# Dauphine | PSL ★
## UNIVERSITÉ PARIS

# 0IELSY18 – Ethics of Artificial Intelligence in Management

**Professor**: Richard Oren
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**Department:** International affairs
**Semester**: 2

**Course level**: L3 undergraduate
**Domain**: Electives
**Teaching language**: English
**Number of in-class hours**: 33
**Number of course sessions:** 10 + Exam
**ECTS**: 6

## Course description and objectives

This course has been designed to grant students insight into the major issues of Artificial Intelligence and its applications in business management. Today the major problems of AI implementation are AI architecture and AI ethics. These will be the main topics of our class. Classes will cover AI architecture, AI reasoning and AI technological extension. Issues of ethical concern for the extension of AI into various areas will be debated. Propositions for ethical processes structurally integrated into AI architecture and the logical reasoning of AI enhanced systems will be discussed.

Lectures will both theoretically and practically connect ethical issues to an emerging power and authority of AI over humanity. They will help students understand the ethical implications of the logical processes guiding business practices and management systems. Independent student research and group presentations will bring concrete examples to debate and enhance their knowledge and ability to manage AI ethically.

## Prerequisites

Students are expected to have notions of management theory or knowledge of business practices. They wish to gain an understanding of ethics and of the potential of AI to ethically redefine business models and management methods. They will actively participate in class debates on preventing AI from generating significant ethical risks.

## Learning outcomes

Classes will be taught by contrasting approaches to AI business applications and by offering a theoretical vista of economic intelligence. Students will acquire new knowledge and express reasoned opinions about controversial implementations in corporate logics. They will also gain insight into the role of economic intelligence within organizations to understand how logical bias is designed into management systems. Students will propose future outlooks for AI with increasingly immaterial economic utilities made from augmented intelligence constituents.

## Assignments and grading

Required case study preparation, class discussion participation and independent research. Graded 50% for collaborative group presentations and 50% for the individual final exam.

The numerical grade distribution will dictate the final grade. The passing grade for a course is 10/20.

**Class participation:** Active class participation – this is what makes classes lively and instructive. Come on time and prepared. Class participation is based on quality of comments, not quantity.

**Exam policy:** In the exam, students will not be allowed to bring any document (except if allowed by the lecturer). Unexcused absences from exams or failure to submit cases will result in zero grades in the calculation of numerical averages. Exams are collected at the end of examination periods.

## Course structure

| Session | Topic |
|---|---|
| 1 | Introduction to AI's origins, historical development, research orientations, current implementations, and future perspectives. Analysis of integrating AI into management processes, redefining human roles and job prospects in management. |
| 2 | Overview of the basis of AI in cognitive science and of the logical processes solved by human and artificial intelligence. Review of AI applications and incidence in reduction or augmentation of economic value and its social implications. Risk assessment of AI. |
| 3 | The absence of Conscience of AI - a barrier to integrating ethical intelligence to artificial intelligence. Bridging the differences between natural intelligence and artificial intelligence and enhancing AI to include ethical process and concern for human well-being. |
| 4 | Understanding the natural intelligence of humans, the reference model for artificial intelligence. Study of natural human logical processes addressing human problem sets. The risks of the emergence of AI problem sets without the inclusion of human issues. |
| 5 | Discussion of mechanistic versus organismic AI and how to make AI more human-like. Hard logics versus soft logics and the ways in which they can be logically interpolated. Associating inductive and deductive processes to engineer ethical anchoring into AI. |
| 6 | Survey of recent AI applications and the latest advances in AI research. The technological and organizational approaches are analyzed for their strengths and shortcomings. Survey of the broadening and deepening of AI applications in various fields. |
| 7 | Prospective of AI. Relevance of the valence of vision and information transformation. How AI will evolve with theoretical and technological breakthroughs. Analysis of the governing logics and the potential value of AI in its social extensions and economic impact. |
| 8 | The ethics of AI and the increasing risk factors of delegating decision-making power to computers and robots. AI in warfare, medicine, social engineering, and political policies. |
| 9 | Student presentations of AI case studies or selected portfolio topics. Class discussion and feedback on the pros and cons of various AI economic logics. |
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| 11 | **Final Exam** |

## Bibliography

Artificial Intelligence and Machine Learning in Business Management: Concepts, Challenges, and Case Studies 1st Edition by Sandeep Kumar Panda (Editor), Vaibhav Mishra (Editor), R. Balamurali (Editor), Ahmed A. Elngar (Editor)

Beyond Algorithms, Delivering AI for Business by James Luke, David Porter, Padmanabhan Santhanam, 2022

**Enterprise Artificial Intelligence and Machine Learning for Managers: A practical guide to AI and ML for business and government by Nikhil Krishnan,** Kindle Edition

## Moodle

This course is on Moodle: **NO**

## Academic integrity

Be aware of the rules in Paris Dauphine University about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. AI enhanced work is rejected for class credit. Working in a group implies that you are an active participant and have fully contributed to the output produced by that group.