

CHAISE curriculum

Mastering Blockchain and Distributed Ledger Technologies



Co-funded by the
Erasmus+ Programme
of the European Union

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Tartu, Estonia*

<https://chaise-blockchainskills.eu/>



A Blueprint for Sector Cooperation Skill Development

Erasmus+ Sector Skills Alliance program

01.11.2020 - 31.10.2024

23 partners

13 countries

European Blockchain Skills Strategy

A forecasting mechanism to anticipate future blockchain skill needs

The first-ever “*Blockchain specialist*” occupational profile

A 5-semester Blockchain Curriculum in 11 EU languages

Transnational mobility schemes for Blockchain students & professionals

A European Blockchain ecosystem

<https://chaise-blockchainskills.eu/>

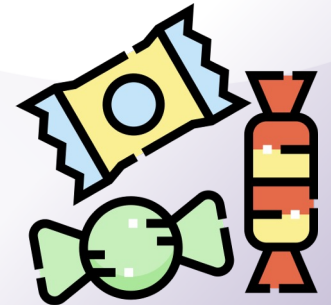
SCAN ME



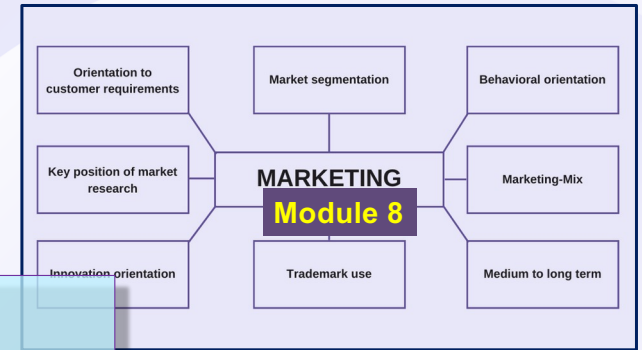
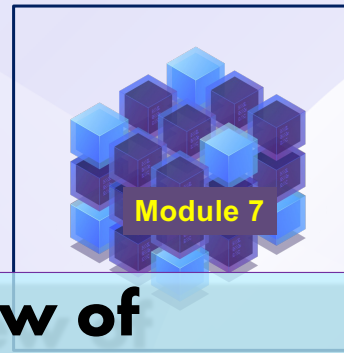
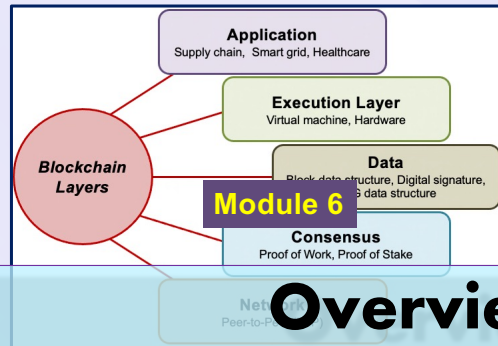
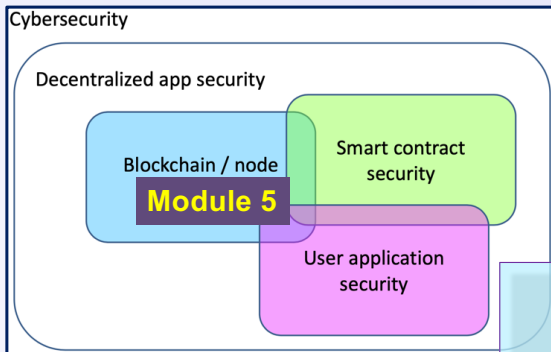
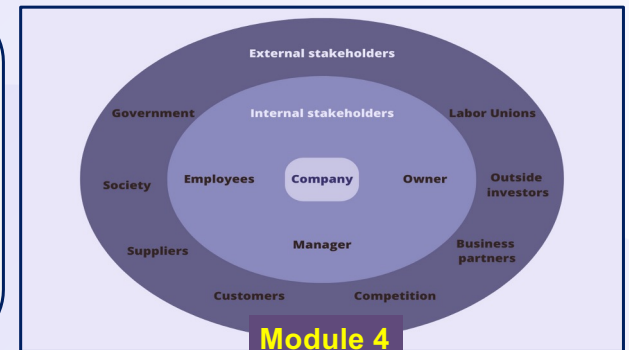
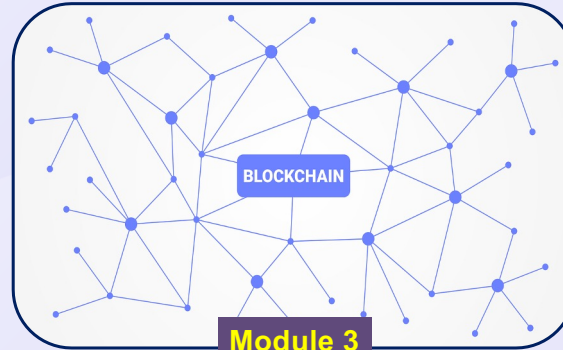
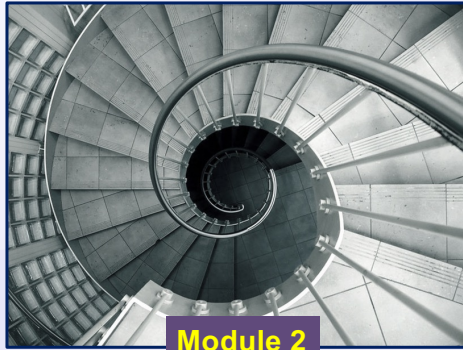
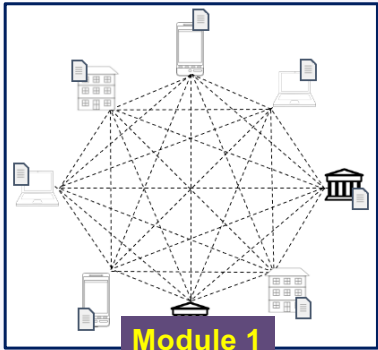
Online Course

