences including policy makers for programme bodies, senior management of research institutions, research managers, and researchers.
- The learner interiorizes and commits to the values and the mission of the institution.
- The student demonstrates curiosity and interest for systemic approaches and for the organization of the research ecosystem.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Short revision of the main points of the previous lesson **b) PBL progress (25 mins):** - The groups finish elaborating the call for tender.		**5 mins** **15 mins**

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c) Work in pairs: each pair receives one of the articles (in case of 4 pairs, 2 will receive the first and 2 the second article). The pair of students answer the following questions based on the articles (15 mins): 1. Which funding changes have occured in the last decades? 2. What other factors have changed in the last decades that seem to affect the way research is conducted? 3. What are the micromechanisms by which researchers adapt to the current pressures of the research environment? 4. Which behaviours related to the way researchers conduct their research have been observed? 5. Which ethical dilemmas are raised in the articles? 6. If you were a Researcher/Funding Agency/Policy maker/ RMA, you abide by which values? Consider the values of the citizen, the researcher and those of the institution. 7. What course of action would you consider for the future? Then, the groups working on the same article form a larger group, discuss their findings (10 mins) then the answers are discussed in class (20 mins).	10 points	**45 mins**
Homework (10 mins): • The groups have to prepare a presentation for the last lesson – aim is to introduce the project, and convince the potential stakeholders / institutional decision makers. • studying the application of another group • taking notes individually for the evaluation on the base of pre-defined evaluation criteria **d) Lesson wrap-up by the teacher**	5 points	**10 mins** **5 mins**

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Lesson 7 - Oral presentations

Learning outcomes to be developed:

- The student can understand and contextualise European research funding frameworks and main European funding programmes and schemes to support research and innovation activities (e.g. Horizon Europe).
- The student is familiar with the general process and principles of evaluation and assessment criteria of research proposals: what do funding agencies prefer, what they dislike, vocabulary required, how to interpret what is required in a specific call, aspects meaning advantage in the context of EU funded calls
- The student can analyse a given European call for funding from the perspective of its underlying policy (need for the call) and proposal (goals, activities, and expected outcomes and impact).
- The student is able to recognize the main components of a funding proposal and link them to the evaluation criteria of a given call for funding.
- The student is able to draft a funding plan (a) in line with the institutional strategy of the organisation (b) that addresses external and internal drivers of policy and strategy, c) adjusted with the specific evaluation and assessment criteria, preferences of research calls (of the funding organisations).
- The student can discuss and formulate arguments and confront opinions in the context of real cases of scientific policies.
- The student can effectively communicate, negotiate terms and persuade different target audiences including policy makers for programme bodies, senior management of research institutions, research managers, and researchers.
- The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.
- The student is critical regarding his own work and that of others taking on a constructive attitude.
- The student takes responsibility for its own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**

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a) Self-introduction and interview with a professional, **external evaluator of proposals**. **b) Peer evaluation** of the project proposals - each group receives one of the proposals, and evaluate it (discussion of scoring), - give arguments and explanations for the evaluation in the form of an oral evaluation report. c) **Feedback and tips from the professional evaluator** **d) Roundtable discussion on the experiences gained in the course** - What did you like? - What was useful? _ What could be improved?	20 points/student (10 from the teacher, 5 from the evaluator, 5 from the peers)	20 min 50 min 15-20 min

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Module 3 - Project Integration and Management

Lesson 1: Project Lifecycle & RMAs as Professionals in the Project lifecycle

Learning outcomes to be developed:

- The student knows how to identify the activities in the light of the project objectives, outputs, main tasks, performance criteria and resource requirements set in the proposal.
- The student will identify the RMA professional roles involved directly and indirectly in post award project management

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Games helping students to be connected: getting acquainted with each other (10-15 minutes) *15 minutes* • "Show and tell"see here • OR: "Snowball fight"- see here. • OR see further ideas here		**15 mins**
b) Evaluation of prior knowledge and competences - *10 minutes* Exploring the initial competences, knowledge of students: Answers to short, **basic questions** by either of the followings • Kahoot test (after registering, at Kahoot homepage, you can create easily games helping assessment here • or interactive word cloud (https://www.mentimeter.com/) • OR virtual whiteboard (linoit.com for example) Closed by teacher's feedback and oral summary	*Results (scores) should **not** be counted into the end of semester grade*	**10 mins**
c) **Introduction to the RMA carrier by the help of an invited RMA** • on the request of the teacher, the RMA shares experiences on the different leadership styles applied in the different stages of a		**30 mins** *10 minutes of self-*

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project life cycle and refers to the theoretical content discussed later on, in the lesson
• Interview questions to be sent to the RMA in advance:
  ○ What are the best ways to find out who are the right persons to ask a question within the organization: giving advice, situation exercise, studies on the topic? (Understanding nonverbal messages and unwritten rules within a workplace.)
• optionally, this conversation can be done via Internet as well
 	
<u>Unit 2 of the lesson: Setting the goals and rules for the course, together with the students</u>
1. Introduction of the course (expectations, planned activities, assessment methods) and the topic of the lesson by the teacher - *10 mins*
2. Activities helping the understanding of theoretical foundation related to the leadership model set by Morgeson et al (2010) https://msu.edu/~morgeson/morgeson_derue_karam_2010.pdf
• **classroom group work:**
  ○ **Each student** receives one of the functions listed in the article on a piece of paper (see in the curriculum)
 	
Leadership functions during the transition phase:
 	
1. Compose the team – bringing together the best available people for the job, taking into account complementary competences and ability to work together for a common goal
2. Define the mission – clarifying the team purpose
3. Establish performance expectations and set team goals – goals which are appropriately challenging and motivating
4. Structure and plan – dividing out tasks and responsibilities, scheduling and so on
5. Train and develop team members – including through coaching by the leader
6. Sense-making — defined as “identifying essential environmental events, interpreting these events given the team’s performance situation, and communicating this interpretation to the team”
		introduction + 20 minutes of Q&A
		
