

# Legal Challenges for the Regulation and Governance of Artificial Intelligence

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## Course Description

The course, "Legal Challenges for the Regulation and Governance of Artificial Intelligence," aims to introduce students to five significant challenges associated with the governance and regulation of artificial intelligence technologies across different countries. Through five key questions, the course explores critical dimensions necessary to govern a technology that already demonstrates global reach.

It begins with an examination of the geopolitical distribution of AI technologies and the challenges posed by international competition, focusing on different governance approaches, such as permissive versus preventive strategies. The course then addresses how to define the inherent risks of AI, analyzing issues of transparency and the potential for discrimination caused by these technologies. It further examines the "black box problem" and possible solutions for achieving algorithmic transparency while protecting trade secrets. The course also investigates the emergence of biases in AI systems, discussing strategies for mitigation and their legal and ethical implications. Finally, it concludes with a reflection on emotional AI and the challenges posed by human-machine emotional dependency, using concrete applications to analyze its constitutional and ethical ramifications.

By engaging with these topics, the course seeks to equip students with the tools to critically assess and propose solutions for the governance of AI technologies in a global context.

## Learning Objectives

- Understand Global Approaches to AI Regulation: Analyze and compare recent debates on how different countries are addressing the governance and regulation of artificial intelligence applications, with a focus on emerging trends and global challenges.
- Evaluate Risks from a Global South Perspective: Critically assess the risks associated with AI technologies, particularly their unique implications for countries in the Global South, including issues of inequality, resource distribution, and socio-economic impacts.
- Critique Social Consequences of AI: Develop a critical understanding of the social consequences of artificial intelligence, including its potential to perpetuate biases, disrupt labor markets, and influence human behavior, while balancing these challenges with the need to foster innovation.

- Propose Evidence-Based Solutions: Encourage the formulation of evidence-based and effective solutions to address the governance challenges of AI, emphasizing the importance of practicality and alignment with societal needs and values.
- Foster Ethical and Innovative Perspectives: Promote a reflective and constructive approach to AI regulation and governance that integrates ethical considerations with strategies to stimulate responsible innovation and global equity.

These objectives are designed to engage students in critical thinking and equip them with the tools to approach AI governance in a balanced, innovative, and socially responsible manner.

### Target Student Profile

This course is designed for undergraduate law students who are eligible to enroll in elective courses and have completed a foundational cycle of legal studies, equipping them with the necessary background to engage with advanced topics. It is also open to graduate students (master's and doctoral levels) who have an academic or professional interest in the governance and regulation of artificial intelligence. The course is particularly suited for those seeking to deepen their understanding of legal, ethical, and social challenges posed by AI technologies in a global context.

### Course Structure and Schedule

<b>Class 1</b>	Is it possible to build Global Governance for Artificial Intelligence?
Description	Based on an initial overview outlined by Luciano Floridi, Huw Roberts, Emmie Hine, and Maria Rosaria Taddeo, the encounter will focus on discussing the challenges of building global governance for artificial intelligence. Following a brief explanation of the characteristics of artificial intelligence as a new computational technology, the meeting will explore how geopolitical competition over the technology has created challenges for establishing international cooperation. In particular, it will address the lack of consensus on which aspects of AI should be subject to regulation and what principles should be adopted at the international level.
Mandatory Reading	Floridi, Luciano, et al. "Global AI Governance: Barriers and Pathways Forward." <i>International Affairs</i> , vol. 100, no. 3, 2023, pp. 1275–1290.

	Available at: <a href="https://academic.oup.com/ia/article/100/3/1275/7641064">https://academic.oup.com/ia/article/100/3/1275/7641064</a> . Accessed 23 Dec. 2024.
Assignment	For the next class, each student will need to identify <b>five companies in South America</b> that develop artificial intelligence systems. For each company, students must provide a <b>four-line explanation</b> detailing what their AI system does, including its application, purpose, and impact in the relevant industry.
<b>Class 2</b>	What does it mean to regulate AI based on its risks?
<b>Description</b>	Recently, the European Union gained prominence in the debate on the regulation of new technologies by approving the AI Act, a legislative framework that regulates artificial intelligence among its member states. Building on Margot E. Kaminski's insights, the encounter will focus on addressing the challenge of defining the risks inherent to the development and use of AI technology, as well as examining the meaning of the risk-based regulatory approach adopted in the European model. Additionally, the meeting will propose a discussion on the advantages and disadvantages of this model, particularly from the perspective of countries in the Global South.
<b>Mandatory Reading</b>	Kaminski, Margot E. "Regulating the Risks of AI." Boston University Law Review, vol. 103, 2023, pp. 1347–1411.  Available at: <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4195066">https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4195066</a> . Accessed 23 Dec. 2024.
Assignment	Each student will choose <b>an artificial intelligence system</b> they have used in the <b>past year</b> and analyze at least <b>two potential risks</b> associated with the system. They must provide a justification for each chosen risk, <b>limited to five lines</b> .
<b>Class 3</b>	<b><i>How can the problem of algorithms as black boxes be solved?</i></b>

