COURSE GUIDE – EXTENDED FORM

Academic year 2026 – 2027

1. Program information

1.1 University	*"Gheorghe Asachi" Technical University of Iasi*
1.2 Faculty	*"Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection*
1.3 Department	*Organic, Biochemical and Food Engineering*
1.4 Field	*Chemical Engineering*
1.5 Study level	*Master*
1.6 Specialization	*Chemical and Biochemical Process Technology - CBPT*

2. Course information

2.1.1 Course name	**Ethics and Integrity**						
2.1.2 Course code	506	2.1.3. Course category Fundamental/Specialized/Complementary)					DS
2.2 Course instructor	Associate professor Irina Cârlescu						
2.3 Course instructors for applied activities (S, L, P, Pr)	Associate professor Irina Cârlescu						
2.4 Year of study [2]	1	2.5 Semesterl[3]	1	2.6 Evaluation type[4]	V	2.7 Course type [5]	DOB

3. Amount of time estimated for course activities (hours / term)

3.1 Hours /week	2	3.2 course	1	3.3a sem.	1	3.3b laboratory	0	3.3c project	0	3.3.d. practice	0	
3.4 Total hours from curriculum[6]	28	3.5 course	14	3.6a sem.	0	3.6b laboratory	14	3.6c project	0			

Time spent for related activities[7]	Hours
Study of recommended books, course support, scientific papers and course notes	20
Study in library and practical skills development	15
Preparation of seminars / laboratory works / project phases / home works / presentations	15
Evaluation[8]	3
Other activities:	

3.7 Total hours of individual study [9]	53
3.8 Total hours per semestre[10]	81
3.9 Number of credits	3

4. Prerequisites (optional)

4.1 curriculum[11]	-
4.2 learning outcomes	-

5. Requirements

5.1 Conditions for course delivery[12]	Whiteboard, video projector will be used. Students must attend the course with their mobile phones turned off.
5.2 Seminar requirements[13]	Whiteboard, video projector, specific materials will be used. Students must attend the seminar with their mobile phones turned off.

6. Overall objective of the course

The course aims to provide students with a foundational understanding of concepts specific to academic ethics and integrity with a view to implementing them in the academic environment and developing a responsible professional career, as moral conduct is an important benchmark of professionalism. Students will gain advanced insights into the access to scientific literature, good conduct in research, data processing, intellectual property and copyright, plagiarism. By completing the course and seminar, students will acquire skills in understanding theoretical aspects they can put into practice in concrete situations and will be able to develop viable solutions in the field of chemical and biochemical process technology.

7. Learning outcomes

Knowledge	The student / graduate: - describes the basics concepts of academic ethics like moral principles, values and rules or personal responsibility. - explains the ethics issue in academic writing, communication or dissemination of information. - summarizes the good conduct in research, data processing, intellectual property and copyright, plagiarism.
Skills	The student / graduate: - uses the concepts acquired to identify and solve problems with ethical implications. - plans documentation and research in accordance with the principles of ethics and integrity. - uses the data and interprets the research results in accordance with the good practice rules. - critically evaluate scientific fraud. - uses dedicated software for writing bibliographic references and correctly citing authors. - identifies and solves issues with ethical implications in chemical and biochemical process technology.
Responsibility and autonomy	The student / graduate: - respects ethical principles, standards, and values in the correct and timely completion of professional tasks, by adopting a rigorous, efficient, and responsible work strategy in decision-making and problem-solving; - assumes responsibility for contributing to professional knowledge and practices and/or for reviewing the strategic performance of teams; - engages in continuous professional development in their field by appropriately using effective lifelong learning methods and techniques.

8. Teaching methods

The teaching process will involve participatory lectures and debates, supported by PowerPoint presentations made available to students. These presentations include images and diagrams to make the information easier to understand and assimilate. Each lecture will begin with a brief review of the topics covered in the previous session.

The teaching method is also based on discovery learning models, facilitated through both direct and indirect exploration of reality (e.g., experiments, demonstrations, modelling). Additionally, action-based methods will be employed, such as practical exercises, hands-on activities, and problem-solving tasks.

