

Engineering Ethics and Attitude

Course Code: PMRKGNM2010A

Semester: Autumn 2018/2019 1.

Course Syllabus

Time: L Friday 11:15-12:45

Location: PTE MIK, L A-216

General Information:

Name of Course:	ENGINEERING ETHICS & ATTITUDE
Course Code:	PMRKGNM2010A
Semester:	1 st
Number of Credits:	2
Allotment of Hours per Week:	2 lectures
Evaluation:	Exam (with grade)
Prerequisites:	-
Instructor:	Dr András TIMÁR, professor emeritus Office: 7624 Hungary, Pécs, Boszorkány u. 2. Office N ^o B305 E-mail: timara@hu.inter.net Phone: +36-70-318-1020

Introduction, Learning Outcomes

Engineering Ethics and Attitudes is designed to introduce students of Civil Engineering to the concepts, theory and practice of ethics. They will be prepared to understand the foundation of classical moral theory and decision making in the context of engineering applications

General Course Description and Main Content

Engineering ethics combines societal, economic and environmental factors in order to produce a set of rules that could lead an engineer to make decisions that protect the public interest regardless of any pressures that they may encounter while serving for corporate organizations. Students are enabled to recognize and properly evaluate ethical challenges that they may face in their professional careers through knowledge and exercises (discussing Case Studies from real life) that deeply challenge and finally strengthen their decision making abilities and ethics. Ethic problems examined by Case Studies seldom have a single clear-cut correct answer, but may have many solutions, where some considered to be better than others. Therefore, ethical problems can be treated similarly to open-ended engineering design problems, where multiple solutions exist.

Methodology

- **Lectures:** will give detailed explanation to the basic knowledge of the main ethical and moral problems related to the engineering practice, presenting appropriate case studies
- **Practical home-work:** In compliance with a prescribed structure (see attached), students will prepare a short (max. 3 pages) written analysis (Case Study) of an ethical case from their own professional experience; it should be sent to the Instructor in Word format as an E-mail attachment for evaluation not later than COB at 10th of December 2016
- **Exams:** Accumulated knowledge is tested by a final written examination (quiz-like test)

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Schedule: Study period in 15 weeks: September 3 - December 14 (2018)

Week	Topic of lecture
1st	The Importance of Ethics in Engineering; Philosophy, Religion and Ethics
3rd	Moral Analysis & Decision Making; Virtues & Habits Internal & External Morality
5th	Moral Responsibility & Legal Regulation – Bribery and Corruption
7th	Attitude and Behaviour; Truth and Whistle-blowing; Plagiarism and Copyright
11th	The Role and Development of Codes of Ethics for Civil Engineer
13th	Conflict of Interest; Equal Treatment: Fairness in Tendering, Contracting and Supervising
15th	Final examination (quiz-like test)

Attendance:

It is required to attend all lectures (it is to be controlled), while attendance will impact the grade (max. 20%). Unexcused absences will adversely affect the grade and in case of absence from more than 30% of the total number of lectures will be grounds for failing the entire course. To be in class at the starting time and stay there until the scheduled end of the lecture is required, delayed arrival or early departure of more than 20 minutes will be considered as an absence. In the case of an illness or family emergency, the student must present a valid written excuse, such as a doctor's note.

Evaluation + Grading

Grading will follow the course structure with the following weight:

1. Class participation, class activity 20 %
2. Preparation of a Case Study related to engineering ethic, accepted by the instructor 30 %.
3. Written exam in the exam period; a minimum of 51% is required to pass the exam.

Grading scale

Numeric Grade:	5	4	3	2	1
Percentage	85%-100%	74%-84%	63%-73%	51%-62%	0-50%

Students with special needs:

Students with a disability and needs to request special accommodations, please, notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

Readings and other Reference materials:

- **Fleddermann, C.B.** (2011): Engineering Ethics. Prentice Hall, 4th edition
- **Van de Poel, I., and L. Royakkers** (2011): Ethics, Technology, and Engineering: An Introduction. Wiley-Blackwell
- **Dave Robinson** (2012): Introducing Ethics for Everyday Life: A Practical Guide. Icon Books Ltd, UK
- **C. Ben Mitchell** (2013): Ethics and Moral Reasoning: A Student's Guide. Crossway, Illinois, USA
- Code of Professional Conduct of the European Council of Civil Engineers (ECCE)
http://www.ecccengineers.eu/about/code_of_conduct.php
- **Code of Ethic of the American Society of Civil Engineers (ASCE)**
<http://www.asce.org/code-of-ethics/>

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<http://engineeringstudies.net>

ATTACHMENT

Structure and Chapters of a Case Study in Engineering Ethics

1. Short and concise **description** of an event/story observed in your professional or private experience, having any relationship with required and respected ethical norms, following a chronological approach (what happened, when and how). A case study or series of events presented, analysed and evaluated already by anybody else (copied from the internet or from any other external source) is strictly forbidden! **Plagiarism discovered by the instructor leads to refusal of the entire work.**
2. **Presentation** of the presumed ethical/moral dilemmas, conflicts of interests and decision making process of the actors participating in the story, with special emphasis on the neglected and/or duly respected ethical principles, norms and requirements (to be enumerated).
3. **Demonstration** of the possible solutions of the ethical problems encountered and their eventual consequences, pointing out, why reality was (or wasn't) different from theoretical opportunities.
4. **Elaboration of your personal opinion:** how would have been possible to find out a valid ethical solution, to decrease ethical risks or to avoid unethical behaviour (if any). **Make proposals** aiming to avoid or reduce probability of similar ethical conflicts in the future.

The Case Study doesn't exceed 3500 words (title page + 3 pages) and should be prepared in electronic form (Microsoft Word is the preferred software program). Use Times New Roman font, with eleven (11) point size. Margins are to be 1 inch or 2.5 cm all around. Number the pages consecutively, beginning with the title page as page 1. Title page must contain the title of the study and the author's name and personal university code.

The duly signed homework has to be sent as an E-mail attachment to the Instructor not later than COB at 14th of December 2018. Address: timara@hu.inter.net