

SYLLABUS

1. Information about the program

1.1 Higher education institution	UNIVERSITY POLITEHNICA OF TIMISOARA
1.2 Faculty ¹ / Department ²	ELECTRONICS, TELECOMUNICATON AND INFORMATION TECHNOLOGIES/CLS
1.3 Field of study (name/code ³)	ELECTRONIC ENGINEERING, TELECOMUNICATION AND INFORMATION TECHNOLOGIES
1.4 Study cycle	License
1.5 Study program (name/code/qualification)	TST-ENG/20/20/10/100/10/TST-ENG

2. Information about the discipline

2.1 Name of discipline/ formative category ⁴	Academic Ethics and Integrity/ DC						
2.2 Coordinator (holder) of course activities	Associate professor dr. Marcela Alina Fărcașiu						
2.3 Coordinator (holder) of applied activities ⁵	Associate professor dr. Marcela Alina Fărcașiu						
2.4 Year of study ⁶	3	2.5 Semester	6	2.6 Type of evaluation	D	2.7 Regime of discipline ⁷	DOb

3. Total estimated time – hours / semester: direct teaching activities (fully assisted or partly assisted) and individual training activities (unassisted) ⁸

3.1 Number of fully assisted hours / week	2 of which:	3.2 course	1	3.3 seminar / laboratory / project	1/0/0
3.1* Total number of fully assisted hours / semester	28 of which:	3.2* course	14	3.3* seminar / laboratory / project	14/0/0
3.4 Number of hours partially assisted / week	of which:	3.5 training		3.6 hours for diploma project elaboration	
3.4* Total number of hours partially assisted / semester	of which:	3.5* training		3.6* hours for diploma project elaboration	
3.7 Number of hours of unassisted activities / week	1,57 of which:	additional documentary hours in the library, on the specialized electronic platforms and on the field			0,8
		hours of individual study after manual, course support, bibliography and notes			0,5
		training seminars / laboratories, homework and papers, portfolios and essays			0,27
3.7* Number of hours of unassisted activities / semester	22 of which:	additional documentary hours in the library, on the specialized electronic platforms and on the field			11,2
		hours of individual study after manual, course support, bibliography and notes			7
		training seminars / laboratories, homework and papers, portfolios and essays			3,78
3.8 Total hours / week ⁹	3.57				
3.8* Total hours /semester	50				
3.9 Number of credits	2				

4. Prerequisites (where applicable)

4.1 Curriculum	• English Language
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¹ The name of the faculty which manages the educational curriculum to which the discipline belongs

² The name of the department entrusted with the discipline, and to which the course coordinator/holder belongs.

³ The code provided in HG - on the approval of the Nomenclature of fields and specializations / study programs, annually updated.

⁴ Discipline falls under the educational curriculum in one of the following formative disciplines: Basic Discipline (DF), Domain Discipline (DD), Specialist Discipline (DS) or Complementary Discipline (DC).

⁵ Application activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr).

⁶ Year of studies in which the discipline is provided in the curriculum.

⁷ Discipline may have one of the following regimes: imposed discipline (DI) or compulsory discipline (DOb)-for the other fundamental fields of studies offered by UPT, optional discipline (DO) or optional discipline (Df).

⁸ The number of hours in the headings 3.1 *, 3.2 *, ..., 3.8 * is obtained by multiplying by 14 (weeks) the number of hours in headings 3.1, 3.2, ..., 3.8. The information in sections 3.1, 3.4 and 3.7 is the verification keys used by ARACIS as: (3.1) + (3.4) ≥ 28 hours / wk. and (3.8) ≤ 40 hours / wk.

⁹ The total number of hours / week is obtained by summing up the number of hours in points 3.1, 3.4 and 3.7.

4.2 Competencies	•
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5. Conditions (where applicable)

5.1 of the course	•
5.2 to conduct practical activities	•

6. Specific competencies acquired through this discipline

Specific competencies	<ul style="list-style-type: none"> • Have fundamental knowledge to successfully handle ethical/moral situations that might be encountered in their engineering careers. • Articulate and practice professional, ethical, environmental and societal responsibilities, and value different global and cultural perspectives. • Exhibit effectiveness in communication skills • Develop critical thinking skills and professional judgment and understand practical difficulties of bringing about change. • Understand case study material and identify areas where ethical considerations are important. • Assess case studies to identify how professional behaviour and ethical considerations could be improved
Professional competencies ascribed to the specific competencies	<ul style="list-style-type: none"> • Use of fundamentals in terms of devices, circuits, systems, instrumentation and electronics technology. • Application of knowledge, concepts and basic methods related to computer system architecture, microprocessors, microcontrollers, programming languages and techniques. • Solving technological problems in fields of applied electronics.
Transversal competencies ascribed to the specific competencies	<ul style="list-style-type: none"> • Methodical analysis of field-related problems aimed at identifying acknowledged solutions, thus ensuring the accomplishment of professional tasks. • Definition of activity stages and their distribution to subordinates in terms of responsibilities, providing effective exchange of information and interpersonal communication. • Adaptation to new technologies, professional and personal development through continuous training, using printed documentation sources, specialized software and electronic resources in Romanian and at least one foreign language.