Mastering Blockchain and Distributed Ledger Technologies

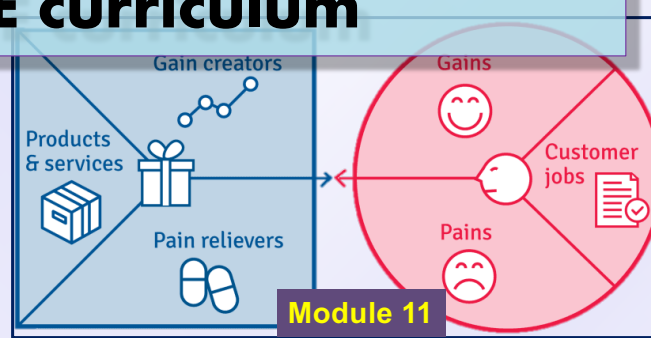
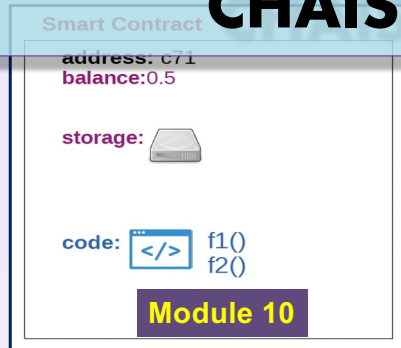
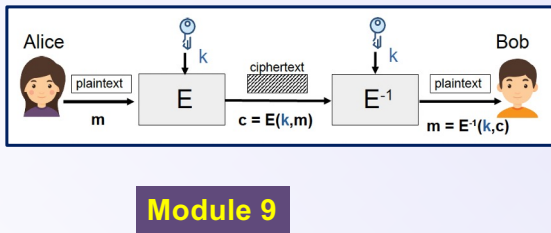
Enrol



Registration link: <https://shorturl.at/AEY36>



Overview of CHASE curriculum



Prisoner 1

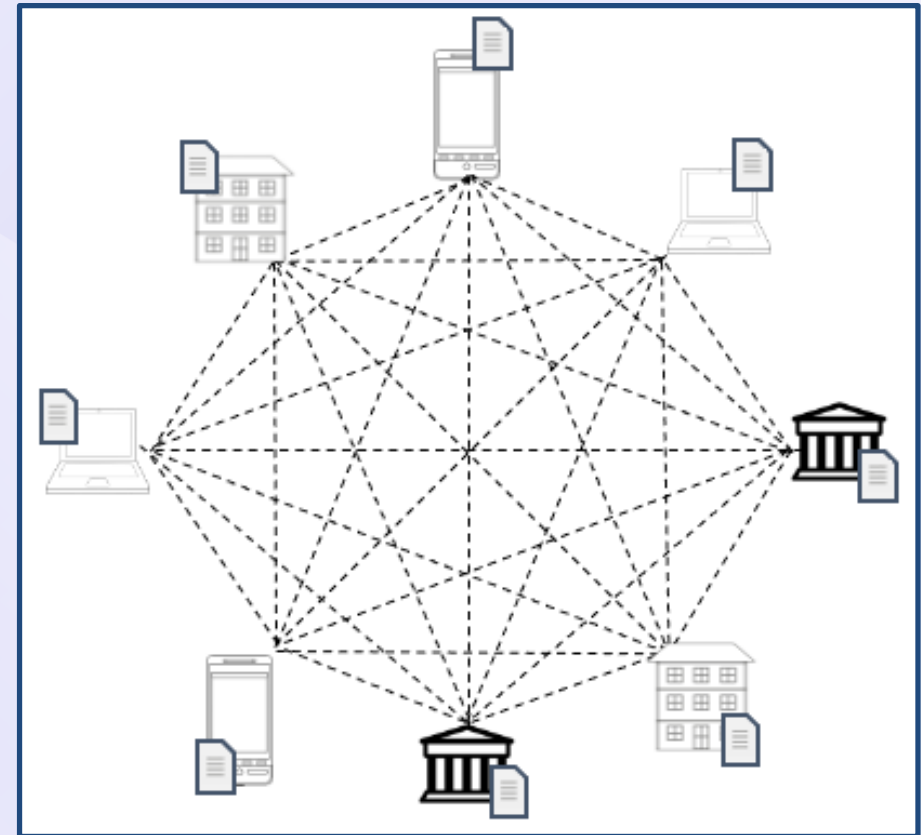
		Prisoner 2	
		Keep Quiet	Confess
Prisoner 1	Keep Quiet	-1, -1	-12, 0
	Confess	0, -12	-8, -8

