

ETHICS, POLICY MAKING AND LEGISLATION IN CS

Grado en Computación e Inteligencia Artificial / Bachelor in Computer Science and Artificial Intelligence BCSAI SEP-2025 EPML-CSAI.4.M.A

Area Computer Science

Number of sessions: 15

Academic year: 25-26

Degree course: FOURTH

Number of credits: 3.0

Semester: 2º

Category: COMPULSORY

Language: English

Professor: **PAULA ORTIZ LOPEZ**

E-mail: portiz@faculty.ie.edu

Lawyer and senior executive with +20 years of experience in the policy/advocacy field focused in the Internet industry. Professional roles encompassing responsibilities within both public and private institutions, involving engagements at both national and European Union levels as a representative and specialist in corporate affairs.

Substantial experience in advising companies on all aspects of global and European privacy laws. This includes defining strategies for compliance, advising on complex operations, and implementing compliance programs with focus on online advertising campaigns, technology and online services.

During 10 years, spokesperson for legal and institutional issues related to the digital advertising industry at IAB Spain, the Spanish chapter of the global association of digital advertising present in 45 countries.

Previously, international delegate of the Spanish Data Protection Authority, representing them at the European institutions, the OECD, as well as international regulators as the Federal Trade Commission. Responsible for negotiation and leadership of several working papers on ICT Law at the European Commission (search engines, social networks, online behavioral advertising, mobile...).

Extensive experience in international projects to adapt countries to data protection regulations, having worked as a leading expert in Israel, Croatia, Bulgaria and Bosnia.

Representative of the digital advertising industry in the Ibero-American Data Protection Network.

Frequent speaker in forums related to data protection and ethics related to emerging technologies. Regularly contributes articles to various publications and media.

LLM in Telecommunications and IT Law. Master in Digital Advertising

Other current responsibilities include:

- Founding member of the Spanish Association of Privacy Professionals (APEP)
- Academic Director of the Course "Legal & Digital Business" (VII promotions)
- Director of the IAB Annual Congress of Digital Regulation (VI editions)
- Advisory Council of the magazine "Privacy & Digital Law"
- Member of the Policy Committee. IAB Europe
- Speaker in lectures and international conferences
- Professor of digital law: Deusto, ICADE, UNIR, UNED, Universidad Autónoma de Madrid, Ilustre Colegio de Abogados de Madrid, ISDI and several business schools.

Office Hours

Office hours will be on request. Please contact at:

portiz@faculty.ie.edu

SUBJECT DESCRIPTION

Developers of new technologies should strive to identify potential adverse consequences early in the design process and take actions to eliminate or mitigate them.

The subject "Ethics, policy making and Legislation in Computer Science" is designed to delve into the ethical, regulatory, and legal issues surrounding the field of computer science and technology. It provides students with the ability to recognize and anticipate ethical dilemmas in the development and use of computing technologies. Furthermore, it equips them with the skills to analyze these problems and potential solutions, both individually and through collaboration, employing concepts and principles from moral philosophy, ethics, and regulation.

Through the analysis of cases, debates, and in-depth discussions, students will develop an understanding and critical thinking regarding the ethical challenges faced by IT professionals. They will also gain insights into the regulations and legislations affecting the industry in real-world scenarios.

The course will address ethical principles encompassed within various frameworks and international laws applicable to delve into issues related to privacy, security, accountability, intellectual property, sustainability, equality, autonomy, initially through debates, and subsequently by applying them to different realities and technologies.

By the end of the course, students will be capable of making informed and ethical decisions in their future careers in technology.

LEARNING OBJECTIVES

Identify and comprehend the ethical, social, and regulatory issues that underlie decision-making in computer science.

Analyze, reason, and debate key ethical problems in computer science, including privacy, security, and responsibility between others.

Become familiar with relevant international and national regulations and legislations that impact computer science.

Apply ethical and legal principles to real-life situations and dilemmas in the field of Computer Science in a manner that they can be incorporated into procedures and strategies from the first steps of design.

Be able to carry out expert reports, opinions and computer arbitrations, taking into account regulations in this regard.

TEACHING METHODOLOGY

IE University teaching method is defined by its collaborative, active, and applied nature. Students actively participate in the whole process to build their knowledge and sharpen their skills. Professor's main role is to lead and guide students to achieve the learning objectives of the course. This is done by engaging in a diverse range of teaching techniques and different types of learning activities such as the following:

Learning Activity	Weighting	Estimated time a student should dedicate to prepare for and participate in
Lectures	20.0 %	15.0 hours
Discussions	26.7 %	20.0 hours
Group work	26.7 %	20.0 hours
Individual studying	26.7 %	20.0 hours
TOTAL	100.0 %	75.0 hours

AI POLICY

Generative AI tools are allowed.

