SUMMER COURSE AT RCC
AT HARVARD UNIVERSITY

WEB3, AI AND QUANTUM COMPUTING (WAIQ)

CHALLENGES AND OPPORTUNITIES FOR INNOVATORS, LEGAL PROFESSIONALS AND OTHER CURIOUS MINDS

PONS ESCUELA DE NEGOCIOS

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Get ahead of the future

This course, entitled **"Web3, AI, and QUANTUM COMPUTING (WAIQ): Challenges and Opportunities for Innovators, Legal Professionals and other Curious Minds"** is designed to provide an in-depth understanding of the impact of emerging technologies from three relevant dimensions: technical, legal and ethical.

Web3, also known as the decentralized web, is the next iteration of the internet that is built on blockchain technology. **AI, or Artificial Intelligence,** is a rapidly growing field that is revolutionizing the way legal services are delivered. **QUANTUM COMPUTING** is a new type of computing that promises to exponentially increase the speed and capacity of data processing.

Throughout the course, participants will explore the challenges and opportunities that these emerging technologies present to current businesses, entrepreneurs, legal firms, etc. They will also gain insights into how these technologies are being used to solve problems, reach opportunities as well as the ethical considerations that arise when using them. Also, the course could be an approach to the current discussions about these new technologies regulation.

This course is tailored for forward-thinking innovators who are eager to explore the latest advancements in Web3, Quantum, and Artificial Intelligence. While the focus is on cutting-edge technologies, we recognize that innovation goes hand-in-hand with effective regulation, including the legal aspects. Therefore, the course will delve into the legal and regulatory frameworks surrounding these technologies to provide a comprehensive understanding of the innovation landscape.

Innovators from all backgrounds, including engineers and legal professionals, are encouraged to participate. The course will foster a multidisciplinary approach, bringing together diverse perspectives to explore the complex interplay between technology, law, and society.

Through engaging lectures, interactive discussions and practical activities, participants will gain valuable insights into the technical, legal and ethical implications of emerging technologies and how they impact various industries.

Whether you are a tech enthusiast, entrepreneur, policymaker, or legal professional, this course offers a unique opportunity to expand your knowledge and skills in Web3, Quantum, and Artificial Intelligence, and their legal and regulatory considerations. Join us at Harvard for this enriching and thought-provoking learning experience.

About the Real Colegio Complutense at Harvard University

The Real Colegio Complutense at Harvard University (Cambridge, Massachusetts), known as RCC, is a non-profit institution created by the Complutense University of Madrid and Harvard University with the aim of promoting academic, intellectual, and scientific exchange between Harvard University and the academic community in Spain.

Calendar

July 24th, 25th, 26th & 27th 2023

Location

26 Trowbridge St, Cambridge, MA 02138 & Harvard Law School Faculty

Methodology

This summer course offers a **theoretical-practical approach** applied to the specific needs of the students, as it is composed of renowned professors who are experts in each specific topic of the program.

We follow a participatory and dynamic methodology. Our instructors use the case method to help you enhance your learning based on real-life situations.

What do you need to fulfil to obtain your diploma?

- Proactive participation.
- Mandatory attendance to classes at 80%.

