Universitatea Naţională de Ştiinţă şi Tehnologie Politehnica Bucureşti
Facultatea de Electronică, Telecomunicaţii şi
Tehnologia Informaţiei

COURSE DESCRIPTION

1. Program identification information

1.1 Higher education institution	**National University of Science and Technology Politehnica Bucharest**
1.2 Faculty	**Electronics, Telecommunications and Information Technology**
1.3 Department	**Electronic Devices, Circuits and Architectures**
1.4 Domain of studies	Electronic Engineering, Telecommunications and Information Technology
1.5 Cycle of studies	Bachelor/Undergraduate
1.6 Programme of studies	Microelectronics, Optoelectronics and Nanotechnologies

2. Date despre disciplină

2.1 Course name (ro) (en)				Filozofie Philosophy			
2.2 Course Lecturer				Assoc. Prof. Dr. Mircea Toboşaru			
2.3 Instructor for practical activities				Assoc. Prof. Dr. Mircea Toboşaru			
2.4 Year of studies	1	2.5 Semester	2	2.6. Evaluation type	V	2.7 Course regime	Op
2.8 Course type		C	2.9 Course code	04.C.02.A.018		2.10 Tipul de notare	Nota

3. Total estimated time (hours per semester for academic activities)

3.1 Number of hours per week	2	Out of which: 3.2 course	2	3.3 seminary/laboratory	0
3.4 Total hours in the curricula	28	Out of which: 3.5 course	28	3.6 seminary/laboratory	0
Distribution of time:					hours
Study according to the manual, course support, bibliography and hand notes Supplemental documentation (library, electronic access resources, in the field, etc) Preparation for practical activities, homework, essays, portfolios, etc.					20
Tutoring					0
Examinations					2
Other activities (if any):					0

3.7 Total hours of individual study	22.00
3.8 Total hours per semester	50
3.9 Number of ECTS credit points	2

4. Prerequisites (if applicable) (where applicable)

4.1 Curriculum	not applicable
4.2 Results of learning	not applicable

5. Necessary conditions for the optimal development of teaching activities (where applicable)

5.1 Course	The course will take place in a room equipped with a video projector

5.2 Seminary/ Laboratory/Project	not applicable

6. General objective *(Reffering to the teachers' intentions for students and to what the students will be thought during the course. It offers an idea on the position of course in the scientific domain, as well as the role it has for the study programme. The course topics, the justification of including the course in the currcula of the study programme, etc. will be described in a general manner)*

Presentation of the most important theories in the core philosophical fields: ethics, political philosophy, philosophy of science, aesthetics, philosophy of mind, philosophy of technology, environmental philosophy, philosophy of culture. The approach is logical, so that students assimilate certain conceptual tools and can critically evaluate the arguments that support the various philosophical theories. Developing critical thinking and the ability to think abstractly. Cultivating the ability to make conceptual connections between different fields: ethics and politics, technology and society, technology and the environment, philosophy of science and logic, etc.

7. Competences *(Proven capacity to use knowledge, aptitudes and personal, social and/or methodological abilities in work or study situations and for personal and proffesional growth. They refflect the empolyers requirements.)*

Specific Competences	Solving technological problems in the fields of applied electronics.
Transversal (General) Competences	Methodical analysis of the problems encountered in activity, identifying the elements for which established solutions exist, thus ensuring the fulfillment of professional tasks.

8. Learning outcomes *(Synthetic descriptions for what a student will be capable of doing or showing at the completion of a course. The learning outcomes reflect the student's acomplishments and to a lesser extent the teachers' intentions. The learning outcomes inform the students of what is expected from them with respect to performance and to obtain the desired grades and ECTS points. They are defined in concise terms, using verbs similar to the examples below and indicate what will be required for evaluation. The learning outcomes will be formulated so that the correlation with the competences defined in section 7 is highlighted.)*

Knowledge	*The result of knowledge aquisition through learning. The knowledge represents the totality of facts, priciples, theories and practices for a given work or study field. They can be theoretical and/or factual.* At the end of the semester, students: • Recognize the main concepts and theories in ethics, political philosophy, philosophy of science, aesthetics, philosophy of mind, philosophy of technology, environmental philosophy, and philosophy of culture. • Identify, in specific contexts, the logical structure and main premises of fundamental philosophical arguments. • List the main modern and contemporary philosophical currents and traditions, indicating the relationships among them. • Mention the basic concepts regarding the relationship between reason, science, technology, culture, and the environment. • Express in their own words the key concepts of normativity, value, knowledge, consciousness, meaning, and responsibility. • Explain the relationships between ethical theories and political theories, as well as their implications for practical and institutional decisions.
Skills	*The capacity to apply the knowledge and use the know-how for completing tasks and solving problems. The skills are described as being cognitive (requiring the use of logical, intuitive and creative thinking) or practical (implying manual dexterity and the use of methods, materials, tools and intrumentation).* Analyze a philosophical text by identifying premises, conclusions, and the validity of arguments. • Apply logical and conceptual methods to evaluate the justificatory strength of philosophical and scientific arguments. • Provide examples of situations and case studies in which philosophical concepts can be applied to the interpretation of scientific, technological, or cultural phenomena. • Classify the main types of reasoning (deductive, inductive, abductive) used in philosophical and scientific analysis. • Compare different philosophical approaches to the relationship between humans, technology, and nature. • Distinguish between valid arguments and fallacies, applying criteria of logical consistency and epistemic relevance. • Develop and defend coherent personal arguments, justified through critical reasoning and relevant theoretical references. • Integrate concepts from different fields (ethics, technology, environment, politics, science) to build interdisciplinary perspectives.

