FUNDAMENTALS OF SUSTAINABLE DEVELOPMENT
SYLLABUS (2021-2022)

1. Information regarding the programme

1.1 Higher education institution	Babeş-Bolyai University
1.2 Faculty	Faculty of Environmental Science and Engineering
1.3 Department	Environmental Analysis and Engineering
1.4 Field of study	Environmental Engineering
1.5 Study cycle	MA
1.6 Study programme / Qualification	Sustainable Development and Environmental Management/ Environmental Engineering

2. Information regarding the discipline

2.1 Name of the discipline	**Fundamentals of Sustainable Development**						
2.2 Course coordinator	Assoc. Prof., PhD Ruxandra Malina Petrescu-Mag						
2.3 Seminar coordinator	Assoc. Prof., PhD Ruxandra Malina Petrescu-Mag						
2.4. Year of study	I	2.5 Semeste	I	2.6. Type of	C	2.7 Type of discipline	Compulsory

3. Total estimated time (hours/semester of didactic activities)

3.1 Hours per week	4	3.2 Of which: course	2	3.3 seminar/laboratory	2
3.4 Total hours in the curriculum	28	3.5 Of which: course	14	3.6 seminar/laboratory	14

Time allotment:	hours
Learning using manual, course support, bibliography, course notes	30
Additional documentation (in libraries, on electronic platforms, field documentation)	30
Preparation for seminars/labs, homework, papers, portfolios and essays	30
Tutorship	6
Evaluations	2
Other activities: visits, workshops, and other academic activities	0

3.7 Total individual study hours	98
3.8 Total hours per semester	126
3.9 Number of ECTS credits	5

4. Prerequisites (if necessary)

4.1. curriculum	No requirements
4.2. competencies	No requirements

5. Conditions (if necessary)

5.1. for the course	Class room with a video projector device
5.2. for the seminar /lab activities	No requirements

6. Specific competencies acquired

Professional competencies	- Understand the basic concepts of Sustainable Development (SD), the environmental, social, and economic dimensions; - Know the history of SD; - Provide tools to facilitate the participation of and partnerships with various stakeholders in public and private sectors through dialogue and setting of priorities; - Facilitate thinking about ways to integrate sustainability principles in the policymaking process; - Be able to discuss the conflicts which are involved in the SD concept on the national as well as on the global scale; - Be able to discuss the (dis-)advantages of instruments for SD; - Understand the SD challenge for companies, their responsibility, and their potential for action
Transversal competencies	- Work successfully in a team by performing practical tasks; - Develop oral communication skills; - Openness to lifelong learning, respecting and developing of professional values and ethics.

7. Objectives of the discipline (outcome of the acquired competencies)

7.1 General objective of the discipline	- The Fundamentals of Sustainable Development aims to initiate students to understand theoretical and practical aspects of SD; - Provide general knowledge of SD.
7.2 Specific objective of the discipline	- To enlarge and reinforce the understanding of the specific concepts used in the field of sustainable development; - To identify the legal basis of SD; - To know the responsibilities of the institutional bodies committed to sustainable development; - To identify the property rights regimes; - To acquire knowledge about environmental justice; - To acquire knowledge about the green side of the EU policies by applying the principle of environmental integration.

8. Content

8.1 Course	Teaching	Remarks
1. Introductory meeting Organizational matters: a. Presentation of the course objectives; b. Information about the course organization (schedule; list of topics; requirements); c. Mutual presentation of the participants; d. Information about the use of scientific literature resources – a demonstration on the access to databases: Scopus, Web of Science through extranet service using university network computer (the net must be available in the classroom) e. Cues concerning critical use of the information found on Internet; 2. QUIZ: Students will be asked to write/discuss (without former preparation) a short essay that includes answers to the questions anticipating different lectures and discussions. 3. Students will be asked to choose individual study topics elaborated and presented during the next sessions. 4. Presentation of the list with the recommended readings. The focus is on the individual search of literature from all possible sources. However, selected journal papers and book chapters will be available as pdf files to the course participants.	Exposure: description, explanation, conversation.	Students are encouraged to move his/her participation to the next level by not just answering questions but asking them, not just making comments, but specifically responding to topics raised during the courses/seminars.
2-3. What does "development" mean? We will focus on several aspects such as: - Human needs, human rights, human ambitions; - How "human rights" are defined; the biological heritage – human inborn motivations. - Demographic boom (demographic dividend; China's one-child policy; Is population growth really a problem?); - How to define the basic levels of survival, comfort, luxury? The relativity of these concepts (Grinde, 2009).		
4. A brief history of sustainable development - What is sustainable development? - Where does it come from? - What are the landmark events that have contributed to today's notion of sustainability? - Why has it moved from a marginal to a central position in today's world?		

5. Legal basis of sustainable development. From principle to strategy character. The functions of law in connection with sustainable development
    - Treaty of Functioning of the EU;
    - Romanian Constitution and Government Emergency Ordinance no. 195/2005 on environmental protection;
    - Regulatory function, the function of governing society, the function of defense and guaranteeing human society's essential values, etc.		