		10 mins
		
		10 mins

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7. Providing feedback – both to individuals and to the team collectively **Leadership functions during the action:** 1. Monitor the team – "examining the team's processes, performance, and the external team context" 2. Manage team boundaries – "representing the team's interests to individuals and groups outside the team in order to protect the team from interference as well as persuading others to support them" and co-ordinating activities with other teams 3. Challenge the team – its performance, assumptions and ways of working 4. Perform team tasks – "participating in, intervening in, or otherwise performing some of the team's task work" 5. Solve problems – diagnosing and resolving issues that prevent performance 6. Provide resources – for example, information, equipment, finance and people 7. Encourage team self-management – empowerment, accountability and responsibility 8. Support the team social climate – encouraging positive and supportive behaviours between team members ○ On the whiteboard, the **two phases are indicated** and they are explained as well (either by arrows, or timeline) ○ The task of the students is to **find the proper phase** for the function they receive first. ○ When the two (7 and 8 members) groups of students are formed, then they have to **decide the right sequence** of the functions and put their paper to the board. ○ The teacher takes a photo of the whiteboard with the two phases and 15 functions, and uploads it to the site of the seminar.		**15 mins**

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3. **Activity transforming the theoretical knowledge into personal experience**: The teacher presents the students the fact that the aim of this course will be to gain practical experiences in all possible ways on the theories/knowledge that they learn in this course. A possible way to introduce this: *"The theories presented above will be applied for ourselves as a team, as this situation is very similar to a workplace. In this case all of you will have to test yourself as leaders (using the Storyline method) but me as a teacher will have the overall responsibility for the effectiveness of our team and your satisfaction and development as my team members. This is an excellent occasion to set our expectations and our resolutions/decisions in terms of this course.* • *Your task is now to think about the function you received earlier and formulate a sentence answering the question:* ○ *Group A (Leadership functions during the transition phase:):"Have you experienced "your" function in any form, during this lesson? (E. g.: setting goals: the teacher presented the goals of the course)* ○ *Group B (Leadership functions during the action): "What are your expectations towards me in terms of the funcion you received in the previous exercise?, how can I enhance your development on that area" (E. g.: "*Provide resources"= I will give you the necessary information regarding good examples/literature/various types of information helping you to better understand the content of the lesson) • Conversation aiming at the definition of the rules for the course including both students' and teacher's obligations (in the form of a written document to be available on the common (Moodle /MsTeams/ Google etc.) interface of the course)		

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Lesson 2 - Project Management Structure (PMS), Grant Agreement (GA) and Consortium Agreement (CA)

Learning outcomes to be developed:

- The student will map the main internal and external actors' involvement across the project management stages and devise a strategy for their timely contribution for the implementation of the project (i.e. Stakeholder Management)
- The student can follow the development of several simultaneous management tasks (eg. team management, cost management) and prioritize the most relevant ones at different stages of project management

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Introduction of the lesson by the teacher - main aims, topics (project life cycle, possible roles - see figure 3; grant and consortium agreement, etc.) **b) Group work: New content with "expert jigsaw" method** describing the main parts of the Project Management Plan (PMP). Description for Expert jigsaw method is available in this document) • students form groups of 5 • each student of the jigsaw groups get and study a different 1-2 pages long document including an example (see examples for project management plans in Annex 3.3.E) such as: ▪ schedule management plan; ▪ costs management plan; ▪ quality management plan; ▪ risk management plan. b. the general description of the given plan (see Annexes 3.2.A, 3.2.B and 3.2.C), and a template for it (see them in Annex 3. 2. F) • Groups of students have to answer the following questions in writing (in online learning, it is recommended to use a common online interface as e. g. a shared Google Drive document): What is	10 points	15 mins 40 mins

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the aim of this plan? How is it used in the course of the project? Who is responsible for its implementation in the course of the project? • students move to expert groups and discuss their answers, and prepare a scheme for the presentation of the given plan. (10 mins) • they go back to their jigsaw group. The members of the jigsaw group present the others the features of the different parts of the project management plan: aims, content, function of the given plan type. (10 mins) • Feedback and summary in the form of a guided conversation led by the teacher. (10 mins)		10 mins
Guiding instructions for the teacher to moderate the conversation: • *Ask the students: Now I am first interested in the opinion of those who did not receive the given plan, so please do not answer if you were working with it.* • *Do not allow the students to answer the question immediately, ask them to lift up their hands instead if they have an idea. Depending on the difficulty level of the question, wait for 10-20 minutes until more of them indicate that they have an answer - this will enhance students' activity.* **Questions:** 1. What can be the purpose of the requirement management/scope management plan? 2. Why is it important to compline a stakeholder management plan? What can be its purpose within a project? 3. Who can be responsible for the elaboration of the given plan? Who participates in the work (which department for example)? 4. In case there is a reschedule in the given plan, which other plans have to be revised? (Or an example of an unforeseen event can be provided, and the class can brainstorm on its impact on the different plans. Examples: a) a multiplier event is not feasible, due to pandemia b) the principal investigator quit his current job and the project as well c) the price of event organization/staff costs prove to be much higher than planned, due to the major changes in the		10 mins 15 mins

