

ETHICS AND IT: EXPERIENCE WITH A NEW COURSE

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Abstract

Data is the new gold; data is the new oil. The richest world companies make their profit mostly from gathering, processing and subsequent monetization of an enormous amount of data, which raises many ethical questions. Similar questions are related to artificial intelligence, decision making and decision-supporting algorithms, social media, or anonymity in the virtual world.

The author of this presentation, who already has experience in academic integrity, namely plagiarism detection, recently joined the academic community of the Faculty of Informatics (FI), Masaryk University (MU), Czechia. MU is the second largest and second-ranked university in Czechia. Its faculty of informatics was founded as the first purely informatics faculty in Czechia. MU emphasizes interdisciplinarity and encourages students to take courses from other faculties. Every year, there is a call for new courses that become part of the “common university core”. Until now, the courses related to ethics were only at the faculties of medicine, pharmaceutical sciences, arts, social sciences, law, sports and economics. Even though information technologies influence

everyday life in all areas of human activity, a course of IT ethics was missing.

The course “Ethics and IT” aims to fill this gap. It takes inspiration from a course “Ethics and Information Technology” taught at the School of Information, the University of Michigan (UMich, n.d.), but both the contents and teaching methods were adjusted for the Czech audience. At the end of 2021, the proposal for this course was selected in a bid, included in the common university core (MUNI, n.d.) and got funding for the course preparation.

Informal discussions with colleagues at the Faculty of informatics, as well as the discussion with the head of the Ethical committee for research indicates that this course not only fills the gap in the IT course offer, but is also beneficial in other ways. It reinforces the discussions about the ethical issues related to information technology, and it contributes a piece of a puzzle of the culture of academic integrity at the whole university. There are plans for a closer cooperation between teachers of professional ethics in various fields of study and ethical committees of the university. This cooperation may be further institutionalized as an academic integrity (advisory) centre.

Course Parameters

The course is offered to students of any field and any degree. The intensity of the course is one 2 hour period of direct teaching per week plus a reading exercise for homework. The course is – in compliance with the common university core courses – completed by colloquium and awarded 2 ECTS credits.

The objective of the course is to acquaint students with ethical problems associated with information technology, ethical dilemmas, and ways to solve them. The course deals with ethical issues related to the collection, storage, processing, and presentation of data and

information, algorithms to support decision-making, and their social overlap.

Learning outcomes of the course include:

- The ability to identify problems related to information technology ethics and the ability to analyze these problems in a structured way.

- The ability to solve moral dilemmas related to information technology, including a thorough argumentation of the chosen solution.
- The ability to debate moral dilemmas, understand opponents' opinions, and be able to accept them, or deal with them in an argument.

Contents of the course

1. Introduction to ethics
 - a. Basic concepts: Ethics, morality, values, virtues
 - b. Moral dilemma
 - c. Discussion of moral dilemmas: Debate and dialogue
1. Ethical data handling
 - a. How to produce and collect data ethically?
 - b. Who owns the data?
 - c. Surveillance capitalism
1. Bias in algorithms
 - a. Ethical aspects of data transformation into information and knowledge
 - b. Ethical aspects of data presentation
1. Media manipulation and misinformation on the Internet
 - a. Consequences of poor quality, misleading and hateful content on the Internet
 - b. How can information technology prevent or limit the spread of misinformation?
1. Information filtering and censorship
 - a. When can information filtering be considered ethical?
 - b. New Great Wall of China
 - c. The right to be forgotten in the EU
1. Ethical aspects of social media and news servers
 - a. Positive and negative content and its attractiveness
 - b. Pay-per-click and social responsibility
2. Crowdsourcing of knowledge; Wikipedia
 - a. Why to trust and why not to trust Wikipedia?
3. Internet and copyright
 - a. "Remix" culture
 - b. Public domain and Creative commons licence
 - c. Plagiarism issues
4. Access to scientific results and their use
 - a. Open access and open data
 - b. Predatory journals, their connection with open access and implications for science
 - c. Possible consequences of the use of scientific results by lay people
5. Anonymity online
 - a. Anonymity, pseudonymity
 - b. Abuse of anonymity for harassment
 - c. Anonymous payments
6. Information technologies for prevention and detection of unethical behaviour
 - a. Plagiarism detection
 - b. Proctoring systems
 - c. Blockchain
7. Professional ethics in IT
 - a. What does "being a good IT professional" mean?
 - b. Ethical issues in IT design and development

Teaching methods

Each week, students are given an article to read and/or a video to watch. There is a quick quiz at the beginning of each lecture to verify that students fulfilled their task. Then, the lecturer presents key issues and initiates the discussion among the students. Students are encouraged

to vote, share their views, and listen to the others. Students can get points for quizzes, active participation in the discussion, presentation of a specific topic, final essay, or critical feedback to someone else's essay.

Results

This is the first time the course is being taught, with 14 students enrolled. Most of them are from Faculty of informatics, but there are also students from the Faculty of Arts, Faculty of Medicine and Faculty of Science. This variety enables rich discussion and various viewpoints. A preliminary feedback from the students indicates that students like the course; it meets their expectations. The students value the discussions and opportunity to confront their opinions with the views from their peers with another background.

The presentation will summarize experience with this course. This abstract is being submitted at the beginning of week 3, thus too early for any evaluation. The conference takes place almost at the end of the semester and allows summarizing of strengths and weaknesses of the course organization, will share inspiration to conference participants and gain new ideas from people having experience with similar courses.

References

UMich, n.d.: 410 – Ethics and Information technology. Available from <https://www.si.umich.edu/programs/courses/410> (accessed 2022-02-28)

MUNI, n.d.: FI: CORE024 Ethics and IT - Course Information. Available from <https://is.muni.cz/predmet/fi/jaro2022/CORE024?lang=en;setlang=en> (accessed 2022-02-28)