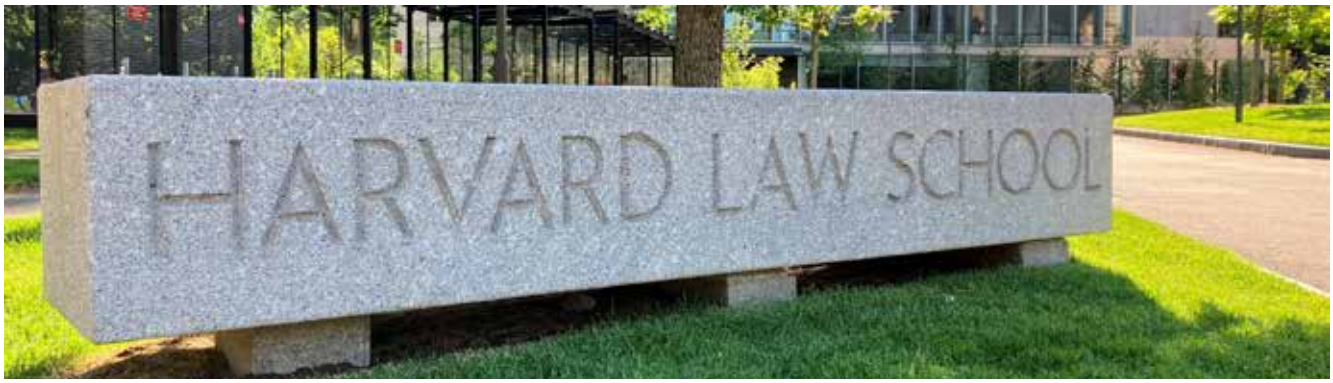
Tools

Attendees will receive the proper documentation used in the course and additional materials related to these matters.

Admission requirements

- The student must have a university degree or be in their last year of study.
- Personal interview with the candidate.
- Have a level of English B2 equivalent. An official certificate is not necessary, the level will e accredited during the interview.

The program is subject to slight modifications.



Program

A program based on 3 technologies (Web3, AI & Quantum) and 3 dimensions (Technical, Legal & Ethical)

DAY 1: HARVARD LAW SCHOOL | Web3

9:00 AM - 9:30 AM | Introduction to the WAIQ Course
9:30 AM - 10:30 AM | Introduction to Web3 and its implications for society

10:30 AM - 10:45 AM | Coffee Break

10:45 AM - 12:30 PM | Legal Implications of Web3

- Web3 and blockchain-based smart contracts
- Applications of AI in contract review and litigation
- Privacy and security challenges

12:30 PM - 2:00 PM | Break

2:00 PM - 2:30 PM | Intellectual property considerations
2:30 PM - 3:00 PM | Regulatory landscape of Web3
3:00 PM - 5:00 PM | Case 1. Emerging Technologies in Networks for Web3

DAY 2: HARVARD LAW SCHOOL | Artificial Intelligence

9:00 AM - 10:00 AM | Understanding AI and its challenges and opportunities
9:30 AM - 10:30 AM | Legal implications of AI

- Bias in AI and its impact on legal decision-making
- Legal implications of blockchain-based systems

10:30 AM - 10:45 AM | Coffee Break

10:45 AM - 12:30 PM | Legal & Regulatory implications of AI

- Innovations in legal tech
- AI Regulatory landscape in US, China & Europe

12:30 PM – 2:00 PM | Break

2:00 PM - 3:00 PM | Ethical considerations of AI
3:00 PM - 5:00 PM | Case 2. AI in a power company. Iberdrola & IA4TES project

DAY 3: RCC AT HARVARD UNIVERSITY | QUANTUM COMPUTING

9:00 AM - 10:30 AM | Concepts and Potential of Quantum Computing (QC)

- Introduction to the principles of quantum computing
- Applications and potential of quantum computing in various industries
- Implications for the legal field and potential benefits for legal professionals

10:30 AM - 10:45 AM | Coffee Break

10:45 AM - 12:30 PM | Legal Implications of QC

- Regulatory considerations for QC
- Privacy and security challenges
- Intellectual property implications and considerations

12:30 PM - 2:00 PM | Break

2:00 PM - 3:30 PM | Case 3. New QC companies

4:00 PM - 5:00 PM | Wrap-Up and Closing Remarks

- Recap of the key themes and takeaways from the program
- Feedback and evaluation of the program

ADDITIONAL TO THE WAIQ COURSE PROGRAME | MIT Nano Lab Visits.

On July 27th / MIT Nano Lab Visit

- Discussion on nanotechnology and its potential impact on emerging technologies
- Q&A session with MIT Nano Lab experts

Lecturers

Thomas Hardjono

Dr Thomas Hardjono is the CTO of Connection Science and Technical Director of the MIT Trust-Data Consortium at MIT in Cambridge, MA. USA. He is an early pioneer in the field of digital identities and trusted hardware, and instrumental in the development and broad adoption of the MIT Kerberos authentication protocol. His activities include leading standard development efforts, notably at the IETF (Internet Engineering Task Force), IEEE, Trusted Computing Group, Confidential Computing Alliance and others. He has published over 70 technical conference/journal papers, several books and over 30 patents. He is currently involved in several startups around the MIT community. His current area of interest is Web3 Digital Assets, with focus on the interoperability of asset networks and survivability of these networks against cybersecurity attacks.

Carlos Kuchkovsky

Carlos Kuchkovsky is the Co-founder and CEO of QCentroid, a mission-oriented Web 3 ecosystem, with the purpose of accelerating sustainable transformation through new ways of working, tech, science, and data. Qcentroid is bringing the power of Quantum tech to Web3 organizations and ecosystems by opening the creator economy to mathematicians, physicists, engineers, and sustainability domain experts. Carlos began his career as a multiplayer mobile video game developer. After that He worked for BBVA in a number of executive positions, positioning BBVA as a leader in quantum computing, AI, blockchain, digital identity, new business, and digital platforms among other areas. He has held different board positions on international associations at Hyperledger, INATBA, Alastria, and the Strategic Advisory Board of the Europan Quantum Flagship, working on the evolution of blockchain, AI, quantum technologies, and Web3. He has published scientific and tech papers and created and led over 30 patents. He also lectures in International MBAs in fintech, deep tech, and new business models.

Luis Ignacio Vicente del Olmo

Luis Ignacio is Strategic Advisor of PONS IP, the IP consultancy firm leader in Spain and Innovation Advisor of ABB. He is a visionary leader with a passion for driving innovation and technology forward. With a background in physics, telecommunications and industry. Also a degree in telecommunications economics, they bring a unique perspective to their work. Their impressive education includes a Master's in Science and Technology Analysis and Management, a Diploma in Innovation Management from MIT, and a specialization in Innovation Economics. They also hold a Diploma in European Communities from the Diplomatic School of the Ministry of Foreign Affairs. Prior to joining PONS IP & ABB, they were responsible during 30 years for Return on Innovation at the Telefónica Group, where he played a key role in driving the company's innovation strategy forward. He also served as President of the es.internet Technology Platform, where they helped to shape the future of the technology industry in Spain and beyond. In ABB, he was responsible for leading the mobile robotics unit's innovation efforts, leveraging their extensive experience and expertise to drive new product development, explore new business models, and identify emerging trends in the industry. As Member of the Board of PONS IP is a dynamic and forward-thinking leader, with a proven track record of success in driving innovation and growth in the technology sector.

Francisco Castro

Francisco is an accomplished Chief IP Counsel with a strong background in both science and law. He obtained his Ph.D. in applied and computational semiconductor physics from Drexel University in Philadelphia, where he also earned several patents. After working as a principal research engineer at Lucent Technologies (now Nokia) and Motorola, he transitioned to a career in intellectual property law. Francisco began his legal career at the Northern Virginia office of Cooley LLP, a Silicon Valley-based law firm, before moving on to become Counsel at Arent Fox LLP in Washington, DC and San Francisco, CA. Currently, he serves as the Chief IP Counsel for IonQ, Inc., a quantum computing startup. In his role, Francisco draws upon his deep scientific expertise and legal knowledge to help guide the company's IP strategy and navigate the complex landscape of emerging technologies. With his unique combination of scientific and legal experience, Francisco is well-positioned to help IonQ stay at the forefront of the rapidly evolving field of quantum computing. He is deeply committed to helping his clients protect their intellectual property and navigate the legal challenges that arise in the rapidly-evolving tech industry.

Carmen Santo

Carmen Santo Marhuenda is a highly qualified legal professional with extensive experience working for some of the most prestigious law firms in Europe and Australia. Carmen is a senior associate in the M&A department of Uría Menéndez. Currently, she is seconded to the Sydney office of Gilbert + Tobin as a consultant. Her practice focuses on advising on all types of transactions in the financial market, both domestic and cross-border, with particular attention to M&A transactions and regulatory matters involving companies in the insurance, banking, and InsurTech sectors, as well as on regulatory matters including insurance distribution and reinsurance. Carmen has taken an active role in teaching. This includes speaking at various sessions on the international business strategy of law firms at the Pontifical University of Comillas, ICADE, as well as her collaboration on sessions about the emerging field of InsurTech in the Master's in Digital Law at the University of Navarra. Carmen is a technology and law enthusiast with a passion for exploring the exciting opportunities and challenges that arise at their intersection, especially when it comes to the financial sector.

Cristina Mesa

Cristina Mesa is a partner in Garrigues' Intellectual Property Department, where she practices in the areas of industrial and intellectual property law, electronic commerce, consumer affairs, advertising, unfair competition, artificial intelligence, freedom of expression and information, and web 3 environments. She handles the management of complex lawsuits and provides recurring advice on contracts and strategy, drawing from her extensive experience in advising trendsetting technology companies. Cristina holds a Degree in Law and Political Science from Universidad Carlos III de Madrid and an LL.M. in International Business and Trade Law (magna cum laude) from Washington College of Law. She has been singled out by Chambers & Partners, Legal 500 and IP Stars (Managing IP). Cristina is also admitted to practice law in New York State.

José Luis Amat Reinoso

José Luis is an accomplished legal professional with extensive experience as a Legal Counsel. He has expertise in a wide range of legal issues, including New Technologies, Intellectual Property, Data Privacy, Corporate Law, and Legal Advice. Throughout his career, he has worked with some of the most prestigious companies in Europe, particularly in the technology and telecommunications sectors such as the Telefónica Group, the venture capital firm Wayra, and is currently the Head of Legal at Aire Group. Currently, José Luis is pursuing a Ph.D. in Law from the Universidad Complutense de Madrid, focusing on the legal implications of quantum technologies. He is passionate about exploring the intersection of law and technology, particularly in emerging fields such as quantum computing. In addition to his legal expertise, José Luis also holds the Alto Diplomado en Estudios de Defensa Nacional from the Defence Ministry of the Spanish Goverment. This program has given him a deep understanding of the critical impacts of national security and the importance of cybersecurity for all countries. With his combination of legal and security expertise, José Luis is well-equipped to navigate the complex legal landscape of emerging technologies and cybersecurity threats. He is dedicated to contributing to the legal landscape for the future.

Alfredo Muñoz

Alfredo is a professor of Commercial Law at the Complutense University of Madrid for 20 years. He serves as Crypto and Blockchain Legal Advisor at GRANT THORNTON Spain, since February 2022. Alfredo is also the Academic Director of "Introduction to DLT Technology and Cryptocurrencies" and a member of the Academic Committee for the promotion of training and research in crypto assets and DLT technology in FIDE Foundation. He is a DEA Expert at Digital Euro Association since September 2021. Alfredo is the Director of High Specialization Diploma in Blockchain at the School of Legal Practice, at the Complutense University of Madrid, since 2020 and works as Deputy Director and Researcher at the School of Cooperative Studies. He has also held various positions as Coordinator and Director in different legal areas programs and grades. Alfredo is a Lawyer at Ilustre Colegio de Abogados de Madrid since 1995 and has been Of Counsel at SACRISTAN-RIVAS ABOGADOS. He has been a Professor of Commercial Law at Real Centro Universitario Escorial - María Cristina for 21 years.

Esperanza Cuenca Gómez

Esperanza Cuenca-Gómez is Head of Strategy and Outreach at Multiverse Computing. She is a digital transformation enthusiast with more than 12 years of experience in consumer finance and banking, and more than 5 years in strategy and operations consulting. Quantum mechanics has always fascinated.
Esperanza, so she decided to study and research in quantum computing and communications. As an engineer, Esperanza sees applied science and engineering as ways to build new technologies, solve problems, and contribute to society. She is a member of Bankinter Foundation for Innovation FIBK Voices, an ecosystem of experts who are international referents and give the Foundation their vision on how innovation is revolutionizing areas such as science, technology, entrepreneurship or education. Esperanza also serves as Head of Change Navigation at the Quantum Strategy Institute.

Carlos Muñoz Ferrandis

Carlos is a seasoned legal professional with a deep passion for the intersection of law, technology, and policy. With a wealth of experience in the field, he currently serves as the Tech & Regulatory Affairs Counsel for AI at Hugging Face, a cutting-edge technology company specializing in natural language processing and machine learning. Carlos is also a co-founder of the HIGH Technology Law Forum, a leading platform for discourse and collaboration on legal and ethical issues related to technology.
Carlos's expertise lies in the area of AI policy and regulation, where he works at the forefront of shaping the legal landscape for emerging technologies. He has collaborated with renowned organizations such as OECD.AI, providing invaluable insights and guidance on developing ethical and responsible AI frameworks. His extensive knowledge of the legal and regulatory challenges posed by AI, combined with his commitment to fostering innovation and responsible technology development, make him a sought-after authority in the field.

José Luis Núñez Díaz

José Luis leads the blockchain and web3 business unit in Telefónica Tech, pushing solutions for enterprises that build on these technologies. Hot topics like decentraliced identity, NFTs and, of course, the metaverse, are also part of the priorities they are developing and devoting resources. Before leading the Blockchain unit, he developed his career in various areas of innovation within Telefónica, highlighting milestones such as the launch of Wayra, the technology startup accelerator backed by Telefónica, in 2011. He holds several patents related to both telecommunications services and improvements in consensus mechanisms and interoperability of Blockchain networks. He holds degrees both in Telecommunications Engineering and Business Administration and specialisations in Innovation and Strategy from MIT Sloan and Harvard Business School. He also teachs Innovation, Digital Transformation and Emerging Technologies topics in several Business Schools.

Marivi Briz Ruiz

Marivi is a highly accomplished product management professional with over 12 years of experience at Telefónica, a leading global telecommunications company. Her career has been marked by a strong track record of driving innovation, delivering results, and leading cross-functional teams to success. She is most recent role at Telefónica is Global Delivery Director, where she plays a pivotal role in ensuring that the APIs, Services, and Tools designed by the Product Management team are effectively deployed in the production environments of the Business Operations. Her strategic mindset and ability to "make strategy a reality" are instrumental in transforming the core of Telefonica and the entire Telco industry. Marivi's expertise in API development, service delivery, and product strategy enables her to effectively drive projects and initiatives to completion, ensuring business success.

Danilo Petranovich

Dr. Petranovich is the Director of the Abigail Adams Institute in Cambridge, Massachusetts. The Institute provides supplementary humanistic education to the Harvard intellectual community by exploring questions of deep human concern that cut across the boundaries of academic disciplines. Previously, Dr. Petranovich taught political science at Duke University and Yale University. His scholarly expertise is in nineteenth century European and American political and social thought. He is currently writing a book, contracted with Yale University Press, on nationalism and the North in antebellum America. He is frequently seen in Harvard's Kirkland House, where he is a dedicated member of the Senior Common Room.

Robert Mahari

Robert Mahari is an engineer and lawyer pursuing a joint JD-PhD degree at Harvard Law School and the MIT Media Lab. His work focuses on Computational Law: leveraging computation to analyze, improve, and extend the law.
Robert is bridging the gap between technology and law to surface and pursue new quantitative research into jurisprudential systems. By formalizing research around computational law, he aims to deepen our understanding of legal processes, while building tools that improve legal practice, expand access to justice, and increase judicial efficacy. Robert also studies the technological transformation of the legal profession and its effect on how organizations manage legal services and risks. To this end, he is collaborating with private and public entities around the world to prototype practice-oriented computational legal solutions, deploying and studying computational law in the real world.

Beatriz Crisóstomo

Beatriz Crisóstomo is Global Head of Innovation at Iberdrola. She is a senior telecommunications engineer from the Polytechnic University of Madrid and an MBA in energy companies from the University of Nebrija. She has completed several postgraduate courses such as the Executive Leadership Program at ESADE, and Venture Capital Investing at IE Business School.

With more than 20 years of experience in technology, innovation and energy, she began hers career in consulting, and in 2006 she joined Iberdrola, where she leads the Global Innovation function, with a presence in 7 countries. Iberdrola allocates +300 million euros annually to R&D&I, with an open model, in which collaborations with suppliers, technology centers, universities and start-ups are key, to ensure the incorporation of new technologies in the future of the energy sector.

Beatriz also leads the IBERDROLA U-Universities program, establishing strategic alliances with prestigious universities around the world, with a network of more than 490,000 members and 13 universities, among which the agreement with MIT (Massachusetts Institute of Technology), for the promotion of the green and digital energy transition, with the creation of a research chair, stands out, and numerous innovation projects and initiatives with students for the promotion of entrepreneurship and young talent.

Additionally, Beatriz directs the national consortium I4ET "Artificial Intelligence for the Sustainable Energy Transition" (framed in the public call for R&D&I Missions in AI), which aims to develop research, knowledge and advanced technology of Artificial Intelligence applied to the energy sector.

Beatriz represents Iberdrola in terms of innovation and digitalization in national and international organizations, working groups and forums (Word Economic Forum, Eurelectric, European Roundtable of Industrialist, Chamber of Commerce, COTEC, AENOR...) and also contributes with her activity to promote the presence of women in the energy sector, with the firm commitment to attract female talent to STEM careers.

On a personal level, Beatriz is a mother of 4 children, optimistic by nature, restless, persevering and always ready to undertake new adventures.

Marta Luengo

Marta is Head of Legal Service Innovation and Climate Change in Iberdrola, a leading global wind power producer and one of the largest electricity companies in the world by stock market capitalization. With almost 25 years of experience, Marta has been collaborating over the past two decades to bring forward the energy transition, to combat climate change and offer a sustainable and competitive business model working in the innovation management of Iberdrola's group since its early stages, helping to develop it as a strong driving force in the Group, where she has been applying her expertise in M&A, venture capital, corporate law, innovation, intellectual property, transnational collaborative projects, Framework Programmes for EU research and financing of IR projects.

She collaborates with LES Spain – Portugal, a nonprofit professional association part of the Licensing Executives Society International, the worlds' leading membership organization for professionals involved in the business of IP where she participates in the promotion of technology transfer and open innovation in Spain & Portugal, being a member of the Board and Chair of the Networking Committee for sharing IP best practices.

She has a bachelor's degree in law from Universidad Complutense de Madrid and a Masters in Energy Law from IE Business School as well as several postgraduate courses including Venture Capital Investing at IE Business School.

Kalyan Veeramachaneni

Kalyan is a Principal Research Scientist in the Laboratory for Innovation and Decision Systems (LIDS,MIT). He leads a group called Data-to-AI. The group is interested in Big data science, Machine learning and developing AI applications to address societal needs. His primary research interests are in building statistical models that enable extraction of information from large amounts of data.

Borja Peropadre

Borja Peropadre is an accomplished physicist and researcher, currently serving as the North America & Japan Lead at IBM Quantum. With an impressive background in both academia and industry, Peropadre has spent much of his career exploring the cutting-edge fields of quantum computing, quantum simulations, and quantum materials.

Before joining IBM, Peropadre held several key positions in the quantum computing industry, including Director of Technical and Strategic Alliances at Zapata Computing, where he helped build the company's partnerships and collaborations with leading research institutions around the world. He also worked as a Scientist at Raytheon and served as a Postdoctoral Researcher in the Chemistry and Chemical Biology Department at Harvard University.

Peropadre's academic achievements are equally impressive. He received his PhD in Physics from Universidad Complutense de Madrid, where his thesis focused on the control of ultrastrongly coupled systems in Circuit Quantum Electrodynamics. He also holds a Master's degree in Fundamental Physics from the same institution, where he studied the 1D Kitaev model in superconducting circuits. In addition, he has conducted extensive research in the areas of superconducting circuits, quantum optics, and circuit QED, and his work has been published in numerous prestigious scientific journals.

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