Module 12

Module 1:

Introduction to Blockchain Technology

Explain the main components of the blockchain technology, recognize its application sectors and discuss the key historical facts of blockchain technology development



Module 2:

Regulation, Legal Aspects, and Governance of Blockchain Systems

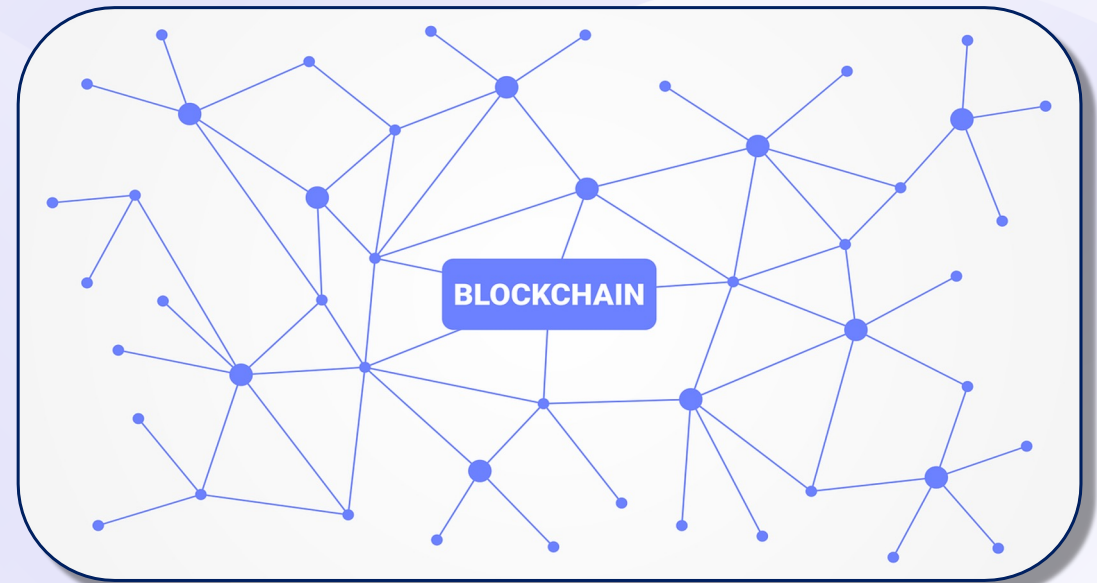
Explain blockchain-related regulations, legal aspects, governance, and their impact in the public and private sectors



Module 3:

Fundamentals of Blockchain and Distributed Ledger Technology

Use the blockchain terminology and discuss differences between the centralised databases and distributed ledger, explain blockchain characteristics, components and main security principles



Module 4:

