Universitatea Națională de Știință și Tehnologie Politehnica București
Facultatea de Electronică, Telecomunicații și
Tehnologia Informației

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	Masters
1.6 Programme of studies	Microsystems

2. Date despre disciplină

2.1 Course name (ro) (en)				Etică și integritate academică			
2.2 Course Lecturer				S.l./Lect. Dr. Mircea Tobosaru			
2.3 Instructor for practical activities				S.l./Lect. Dr. Mircea Tobosaru			
2.4 Year of studies	1	2.5 Semester	I	2.6. Evaluation type	V	2.7 Course regime	Ob
2.8 Course type		DC	2.9 Course code	UPB.04.M4.O.16-28		2.10 Tipul de notare	Nota

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

3.1 Number of hours per week	1	Out of which: 3.2 course	1.00	3.3 seminary/laboratory	0
3.4 Total hours in the curricula	14.00	Out of which: 3.5 course	14	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.					10
Tutoring					6
Examinations					6
Other activities (if any):					14

3.7 Total hours of individual study	36.00
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	Ability to speak freely in front of a group of colleagues

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 video projector and computer.
5.2 Seminary/ Laboratory/Project	The laboratory will be held in a specific room, which must include: video projector,computer, specific software (Python) and equipment

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)*

The course aims at theoretical understanding and practical assumption of academic deontological norms. It also aims to train students in the spirit of academic integrity and responsibility. Secondary objectives: (i)Assimilating a relevant ethical conceptual apparatus so that students can effectively analyze ethically challenging situations in an academic and professional context (ii) Connecting theoretical issues with ethical issues practical (iii) Acquiring concrete rules on academic writing and conducting research in an ethical manner.

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	The course aims at the theoretical understanding and practical acceptance of academic deontological norms. It also aims to prepare students in the spirit of academic integrity and responsibility. Secondary objectives: (i) Assimilating a relevant conceptual ethical apparatus, so that students can effectively analyze ethically challenging situations in an academic and professional context (ii) Connecting theoretical issues with practical ethical aspects (iii) Acquiring concrete rules regarding academic writing and conducting research in an ethical manner.
Transversal (General) Competences	– Ethical communication in academic context. – Has a degree of autonomy and critical ethical thinking: has the ability to think in ethical terms, to seek and analyze ethical dilemmas independently, to find morally appropriate solutions. – Has the ability to analyze, synthesize, explain and communicate the acquired ethical knowledge as a result of an internalization process. – Respects the principles of academic ethics: in the documentation activity knows how to correctly quote the used bibliographic sources, knows the types of methodologies relevant to STEM, respects the ethical principles of academic research.

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.* · Lists the most important moments in the development of the discipline of academic ethics. · Defines specific notions of academic ethics. · Selects fundamental ethical concepts for the analysis of moral dilemmas that may arise in the academic context. · Describes theories/classifies notions/processes/phenomena/structures used in academic ethics. · Identifies the main research methods and techniques of academic writing. · Highlights the consequences and relationships of the process of ethical institutional management. · Understands the need to promote and support academic ethical principles and values.
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).* · Selects and groups information relevant to the given context. · Analyses and compares the information necessary for the design of professional activities. · Work effectively in a team. · Develops a scientific text. · Identifies solutions and elaborates strategies and procedures for working life. · Acquires, improves or corrects knowledge about ethical communication. · Can effectively analyze ethical communication processes in various contexts (professional, academic, interpersonal, public, intercultural, etc.)
Responsability and autonomy	*The student's capacity to autonomously and responsably apply their knowledge and skills.* · Selects relevant bibliographic and webographic sources, analyzes them and uses them in theelaboration of works. · Respects the principles, norms and values of ethics and academic integrity in retrievinginformation from webographic and bibliographic sources. · Demonstrates receptivity in new learning contexts. · Identifies the roles and responsibilities of teamwork with colleagues and teachers in teachingand extracurricular activities. · Manifests social responsibility through active involvement in teaching and teaching activities. · Demonstrates the ability to ethically manage real-life situations, · Acts responsibly in different cultural contexts. · Identifies opportunities for assisted further training and personal development. · Communicates effectively and ethically with colleagues, teachers and in the professional organizations in which it operates.

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.)*

Building on the analysis of students' learning characteristics and their specific needs, the teaching process will explore teaching methods both expository (lecture, exposure) and conversational-interactive, based on learning by discovery models facilitated by direct and indirect exploration of reality (experiment, demonstration, modeling), but also on action-based methods such as exercise, exercise, and, practical activities and problem solving. Lectures will be used in the teaching activity, based on Power Point presentations or different videos that will be made available to students. Each course will start with the recapitulation of the chapters already covered, with an emphasis on the notions taken at the last course. The

presentations use images and schemes so that the information presented is easily understood and assimilated. This discipline covers information and practical activities designed to support students in their learning efforts and to develop optimal collaborative and communication relationships in a climate conducive to learning through discovery. It will be considered to practice the skills of active listening and assertive communication, as well as the mechanisms of feedback construction, and, as ways of behavioral regulation in various situations and of adapting the pedagogical approach to the learning needs of the students. The ability to work in teams to solve different learning tasks will be practiced. Full course materials are available in electronic format on the Moodle platform of the faculty. The applications developed help students to develop optimal communication relationships in a climate conducive to learning through discovery.

