



## 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         | Advanced Computing in Embedded Systems                                |

### 2. Date despre disciplină

|   |   |              |                 |   |   |                      |      |
|---|---|--------------|-----------------|---|---|----------------------|------|
| 2.1 Course name (ro)<br>(en)            |   |              |                 | Etică și integritate academică<br>Ethics and Academic Integrity |   |                      |      |
| 2.2 Course Lecturer                     |   |              |                 | S.I./Lect. Dr. Andrei Simionescu-Panait                         |   |                      |      |
| 2.3 Instructor for practical activities |   |              |                 |   |   |                      |      |
| 2.4 Year of studies                     | 1 | 2.5 Semester | I               | 2.6. Evaluation type  | V | 2.7 Course regime    | Ob   |
| 2.8 Course type                         |   | F            | 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<br>Supplemental documentation (library, electronic access resources, in the field, etc)<br>Preparation for practical activities, homework, essays, portfolios, etc. |       |                          |      |                         | 30    |
| Tutoring   |       |                          |      |                         | 2     |
| Examinations   |       |                          |      |                         | 4     |
| Other activities (if any):   |       |                          |      |                         | 0     |
| 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          | - |
| 4.2 Results of learning | - |



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

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| 5.1 Course                          | Lecture room with video projector |
| 5.2 Seminary/<br>Laboratory/Project | -                                 |

**6. General objective** *(Referring 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 curricula of the study programme, etc. will be described in a general manner)*

The aim of the course is the theoretical understanding and the practical assumption of the academic deontological norms. It also aims to train students in the spirit of academic integrity and responsibility.

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

|  |  |
|--|--|
| <b>Specific Competences</b>              | <ul style="list-style-type: none"><li>– Demonstrates basic knowledge of academic ethical principles.</li><li>– Apply the acquired theoretical knowledge in practice to be able to act ethically when faced with ethical dilemmas in an academic context.</li><li>– Applies academic research methodologies, academic writing and behavioral norms when appropriate.</li><li>- Analyzes coherently and correctly the rights and obligations of students, teaching staff and auxiliary staff.</li><li>– Assimilate specific norms of academic behavior and academic research (e.g. avoidance of discrimination, favoritism, corruption, avoidance of plagiarism, self-plagiarism, application of writing styles in the case of academic papers, etc.).</li><li>– Adequately identifies problematic ethical situations from an ethical point of view: discrimination, favoritism, corruption, sexual harassment, plagiarism, self-plagiarism, data manipulation, etc.).</li></ul> |
| <b>Transversal (General) Competences</b> | <ul style="list-style-type: none"><li>– Communicate ethically in an academic context.</li><li>– Possesses a degree of autonomy and critical ethical thinking: has the ability to think in ethical terms, to search and analyze ethical dilemmas independently, to identify morally appropriate solutions.</li><li>– Has the ability to analyze, synthesize, explain and communicate the acquired ethical knowledge, as a result of an internalization process.</li><li>- Respects the principles of academic ethics: in the documentation activity, knows how to correctly cite the bibliographic sources used, knows the types of methodologies relevant to STEM, respects the ethical principles of academic research.</li></ul>   |

**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 accomplishments 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                   | <p><i>The result of knowledge acquisition through learning. The knowledge represents the totality of facts, principles, theories and practices for a given work or study field. They can be theoretical and/or factual.</i></p> <ul style="list-style-type: none"> <li>– Lists the most important moments in the development of the discipline of academic ethics.</li> <li>– Defines notions specific to academic ethics.</li> <li>– Select fundamental ethical concepts for the analysis of moral dilemmas that may arise in an academic context.</li> <li>– Describes theories/classifies notions/processes/phenomena/structures used in academic ethics.</li> <li>– Identifies the main research methods and academic writing techniques.</li> <li>– Highlights consequences and relationships of the institutional ethical management process.</li> <li>– Understands the need to promote and support academic ethical principles and values.</li> </ul>   |
| Skills                      | <p><i>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 instrumentation).</i></p> <ul style="list-style-type: none"> <li>– Select and group information relevant to the given context.</li> <li>– Analyze and compare the information needed to design professional activities.</li> <li>– Works effectively in a team.</li> <li>– Elaborate a scientific text.</li> <li>– Identifies solutions and develops strategies and procedures for professional life.</li> <li>– Acquire, improve or correct knowledge about ethical communication.</li> <li>– Can effectively analyze ethical communication processes in various contexts (professional, academic, interpersonal, public, intercultural, etc.)</li> </ul>   |
| Responsability and autonomy | <p><i>The student's capacity to autonomously and responsibly apply their knowledge and skills.</i></p> <ul style="list-style-type: none"> <li>– Selects relevant bibliographic and webographic sources, analyzes them and uses them in the elaboration of papers.</li> <li>– Respect the principles, norms and values of ethics and academic integrity in retrieving information from webographic and bibliographic sources.</li> <li>– Demonstrates responsiveness in new learning contexts.</li> <li>– Identifies the roles and responsibilities of teamwork with colleagues and teaching staff in teaching and extracurricular activities.</li> <li>– Demonstrates social responsibility through active involvement in didactic and extra-didactic activities.</li> <li>– Demonstrates the ability to ethically manage real-life situations.</li> <li>– Act responsibly in different cultural contexts.</li> <li>– Identifies opportunities for ongoing assisted training and personal development.</li> <li>– Communicates effectively and ethically with colleagues, teaching staff and in the professional organizations in which they work.</li> </ul> |