Blockchain Business Management and Planning

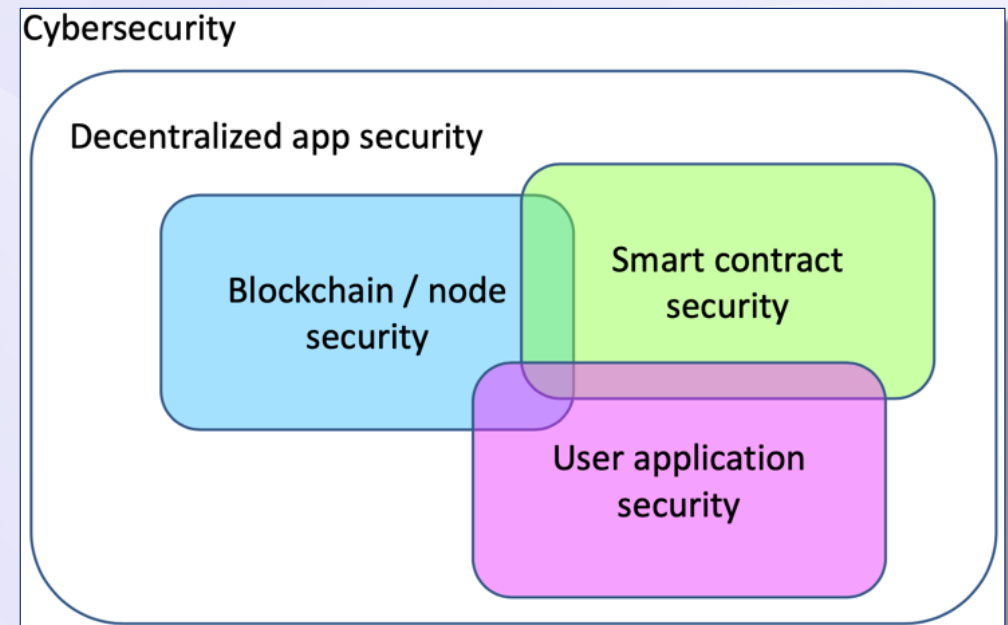
Describe the blockchain suitability for the business process innovation, discuss the fundamentals of blockchain use cases and use case implementation



Module 5:

Blockchain Security and Digital Identity

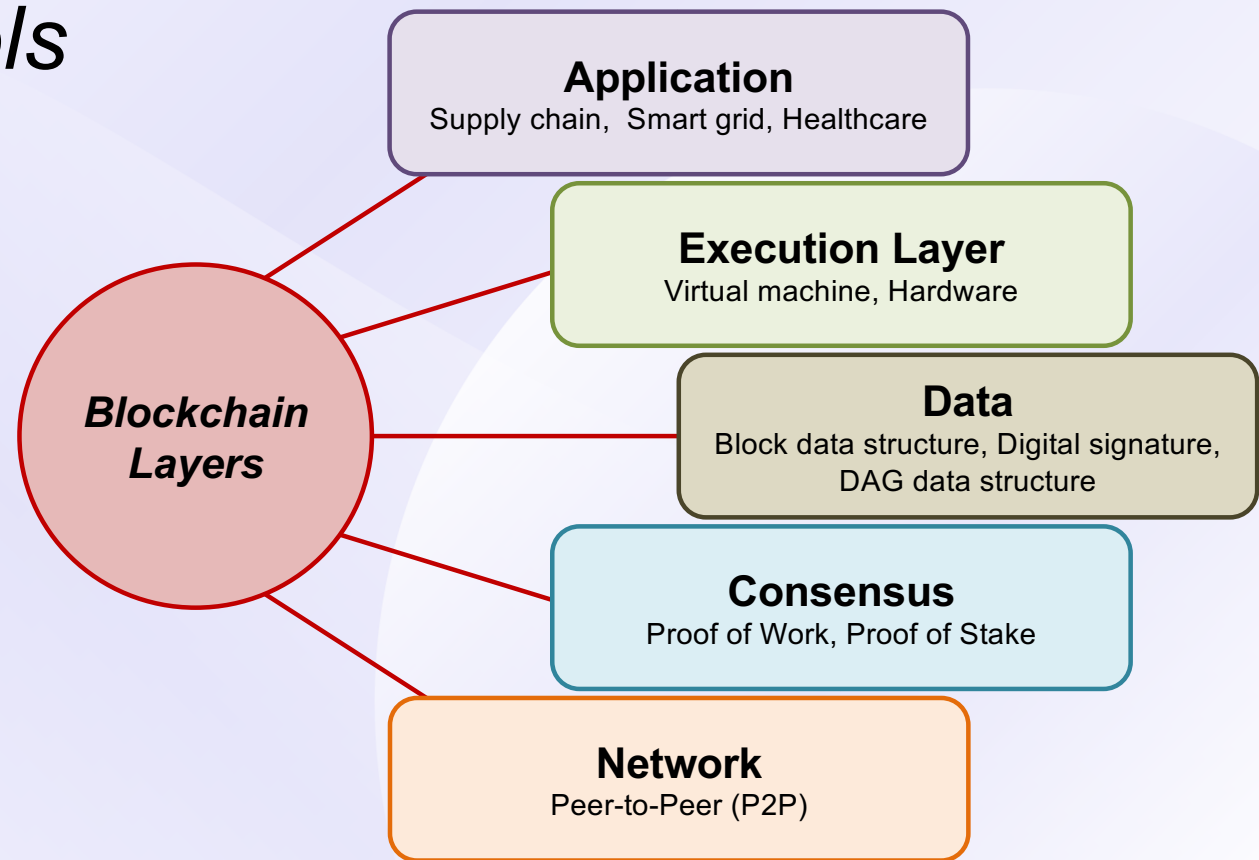
Describe how blockchains may secure data and information by utilizing the transaction protection and validation principles of blockchains, access control and digital identity principles