10. Contents

COURSE		
Chapter	**Content**	**No. hours**
1	I. Course presentation: purpose, structure, graduation conditions. II. Introductory notions: morality, ethics, applied ethics, metaethics, academic ethics. III. Discipline horizon.	2
2	I. The main ethical traditions (authors, basic texts, critical discussion): deontology, utilitarianism, virtue ethics. II. University ethical codes and professional deontological codes. Explaining the core ethical values and principles of the UPB Code of Ethics. III. Academic roles, associated rights and responsibilities.	2
3	I. Plagiarism, autoplagiarism. II. Digital ways of verifying plagiarism. III. Writing academic papers: AI integration.	2
4	I. Drafting the scientific work. II. Types of research and originality of research. I. Legislation in academia. II. Intellectual property, copyright, trademarks, inventions, public domain, licenses, etc.	2
5	I. Drafting the scientific work. III. Types of research and originality of research. II. Academic feed-back methods. IV. After university: from academic ethics to business ethics.	2
6	I. Working in a research team. II. Ethical principles of research.	2
7	Dissemination of results: editorial process, scientific journals, databases.	2
	Total:	14

Bibliography:
. Androniceanu, Armenia. 2017. Fundamente privind elaborarea unei lucrări ştiinţifice. Bucureşti: Editura Universitară.
. Barrow, Robin, şi Patrick Keeney (eds.). 2006. Academic Ethics. London: Routledge.
. Buchanan, Elizabeth A. 2003. Readings in Virtual Research Ethics: Issues and Controversies.Information Science Pub.
. Burgess, Robert G. 1989. The Ethics Of Educational Research. London: Routledge.
. Crăciun, Dan, Vasile Morar, şi Vasile Macoviciuc. 2005. Etica afacerilor. Bucureşti: Editura Paideia.
. Eco, Umberto. 2006. Cum se face o tezã de licentã. Iaşi: Polirom.
. Harris, C. E., ş i Michael S. 1995. Pritchard. Engineering Ethics: Concepts and Cases. Belmont, Calif.: Wadsworth.
. Harvey, Gordon. 2008. Writing with Sources. A guide for students. Indianapolis, Ind: Hackett Pub.
. Lipson, Charles. 2006. Cite Right: A Quick Guide to Citation Styles--MLA, APA, Chicago, the Sciences, Professions, and More. University of Chicago Press.
. Loue, Sana. 2000. Textbook of Research Ethics: Theory and Practice. Springer.
. Mureşan, Valentin. 2009. Managementul eticii în organizaţii. Bucureşti: Editura Universităţii din Bucureşti.
. Mureşan, Valentin. 2012. Trei teorii etice: Kant, Mill, Hare. Bucureşti: Editura Universităţii din Bucureşti.
. Constantinescu, Mihaela, ş i Valentin Mureş an. 2013. Instituţionalizarea eticii - mecanisme şi instrumente. Bucureşti: Editura Universităţii din Bucureşti.
. Rad, Ilie. 2008. Cum se scrie un text ştiinţific. Iaşi: Ed. Polirom.
. Shrader-Frechette, Kristin. 2000. Ethics of Scientific Research. Rowman & Littlefield Publishers.
. Singer, Peter (ed.). 2006. Tratat de Etică. Bucureşti: Polirom.
. Whitbeck, Caroline. 2011. Ethics in Engineering Practice and Research. Cambridge University Press.

Bibliography:

11. Evaluation

Activity type	11.1 Evaluation criteria	11.2 Evaluation methods	11.3 Percentage of final grade
11.4 Course	Knowledge of fundamental theoretical concepts related to academic ethics. Knowledge of how to apply theory to solving academic ethical dilemmas.	Written examination before the exam session.	20%
11.5 Seminary/laboratory/project	Basic knowledge of academic ethics .Ability to produce a relevant synthesis	MOODLE Activities	80%
11.6 Passing conditions			
– Getting 50% of the total score. – Participation in the written examination.			

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)

· Discipline meets the current requirements of development and evolution at national and international level of higher education.

· The syllabus of the discipline is integrated into the associate degree programs.

· Provides students with skills related to the needs of current qualifications, scientific and ethical training corresponding to the university level, and, enabling them to develop personally and professionally in accordance with academic and professional engineering ethical norms.

The course has a similar content to courses conducted under similar study programmes from other universities.

Date	Course lecturer	Instructor(s) for practical activities
17.10.2024	S.l./Lect. Dr. Mircea Tobosaru	S.l./Lect. Dr. Mircea Tobosaru

Date of department approval	Head of department
31.10.2024	Prof. Dr. Claudius DAN

Date of approval in the Faculty Council	Dean
01.11.2024	Prof. Dr. Mihnea Udrea