7. Objectives of the discipline (based on the grid of specific competencies acquired - pct.6)

7.1 The general objective of the discipline	<ul style="list-style-type: none"> • Help students to recognize and evaluate ethical challenges that they will face in their academic and professional careers through knowledge and exercises that deeply challenge their decision making processes and ethics
7.2 Specific objectives	<ul style="list-style-type: none"> • An understanding of duties and responsibilities as professionals through gaining knowledge of the philosophies of ethics, professional practice, and world culture. • Basic knowledge to make informed ethical decisions when confronted with problems in the working environment. • Improved awareness of potential ethical issues within an engineering context. • Team skills through working in teams on assignments and in-class assignments. • Subjective analytical skills through investigation and evaluation of ethical problems in engineering settings using accepted tests for moral problem solving. • An understanding of how societal morals varies with culture and how this influences ethical thought and action. • Improved communications skills with regard to ethical and professional issues in engineering. • Know some of the classic cases as well as contemporary issues in engineering ethics

8. Content ¹⁰

8.1 Course	Number of hours	Teaching methods ¹¹
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¹⁰ It details all the didactic activities foreseen in the curriculum (lectures and seminar themes, the list of laboratory works, the content of the stages of project preparation, the theme of each practice stage). The titles of the laboratory work carried out on the stands shall be accompanied by the notation "(*)".

Ethical theories. Ethical dilemmas. Ethics in engineering. The role of ethical codes. Engineer's professionalism. Engineer's responsibility regarding the public's safety	2	Lecture, brainstorming, discussion, examples
Conflicts of interest. Intellectual property and the professional secret. Whistleblowing.	2	
Risk management. Discrimination. Confidentiality	2	
Communication and the communication process. Communication barriers in the workplace. Organisational communication. The 7 Cs of communication	2	
Written communication in the workplace. Making an oral presentation	2	
Exam – first sit	2	
Exam - resit	2	

Bibliography ¹²

1. Barry, B. E., & Herkert, J. R. (2015). Engineering ethics. In *Cambridge handbook of engineering education research* (pp. 673-692). Cambridge University Press.
2. Harris Jr, C. E., Pritchard, M. S., Rabins, M. J., James, R., & Englehardt, E. (2013). *Engineering ethics: Concepts and cases*. Cengage Learning.
3. Fărcașiu, M. A. (2017). Cultural Challenges in Teaching Ethics to Romanian Engineering Students. *Buletinul Stiintific al Universitatii Politehnica din Timisoara, Seria Limbi Moderne*, (16), 61-68.
4. Maude, B. (2017). *Managing cross-cultural communication: Principles and practice*. Bloomsbury Publishing.

8.2 Applied activities ¹³

	Number of hours	Teaching methods
Discussion of some ethical cases in the engineering environment	2	Conversation, simulation, debate, role play
Discussion of some ethical cases in the engineering environment	2	
Discussion of some ethical cases in the engineering environment	2	
Using the 7 Cs when writing e-mails. Writing a business letter. Writing a memo,	2	
Oral presentations of ethical cases	2	
Oral presentations of ethical cases	2	
Oral presentations of ethical cases	2	

Bibliography ¹⁴

1. Beer, D. F., & McMurrey, D. A. (2019). *A Guide to Writing as an Engineer*. John Wiley & Sons.
2. Fărcașiu, M. A. (2017). Cultural Challenges in Teaching Ethics to Romanian Engineering Students. *Buletinul Stiintific al Universitatii Politehnica din Timisoara, Seria Limbi Moderne*, (16), 61-68.
3. Gunelius, S. (2018). *Ultimate guide to email marketing for business*. Entrepreneur Press.
4. Martin, D. A., Conlon, E., & Bowe, B. (2021). Using case studies in engineering ethics education: the case for immersive scenarios through stakeholder engagement and real life data. *Australasian Journal of Engineering Education*, 26(1), 47-63.

9. Corroboration of the content of the discipline with the expectations of the main representatives of the epistemic community, professional associations and employers in the field afferent to the program

¹¹ Presentation of the teaching methods will include the use of new technologies (e-mail, personalized web page, electronic resources etc.).

¹² At least one title must belong to the discipline team and at least one title should refer to a reference work for discipline, national and international circulation, existing in the UPT library.

¹³ Types of application activities are those specified in footnote 5. If the discipline contains several types of applicative activities then they are sequentially in the lines of the table below. The type of activity will be in a distinct line as: "Seminar:", "Laboratory:", "Project:" and / or "Practice/training".

¹⁴ At least one title must belong to the discipline team.

- Students will have the improved ability to function as multidisciplinary teams.
- Students will have an improved ability to communicate effectively.
- Students will have the broad education necessary to better understand the impact of engineering solutions in a global/societal context.
- Students will have recognition of the need for and an ability to engage in lifelong learning

10. Evaluation

Type of activity	10.1 Evaluation criteria ¹⁵	10.2 Evaluation methods	10.3 Share of the final grade
10.4 Course		Final exam at the end of semester	50%
10.5 Applied activities	S:	Written assignments and an oral presentation	50%
	L:		
	P¹⁶:		
	Pr:		
10.6 Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified ¹⁷)			
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Date of completion

29.06.2023

**Course coordinator
(signature)**

**Coordinator of applied activities
(signature)**

**Head of Department
(signature)**

Date of approval in the Faculty Council ¹⁸

14.09.2023

**Dean
(signature)**

¹⁵ Syllabus must contain the procedure for assessing the discipline, specifying the criteria, methods and forms of assessment, as well as specifying the weightings assigned to them in the final grade. The evaluation criteria shall be formulated separately for each activity foreseen in the curriculum (course, seminar, laboratory, project). They will also refer to the forms of verification (homework, papers, etc.)

¹⁶ In the case where the project is not a distinct discipline, this section also specifies how the outcome of the project evaluation makes the admission of the student conditional on the final assessment within the discipline.

¹⁷ It will not explain how the promotion mark is awarded.

¹⁸ The endorsement is preceded by the discussion of the board's view of the study program on the discipline record.