Document and acknowledge the ways you have used generative AI.

If you are using generative AI for any work you are planning to submit for evaluation purposes, you will have to acknowledge what technologies you have used, how you used them, list the prompts, and how you incorporated the generated outputs in your work.

Exercise critical thinking and disciplinary expertise when evaluating AI outputs. It is crucial to fact-check all AI-generated outputs.

AI tools can occasionally provide incorrect or false information, including references that do not exist in academic literature or code that is unsecure.

Unless claims are cross verified with reliable sources, assume they are inaccurate. In this sense, it is imperative to check for inaccuracies ("hallucinations") and biases and document them.

Use AI as a supplementary tool and be cautious about biases in the outputs produced by generative AI.

AI tools should not replace thorough research and academic rigor.

We suggest you use multiple sources for your research and academic work and treat generative AI as a supplementary aid.

Use AI responsibly and make sure to mitigate biases in AI generated content.

Ensure data privacy and confidentiality when using generative AI, as the AI could unintentionally reproduce or leak sensitive information.

It is your responsibility to protect your and others' personal information.

Sometimes you can modify the tools' settings (e.g. deactivate model training or storing of chat history) to avoid the generative AI tool utilizing or learning from your interactions and prompts.

Make sure to consult each tool's terms of service.

Ensure that your submitted work is your own, and not a "copy & paste" or simple paraphrasing of generative AI output.

For any work that you submit, your own style and voice should be evident.

The suspect that you are submitting AI generated output as your own work, which would be a violation of IE Academic Standards, you will be investigated according to the procedures outlined in the IE Code of Ethical Conduct.

PROGRAM

SESSION 1 (LIVE IN-PERSON)

Welcome and introduction to ethics, regulation and legislation in Computer science. Introduction to the course, logistics, evaluation system.

Differences between ethics, regulation and legislation.

IN-CLASS DEBATE: In the last 5 minutes of the class, we will have a first debate on the ethical issues affected by CS.

SESSION 2 (LIVE IN-PERSON)

ETHICS: FUNDAMENTAL PRINCIPLES

Ethical, philosophical and moral principles. Different frameworks (OECD, UNESCO, European Union...)

In this session w will explore principles such as responsibility, equality, autonomy, justice, privacy, sustainability among other ethical principles related to Fundamental Rights.

Exercise: Examples of business ethical frameworks.

SESSION 3 (LIVE IN-PERSON)

POLICY MAKING AND REGULATION: GLOBAL SCOPE. LAWS AFFECTING CS

In this session we will review the international regulations and their impact on Computer Science.

International context. Regulators and institutions: Who is Who.

Institutions & global regulatory frameworks. Overview with a Map of legislations in the world affecting CS, looking at what is called the Brussels Effect: Artificial Intelligence Act, Digital Services Act, Digital Markets Act, Data Governance Act, Data Act, Sustainability, Copyright.

IN-CLASS QUIZ: In the last 5 minutes of the class, we will run a quiz related to the concepts explained during the session.

SESSION 4 (LIVE IN-PERSON)

POLICY MAKING AND REGULATION: ARTIFICIAL INTELLIGENCE ACT, COPYRIGHT

Analysis of key aspects of the Artificial Intelligence Act, such as types of uses, oversight of AI systems, transparency, and accountability.

Implications of copyright in the digital age would also be examined, addressing the protection of creative works and the challenges posed by technology.

Identification of ethical dilemmas related to 3D printing, such as manufacturing 3D printed weapons or design piracy.

SESSION 5 (LIVE IN-PERSON)

POLICY MAKING AND REGULATION: PRIVACY AND DATA PROTECTION.

In the next two sessions we will focus on privacy and data protection so that students have an understanding of the regulations and acquire knowledge regarding topics such as data mining, profiling, use of public data, transparency, etc.

Scope of application, principles, rights, privacy impact assessment, privacy by design. Comparison between EU & US Laws.

IN-CLASS QUIZ

In the last 5 minutes of the class, we will run a quiz related to the concepts explained during the session.

SESSION 6 (LIVE IN-PERSON)

ARTIFICIAL INTELLIGENCE. TRANSVERSAL CHALLENGES IN ETHICS & REGULATION.

Artificial intelligence, although it has undoubted benefits and opportunities, poses a multitude of dilemmas and risks for society. In order to be able to address them in a practical and participatory way, the different issues that are affected by AI will be raised during two sessions and through real cases (among others, medical decision making or automated surveillance). This class will be carried out through debates so that all students can address the topics, as well as possible solutions from their development or implementation, including the design of fair and transparent algorithms.

In this first class, we will discuss the topics associated with Data protection in profiling, bias and discrimination and equal opportunities training. Explainability and transparency. Moral decision making. Sustainability in AI. Green algorithms.