Module 6:

Blockchain System Architecture and Consensus Protocols

Construct architecture of blockchain-based applications, apply design patterns, compare different consensus protocols



Module 7:

Blockchain Platforms

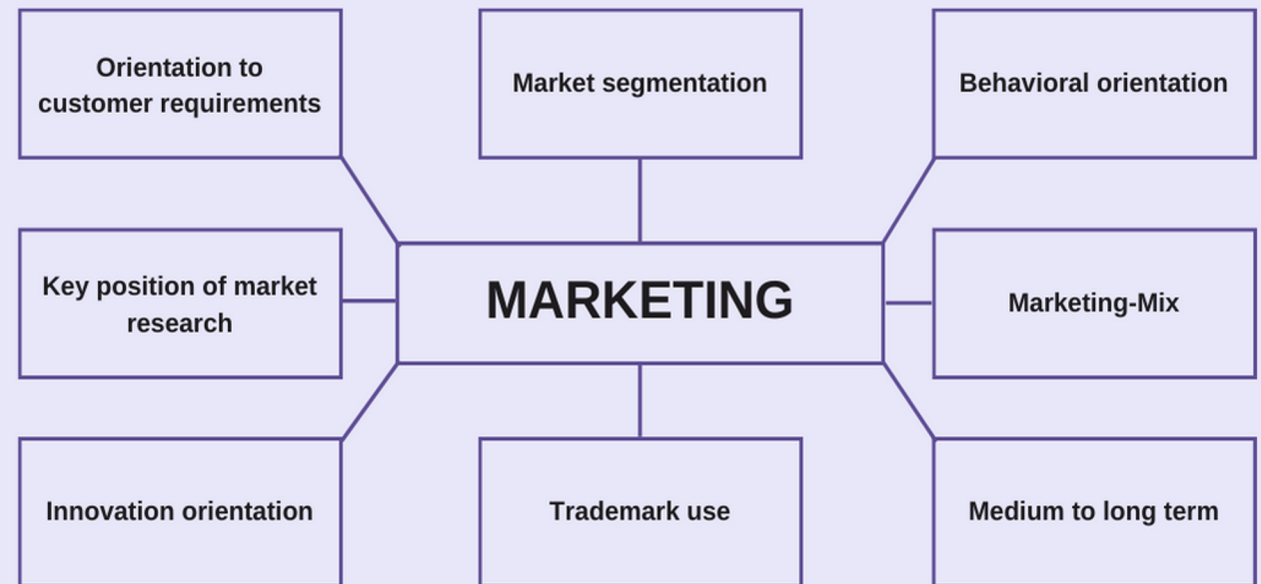
Explain basic components and types of the blockchain platforms, demonstrate the node creation, account management and transaction principles



Module 8:

Marketing and Customer Support

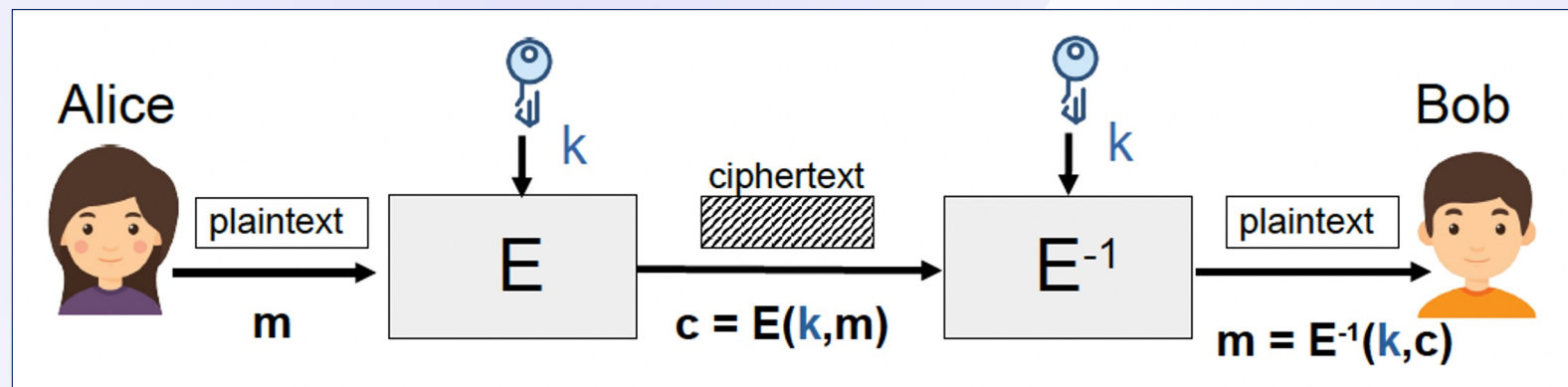
Demonstrate marketing, customer support principles for the blockchain technology