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institutional regulations d) one of the partners does not complete the task undertaken, thus the partnership cannot continue the work according to the work plan e)) 5. What do you assume to be the most important type of plan, affecting the most aspects of the project implementation? **c) First PBL task in the classroom - combined classroom and group work:** The teams receive and study the text of a submitted proposal (all of the teams receive the same text, the teacher can select one of the texts included in Annex 3.2.D) Classroom work: • Formation of **groups of 4 students**, • **presentation of the project proposal by the teacher** • Explanation of the Storyline method and the next task. Group work: • Students read the document presenting the different characters (See in Annex 3.2.G) • each of them chooses one, on the base of a group discussion • they complete the profiles • Info on the Storyline rules: think about choosing a fictive identity/avatar Classroom work: • Explanation of the responsibilities of ○ the (fictive) project coordination team within the consortium, ○ within the organisation (University as environment). For example, in case of a university, one can refer to the project management office at the institution, and the framework given by the official procedures. ○ the roles and responsibilities within a project coordination team such as responsible for 'professional', 'finances', 'communication', 'leader' (resp. for coordination / management) 'expert' Group work: • Choosing a leader		10 mins 10 min 10 min 25 min

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- Discussing the following questions with the moderation of the leader: Which role would you like to fulfil in the project coordination team (PCT)? Groups make decision on the roles assigned to each student within the small group, i. e. the "project coordination team" by the help of the following table:

	Select one from these: - professional - finances - communication - leader (resp. for coordination / management) expert	The competences that enable you (i. e. your avatar) for the given roles
choice #1		
choice #2		

- The teams compare their tables and decide together on the functions. If more students would like to be the leader, the teacher helps the group to decide. If more students would like to fulfil or avoid a certain function, the team leader appoints/convinces the students for the given function.
- The teacher explains the homework (to prepare 1 or 2 plan/student) according to their role within the team
- The teacher gives guidance for the team leaders to set a **doodle voting** for a team meeting (team members plus teacher included) during the following week

5 points/ student

Homework:

Individual assignment: in every group, student responsible for

- communication elaborates the communication management plan and identifies potential stakeholders

10 points

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• finances, starts to elaborate (and collect his questions on) resources management plan
• professional issues, elaborates the quality management plan;
• coordination and leadership, starts to elaborate the schedule management plan
• team members & teacher send their doodle vote until the end of the given day
• team leader
  ○ prepares an agenda and send to the members who can complete it
  ○ appoints a group member to write notes
  ○ after the meeting, sends out the reminder to the team members and the teacher
Tasks for the meeting
• As part of the project management plan, start elaborating the project scope management plan summarizing the work breakdown structure (WBS) on the base of a given Gantt chart and the project proposal (stages, outputs, partners) (table to be filled out should be included);
  ○ defining concrete assignments related to the plans
• the teacher provides the teams with a short article summarizing the main advices on how to run an effective meeting (https://hr.vanderbilt.edu/training/effectivemtgs.php)		

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Lesson 3 - Project management integration, Monitoring and Control

Learning outcomes to be developed:

- The student has a basic insight into some main time and project management tools and methodologies.
- The student will be able to identify and measure the resources needed for project implementation (team and their time allocation, the physical and infrastructural resources needed, plus other needs) and to integrate this information with a budget and a calendar plan (i.e. Project Management Plan).
- The student will apply methodologies and tools for effective project management, including time, people and tasks management, as well as reporting.
- The student will be able to contribute to the identification and prioritization of the management, financial and legal issues to be addressed at different stages of the project life cycle (i.e. Project Integration Management).

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Feedback (10 mins) on the homework **b) Presentation of the teacher (30 mins):** • briefing on financial management issues; • Demonstration of an online PM tool such as e. g. Asana, Monday, Redmine, Todoist, Notion etc see more here - teacher makes the voice in advance according to his/her preferences https://project-management.com/top-10-project-management-software/ • grounding the next activity (organizing a kick.off meeting): presentation of the main parts, goals, features of a kick-off meeting in 5 minutes **d) PBL task:** • Storyline new event: <the execution of the project has started, the agreement is signed; the implementation of the work packages has to begin. >		10 mins 30 mins 35 mins

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- start the organization of a kick-off meeting, the leader discusses with the members of the project team the tasks and the responsibilities
- Time management - with the help of a PM tool indicates the WBS.
- they finalize the agenda of the kick-off meeting - send it with an official letter to the teacher
- feedback on the agendas, discuss the role of RMA in the preparation and execution of the kick-off meeting.

10 points

f) Exit ticket- *5 minutes*

With the help of Socrative, or other platforms, students fill out the exit ticket. Possible questions:

- How well did you understand today's material?
- What did you learn from today's material?
- Answer the teacher's question (for example: mention those topics that need further clarification).

5 min

g) Explanation of the individual homework: (PBL)

- Optional task for extra points: Make scrib notes for yourself helping to remember the main financial terms

10 points

5 mins

term	features	example
...		
...		
...		
...		
...		

5 mins

- Suggestions for the detailed budget (amount of grant, goals) for their project and instructions using the key terms of the Lesson's

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text on financial issues (e. g. flat rate, direct costs, eligibility etc.) with justification • Instruction for the students: keep in mind the interest of your avatar and try to assign the most preferable and still justifiable amounts to the activities related to your area • prepare with arguments for the next lesson where the budget will be discussed in the form of a team negotiation process		5 mins

Further reading for the teacher on the stages of group development:

https://hr.mit.edu/learning-topics/teams/articles/stages-development; https://hr.mit.edu/learning-topics/teams/articles/models)

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Lesson 4 - Project management integration, Monitoring and Control

Learning outcomes to be developed:

- The student has a basic insight into some main time and project management tools and methodologies.
- The student will be able to identify and measure the resources needed for project implementation (team and their time allocation, the physical and infrastructural resources needed, plus other needs) and to integrate this information with a budget and a calendar plan (i.e. Project Management Plan).
- The student will apply methodologies and tools for effective project management, including time, people and tasks management, as well as reporting.
- The student will be able to contribute to the identification and prioritization of the management, financial and legal issues to be addressed at different stages of the project life cycle (i.e. Project Integration Management).