9. Course content

9. 1. Courses[15]	**Teaching methods**	**Time allocation**
9.1.1. Fundamental concepts and distinctions of academic ethics. Origins of ethics. Major ethical traditions: morality, legality, religion. Principles, values and moral rules: moral, immoral, non-moral. Moral autonomy and personal responsibility.	Interactive lecture Guided discussions Clarifying explanations	2 hours
9.1.2. Implementation of academic ethics and integrity procedures in the university environment. The regulatory framework specific to institutional ethics. Ethics codes and committees. Moral rules and etiquette in academia. Examples of good practice.		2 hours
9.1.3. Academic freedom and disagreement in science. Collaboration, complicity and the warning of integrity. Access to resources.		2 hours
9.1.4. Good conduct in research and development. Definitions. Intellectual property and copyright.		2 hours
9.1.5. Writing a scientific paper in accordance with the principles of ethics and academic integrity.		2 hours
9.1.6. Scientific fraud, plagiarism and duplication of publication (self-plagiarism). Forms of plagiarism. Plagiarism procedures. Other forms of academic dishonesty.		2 hours
9.1.7. Ways of quick identification of scientific fraud. Examples of scientific fraud cases. Consequences and sanctions. Social effects of lack of academic integrity.		2 hours

Course bibliography:

1. Bernard Williams. Morality: an introduction to ethics. Cambridge University Press, (1993).
2. David L. Finegold, Cécile M. Bensimon, Abdallah S. Daar, Margaret L. Eaton, Béatrice Godard, Bartha Maria Knoppers, Jocelyn E. Mackie and Peter A. Singer. Bioindustry ethics. Academic Press, (2005).
3. Peter Singer. A companion to ethics. Wiley-Blackwell, 1993.
4. Andrei Avram, Cătălin Berlic, Bogdan Murgescu, Mirela-Luminița Murgescu, Marian Popescu, Cosima Rughiniș, Dumitru Sandu, Emanuel Socaciu, Emilia Șercan, Bogdan Ștefănescu, Simina Elena Tănăsescu, Sanda Voinea. Academic ethics. Framework curriculum. University of Bucharest Publishing (2018).
5. Emanuel Socaciu, Constantin Vică, Emilian Mihailov, Toni Gibea, Valentin Mureșan, Mihaela Constantinescu. Ethics and academic integrity. University of Bucharest Publishing (2018).

6. Carmen Bălan, Carmen Diaconu. Copyright and other intellectual property rights legislation in Romania. Deontological aspects of research and publication of scientific results. Chapter 2 in Handbook of Scientific Authorship. Coord. Ioan Dumitrache și Horia Iovu. http://www.ubm.ro/sites/al/images/docs/ManualAutoriat.pdf (2009).
7. Code of Ethics and Professional Academic Deontology of "Gheorghe Asachi" Technical University of Iasi. http://www.calitate.tuiasi.ro/TUIASI.COD.01_Codul%20de%20etica_E3R0%20(1).pdf. (Accessed on 22.01.2019).
8. http://www.ccea.ro/etica-si-integritate-academica/ (Accessed on 22.01.2019)

9.2b Seminar	Working methods [17]	Observations, Time allocation
9.2.b.1. Tolerated deviance. Factors influencing moral behaviour. Deontologism. Utilitarianism. Virtue ethics. Ethics in chemical and biochemical process technology.	Practical demonstrations, exercises, experiments	2 hours
9.2.b.2. Fabrication or deliberate alteration of experimental data. Forms of plagiarism. Problems and solutions. Ethics of scientific data processing. Documentation.		2 hours
9.2.b.3. Management and insertion of bibliographic references in documents using dedicated software.		2 hours
9.2.b.4. Ethics of presenting scientific data.		2 hours
9.2.b.5. Use of electronic means of checking work: advantages, limitations.		2 hours
9.2.b.6. Ethics in evaluation/auto-evaluation. Consequences and sanctions. Social effects of lack of academic integrity.		2 hours
9.2.b.7. Final evaluation.		2 hours

Bibliography for applied activities (seminar / laboratory / project):