Module 9:

Applied Cryptography

Apply major digital signature schemas, cryptographic protocols, and tools to protect blockchain-based applications



Module 10 :


Smart Contract Development

Employ programming language(s) to develop smart contracts and digital currency

Smart Contract

address: c71
balance: 0.5

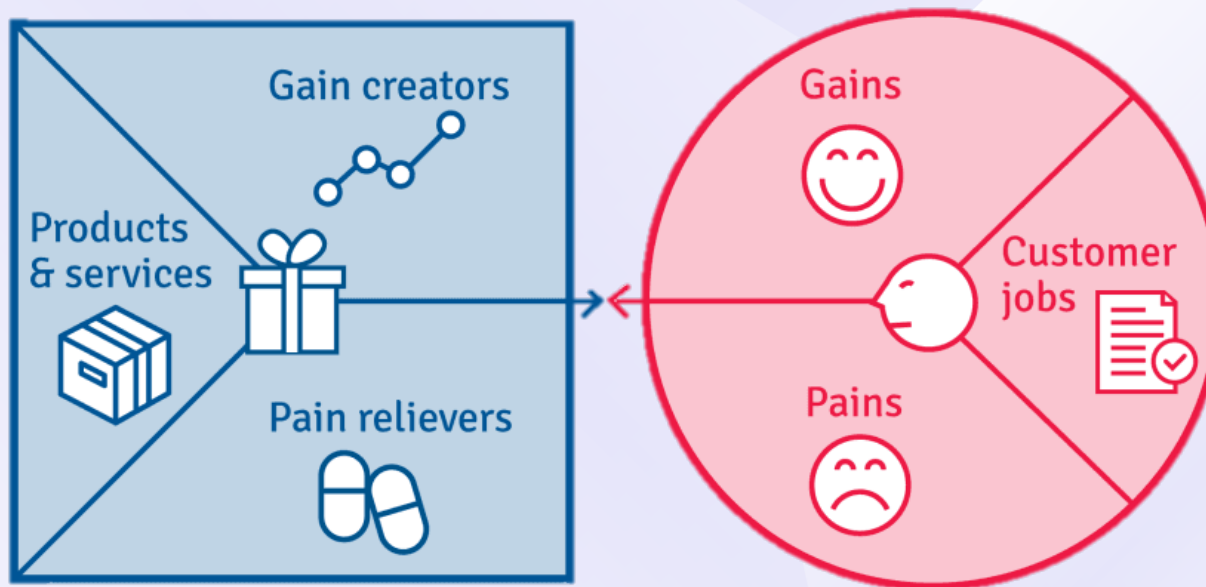
storage: 

code:  f1()
f2()
...

Module 11:

Development Use Cases: from Ideas to Service

Design heuristics for reaching customer needs, managing products and creating services using the blockchain-based applications



Module 12:

Game Theory in Blockchains

Demonstrate how reason on the blockchain-based business and investment decision using the game theory model

		Prisoner 2	
		Keep Quiet	Confess
Prisoner 1	Keep Quiet	-1, -1	-12, 0
	Confess	0, -12	-8, -8

Curriculum Overview

<i>Transversal Skills (M, A, D)</i>			
1. Introduction to Blockchain Technology 2. Regulation, Legal Aspects and Governance of Blockchain Systems			
<i>Technical Basics (D, A, M)</i>		<i>Business Basics (M, A, D)</i>	
3. Fundamentals of Blockchain and Distributed Ledger Technologies		4. Blockchain Business Management and Planning	
<i>Technical Blockchain Specialisation (D, A)</i>		<i>Business Blockchain Specialisation (M)</i>	
5. Blockchain Security and Digital Identity 6. Blockchain System Architecture & Consensus Protocols		7. Blockchain Platforms 8. Marketing and Customer Support	
<i>BC Conception & Use Case Development (A)</i>	<i>BC Engineering & Development (D)</i>	<i>Strategic Business Management (A, M)</i>	<i>Operational Business Management (D, M)</i>
9. Applied Cryptography	10. Smart Contracts Programming	11. Developing use cases: From ideas to services	12. Game Theory in Blockchain



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Thank you!



