

**Course title:** The Global Governance of the Internet and Future Emerging Technologies

**Language of instruction:** English

**Professors and professors' contact:** Josep Ibáñez (josep.ibanez@upf.edu) and Adrià Rodríguez-Pérez (adrian.rodriguez@upf.edu).

**Course contact hours:** 45

**Recommended credit:** 6 ECTS credits

**Course prerequisites:** There are no prerequisites for this course.

**Language requirements:** Recommended level in the European Framework B2 (or equivalent: Cambridge Certificate)

**Course focus and approach:** The course focuses on the governance of cyberspace, the Internet and Future Emerging Technologies (i.e., Artificial Intelligence, blockchain, cryptocurrencies, biometrics, as well as quantum computing and post-quantum cryptography). These topics are approached from the perspectives of International Relations and Global Governance, including International Political Economy (IPE) and international (cyber)security.

**Course description:** The course is aimed at analyzing how the Internet and Future Emerging Technologies are governed at a global level. In a continuously evolving digital environment, the course is an invitation to reflect about different initiatives at the international level aimed at addressing some of the key challenges traditionally associated to these technologies (including issues of privacy and data protection, limitations on freedom of expression and content moderation online, as well as the social and environmental impact of digital technologies). In this sense, the course will focus on understanding the role that non-State actors (such as international governmental and non-governmental organizations, non-state public organizations, private companies, and the broader global civil society) play in these initiatives as well as the models of governance that each of these players support and promote when it comes to the governance of the Internet and of Future Emerging Technologies.

**Learning objectives:** At the end of this course, students will be able to:

- Understand the models of governance of the Internet and of Future Emerging Technologies at the global level.
- Explore different initiatives at the international level aimed at addressing some of the key challenges traditionally associated to Future Emerging Technologies.
- Identify and critically assess the role played by non-State actors in these global governance initiatives.

**Course workload:** the course combines lectures, case studies on specific issues, and all sorts of activities for students, including writing essays and preparation of presentations, among others. In all sessions students will be expected to actively contribute to debates and group work.

**Teaching methodology:** The course will combine different activities in class and independent work to be carried out by the students between sessions. In-class session will include:

- Lectures by the professors (about 45-60 minutes) on the topic of each session.
- Seminars that will be based on simulations (role-playing), policy analysis, presentations, and debates.
- Case studies, many of them to be prepared and presented by students.
- 'In the spotlight' sessions, combining an introductory session by the professors on a specific issue and a debate among students.
- Work outside class will include readings, watching documentaries, gathering data, and preparing the above-mentioned sessions.

**Assessment criteria:**

Seminars: 40%

Class participation 30%

Final assignment: 30%

**BaPIS absence policy**

Attending class is mandatory and will be monitored daily by professors. Missing classes will impact on the student's final grade as follows:

<b>Absences</b>	<b>Penalization</b>
Up to two (2) absences	No penalization
Three (3) absences	1 point subtracted from final grade (on a 10-point scale)
Four (4) absences	2 points subtracted from final grade (on a 10-point scale)
Five (5) absences or more	The student receives an INCOMPLETE ("NO PRESENTADO") for the course

The BaPIS attendance policy **does not distinguish between justified or unjustified absences**. Students are expected to manage their attendance to sessions.

Only absences for medical reasons will be considered justified absences. The student is deemed responsible to provide the necessary documentation. Other emergency situations will be analysed on a case-by-case basis by the Academic Director of the BaPIS.

The Instructors, the Academic Director, and the Study Abroad Office should be informed by email without any delay.

**Classroom norms:**

- No food or drink is permitted in class.
- A ten-minute break is foreseen in the middle of each session.

**Weekly schedule:****PART I. THEORETICAL PERSPECTIVES  
ON THE GOVERNANCE OF THE INTERNET****WEEK 1. Introduction to Internet governance**

*Session 1 (September 27). Course description and introduction to Internet governance  
Syllabus, assessment, and readings.*

Introduction to Internet Governance and Future Emerging Technologies.

**WEEK 2. Normative dimensions of Internet governance**

Course lectures

*Session 1 (October 2). Regulating the internet: is it feasible?*

*Session 2 (October 4). Regulating the internet: Is it desirable?*

Case studies / In the spotlight

- The geopolitics of cyberspace
- Neurotechnologies and the neurorights movement.

**WEEK 3. Actors and authorities in Internet governance**

Course lectures

*Session 1 (October 9). Actors in Internet governance*

*Session 2 (October 11). Authorities in Internet governance*

Case studies / In the spotlight

- Mapping international actors
- Internet Corporation for Assigned Names and Numbers (ICANN)

**PART II. CURRENT ISSUES  
ON THE GOVERNANCE OF THE INTERNET AND CYBERSPACE****WEEK 4. The Platform Economy**

## Course lectures

*Session 1 (October 16). From the data economy to the platform economy*

*Session 2 (October 18). Freedom of expression online*

## Case studies / In the spotlight

-The Big Tech

-From the social media revolution to online content moderation

*Course Seminar 1 (October 20): Who governs your emoji keyboard?*

**WEEK 5. Cybercrime and cybersecurity**

## Course lectures

*Session 1 (October 23). Cybercrime: old wine in new bottles?*

*Session 2 (October 25). The right to privacy and the right to data protection*

## Case studies / In the spotlight

-Cybersecurity.

-Key escrows / *Spyware and the rise of cyber-mercenaries.*

**WEEK 6. Digital rights**

## Course lectures

*Session 1 (October 30). A fourth generation of human rights? / Digital technologies and environmental rights*

## Case Study / In the spotlight

-Internet shutdowns

-Rights in conflict? The global governance of geoengineering

**PART III. NEW GOVERNANCE MODELS  
FOR FUTURE EMERGING TECHNOLOGIES**

**WEEK 7. Artificial Intelligence and Machine Learning**

Course lectures

*Session 1 (November 6). Artificial Intelligence and Machine Learning (I)*

*Session 2 (November 8). Artificial Intelligence and Machine Learning (II)*

Case studies / In the spotlight

- Algorithmic audits.
- Biometrics.

*Course Seminar 2 (November 10): Killer robots.*

**WEEK 8. Blockchains and Distributed Ledger Technologies**

Course lectures

*Session 1 (November 13). Blockchains and Distributed Ledger Technologies*

*Session 2 (November 15). Cryptocurrencies & CBDC*

Case studies / In the spotlight

- Non-Fungible Tokens (NFT).
- The rise and fall of Meta's Diem.

**WEEK 9. 5G and cloud infrastructures**

Course lectures

*Session 1 (November 20). 5G and 6G*

*Session 2 (November 22). Cloud infrastructures*

Case studies / In the spotlight

- The superpower's race for 5G infrastructures
- Data protection and cloud providers – a clash of jurisdictions?

**WEEK 10. Quantum computing and post-quantum cryptography**

Course lectures

*Session 1 (November 27). Quantum computing**Session 2 (November 29). Post-quantum cryptography*

Case studies / In the spotlight

- Study visit to the BSC
- The NIST's competition on post-quantum algorithms.

*Final exam of the course (December 1)***Last version: August 23, 2023.****Required readings and materials:**

Readings and materials will be uploaded by the professors on the course's intranet.

**Recommended bibliography:**

- BARTLETT, Jamie. 2018. *The People Vs Tech. How the internet is killing democracy (and how we save it)*. London: Penguin Random House.
- CASTELLS, Manuel. 2010. *The Rise of the Network Society*. West Sussex: Blackwell Publishing Ltd, 2nd edition.
- DENARDIS, Laura. 2013. "The Emerging Field of Internet Governance". Dutton, William H. (ed.) *The Oxford Handbook of Internet Studies*. Oxford: Oxford University Press.
- FLORIDI, Luciano. 2007. "A Look into the Future Impact of ICT on Our Lives". *The Information Society*, 23(1), pp. 59-64.
- FRY, Hannah. 2019. *Hello World: Being Human in the Age of Algorithms*. London: Penguin Random House.
- GOLDENFEIN, Jake. 2019. *Monitoring Laws: Profiling and Identity in the World State*. Cambridge: Cambridge University Press.
- HILDEBRANDT, Mireille. 2020. *Law for Computer Scientists and Other Folk*. Oxford: Oxford University Press.
- HOOFNAGLE, Chris Jay & GARFINKEL, Simson L. 2022. *Law and Policy for the Quantum Age*. Cambridge: Cambridge University Press.
- IBÁÑEZ, Josep. 2007. "Who governs the Internet? The Emerging Regime of E-Commerce". GRAZ, Jean-Christophe & NÖLKE, Andreas (eds.) *Transnational Private Governance and Its Limits*. London, UK: Routledge, pp. 142-155.
- KAYE, David. 2019. *Speech Police. The Global Struggle to Govern the Internet*. New York, US: Columbia Global Reports.
- LESSIG, Lawrence. 2006. *Code. Version 2.0*. New York: Basic Books.

- LEVY, Steven. 2001. *Crypto. How the code rebels beat the government— saving privacy in the digital age*. New York: Penguin Books.
- MARTIN, Keith. 2020. *Cryptography. The Key to Digital Security, How it Works, and Why it Matters*. New York: W.W. Norton & Company.
- MAURER, Tim. 2018. *Cyber Mercenaries: The State, Hackers, and Power*. Cambridge, UK: Cambridge University Press.
- MUELLER, Milton L. 2002. *Ruling the Root. Internet governance and the taming of cyberspace*. Cambridge, MA: MIT Press.
- MOROZOV, Evgeny. 2014. *To Save everything, Click Here: The Folly of Technological Solutionism*. New York, US: PublicAffairs.
- MURRAY, Andrew D. 2011. "Nodes and Gravity in Virtual Space". *Legisprudence*, 5(2), pp. 195-221 .
- MURRAY, Andrew D. 2011. "Internet regulation". Levi-Faur, David (ed.) *Handbook on the Politics of Regulation*. Cheltenham and Massachusetts: Edward Elgar Publishing Ltd, pp. 267-279.
- O'NEIL, Cathy. 2016. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. New York, USA: Crown Publishers.
- NOBLE, Safiya Umoja. 2018. *Algorithms of oppression: how search engines reinforce racism*. New York: New York University Press.
- SINGH, Simon. 1999. *The Code Book. The Science of Secrecy from Ancient Egypt to Quantum Cryptography*. Nueva York: Anchor Books.
- TUFEKCI, Zeynep. 2017. *Twitter and Tear Gas: The Power and Fragility of Networked Protest*. USA: Yale University Press.
- VELIZ, Carissa. 2020. *Privacy is Power. Why and How You Should Take Back Control of Your Data*. London, United Kingdom: Bantam Press.
- WEBERBACH, Kevin. 2018. *The Blockchain and the New Architecture of Trust*. Cambridge, Massachusetts and London, UK: The MIT Press.
- ZUBOFF, Shoshana. 2019. *The Age of Surveillance Capitalism. The Fight for a Human Future at the New Frontier of Power*. London, United Kingdom: Profile Books.