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**

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a. **Short revision of the main points of the first lesson (10 mins)**: the teacher prepares a crossword including 8-10 words in connection with the financial management of the project with the help of crossword labs. The students fill out the crossword individually (5 mins). They discuss the results. (5 mins)	5 points	10 mins
b) presentation of the teacher - financial monitoring and the role of RMA (the question of compulsory supportive documents - give examples for all of them); project reporting - role of RMA; communication (Closing this session, the students could talk about their style on the first team meeting.)		15 mins
c) PBL task: Storyline event: the team leader so far gets new duties within the organization which do not make possible for him/her to fulfil this role - the team has to decide on the person of a new leader. The groups have to find out a new "Storyline" event generating situation where conflict management and assertivity has to be applied: preferably in connection with the definition of the details of the budget: contracts, procurement etc. - identifying the different costs arising in the different work packages of the project. The groups have to fill out a given excel table.	10 points	30 mins

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stakeholdermap.com
Project Management, project planning, templates and advice

Work Breakdown Structure Table

Provide basic information about the project including: Project Title – The proper name used to identify this project; Project Working Title - The working name or acronym that will be used for the project; Project Manager - the person with responsibility for the successful delivery of the project to time cost and quality. Project Sponor - the person ultimately accountable for the success of the project. Prepared by – The person(s) preparing this document; Date/Control Number – The date the plan is finalized and the change or configuration item control number assigned.

Project Title: _____ Project Working Title: _____

Project Manager: _____ Project Sponsor: _____

Prepared by: _____ Date / Control Number: _____

For more tips on completing this template see WBS Excel template

Element Number	WBS Elements Activity, Task, or Sub-Task Name	Definition of Activity or Task (Description)	Responsible Person or Group	Estimated (E) or Actual (A) Cost (Cross reference to budget)	Project Phase (Cross reference to schedule)
The unique reference ID for the activity or task.	*Enter the name or title of the Task, Sub-task, Activity or Deliverable.*	*Provide a brief description of this Activity, Task or Sub-Task.*	*Enter the person or group who are responsible*	*Enter the estimate or actual cost of the activity or task or add a cross reference to the budget.*	*Provide the name or number of the Project phase that this activity falls into.*

Teacher's question to the groups: Which topics, tasks generated discussion among the group members? How did the group solve the situation?
General conclusion of the financial topic by the teacher - introduction of the homework.

10 mins

d) Frontal teacher presentation:

- the 3 types of conflict according to the theory of Jehn and Mannix (2001)
- their main conclusions and aspects related to project work

2 slides are recommended to use: the 3 types on the first, and the conclusions on the second

25 mins

e) Class activity: Exercise helping to understand the types of the Thomas-Kilmann model of conflict management (see the notes at the end of the lesson!)
Each conflict management strategy will be studied by a group of 3, but members of the groups have to find each other on the basis of the information handed out to them. Every student receives a word (integrating /dominating /obliging /avoiding /compromising) or a

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description or an example (short situation illustrating the given conflict management type). *The handouts are being developed* • As all groups receive the same example for conflict situations, each group demonstrates the given conflict management way (2 students) and the 3rd provides an explanation: what is its name, advantages ,disadvantages, in what kind of situation is it useful? • Each group presents their way of solving the conflict situation, the others evaluate and analyse the small situation practices. → Reflecting on their own behaviour → Re-playing or discussing the behaviours observed in the situations faced in the first half of the lesson with different attitudes/solutions		5 mins
Explanation of the homework: a project partner indicates that it would not be able to fully perform its tasks. • How would the groups deal with the situation? • Formal letter to the consortium, compromise on the situation, re-arrangement of the timing (Gantt as well if necessary), re-allocation of costs (letter to the national agency?)	10 points	
optional tasks for extra points: • make a 1-page crib note of the major terms on the lesson. • write an essay of min. 400 words on reflections to their own conflict management strategies applied so far	+5 points	

Resources for activities described in e):

- table

https://www.uscg.mil/Portals/0/seniorleadership/chaplain/5%20types%20of%20Conflict%20Styles%20Questionnaire.pdf?ver=2020-01-16-150312-330

- background material

https://kilmanndiagnostics.com/wp-content/uploads/2018/03/TKI_Sample_Report.pdf

- evaluation

http://www.mordirections.com/uploads/1/0/2/2/10225537/thomas_kilman_conflict_mode_instrument.pdf

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Lesson 5 - Quality and Risk Management

Learning outcomes to be developed:

- The student is aware of the concept and methodology of risk management
- The student can effectively define and articulate, brainstorm and select the most adequate management solutions and evaluate its effects in achieving the project's goals

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Short feedback (10 mins) on the homework **Short quiz** on the theoretical framework/concepts of lesson 4 (5 mins) by Kahoot or Moodle (according to the teacher's preferences)	10 points individual work, evaluating the comprehension of the terms used in Lesson 4 (classroom test)	15 mins
b) Presentation by the teacher: main aspects of quality management		10 mins
c) Brainstorming (by virtual whiteboard) on positive and negative risks Summary of the outcome of the brainstorming by the teacher; short introduction to the next topic.		5 mins
d) PBL task: • draw a risk assessment chart, identify the risks and their probability and then articulate contingency plans • prepare a risk management table. • present the chart and table in class • feedback on the presentations.	5 points	25 mins

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f) PBL activity: Stages of team Development (Sources: Mindtools or MIT website article)

- based on the model of Tuckman discussed in Lesson 1, the students will be assigned two types of tasks: one individual and one group task
  - First, each student receives a table with the 5 phases of the model, and (s)he has to fill out the first column of it, based on his/her opinion, in which one the group is (with reasoning), which one it passed.
  - Then, the PBL group gets together and discusses the individual results.
  - The groups give a briefing on their findings.