Examples of organizations and companies that are leading AI ethics efforts.

SESSION 7 (LIVE IN-PERSON)

ARTIFICIAL INTELLIGENCE. TRANSVERSAL CHALLENGES IN ETHICS & REGULATION (cont).

In this second session, issues related to disinformation will be addressed (Introduction to online disinformation and its impact on society. Examples of disinformation on social networks and other digital media. Deep Fakes, etc.)

Copyright. (Ethical challenges in digital content piracy, Fair use and licenses).

Accountability. Responsibility of the different actors (developers, technological platforms...) Neurorights (Introduction to "neurorights" as human rights related to brain technology.

The last minutes will be dedicated to the preparation of the practical case. We will select a case of ethics in AI to present in the next session with affected rights and compliance solutions through ethical frameworks (autonomous cars, dark patterns, medical use, neurorights... to be defined)

SESSION 8 (LIVE IN-PERSON)

In this session, groups will present the proposed practical case proposed

SESSION 9 (LIVE IN-PERSON)

ROBOTICS. ETHICAL & REGULATORY DILEMMAS.

In this session, specific issues in the development of robotics will be addressed, as well as the various consequences that its development can have. We will see Asimov's laws. Employment, protection labor rights; Robot Taxes, effects of autonomy, black boxes, opacity and bias in human-robot interaction. Transhumanism and neurorights.

IN-CLASS DEBATE: Debate on a specific ethical issue related to robotics.

SESSION 10 (LIVE IN-PERSON)

ROBOTICS. ETHICAL & REGULATORY DILEMMAS (cont)

Ethics In robotics by industries: Medicine (use of robots and surgeries and medical care) industrial robotics and supply chains, responsibility, security).

Ethical design of robotic systems.

IN-CLASS DEBATE: Debate on a specific ethical issue related to robotics.

In the last minutes we will see the practical case to be prepared individually.

SESSION 11 (LIVE IN-PERSON)

REGULATION AND ETHICS ON INTERNET OF THINGS & NANOTECHNOLOGIES.

The goal of this class is to understand the ethical implications in the interconnection of IoT devices and the use of nanotechnologies. Analyze ethical challenges related to privacy, security and environmental impact and explore ethical approaches and regulations for the responsible development of IoT and nanotechnologies and their application to health and nanomedicine. IN-CLASS DEBATE: Debate on principles to take into account in the ethical design of IoT devices and nanotechnologies.

SESSION 12 (LIVE IN-PERSON)

Individual presentation on ethics and robotics.

SESSION 13 (LIVE IN-PERSON)

SOFTWARE AND WEB APPLICATION DEVELOPMENT.

Ethical aspects and regulatory compliance.

Objective: Put into practice what has been learned regarding the use of data and machine learning, security in software development, dark patterns and interface design and user experiences in the design and development of an app and its use and privacy policies.

SESSION 14 (LIVE IN-PERSON)

CYBERSECURITY.

Cybersecurity involves a wide range of issues to take into account and the current challenges are varied. They will be addressed from the regulatory point of view, and the technical and ethical limits.

Examples of best cybersecurity practices and company regulatory compliance will be addressed.

IN-CLASS DEBATE: Discussion on best practices to ensure compliance with cybersecurity and ethical hacking regulations.

SESSION 15 (LIVE IN-PERSON)

FINAL EXAM

EVALUATION CRITERIA

Class participation: This includes class attendance, and active participation in in-class discussions, with the goal of ensuring a continued learning process, good teamworking, and ability to apply class concepts in real-world problems.

Participation is based on the quality, rather on the quantity, of your contributions.

Final Exam

The final exam will include all the material explained in the course and will be held during the last session.

criteria	percentage	Learning Objectives	Comments
Final Exam	20 %		
Individual presentation	20 %		
Group Presentation	20 %		
Individual work	40 %		
Group Work	0 %		
Class Participation	0 %		
Intermediate tests	0 %		
Other	0 %		

RE-SIT / RE-TAKE POLICY

BIBLIOGRAPHY

Recommended

- Stephanie Hare. *Technology Is Not Neutral: A Short Guide to Technology Ethics*. ISBN 9781907999 (Digital)
- Jamie Susskind. *Future Politics: Living Together in a World Transformed by Tech..* ISBN 978019255949 (Digital)
- Carissa Véliz.. *Privacy Is Power: Why and How You Should Take Back Control of Your Data*. Carissa Véliz. ISBN 1473583535 (Digital)

BEHAVIOR RULES

Please, check the University's Code of Conduct [here](#). The Program Director may provide further indications.

ATTENDANCE POLICY

Please, check the University's Attendance Policy [here](#). The Program Director may provide further indications.

ETHICAL POLICY

Please, check the University's Ethics Code [here](#). The Program Director may provide further indications.

