Universität für Bodenkultur Wien
University of Natural Resources and Life Sciences, Vienna

Department für Wirtschafts- und Sozialwissenschaften
Institut für Rechtswissenschaften

Univ.-Prof.in Dr.in Iris Eisenberger, M.Sc. (LSE)

Contact details:
iris.richter@boku.ac.at

Governance of Emerging Technologies
(Course number: 736004; 2 ECTS credits)

1. Course dates:

The course dates can be found on BOKUonline.

2. Course description:

Emerging technologies such as nanotechnology, biotechnology, drones, robotics, blockchain or artificial intelligence are rapidly changing our society. This optional course will provide you with an overview of legal issues concerning emerging technologies, especially in the field of artificial intelligence.

We will address issues such as:
- Pros and cons of artificial intelligence.
- Which societal implications might arise out of artificial intelligence?
- In which parts of our lives is artificial intelligence already present, where will it be within in the next years?
- What regulatory measures should or could be taken and by whom?
- Which role do states have in controlling and governing emerging technologies such artificial intelligence?

3. Assessment:

- Active participation in class discussions (40%; the grade is based on the quality of students' participation in class).
- Presentation of one paper per student (30%; the grade is based on the quality and substance of the presentation).
- Drafting a short recommendation (~ 1.000 words) regarding a regulatory question (30%; the grade is based on the strength of the argument).

4.   Course outline:

Preliminary discussion
Course structure, brief introduction into artificial intelligence.

Readings:
- Toby Walsh; **What if ... we create human-level artificial intelligence?**. New Scientist, Features 16 November 2016. *https://www.newscientist.com/article/mg23231000-600-the-world-in-2076-machines-outsmart-us-but-were-still-on-top/*
- Yunhe Pan. **Heading toward Artificial Intelligence 2.0**. Engineering 2 (2016), 409-413.
- Yann LeCun, Yoshua Bengio, Geoffrey Hinton. **Deep Learning**. Nature 521 (2015), 436-444.

Session I – Law, Technology & Society

Readings / Presentations:
- Nils J. Nilsson. **Human-Level Artificial Intelligence? Be Serious!**. AI Magazine, Winter (2005), 68-75.
- Dirk Helbing. **Societal, Economic, Ethical and Legal Challenges of the Digital Revolution: From Big Data to Deep Learning, Artificial Intelligence, and Manipulative Technologies**, ETH Zürich (2015), 1-25.
- Eduard Fosch Villaronga, Peter Kieseberg, Tiffany Li. **Humans Forget, Machines Remember: Artificial Intelligence and the Right to be Forgotten**, Computer Law & Security Review (2017), 1-19.
- Mark R. Waser. **Designing, Implementing and Enforcing a Coherent System of Laws, Ethics and Morals for Intelligent Machines (including Humans)**, Procedia Computer Science 71 (2015), 106-111.

Session II – Regulatory measures

Readings / Presentations:
- Matthew U. Scherer. **Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies**, Harvard Journal of Law & Technology 29 (2016), **only pages 354-376**.
- Alzbeta Krausová. **Intersections between Law and Artificial Intelligence**, International Journal of Computer 27 (2017), 55-68.
- Jack B. Balkin. **The Path of Robotic Law**, The Circuit 72 (2015), 1-16.

Session III – Policy-makers

Readings / Presentations:
- Nick Bostrom, Allan Dafoe, Carrick Flynn. **Policy Desiderata in the Development of Machine Superintelligence**, Future of Humanity Institute (2016), 1-20.
- European Economic and Social Committee; **Artificial Intelligence – The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society,** Opinion INT/806 (2016), 1-13.
- European Data Protection Supervisors (EDPS); **Artificial Intelligence, Robotics, Privacy and Data Protection**, Room document for the 38th International Conference of Data Protection and Privacy Commissioners (2016), 1-22.