25 mins

e) PBL activity:

10 min

Individual work:

- Students read and study the model of Belbin's 9 team roles (1970) (a one page long text summarizing the 9 main types of group roles). See also the ppt in Annex 3.5.
- Reflexion: On the base of the description of the text, what are the roles (max 2) you think you have fulfilled so far in this PBL team, and what do you think about the members of your teams? Use the table below for thinking about it.

Group work:

15 min

- PBL groups turn to each other and discuss the results
- The groups formulate their questions towards the teacher regarding their results/controversions
- (Possible question from the teacher: What are the missing roles? What are the roles on which you could not agree?)

5 mins

Name of the student	Team roles perceived so far (max 2)
	#1 #2
	#1 #2

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	#1 #2		
	#1 #2		

- Closing remarks from the teacher
  - these roles are dynamic, and are not necessarily remain the same in every environment
  - read the strengths and weaknesses featuring your type because they might help your self-awareness and personal development

Homework: because of Covid 19, travel restrictions are introduced. The transnational project meeting is scheduled in 2 weeks. How do you handle the situation?

1. Write a letter to partners, find out their intentions, find a compromise.
2. Write to the national agency as well – find out their standpoint
3. Prepare an infographic on the risks posed by the situation.

10 points

Further readings for the teacher

Gillian Smith, Pat Yates: Team role theory in higher education. www.trainingjournal.com March 2011 https://www.belbin.com/media/1819/tj-article-team-role-theory-in-higher-education.pdf

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Lesson 6 - Team Management and leadership

Learning outcomes to be developed:

- The student has a basic insight into the theories discussing the features and dynamics of team roles, procession and decision making
- The student will get familiar with the most important leadership models
- The student can select and apply the most adequate leadership model according to the given circumstances

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

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Teaching ideas: Methods, tools, illustration, problem, game etc.	Evaluation and assessment	Timing

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Short feedback (10 mins) on the homework **Presentation by the teacher:** introduction to leadership models. **Class activity:** leadership styles defined by Morgeson • The teacher describes the 15 elements shortly (1 sentence each). • The task of the students is twofold: (1) divide the elements into 3 groups: strength, neutral, weakness; (2) (s)he chooses 1 strength and 1 weakness that characterise him/her; (s)he does the same for a groupmate as well (has to choose blindly from a paper). • The students discuss how to improve in the future based on the task. **PBL task:** • a new event in the Storyline: (due to a conflict or problem) the leader of the team resigns and roles in them change: an acting leader is temporarily appointed • the acting leader is facing a challenge: ○ Tasks: distribution of tasks, agreement on deadlines, communication with project partners. Write formal letters to partners (the team leader should "sign" the letters) - have to agree on content, style, etc. ○ on the base of the theories learnt, evaluating the performance of the style and the tools of the 2 former leaders **Homework** • optional task for extra points: select (short) movie scenes presenting certain leadership styles **e) Quick end-of-lesson feedback for the teacher** - Competition by Socrative or Wordwall game with quiz questions related to the content of the lesson. *Results (scores) should be counted into the end of semester grade*	5 points 10 points 10 points +2 points for the 3 students achieving the best results	10 mins 10 mins 30 min *5 min*

Further readings for the teacher

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- Anna B. Kayes Edd, D. Christopher Kayes Phd
- Team Leadership Questionnaire - Leader Edition: Improving leadership through learning https://www.academia.edu/24234948/Full_Range_Leadership_Model

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Lesson 7 - Present and discuss a Project Management Plan

Learning outcomes to be developed:

- The student can follow the development of several simultaneous management tasks (eg. team management, cost management) and prioritize the most relevant ones at different stages of project management.
- The student is critical regarding own work and that of others taking on a constructive attitude.
- The student takes responsibility about own work.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Presentation of homework and movie scenes selected (in the teaching material) Based on the movie scenes, the group discuss the different leadership styles (based on a given theoretical framework / article)- Full range of leadership **PBL task** • The groups finalize and submit their detailed project management plan • They present them to each other, in the form of an international webinar or stakeholder forum - we can invite for this event 2-3 representatives (in the form of online presence) of different actors related to research projects, such as ○ an RMA/financial officer from our institution ○ a researcher from our institution ○ a representative of a national agency dealing with the governance/allocation of a given fund ○ representatives of a company, NGO, professional association etc. working with our university	10 points Peer evaluation: (10 points) students give points to each others presentation with supporting arguments. Results of peer evaluation will be counted into the final	15 min

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	grade in a limited way. Teachers' evaluation: (20 points) teacher gives points - for the accuracy and adequacy of students peer evaluation - for the presentation - according to the feedback of the invited experts	

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Module 4 – Research Impact and Public Engagement

Lesson 1 - Research Impact: why research matters?

Learning outcomes to be developed:

- The student will become familiar and differentiate several RMA facilitation roles that add value to research (such as science communication, societal engagement, technology and knowledge exchange).
- The student can explore several paths to maximise research impact (for example by finding the ways to incorporate the most relevant 17 sustainable development goals into the research project).
- The student can understand the concept of research impact and the different areas of impact beyond academia.
- The student can distinguish between output, outcome and impacts.
- The student can explain the benefits that impact-driven research can bring to the economy and society.

Background information to the PBL tasks

In the course of Module 4, students will work with 3 different projects:

- **a "fictive" project:** the project that was given to them in Module 3 (according to the instruction of Module 3: " *In case it is possible, work with the project proposals created in the previous semester can be continued, but other options have to be taken into consideration as well. An important requirement is that now, fully elaborated but not implemented project proposals are needed (with established phases, stages, activities, budget*")
- **a "real" project**: *The universities implementing foRMAtion project select a research project within their institution which*
    - *is expected to be still running at the time of the pilot courses*
    - *is strongly related with social impact, i. e. serving a goal directly serving a public interest objective*
    - *includes significant activities related to social engagement and responsibility*
- **foRMAtion** *project: Students will write articles, prepare promotional videos on and study the dissemination strategy of foRMAtion project*

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Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Short introduction by the teacher (15 mins): • Topics: research impact, impact related concepts, evaluation of research impact **b) Activities helping the understanding of theoretical foundations**: **"Think like an activist of a Big Issue!"** Individual task deepening the understanding of science impact and the SDG goals - Choose one topic from this 17 item-list: 17 Sustainable Development Goals (SDGs) , according your personal values/preferences (every goal has to be chosen by at least 1 student); in this exercise you have to think like an activist of this goal - Let's suppose that your institution is running these projects (see in IO2). 1. Astronomers Capture First-Ever Image of a Supermassive Black Hole 2. Editing genes: CRISPR genome editing 3. CERN Detects the Higgs Boson: The Higgs Boson 4. A Vaccine and New Treatments to Fight Ebola: 'Make Ebola a thing of the past': first vaccine against deadly virus approved 5. New Human Relatives: A new species of Homo from the Late Pleistocene of the Philippines 6. Climate change: The last five years were the hottest ever recorded 7. New space missions: Underground Lake of Liquid Water Detected on Mars 8. Fossilized Pigments Reveal the Colors of Dinosaurs :The Colors of Dinosaurs Open a New Window to Study the Past 9. 40,000-year-old cave art may be world's oldest animal drawing 10. Lock the Planck: the kilogram has a new definition - Review this list of scientific achievements from the aspect of the SDG goal you are fighting for, on the base of the following questions: What are the achievements		15 mins 30-40 mins

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1. that serve the given goal, 2. that could be connected with it 3. that are against it - Prepare a scheme for a 1-minute-long speech (elevator pitch) to be presented at an internal management meeting for the 15 top leaders of your institution. - summarize your arguments and thoughts in a convincing way - Present your speech in front of the class who will have the opportunity to defend the interests of the project in question - In case of disagreement, listen to each other's arguments and reflect on them in a polite though persuasive way, e. g. by offering compromises, alternative solutions etc.	10 points	
c) Storyline task (25 mins): <challenge/task> • the groups prepare a mindmap for their project (that they had been working in the course of Module 3) • assign and indicate SDGs and possible impacts to their project and indicate them on the mindmap	5 points 5 points	25 mins
e) Quick end-of-lesson feedback for the teacher - *5 minutes* Wordwall game with quiz questions related to the content of the lesson.	+2 points for the 3 students achieving the best results	5 mins
f) Individual homework /PBL task: Write a short article (of min. 150 words) to be published on your project website presenting your project from the aspect of the SDGs: • Which are the SDGs that are fostered by your research activities? • How will this be implemented? • What are the expected results in this area?	5 points	

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Lesson 2 - Responsible Research and Innovation approach: the EU drivers for Impact

Learning outcomes to be developed:

- The student can explain Responsible Research and Innovation (RRI) principles and practices in its main thematic elements: public engagement, open access, gender, ethics, science education, science communication and engagement, and impact.
- The student can identify cross-cutting issues in a given project (e.g. ethical and gender issues) and identify different strategies to address them in different research projects.
- The student can argue about the reasons for promoting accountability, responsibility, ethics and integrity in research.
- The student can contribute to the design of activities and instruments fitted to each of the RRI principles.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) Classwork: presentation & brainstorming • identify ethical issues that can emerge during the project – and how to solve them. • Possible topics: GDPR, issues that might emerge in connection with interviews, etc. • generating a debate where students can come up with pro and con arguments • concrete examples related to ethical issues regarding the "real project" (see here) will be discussed in the presentation below (b)) **b)** *The universities implementing foRMAtion project select a research project within their institution which* • *is expected to be still running at the time of the pilot courses* • *is strongly related with social impact, i. e. serving a goal directly serving a public interest objective*	5 points	10 mins 25 mins

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• *includes significant activities related to social engagement and responsibility* Activity related to the chosen project: • invitation of an RMA of the give project team who gives a 10 minutes long presentation on the project, in line with the following topics (these have to be sent the expert in advance, as well as two resources that will be used in the following lessons:The six main categories of purpose for public engagement and D3.2 Public Engagement Methods and Tools of Engage2020) ○ Basic info on the project: source of the grant, programme, duration, partners, results so far ○ Why did you launch the project, what was the idea behind it? What are the main goals of your project? How does it serve public goals /society? ○ Who are the target groups and the involved stakeholders? ○ How did you find the way to the stakeholders, how did you address them? ○ What are the platforms and the means of dissemination, who are the target groups of the dissemination? ○ Ongoing and next project tasks, especially in the field of communication ○ What are/can be the purposes of the engagement of the project with the given stakeholders, according to the 6 categories? ○ What are the main main messages that you would like to transfer to them. ○ What kind of information do you include in your messages and in which channels in order to emphasize and support your message? ○ Challenges and the ways to tackle them, especially in the field of ethics and conflict of interests ○ Ethical issues emerged • Questions and answers by the students **PBL/Storyline activities** **Classroom activity connecting the two phases:**		50 mins