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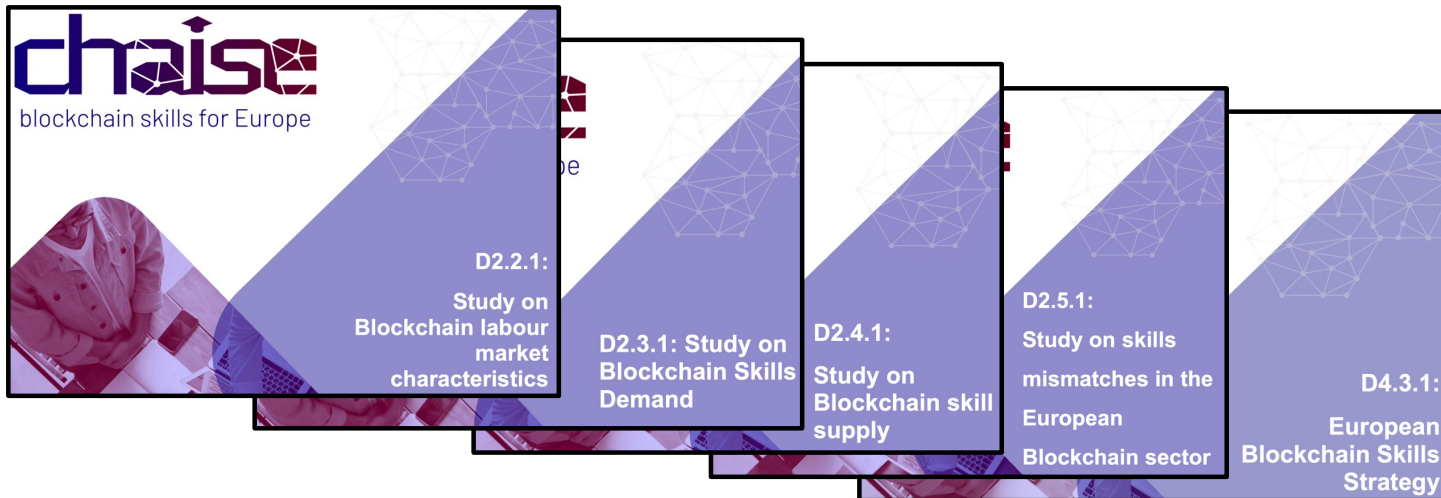


chaise-blockchainskills.eu



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Technical & Blockchain specific Skills

- Maths & Stats
- Coding (C++, Python, Java)
- Blockchain Solutions Design
- Protocol Engineering
- Cryptography Development
- Distributed Network Engineering
- Frontend & Backend Development
- Data Analysis
- Data / Network Security Design
- Smart Contract Development
- Dev. of decentralised Apps
- Cloud & Infrastructure Design
- UX Design
- Scientific Computing

Professional / Business Skills

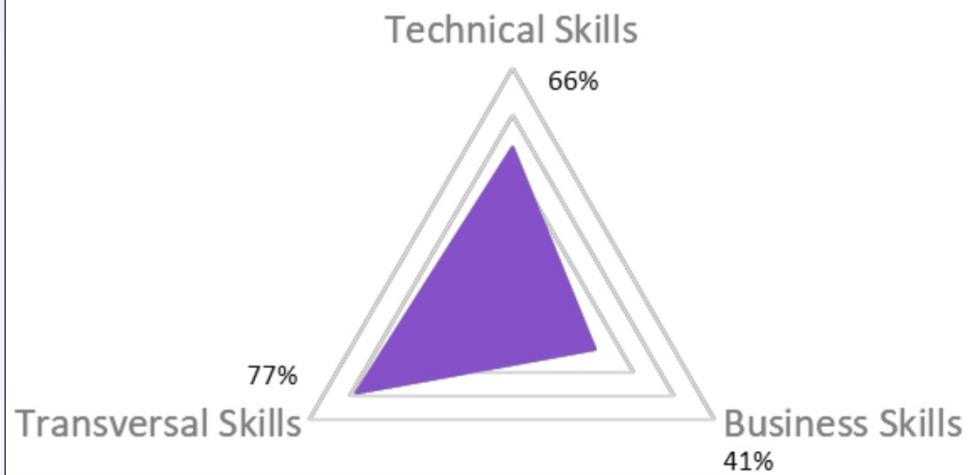
- Business (Needs) Analysis
- Business Development
- (Blockchain) Use Case Development
- Product Development
- Product Management
- Legal & Compliance
- Marketing
- Finance and Controlling
- Human resource development
- Customer Success Design
- Affiliate Marketing

