Universidad del Desarrollo
Universidad de Excelencia

Syllabus
Blockchain to Bitcoin, Basics and Benefits (en Inglés)

A. General Information

1. Academic Unit	OFFICE OF THE UNDERGRADUATE VICE-PRESIDENT					
2. Program	SCIENCE, TECNOLOGY AND INNOVATION TRACK (CTI)					
3. Code	CTR20211					
4. Location in the curriculum	Bachelor Level					
5. Credits	10					
6. Type of course	Mandatory		Elective	X	Optional	X
7. Duration	Bimonthly		Semi-annual		Annual	
8. Modules per week	Theoretical	1	Practical	1	T.A.	X
9. Class hours	Classes	68	Teaching Assistance		0	
10. Prerequisites	None					

B. Contribution to the Graduate's Profile

Bearing in mind the changes in the job market, mainly because of the global environment, diversity and interdisciplinary view, Universidad del Desarrollo has proposed to educate its students through an educational project that will develop new skills, competencies and knowledge in students. Students will receive a solid education in their branch of knowledge, consistent with the needs of the working world so that they can successfully enter their profession at the end of their undergraduate education. Track courses have thus been designed in the aim of helping students gain more enriching learning experiences through extra-disciplinary education that will prepare them for the changing working world.

The course ***Blockchain to Bitcoin, Basics and Benefits*** forms part of the CTI Track and is intended to give the student the mindset and ability to identify upcoming opportunities and lead current projects for organizations of all kinds, thus principally teaching the following generic competencies of UDD: Communication , Critical thinking, Digital transformation.

C. General Competencies and Learning Outcomes from the Course

Generic Competencies	General Learning Outcomes
	To understand and identify the new macroenvironmental factors driving the need for new technologies. Map the chain of need for monetary flow and the impact of digital money and transactions writ large. Understand the creation and value of new technologies such as cryptocurrencies, blockchain, nun-fungible-tokens, utility coins, etc. on a global level and the potential application for organizations of all kinds.
Communication *Critical thinking*	Development and Collaboration of complex solutions across international teams utilizing traditional and modern communication tools. Incorporation of real-time and near-real-time presentations to persuade the various audiences that can arise in the context of technology and innovation.
Digital transformation	Identifying and mapping current industries and searching for and organizing information to be easily analyzed and easily understood across functional and language barriers as the analytic vision for Blockchain and all of its possibilities requires critical thinking throughout the innovation process.
	Researching and decision-making individually and part of a group to make decisions based upon thorough but in a changing environment incomplete information and uncertainty. Utilizing Adaptive Leadership techniques to support entrepreneurial thinking in an environment of high -technology, high -innovation and high level – of -change

D. Units, Content and Learning Outcomes

Units and Content	Competency	Learning Outcomes
UNIT I: HISTORY OF INNOVATION AND TECHNOLOGY: ● The Accelerating Pace of Change ● The meaning of the FOURTH INDUSTRIAL REVOLUTION ● Technology Mega shifts	*Communication* *Critical thinking*	Identify the ways of the accelerating pace of change in society, technology, and globalization.
UNIT II: THE MACROENVIRONMENTAL EFFECTS OF CRYPTOCURRENCY AND DISTRIBUTED LEDGER TECHNOLOGY ● Money: How does it work? ● Distributed Ledger Tech Cryptocurrency	*Digital transformation*	To research and build a basic understanding of the context of International & Domestic Monetary and fiscal policy. Understand how money Works and flows and be able to show the difference between traditional and legacy monetary systems, Digital and hybrid systems and Cryptocurrencies. Express fluently through frameworks in the context of future growth of blockchain technology with its impact on industries and firms.
UNIT III: EXPLORATION OF THE FUNDAMENTAL TECHNOLOGIES OF BLOCKCHAIN ● CRYPTOCURRENCIES ● WALLETS ● DISTRIBUTED LEDGER TECHNOLOGY & APPS WRIT LARGE		Operate Bitcoin as a medium of exchange, store of value, settlement instrument in current exchanges.