Responsability and autonomy	*The student's capacity to autonomously and responsably apply their knowledge and skills.* • Critically evaluate the ethical, epistemological, and cultural implications of contemporary technological development. • Select and use relevant academic bibliographic sources, respecting the norms of ethics and academic integrity. • Organize study activities autonomously, set objectives, and plan the stages for completing written papers. • Collaborate constructively in seminar activities, offering and receiving argued feedback from the perspective of philosophical reasoning. • Reflect on their own theoretical positions, being able to revise them in light of opposing arguments or new evidence. • Assume responsibility for the coherence and rigor of personal argumentation in academic and interdisciplinary contexts.

9. Teaching techniques *(Student centric techniques will be considered. The means for students to participate in defining their own study path, the identification of eventual fallbacks and the remedial measures that will be adopted in those cases will be described.)*

Teaching in this course is designed to be as interactive as possible and to involve students as much as possible. The lectures aim to clarify basic concepts and open topics for discussion, leaving room for questions and interventions from students. Thus, the course combines theoretical exposition, discovery learning, and the use and development of critical thinking. We will use multimedia materials, problem-based and challenge-based learning.

10. Contents

COURSE		
Chapter	**Content**	**No. hours**
1	Course structure and central themes. Presentation of the course structure and of the philosophical domains Notions of critical thinking Philosophy of science – issues and theories Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4
2	Philosophy of technology – main problems and theories Main subfields of ethics: metaethics, normative ethics, applied ethics Consequentialist, deontological, and teleological ethical theories Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4
3	Issues in applied ethics. Ethical theories applied to concrete cases Main theories in political philosophy Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4

4	Environmental philosophy. Land ethics. Deep ecology Environmental risk analysis. Strategies. Cost–benefit analysis. Value-sensitive and sustainable design. Ecological footprint and the value of nature. Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4
5	Philosophy of mind and artificial intelligence. Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4
6	The role of art. Aesthetics and Philosophy of Art Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4
7	Review, feedback, open problems. Interactive text analysis, viewing multimedia materials, presentation projects, debates.	4
	Total:	28

Bibliography:

ursul în format electronic din Moodle, ESU, Conf. Univ. Dr. Mircea Toboşaru. Link.
. Filosofie:curs de bază, Ekkehard Martens, Herbert Schnädelbach, Editura Ştiinţifică, 1999.
. Trei teorii etice: Kant, Mill, Hare, Valentin Mureşan, Bucureşti, Editura Universităţii din Bucureşti, 2012.
. Teorii ale dreptatii, Editura Alternative, Bucuresti, 1996.
. Etica aplicată, Editura Alternative, Bucuresti, 1995.
. Philosophy of Technology - An Introduction, Val Dusek, 2006, Blackwell.
. Philosophy of Art: A Contemporary Introduction, Noël Carroll, 1999, Routledge.
. Human Ecology, Gerald G. Marten, Earthscan, 2001.
ilosofia minţii şi ştiinţa cogniţiei, Mihail Radu Solcan, Editura Universităţii din Bucureşti, 2000.
mieson, Dale . 2003. A Companion to Environmental Philosophy. Blackwell Publishing.
Marghescu, Georgeta. 2009. Cultura Ecologică. Bucureşti, Printech.

Bibliography:

11. Evaluation

Activity type	11.1 Evaluation criteria	11.2 Evaluation methods	11.3 Percentage of final grade
11.4 Course	Active attendance, timely contributions, solving exercises, completing assignments throughout the semester.	Continuous assessment during the semester	80
	mastery of the knowledge presented during the semester; ability to apply this knowledge to solve various types of exercises/applications (written evaluation)	Colloquium	20
11.5 Seminary/laboratory/project			

11.6 Passing conditions
Obtaining 50% of the total score. Minimum seminar attendance (50%+1, i.e., 4 attendances out of 7) is a necessary but not sufficient condition for passing Passive attendance in the seminar does not count as activity Assessment during the semester may take place both in the lecture and in the seminar. A maximum of 20 points (20% of the final grade) can be obtained as a bonus through additional active attendance (between 10 and 14 activities – directly proportional) The result of the final evaluation in a course results from summing the points allocated to each activity within the course (the total of which is 100), and the total score is converted into a grade (from 1 to 10) by dividing by 10 and rounding (except for grade 5 which is obtained by truncation). The minimum passing score is 50 points.

12. Corroborate the content of the course with the expectations of representatives of employers and representative professional associations in the field of the program, as well as with the current state of knowledge in the scientific field approached and practices in higher education institutions in the European Higher Education Area (EHEA)

Philosophy for students provides essential *transversal* competencies: critical thinking, argumentative reasoning, ethical analysis (responsibility, safety, data protection), reflection on technology (socio-technical impact), and conceptual communication. These competencies complement the technical skills required by the labor market (e.g., problem solving, professional communication, professional responsibility).

Date	Course lecturer	Instructor(s) for practical activities
21.09.2026	Assoc. Prof. Dr. Mircea Toboşaru	Assoc. Prof. Dr. Mircea Toboşaru

Date of department approval	Head of department
22.09.2026	Prof. Dr. Claudius Dan

Date of approval in the Faculty Council	Dean
22.09.2026	Prof. Dr. Mihnea Udrea

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