1. Emilia Șercan. Academic ethics: a practical guide. University of Bucharest Publishing (2017).
2. Jay D. Humphrey, Jeffrey W. Holmes. Style and Ethics of Communication in Science and Engineering. Morgan & Claypool Publishers, (2009).
3. M. Șt. Rădulescu, Scientific research methodology. Elaboration of bachelor, master, doctoral works. Didactic and Pedagogical Publishing, Bucharest, (2011).
4. http://www.anelisplus.ro/wp-content/uploads/2018/06/Ghid_de_utilizare_Web-of-Science-2018.pdf
5. Clarivate Analytics Master Journal List (ISI) http://mjl.clarivate.com
6. Scopus https://www.scopus.com/sources

10. Evaluation

Activity type	**10.1 Evaluation criteria**	**10.2 Evaluation method**		**10.3 Percentage of the final grade** ***(recommended to be proportional to the number of hours allocated to each type of activity)***
10.4 Type of evaluation: Final Exam / Assessment	*Completeness and correctness of knowledge.* *Logical coherence, fluency, strength of argumentation.* *Capacity for analysis, personal interpretation, originality, creativity.* *Degree of mastery of specialized terminology and communication skills.* *Ability to apply acquired skills.* *Ability to process data and solve given problems.*	*Systematic observation of students (individual/team assignments – assignments must be completed during the week between lectures, preparation of a report – case study).*	*20 %*	70%
		Formative assessment test (ongoing evaluations throughout the semester).	*40 %*	
		Summative assessment test (final evaluation).	*40 %*	
10.5b Laboratory	*Laboratory activity – Ability to work in a team, ability to apply learned knowledge in practice, in different contexts.* *Capacity for analysis, personal interpretation, originality, and creativity.*	*Completion of laboratory sheets (all lab works must be completed, allowing the makeup of only one missed lab work);* *Assessment test (laboratory colloquium).*		30%
10.6 Conditions for passing				

The final evaluation result for a course is determined by considering the scores and weights assigned to each activity within the course. Whole-number grades from 10 to 1 will be awarded, with a grade of 5 certifying the achievement of the minimal learning outcomes required for the course and the awarding of the corresponding study credits.

Date: 3.09.2025
Course instructor: Associate professor Irina Cârlescu
Course instructors for applied activities: Associate professor Irina Cârlescu

Date of approval by the department: 5.09.2025

Head of Department
Associate professor Corina Cernatescu

Date of approval by the Faculty Council: 8.09.2025

Dean,

Professor Teodor Malutan

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[1] *Bachelor's / Master's degree.*
[2] *For Bachelor's: 1-4; for Master's: 1-2.*
[3] *For Bachelor's: 1-8; for Master's: 1-4..*
[4] *Exam (E), assessment (A) – according to the curriculum.*
[5] *DOB – mandatory course, DOP– optional course, DFA– elective course;*
[6] *Duration equals 14 weeks multiplied by the number of hours listed at point 3.1 (similarly for points 3.5 and 3.6abc).*
[7] *The lines below refer to individual study; total is completed at point 3.7.*
[8] *Between 2 and 6 teaching hours, not included in individual study..*
[9] *Total number of individual study hours (sum of values from previous lines).*
[10] *Total of direct teaching hours (3.4) plus individual study hours (3.7); must equal the number of credits (3.9) multiplied by 27 hours per credit.*
[11] *Prerequisite courses that must be passed previously or their equivalents are indicated.*
[12] *Teaching resources: blackboard, video projector, flipchart, specific teaching materials, etc.*
[13] *Technical equipment: computers, software packages, experimental stands, etc*
[14] *Learning outcomes presented as knowledge, skills, responsibility, and autonomy specific to the course, aligned with level 7 of the National Qualifications Framework (NQF) and adapted to the type of university program. For research master's programs, these include competences necessary for conducting independent scientific research (https://www.aracis.ro/wp-content/uploads/2025/07/Standarde-specifice-masterat.pdf).*
[15] *Titles of chapters and paragraphs.*
[16] *Teaching methods: discussions, debates, presentations and/or paper analyses, exercises and problem solving.*
[17] *Practical demonstrations, exercises, experiments.*
[18] *Case studies, demonstrations, exercises, error analysis, etc.*