		Purchase, trade, and store cryptocurrency in the current method. Express the fundamental differences of ICO, Cryptocurrencies, decentralized applications, finance technologies and smart contracts.
UNIT IV: APPLYING BLOCKCHAIN IN AN ORGANIZATIONAL CONSTRUCT ● Identifying opportunities ● Finding efficiencies between and within industries ● Digital value networks		Research and identify opportunities, skills needs and challenges facing various application of blockchain in the current pandemic and post-pandemic state. Applying and creating Non-Fungible Tokens using current methods and technologies applying the concepts to the digital content world.
UNIT V: COLLABORATIVE FINAL INTERNATIONAL PROJECT		Present as a group an opportunity in an industry with a need, a solution, and the impact of the solution at individual, firm and social levels.

E. Teaching Methods

- **Expository classes:** strategy oriented to favor the construction of knowledge, through the abstraction and activation of complex cognitive processes that are developed in the student, together with support resources (auditory and visual). The student integrates, analyzes, and interprets, building a new network of concepts in a meaningful way.

- **Use of digital images and illustrations:** images and illustrations for frameworks and examples have the ability to motivate students and have greatly facilitated the task of teaching for many teachers. Images and illustrations as resources, today are highly accessible, are a flexible resource, therefore, modifiable, can be shared in various formats, are available to all teachers and students and can be used and reused at any time.

- **Problem-based learning (PBL) and Case analysis:** develops higher psychological skills through group interaction in which students play a leading role. It is based on teachers presenting a puzzling situation, question or problem, students formulate hypotheses to explain the situation or solve the problem.

- **Debates and forums:** structured conversations whose objective is to confront two or more opinions regarding a topic that is controversial, or at least, debatable from various points of view. The structure of the conversation is characterized by alternating replies from one team that defends and the other that opposes the assertion made, for which rigorous documentary research is required in order to be able to reply with a solid foundation. Through this process, critical and logical thinking is developed, teamwork is favored and the use of language and non-verbal communication resources are tested.

- **Learning-by-doing:** Hands-on approach to learning where students interact with technologies and the digital environment, trained and supported by instructors. Students build a functioning solution such as a wallet, coin, smart contract, NFT or other forms of Blockchain.

F. Evaluation

- Case-based applied test
- Quizzes testing workshop competencies
- Group proposal and industry brief
- Group final presentation and materials
- Attendance rules as prescribed my track coordination: Students can miss 6 classes after the end of the Drop-Add process indicated in the respective academic calendar. Law students can miss no more than 4 classes.

* **Passing Grade:**

- *Students must earn a grade above 3.0 on the exam to pass the course.*

"The course and/or activity include a mandatory attendance requirement, which implies that students who fail to meet this requirement will not be eligible to take the Final Exam for the subject, as stated in the Academic Regulations for Regular Students. The number of allowable absences will be specified in the respective calendars of each course and/or academic activity, and this information will be provided at the beginning of the school period for each of them."

G. Learning Resources

- *Reading Materials:*
  - *Leonard, G. (2016). Technology vs. Humanity: The Coming Clash Between Man and Machine. Fast Future Publishing.*
  - *Pritzker, Y. (2019). Inventing bitcoin: the technology behind the first truly scarce and decentralized money explained.*
  - *Hoffman, E , et al., (2020) TradeIX: Blockchain-Enabled Trade Finance in Global Supply Chains HBS No. W20650-PDF-ENG, Boston, MA, USA: Harvard Business School Publishing*
  - *Allayannis, Y., & Fernstrom, A. (2017) HBSP An Introduction to Blockchain , HBS No. UV7356-PDF-ENG, Boston, MA USA: Harvard Business School Publishing*
  - *Yen, B., & Huang M., (2020) HBSP Can Blockchain Help Château Lafite Fight Counterfeits?, HBS No. HK1237-PDF-ENG, Boston, MA USA: Harvard Business School Publishing*