**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.*)

Starting from the analysis of students' learning characteristics and their specific needs, the teaching process will explore both expository (lecture, exposition) and conversational-interactive teaching methods, based on discovery learning models facilitated by direct exploration and indirect way of reality (experiment, demonstration, modelling), but also on action-based methods, such as exercise, practical activities and problem solving. In the teaching activity, lectures will be used, based on Power Point presentations or different videos that will be made available to the students. Each course will start with a recap of the chapters already covered, with an emphasis on the concepts covered in the last course. Presentations use



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images and diagrams so that the information presented is easy to understand and assimilate. This discipline covers information and practical activities designed to support students in their learning efforts and the development of optimal collaborative and communicative relationships in a climate conducive to discovery learning. The practice of active listening and assertive communication skills, as well as feedback construction mechanisms, will be taken into account, as ways of regulating behavior in various situations and adapting the pedagogical approach to the students' learning needs. Teamwork skills will be practiced to solve different learning tasks. Full course materials are available electronically on the faculty's Moodle platform. The developed applications help students in developing optimal communication relationships in a climate conducive to learning through discovery.

## 10. Contents

| COURSE  |   |           |
|---------|---|-----------|
| Chapter | Content   | No. hours |
| 1       | Presentation of the course: purpose, structure, evaluation. Discussion about student rights   | 2         |
| 2       | Classical frameworks of ethical analysis: deontology, utilitarianism, virtue ethics. Debate about the academic agent's motivation to cheat. | 2         |
| 3       | Jobs incompatible with the academic environment. Ethical debate.  | 2         |
| 4       | Writing academic articles. Citation styles. Types of plagiarism, self-plagiarism.   | 2         |
| 5       | Integration of AI in research. Debate about the limits between the use of AI and intellectual theft.  | 2         |
| 6       | The publishing process. Intellectual property, copyright, trademarks, patentees, Creative Commons licenses.                                 | 2         |
| 7       | Final evaluation.   | 2         |
|         | <b>Total:</b>   | 14        |



### Bibliography:

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2. Emilia Șercan. 2017. Deontologie Academica: ghid practic. Ed. Universitatii din Bucuresti.
3. Socaciu et al. 2018. Etică și integritate academică. Editura Universității din București.
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5. Buchanan, Elizabeth A. 2003. Readings in Virtual Research Ethics: Issues and Controversies. Information Science Pub.
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8. Eco, Umberto. 2006. Cum se face o teză de licență. Iași: Polirom.
9. Harris, C. E., și Michael S. 1995. Pritchard. Engineering Ethics: Concepts and Cases. Belmont, Calif.: Wadsworth.
10. Harvey, Gordon. 2008. Writing with Sources. A guide for students. Indianapolis, Ind: Hackett Pub.
11. Lipson, Charles. 2006. Cite Right: A Quick Guide to Citation Styles--MLA, APA, Chicago, the Sciences, Professions, and More. University of Chicago Press.
12. Loue, Sana. 2000. Textbook of Research Ethics: Theory and Practice. Springer.
13. Mureșan, Valentin. 2009. Managementul eticii în organizații. București: Editura Universității din București.
14. Mureșan, Valentin. 2012. Trei teorii etice: Kant, Mill, Hare. București: Editura Universității din București.
15. Constantinescu, Mihaela, și Valentin Mureșan. 2013. Instituționalizarea eticii - mecanisme și instrumente. București: Editura Universității din București.
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17. Shrader-Frechette, Kristin. 2000. Ethics of Scientific Research. Rowman & Littlefield Publishers.
18. Singer, Peter (ed.). 2006. Tratat de Etică. București: Polirom.
19. 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                      | Participation in debates. Uploading assignments to Moodle. Completing the grid test. | Oral examination        | 100                            |
| 11.5 Seminary/laboratory/project |  |                         |                                |
| 11.6 Passing conditions          |  |                         |                                |
| At least 50% of the final grade  |  |                         |                                |



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**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)**

– The lecture meets the current requirements of development and evolution on a national and international level of higher education.

– The curriculum of the discipline is integrated into the associate study programs.

- The students are provided with skills related to the needs of the current qualifications, a scientific and ethical training corresponding to the university level, which will allow them a personal and professional development in accordance with the academic and professional engineering ethical norms.

| Date | Course lecturer | Instructor(s) for practical activities |
|------|-----------------|--|
|------|-----------------|--|

|  |   |  |
|--|---|--|
|  | S.I./Lect. Dr. Andrei Simionescu-Panait |  |
|--|---|--|

| 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 |
|------------|------------------------|