<b>Description</b>	<p>Professor Frank Pasquale developed an analogy comparing the decision-making process of artificial intelligence systems to the black boxes in airplanes. His proposal is to reflect on the conditions under which algorithms (the minimal units of AI systems) can become more transparent, even in a context where they are protected as trade secrets by the companies that develop them. In this class, we will discuss Professor Pasquale's black box concept and critically examine it through the framework proposed by Professors Sandra Wachter, Brent Mittelstadt, and Chris Russell, exploring the possibility of achieving transparency through input simulations in algorithms.</p>
<b>Mandatory Reading</b>	<p>Wachter, Sandra, Brent Mittelstadt, and Chris Russell. "Counterfactual Explanations Without Opening the Black Box: Automated Decisions and the GDPR." <i>Harvard Journal of Law &amp; Technology</i>, vol. 31, no. 2, 2018, pp. 841– 887.</p> <p>Available at:  <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3063289">https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3063289</a>.        Accessed 23 Dec. 2024.</p>
<b>Assignment</b>	<p>Students will need to <b>select an application</b> that uses an artificial intelligence system and propose <b>two questions to be answered</b>. Each question must address a specific <b>characteristic of the AI's functioning</b>. Each proposed question must include a justification of no more than 5 lines.</p>
<b>Class 4</b>	<p>How can we reduce algorithmic discrimination?</p>
<b>Description</b>	<p>The presence of biases in the development and use of artificial intelligence systems has been treated as a problem by companies and governments. In this class, we will explore the concept of bias and its impact on the production of discriminatory content in AI systems. We will examine how these biases arise and how they can influence decision-making models in AI systems. Additionally, we will discuss the legal and ethical implications of their presence, as well as strategies for their mitigation (e.g., training, auditing, monitoring, transparency, multidisciplinary engagement, etc.).</p>
<b>Mandatory</b>	<p>Hacker, Philipp, Brent Mittelstadt, Frederik Zuiderveen</p>

<p><b>Reading</b></p>	<p>Borgesius, and Sandra Wachter. "Generative Discrimination: What Happens When Generative AI Exhibits Bias, and What Can Be Done About It." arXiv, 2024.</p> <p>Available at: <a href="https://arxiv.org/abs/2407.10329">https://arxiv.org/abs/2407.10329</a>. Accessed 23 Dec. 2024.</p>
<p><b>Assignment</b></p>	<p>Each student will be required to <b>write a brief analysis</b> of no more than one page, selecting <b>one of the measures proposed by the authors</b> of the assigned reading as the <b>potentially most effective</b> for mitigating biases in artificial intelligence systems.</p>
<p><b>Class 5</b></p>	<p>What are the risks of becoming emotionally dependent on machines?</p>
<p><b>Description</b></p>	<p>There is a new field in the study of artificial intelligence governance and regulation called emotional AI. This field examines systems capable of recognizing, interpreting, and responding to human emotions. Today, there are various applications worldwide offering services with this technology, such as AI-based virtual therapists, AI companions (e.g., boyfriend, best friend, etc.), among others. In this class, we will discuss the characteristics of this new application and the challenges within constitutional law in addressing emerging issues of emotional dependency between humans and machines.</p>
<p><b>Mandatory Reading</b></p>	<p>Valcke, Peggy, Damian Clifford, and Viltè Kristina Dessers. "Constitutional Challenges in the Emotional AI Era." Constitutional Challenges in the Algorithmic Society, edited by Oreste Pollicino and Giovanni De Gregorio, Cambridge University Press, 2022, pp. 57–77.</p> <p>Available at: <a href="https://www.cambridge.org/core/books/constitutional-challenges-in-the-algorithmic-society/constitutional-challenges-in-the-emotional-ai-era/9503BFE93CFAA8732F915B81884DF67D">https://www.cambridge.org/core/books/constitutional-challenges-in-the-algorithmic-society/constitutional-challenges-in-the-emotional-ai-era/9503BFE93CFAA8732F915B81884DF67D</a>. Accessed 23 Dec.</p>

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<b>Assignment</b>	Each student will be required to write a short essay addressing the challenges of governing a technology like emotional AI. The essay may be up to two pages long and must address both the risks and effective measures to promote the governance of this technology, whether through regulation or internal governance measures within organizations.

### Assessment and Grading

Assessment Component	Description	Weight (%)
Engagement and Participation	Active participation and meaningful contributions to in-class debates and discussions	<b>30%</b>
Assignments	Submission of the tasks described in the first four classes, each contributing 10% of this category's total weight.	<b>40%</b>
Final Essay	A short essay evaluating the effectiveness of measures in the context of Emotional AI applications	<b>30%</b>