6. Institutional/subsidiary body framework committed to sustainable development - UNEP, Commission on Sustainable Development, United Nations Department for Policy Coordination and Sustainable Development, Inter-Agency Committee on Sustainable Development, Earth Council; - Challenges in implementing multilateral environmental agreements (MEAs); - Other information related to the sources of International Environmental Law (Hard Law vs. Soft Law; Principles vs. Jurisprudence; Treaty Law vs. Customary law; The three levels of treaty-making); - Sustainable development governance timeline. Key milestones (1992-2017).		
7. The shared resources system - What are public goods? The economic theory of a situation within a shared-resource system and - Property rights regimes: "The tragedy of the commons": classical paper by Garrett Hardin (1968); real-life examples of the tragedy of the commons.		
8-9. The four principles considered as "distilled" from the principle of sustainable development - The principle of inter-generational equity; - The principle of sustainable use; - The principle of common but differentiated responsibilities; - The principle of environmental integration; - Definition, implications, and international treaties.		
10. Equity across generations Environmental justice and sustainability - Procedural and distributive justice.		

11-12. The green face of the EU sectorial policies: agriculture, energy, and business - An overview on Common Agriculture Policy (CAP) - Organic farming - Organic farming contribution to cross-cutting objectives "Environment" and "Climate" - The enterprise and the industry policies		
13. Sustainable consumption and production pattern		
14. Sustainable cities and resilience building. Final remarks on SD		

Bibliography
1. Atkinson, G., Dietz, S., Neumayer, E., Agarwala, M. (eds.). (2014). Handbook of sustainable development. Edward Elgar Publishing.
2. Hardin, G. (1968). The tragedy of the commons. *Science,* 162(3859), 1243-1248.
3. Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M. C., Shyamsundar, P., ... & Noble, I. (2013). Policy: Sustainable development goals for people and planet. *Nature*, 495(7441), 305-307.
4. Grinde, B. (2009). An evolutionary perspective on the importance of community relations for quality of life. *The Scientific World Journal*, 9, 588-605.
5. Petrescu-Mag R. M., Burny Ph, 2015. The Principle of environmental integration under scrutiny. An analytical legal framework on how EU policies are becoming green. Cluj-Napoca, Editura Accent.
6. Petrescu-Mag, R.M., Petrescu, D.C., Oroian, I.G.; Safirescu, O.C., Bican-Brișan, N. (2016). Environmental Equity through Negotiation: A Case Study on Urban Landfills and the Roma Community. *Int. J. Environ. Res. Public Health*, 13, 591.
7. Petrescu-Mag R. M., Dragan A. A., Petrescu-Mag I. V. (2013). Considerations on the legal basis of sustainable development. Advances in Environmental Sciences–AES, 5(3):294-299 http://www.aes.bioflux.com.ro/docs/2013.294-299.pdf
8. Petrescu-Mag, R. M., Mihaiescu, T., Paulette, L., Varban, D., (2013). The functions of law in connection with sustainable development. Advances in Environmental Sciences–AES, 5(3):300-305. http://www.aes.bioflux.com.ro/docs/2013.300-305.pdf
9. UN, 2016. Progress towards the Sustainable Development Goals. http://www.un.org/ga/search/view_doc.asp?symbol=E/2016/75&Lang=E
10. Video material: https://www.youtube.com/watch?v=WYA1y405JW0 (Tragedy of the commons)

8.2 Seminars	Teaching methods	Remarks
The goal of the seminars is to increase students' participation. This does not mean to have every student participate in the same way or at the same rate. Instead, it is to create an environment where all students have the opportunity to learn. The students will explore issues and ideas in-depth within the seminars, from various viewpoints, all about sustainability. Critical discussion of causes / consequences and benefits/ risks of sustainable development. Discussion of the current economic issues in the context of the global sustainable development debate.	Conversation, debate, case studies. *Recommended strategies for the students:* - To become more active and/or make more effective comments. This will raise the overall level of discussion.	Please note: While reading the courses is necessary but not sufficient to assure participation in discussions, students who do not read the course support and other materials (including the compulsory readings) cannot provide meaningful contributions to the discussion.

Bibliography
1. Barkemeyer, R., Holt, D., Preuss, L., & Tsang, S. (2014). What happened to the 'development' in sustainable development? Business guidelines two decades after Brundtland. Sustainable Development, 22(1), 15-32.
2. Holden, E., Linnerud, K., & Banister, D. (2016). The Imperatives of Sustainable Development. Sustainable Development.
3. Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable development: mapping different approaches. Sustainable development, 13(1), 38-52.
4. Pauliuk, S. (2020). Making sustainability science a cumulative effort. Nature Sustainability, 3(1), 2-4.
5. Steurer, R., & Hametner, M. (2013). Objectives and indicators in sustainable development strategies: similarities and variances across Europe. Sustainable Development, 21(4), 224-241.

9. Corroborating the content of the discipline with the expectations of the epistemic community, professional associations and representative employers within the field of the program

Courses with similar content are taught within the most important universities from Romania and abroad. The use of the English language facilitates the graduates' access to companies from abroad and to multinational companies in Romania.

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in
10.4 Course	Knowing the milestones in SD: e.g., concepts, legal basis, greening commitments of the EU policies.	Examination	50%

10.5 Seminar/lab activities	Elaboration and presentation of a research essay (research project)	To assess the project, the following elements will be considered: respecting the deadline; paper presentation; paper aspect; paper content; references.	30%
	Active participation in seminars	Participation in discussions/debates, preparation of the tasks. Students are rewarded for bringing up more challenging ideas and collaboratively dealing with them.	20%

10.6 Minimum performance standards: minimum 5.

March 6, 2021

Signature of course and seminar coordinator:

Ruxandra M. Petrescu-Mag

Signature of the head of department

Date of approval: