



### Syllabus

Academic Year	2020/2021
Program	Law, Digital innovation and Sustainability
Course	Law and Policy of Innovation and Sustainability
Term	I semester
Year	1
SSD	IUS/09 – Istituzioni di diritto pubblico
CFU	6

INSTRUCTIONAL GOALS	<p>The course will discuss and analyze the most relevant public law and policy aspects related to innovation and sustainability.</p> <p>Students will examine the basic legal fundamentals of public law and their relationship with the opportunities and threats posed by technological and digital transformation, as well as the environmental, social, and economic impacts of climate change that will affect the current public law system and the future.</p> <p>Furthermore, during the second part of the course, students will learn and discuss some of the most impacted sectors such as energy, mobility, research and innovation, procurement, health, finance, and relevant case studies concerning innovative law and policy solutions.</p>
INTENDED LEARNING OUTCOMES	<p><b>Knowledge and understanding:</b> By the end of the course, students should be able to:</p> <ul style="list-style-type: none"><li>• know and understand the main public law institutions and have the skills to discern the different rule making processes;</li><li>• perceive different public law's institutions and their changes and challenges over time, as well as their future prospects;</li><li>• recognize the influence that technological and digital innovation could have on the public system and figure out how social and environmental challenges should orientate policy.</li></ul> <p><b>Applying knowledge and understanding:</b> Upon completing the study program, students will be able to:</p> <ul style="list-style-type: none"><li>• master the different perspectives and approaches on innovation and sustainability;</li><li>• gain knowledge on the functioning mechanisms of the administrative and institutional ecosystem for innovation and ecological transition;</li><li>• effectively communicate and work with experts in public law and policy of innovation and sustainability.</li></ul> <p><b>Making judgments:</b> Upon completing the study program, students will be able to:</p> <ul style="list-style-type: none"><li>• have a general knowledge of public law institutes in connection with the different aspects of technical, juridical, economic and social knowledge that characterize it;</li><li>• discern the different outcomes that can derive from a correct application of the main technological issues in the public world;</li><li>• create and generate experimental laws and innovative policies enabling just and democratic digital transition as well as fight against climate change;</li></ul> <p><b>Communication skills:</b> Upon completing the study program, students will be able to:</p>



- develop the ability to communicate in written form through completing the assignment and oral form through the final exam and the class debate;
- use the notions and the communication of public institutions;
- foster the development relational skills in international and multicultural settings.

#### Learning skills:

Upon completing the study program, students will be able to:

- deal with real life projects or cases to gain greater awareness of the innovative techniques and tools of law and policy in the field of new technologies, sustainability and innovation in general,
- develop a problem-solving and problem-framing approach through interactive workshops, co-working sessions, negotiation labs, legal design thinking sessions and carrying out project work alongside traditional teaching;
- analyse dynamic, complex settings through empirical analysis skills;
- develop operational, survival, networking and political skills.

Prerequisites	No specific knowledge is required outside a basic understanding of public law system and institutions. By basic knowledge we mean the command of the notions offered in courses like public policy, constitutional law, public law, micro/macroeconomics in undergraduate degrees as well as basic knowledge of the EU system.
Course content	<p>The course is divided into two fundamental parts. The first part is aimed at structuring a solid basic framework on public law categories so the student can have the necessary skills to face the second, more specific, part of the course. In fact, in the second part of the course, the institutes initially addressed will be developed according to their interrelationships with the new technologies of the digital era and with the new perspectives of economic, social and environmental sustainability.</p> <p>Week 1: Law and innovation – Course introduction. The initial part of the course will focus on the main interconnections between scientific and technological discoveries and the world of law. It will also analyze the impact of technological innovations in the world of classic straight theories, as well as the evidence of this phenomenon in the decisions of national and international courts. In the first week of the course, reference will be made to the main technological innovations affecting law in recent years, such as blockchain, the world of the network, social networks, bioethics and, in general, all that new technologies.</p> <p>Week 2: State and innovation. This part of the course will focus on the policy tools that the European Union makes available to the PAs to implement technological advancement and environmental sustainability, from a regulatory point of view. The goal of the analysis will not be to enhance the principles of innovation reward but rather to identify the public entity as a substantial innovation vector capable of developing and facilitating research, improvement and marketing of new products in the innovation cycle, such as technologies which affect efficiently the public matrix.</p> <p>Week 3: Innovation and future. This will be the final part of the course's approach to innovation and will aim to identify the possible implications - in the field of technological, digital innovation and that of economic sustainability - that experimentation may have in the near future (i.e. free -zones, legislative entrenchment, sunset and sunrise clauses, innovation procurement; future-proofing law).</p> <p>Week 4: Human rights and innovation. In this part of the course, technological innovations and environmental sustainability will be analyzed in the rooms of social coexistence in which fundamental human rights have the greatest chance of manifesting themselves, cities. Thus, the innovative visions of smart cities, resilient cities, urban solidarity will develop, with a view to a complete analysis between technology, sustainability and human rights values.</p> <p>Week 5: The principle of sustainable development. This part of the course will explore the innovations that have developed in the field of environmental sustainability (i.e. electrical, solar, water) and the techniques through which they can be a vehicle for innovation in the field of law. In particular, with the intent to meet the primary needs of future generations, sustainability is a fundamental topic that policy makers must necessarily take into consideration in the future.</p>



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Week 6: Public procurement and innovation. The rethinking of the welfare state in the logic of social innovations has so far led private companies to a technological innovation based, among others, on the environmental sustainability. Similarly, the future of public procurement will have the fundamental role of creating innovative schemes that, through technological improvement, will be able to give a practical and positive reflection on social interaction.

Week 7: Polycentrism and Co-governance. In this part of the course the attention will be paid on the innovations that have characterized the evolution of the concept of governance (i.e. tragedy of the commons, co-governance, multi-governance) and on the developments that a polycentric redistribution of the aforementioned could have on the cardinal principles of the law. In the same way, this approach will be analyzed in a sustainability key in such a way that could explain the fundamental role that governance policies might furnish in this subject.

Week 8: Energy and innovation. This part of the course will focus on energy innovation and will be addressed through a different learning methodology, the negotiation lab. Specifically, we will try to formulate with the students a legal framework on a case study chosen together.

Week 9: Mobility and Innovation. In this part of the course, the innovations that have characterized the transport system (i.e. mass, hyperloop, autonomous driving, e-highway) and sustainable mobility will be taken into consideration. In particular, attention will be paid to new technologies that will allow development in this area, also featuring environmental improvement and a reduction in energy consumption and pollution.

Week 10: Fintech and Green Finance. In this part of the course will be analyzed the transition process that will conduct, through technological innovations, to sustainable finance and will lead to a sustainable financial system able to promote the well-being of an inclusive economy in the long run, with particular attention to fintech, which merges technology and finance.

Week 11: Health and innovation - bioethics. This part of the course will deal with technological innovations in the health field that can lead to greater inclusiveness as well as greater sustainability of health infrastructures. Last but not least, the field of bioethics and its inevitable influences on the field of law and on moral and social issues will be examined.

Week 12: Technological advancement in food, agriculture, fashion, arts and heritage. This part of the course will analyze the risks and opportunities related to the so-called "Italy 4.0", the smart specialization strategy towards innovation and sustainability devised for Italian key industrial sectors.

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Reference Books

The analysis of very recent or current issues in the law and technology discourse makes it impossible to refer to a specific textbook. Reading materials, handouts and slides, referring to a given lesson, will be made available to students in advance.

However, in order to have a general and analytical view on the regulatory innovations in the Euro area, you can refer to:

D. Stokes, *Pasteur's quadrant* (1997).

Richard R Nelson, *The Moon and the Ghetto* revisited, *Science and Public Policy*, Volume 38, Issue 9, November 2011, Pages 681-690

Kathleen Garnett, Geert Van Calster & Leonie Reins (2018) Towards an innovation principle: an industry trump or shortening the odds on environmental protection?, *Law, Innovation and Technology*, 10:1, 1-14

Mariana Mazzucato, Mission-oriented innovation policies: challenges and opportunities, *Industrial and Corporate Change*, Volume 27, Issue 5, October 2018, Pages 803-815,

J. Boyle, *The Public domain. Enclosing the Commons of the Mind* (2008)

P.D. Aligica & V. Tarko, Polycentricity, Governance: An International Journal of Policy, Administration, and Institutions, Vol. 25, No. 2, April 2012 (pp. 237-262).

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Emilie C. Schwarz, Human vs. Machine: A Framework of Responsibilities and Duties of Transnational Corporations for Respecting Human Rights in the Use of Artificial Intelligence, 58 Colum. J. Transnat'l L. 232 (2019).

Dacian C. Dragos; Bianca Racolta, Comparing Legal Instruments for R&D&I: State Aid and Public Procurement, 12 Eur. Procurement & Pub. Private Partnership L. Rev. 408 (2017)

Beatriz Martinez Romera; Roberto Caranta, EU Public Procurement Law: Purchasing beyond Price in the Age of Climate Change, 12 Eur. Procurement & Pub. Private Partnership L. Rev. 281 (2017)

van Winden, W., & de Carvalho, L. (2018). Can startups solve urban problems? An analysis of Amsterdam's "Startup in Residence" programme. Amsterdam: Hogeschool van Amsterdam

Andrea Castelli, Smart Cities and Innovation Partnership. A New Way of Pursuing Economic Wealth and Social Welfare, 13 Eur. Procurement & Pub. Private Partnership L. Rev. 207 (2018)

Fabrizio Clermont; Francesco Fionda, A Modern Approach for Procuring Research and Innovation: The Pre-Commercial Public Procurement, 11 Eur. Procurement & Pub. Private Partnership L. Rev. 88 (2016)

Johan Wolswinkel, Concession Meets Authorization: New Demarcation Lines under the Concessions Directive, 12 Eur. Procurement & Pub. Private Partnership L. Rev. 396 (2017)

Marco Ceruti, Sustainable Development and Smart Technological Innovation within PPPs: The Strategic Use of Public Procurement, 12 Eur. Procurement & Pub. Private Partnership L. Rev. 183 (2017)

Adam J. Kolber, Not-So-Smart Blockchain Contracts and Artificial Responsibility, 21 Stan. Tech. L. Rev. 198 (2018)

Claire Henly; Sam Hartnett; Buck Endemann; Ben Tejblum; Daniel S. Cohen, Energizing the Future with Blockchain, 39 Energy L.J. 197 (2018)

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Teaching Methods

Reading materials, handouts and slides will be available before each class covering each of the specific topics addressed during the course. Hence, the traditional presentation of the analytical problems can be concise and leave room to Q&A and discussions.

Guests will give a lecture on future-proofing public law, new investment opportunities and career paths based on research and innovation, new business models to combat climate change, digital transformation for social good (names to be announced).

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Assessment

The assessment of students learning will be centered on a written exam (40% of the final grade), and class participation to class debates, students' presentation, labs involvement (60% of the final grade). Students are asked to work in groups to tackle a policy problem concerning the innovation and sustainability debate, prepare original research supported by relevant bibliography and data analysis, participate to simulations, role games and legal design labs, and debate in class different perspectives to address the issues at stake.

Students unable to attend will be asked to an additional set of readings for the oral exam (50%).

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