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Introduction In Module 4, an important output of students' activities will be a promotional video that will present students' experiences on foRMAtion project to different target groups and stakeholders such as - an international professional organization, e.g. EARMA, - BA students of their university (aim: to promote the course within the university) - the top management of their own institution (aim: to raise awareness regarding RMA as a profession and to promote the project within the institution) - an NGO or company or a national EU funding agency working in cooperation with the university in other projects or activities (its aim is to raise awareness regarding RMA as a profession and promote the university's training in this field). Each PBL group will prepare a separate, 2-3 minutes long video, addressing a different target group. They will define and formulate the message and choose the style of the video according to the relevant strategies of foRMAtion project. E-mail from the "head of unit": ● The new and last team leader is finally appointed by the "head of unit" - the new leader should be the 4th student, preferably the one who has been responsible for communication so far. In his e-mail, the senior leader justifies his choice with the fact that in this phase of the project, expertise in the field of communication is essential. ● The article below is also attached to the letter, together with the given target group, stakeholder. Activities to be implemented this lesson, according to the e-mail of the "head of unit": 1. Read the article identifying the six main categories of purpose for public engagement https://www.publicengagement.ac.uk/do-engagement/quality-engagement/purpose 2. Each group is informed about the stakeholder which will be the target group of their video 3. They have to study the dissemination plan (relevant strategic document) of foRMAtion project (available in Annex 4.2.C)		

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4. Send a written answer to the questions below, on the base of the article and the dissemination plan in a Google Document that is shared with the team members and the teacher. ○ What are/can be the purposes of the engagement of foRMAtion project with the given stakeholder? ○ On the base of your conclusions, formulate 2-3 main messages that the video of your team should transfer. ○ What kind of information should be included in your video in order to emphasize and support your message?	10 points	
Homework: • PBL teams further develop their answers for the questions above (PBL/Storyline activities) • Brainstorming about the participants, messages, parts, content, style (music, place of the video) in the same Google Document that was used in class	10 points Until the next class, teacher sends feedback, correction & evaluation for this homework, as students will work with it in Lesson 3	
Optional individual homework for extra points: Compile a written answer to the questions above in the form of a formal letter (of 300 words) that will be submitted to the Management Boards, on the base of the article, the dissemination plan.	+5 points	
Wrap up and conclusions by the teacher		2 min

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Lesson 3 - Pathways to research: planning a strategy for public engagement

Learning outcomes to be developed:

- The student is aware of the major elements and characteristic features of a research engagement plan and the key performance indicators.
- The student will be able to map the different target stakeholders and its roles at different stages of the research project
- The student is able to select the engagement strategies, platforms and communication style suited for each target audience.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**
a) Presentation by the teacher (15 mins), explanation on the base of questions • public engagement strategy - purpose, stakeholders, process and evaluation. • The 6 stages/levels of public engagement on the base of the introduction of *D3.2 Public Engagement Methods and Tools of* Engage2020 (pages iii-xi) such as Dialogue, Consulting, Involving, Collaborating, Empowering, Direct decision **b) Case study** - public engagement plan (PEP) of the "real" project presented in Lesson 2. In case they do not have one, the students study the institutional PEP of their university OR the dissemination strategy of foRMAtion project OR the PEP of another institution or project • in groups of 2, students are given the public engagement plan • they have to identify the purpose, stakeholders, activities based on the documents. • They answer the following questions on the base of the examples of the tables published in *D3.2 Public Engagement Methods and*		15 mins 30 mins

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Tools of Engage2020 (pages iii-xi): What is the level of public engagement targeted by the document you are studying? How could you further develop/complete this plan? Students answer the questions on writing, in a Google Form created for this purpose. Guide for teachers for the application of Google Forms in classroom work is available in Annex 5.1 • discuss findings in class, using the spreadsheet generated on the base of the responses arrived to the form. **c) PBL task on PEP:** The groups start preparing the Public Engagement Plan (PEP) of their "fictive" project (the one they have been working on from the beginning of the semester) in the form of a mindmap. • They will use a template given by the teacher. (Question to NOVA: can you suggest a basic plan /example that we can use for this purpose?) • They decide on the main parts of the plan and the leader of the team shares the tasks among the students that they have to prepare as homework. It is recommended that the leader of the group writes a short reminder of the task to make the distribution of parts and tasks clear of the members of the group. **e) PBL task related with the promo video:** • Feedback on the homework (brainstorming): discussing the distribution of the points (see the remarks in the "Evaluation" column). In case of disagreement, the leader takes the final decision. • the teams decide on the tasks related with the video-making: editor, cameraman, graphic elements, actors etc. All members have to be responsible for the content/text. • On the base of the homework and the classroom work, making final decision on the following questions: ○ What are/can be the purposes of the engagement of foRMAtion project with the given stakeholder? (see the 6 main purposes) ○ What should be the level of public engagement in relation with your target group?	*The groups receive a common score (max. 40 points) that has to be divided among each other according to the team-members self-evaluation. (Each team member estimates the number of points considered as a fair and consistent with its performance)*	20 min 5 mins 20 min

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• On the base of the above and the homework, formulate 2-3 main messages that the video of your team should transfer.
• What kind of information should be included in your video in order to emphasize and support your message?
• How should be the video:
  ○ style (emphasizing funny, professional, convincing, surprising etc. features)
  ○ music?
  ○ participants
  ○ basic ideas, story
• In case of disagreement, the leader takes the final decision.
 	
e) Homework
1. Preparing a given part of the PEP of the "fictive" project, according to the instructions of the team leader. (The complete PEP has to be submitted as the "product" of the group.)
2. Each student reflects on his own leadership style on the base of the Team Leadership Questionnaire by Morgeson (2010). This will be used in the course of the next lessons's classroom work.
	10 points
	
	5 points	

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Lesson 4 - Science communication and dissemination: framing the message

Learning outcomes to be developed:

- The student can distinguish the aims and activities pertaining to science communication, dissemination and broader impact
- The student can effectively communicate ideas and the main results of a given project to non-specialist audiences, applying different strategies to increase audience interest and understanding.
- The student can design a research engagement plan and identify suitable key performance indicators to assess stakeholder engagement.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and suggested scores**	**Timing**

a) Theoretic content: Purposes and features of communication/dissemination and exploitation
- **Students read individually (5 mins)** the same text (IO2 Curriculum, Module 4, Lesson 4, p 206-209) <https://docs.google.com/document/d/1tmUS3ZbA0drt9uqC8a7_lPXz2cljMTQj/edit#heading=h.2y3w247 > and get different questions regarding
  - communication plan
  - dissemination plan
  - exploitation plan
The teacher projects each question separately on a slide (See the ppt available in Annex 4.4.A) and addresses them to different students, by random selection. (Optionally, students can answer via Kahoot)
1. Which type of activity is addressing the widest audience?
2. Which are the typical platforms of communication?
3. What is the difference between the aims of the communication and dissemination?
4. When does the process of communication start?
		20 mins
		
		30 mins

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5. When does the dissemination start? 6. When does the exploitation start? 7. How long do the exploitation activities last? 8. To which activity do the following platforms and tools belong? a. articles of scientific journal b. professional workshops c. trainings and strategic consultations d. participation in common publications e. Twitter posts? 9. What kind of activities belong to the exploitation?		
The teacher calls for them personally to answer the given questions (questions are presented on the slides one by one). Between the answers, whenever it is needed, the teacher explains features of the 3 types of activities by the help of the infographics included in the presentation (see Annex 4.4.A)	1 points/ person	
PBL tasks: <u>Group work:</u> The groups receive an e-mail from the head of unit (see the tasks and the worksheet in Annex 4.4.F) ● *group members submit their answers by e-filling in the table on the online interface used in the lesson*	10 points	20 min
<u>Classroom work:</u> ● *The class discusses the answers in the form of a workplace meeting. Group representatives report on the results of their group in front of the class.* ● *The teacher summarizes and demonstrates the answers of students in the form of an online Coggle mindmap elaborated by answer to answer, (see an example for a ready mindmap on TELLME in Annex 4.4.B and at this link: https://coggle.it/diagram/X1is0zfdS9ZF3xIH/t/framing-the-message-of-tellme-project/9db5fdd86639422e773940180f81e0f5b9e40c31b5b887631cc6fc69c9737c4a)*		15 min
<u>PBL group work:</u> ● *an urgent message from the head of unit:*		5 min: instructions

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Individual work: • PBL group members write individually a blog post / a Twitter post / a Facebook /a website / or LinkedIn post on the "real" project chosen by the teacher, on the base of a project progress report and the project website. Each member is given a different genre by the group leader. • Optional task: Finalization of Public Engagement Plan of the "fictive" project Group work: • Evaluation of leadership skills using the Team Leadership Questionnaire by Morgeson (2010) using the "hot seat" method: someone is chosen to be evaluated; the other 3 writes down their thoughts on the base of the following questions: a) What were his strengths as a leader? b) What are his areas of development? c) What did I enjoy/appreciate in him/her personally? The teacher has to enhance that the goal of the evaluation is to encourage each other and give each other feedback in a positive way. **Homework:** PBL groups work on and finalize their promotional videos according to the feedback of the teacher. • Apart from the teacher, a member of the "real" project coordination team gives students evaluating feedback as well • Teams give themselves up to 10 points / person for their activity, based on self-assessment Optional task for extra points: design a Facebook page for the project (based on a given framework - not a public one)	10 points Altogether: 25 points +5 points	15 min: elaboration of texts 20 min

Further reading.

- Dunleavy, Patrick (2014) Shorter, Better, Faster, Free. Blogging changes the nature of academic research, not just how it is communicated. https://blogs.lse.ac.uk/impactofsocialsciences/2014/12/28/shorter-better-faster-free/
- Oakes, Kelly (2014) How to Create a Successful Science Blog

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https://www.theguardian.com/science/2014/apr/17/science-blog-wellcome-trust-writing-prize

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Lesson 5 – Submission of public engagement plans, presentation and discussion of promotional videos

Learning outcomes to be developed:

- The student can act to facilitate processes in the context of a simulated science engagement situation.
- The student can design a research engagement plan and identify suitable key performance indicators to assess stakeholder engagement.

Legend for the use of lesson plans: Grey texts describe useful but elective activities while black text colour indicates activities considered essential.

Teaching ideas: Methods, tools, illustration, problem, game etc.	**Evaluation and assessment**	**Timing**
a) PBL task: Presentation of the promo videos. They will present students' experiences on foRMAtion project to different target groups and stakeholders such as - an international professional organization, e.g. EARMA, - BA students of their university - the top management of their own institution - an NGO or company or a national EU funding agency working in cooperation with the university in other projects or activities (aim is to raise awareness regarding RMA as a profession and promote the university's training in this field) in the frame of • an international webinar (if the dates can be reconciled among the 3 universities) presenting the project • OR: a fictive stakeholder/workshop forum where the class members will play the role of the several stakeholders **b) Course-evaluation roundtable** (including the report of the teacher as well): • "What were the most important things you learnt in this course?" • "Share something you liked and appreciated." • "What are the areas where we could further improve it?"	*Peer assessment:* *- students give points to each other's videos on the basis of the evaluation form.* *- In case the videos of the parallel courses (NOVA & Sapientia) cannot be presented, students give oral feedback regarding each others'*	

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	videos. Teachers' question launching the conversation: "Which features of the video that reflect the aspects and the needs of the given target group?"	
PBL homework: Groups have to submit • the updated and finalized project management plan until a predefined deadline • *Optional assignment: a report on the project results compiled on the base of the form prepared by the teacher (see Annex…)*	*20 points* *10 points*	

Further reading:

- An example to study: https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5c48ab206&appId=PPGMS
- Guide http://globeducate.s3.amazonaws.com/PDF%2FPublic-engagement-a-practical-guide.pdf

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4. Annexes

Annexes are available at the following link:
https://drive.google.com/drive/folders/1FifhDCJj4gIKLfyQPQLfGJzb1SCgN4qE?usp=sg

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