Transversal Future Skills

- Learning literacy & Metacognitive Skills
- Self-efficacy & Self-confidence
- Self-determination & Autonomy
- Self-manag./orga./regul. & responsibility
- Decision competence & Responsibility-taking
- Initiative & performance competence
- Ambiguity competence
- Ethical & Environmental competence
- Design-thinking competence
- Innovation & Creativity Skills
- Systems & Networked Thinking
- Sensemaking
- Future mindset & willingness to change
- Cooperation competence
- Communication competence

Skills of Blockchain Architect

Skill Index of the BC Architect



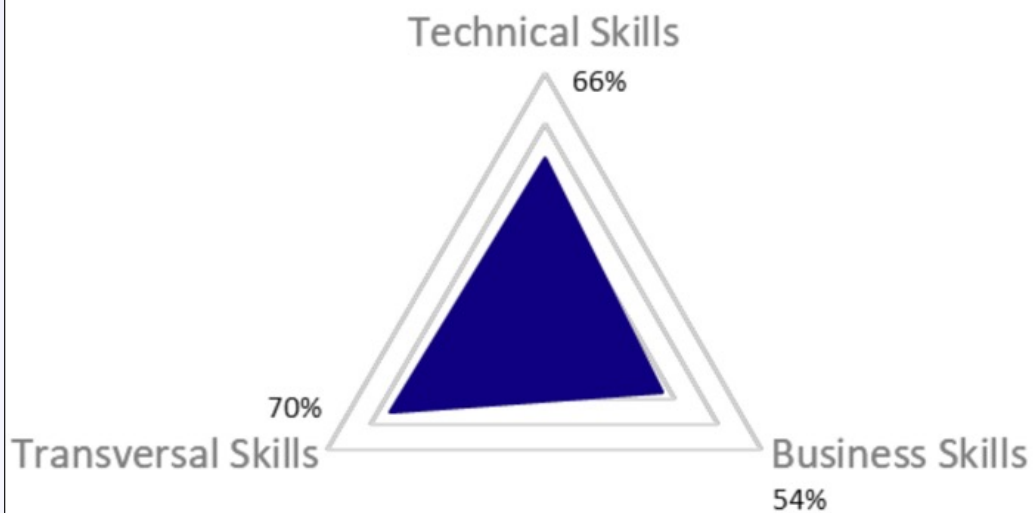
- All Technical & Blockchain Specific skills
– A specific - on the conception and design
- Business Needs Analysis, Product Management, Product Development and Business / Use Case Development
- All Transversal skills are important for the BC Architect

Architect's Curriculum Overview

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9. Applied Cryptography		11. Developing use cases: From ideas to services	

Skills of Blockchain Developer (D)

Skill Index of the BC Developer



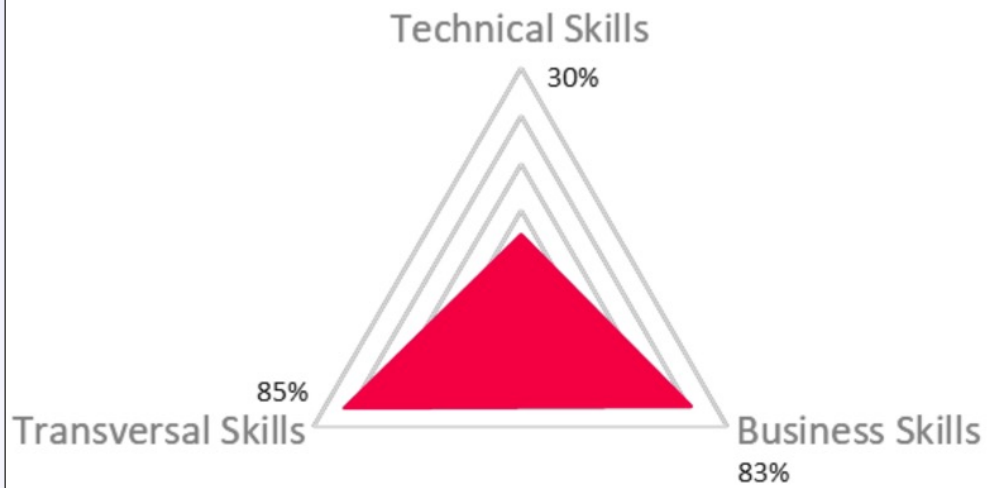
- General software development skills
 - Emphasis on the development skills
- The important Business skills are operational business skills
- All transversal skills should be included

Developer's Curriculum Overview

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	10. Smart Contracts Programming		12. Game Theory in Blockchain

Skills of Blockchain Manager (M)

Skill Index of the BC Manager



- Overview of the functional and technical background of Blockchain technology and its applications
- The Blockchain Manager needs an economic and business-oriented education (Business skills)
- All Transversal Future skills should be included

Manager's Curriculum Overview

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