

FACULTY OF ELECTRICAL
ENGINEERING**SUBJECT CARD**

Name in Polish: **Etyka inżynierska**
 Name in English: **Engineering Ethics**
 Main field of study (if applicable): **Control Engineering and Robotics**
 Specialization (if applicable):
 Level and form of studies: **1st level, full-time**
 Kind of subject: **optional / university-wide**
 Subject code: **FLH050811**
 Group of courses: **NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):	15				
Number of hours of total student workload (CNPS):	30				
Form of crediting:	crediting with grade				
For group of courses mark (X) final course:					
Number of ECTS points:	1				
including number of ECTS points for practical (P) classes :					
including number of ECTS points for direct teacher-student contact (BK) classes:	0.70				

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Humanistic knowledge at the level of secondary education.

SUBJECT OBJECTIVES

- C1. Obtaining knowledge on general and professional ethics.
 C2. Learning how to identify and analyze moral dilemmas related to engineering professions.
 C3. Introducing and analyzing the content of professional codes of ethics for engineers.

SUBJECT EDUCATIONAL EFFECTS*relating to knowledge:*

- PEK_W01 Students acquire essential knowledge from the fields of general and professional ethics.
 PEK_W02 The student has knowledge that is essential to understanding and interpreting social and ethical considerations of engineer's activity.

*relating to skills:**relating to social competences:*

- PEK_K01 The student is aware of the importance of understanding non-technical aspects and of engineer's activity, its consequences and responsibility for undertaken decisions. The student correctly identifies and analyzes dilemmas related to their profession.

PROGRAMME CONTENT

Form of classes - lecture		Number of hours:
Lec 1	Introduction: morality, ethics, law.	1
Lec 2	Principles of ethics.	1
Lec 3	Main ethical theories: criteria for justification of moral judgments.	1
Lec 4	Structure of a moral dilemma.	1
Lec 5	Status, goals and functions of professional engineering ethics.	1
Lec 6	Structure and functions of professional codes of ethics for engineering professions.	1
Lec 7	Professional obligations and responsibilities of engineers in ethical perspective.	2
Lec 8	Engineers responsibility toward society.	2
Lec 9	Analysis of selected codes of engineering ethics; case study analyses.	2
Lec 10	Ethical dilemmas in engineering professions: case study analyses.	2
Lec 11	Social responsibility of science and technology	1
Total hours:		15

TEACHING TOOLS USED

N1. Prezentacja multimedialna
N2. Lecture
N3. Discussion

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation <i>F - forming (during semester)</i> <i>P - concluding (at semester end)</i>	Educational effect number	Way of evaluating educational effect achievement
F1(w)	PEK_W01 PEK_W02 PEK_K01	Written test or a case analysis; active participation in lectures
P(w)	P=F1	

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Chyrowicz B., O sytuacjach bez wyjścia w etyce, Kraków 2008.
- [2] Budinger T.F., Budinger M. D., Ethics of Emerging Technologies: Scientific Facts and Moral Challenges, Hoboken, New Jersey 2006.
- [3] Galewicz W. [red.], Moralność i profesjonalizm. Spór o pozycję etyk zawodowych, Kraków 2010.
- [4] Harris C., Pritchard M., Rabins M., Engineering Ethics. Concepts and Cases, Wadsworth 2009.

SECONDARY LITERATURE:

- [1] Chyrowicz B. [red.], Etyka i technika w poszukiwaniu ludzkiej doskonałości, Lublin 2004.
- [2] Jonas H., Zasada odpowiedzialności. Etyka dla cywilizacji technologicznej, tłum. M. Klimowicz, Kraków 1996.
- [3] Małek M., Mazurek E., Serafin K., Etyka i technika. Etyczne, społeczne i edukacyjne aspekty działalności inżynierskiej, Wrocław 2014.
- [4] Ossowska M., Normy moralne. Próba systematyzacji, Warszawa 2003.

SUBJECT SUPERVISOR

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MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT
FLH050811 - Engineering Ethics
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY **Control Engineering and Robotics**

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)	Subject objectives	Programme content	Teaching tool number
PEK_W01	K1AiR_W37	C.1 C.2 C.3	Lec1 Lec2 Lec3 Lec4 Lec5 Lec6 Lec7 Lec8 Lec9 Lec10 Lec11	N.1 N.2
PEK_W02	K1AiR_W37	C.1 C.2 C.3	Lec1 Lec2 Lec3 Lec4 Lec5 Lec6 Lec7 Lec8 Lec9 Lec10 Lec11	N.1 N.2
PEK_K01	K1AiR_K02	C.1 C.2	Lec8 Lec10 Lec11	N.1 N.2 N.3