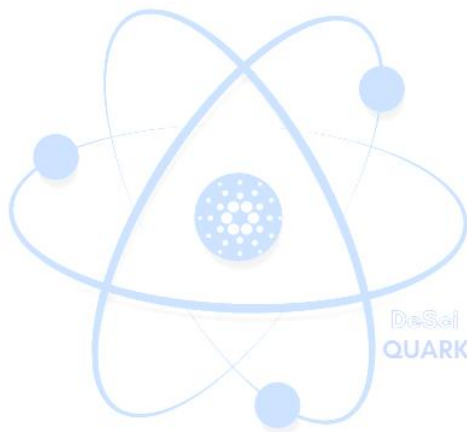# Project ID 1300094

Empowering DeSci with Marlowe: A Free Course on Real-World Blockchain Applications

M1- PoA - Evidence of Completion
Version 2

Delivery date: 4/21/2025

Coordinator: Rivero Martín, PhD. (martinnicolasrivero@gmail.com)

Introduction:

The project with ID 1300094 was officially named **"DeSci Quark"** to establish a strong, recognizable identity aligned with its mission. The name "DeSci Quark" was chosen to reflect the foundational nature of both scientific discovery and blockchain technology—just as quarks are the fundamental building blocks of matter, this platform aspires to be the entry point for scientists, academics, and developers exploring decentralized science. It positions our initiative as a bridge between the world of research and Cardano-based solutions, with a focus on practical applications in funding, collaboration, and data management.

The creation of the **DeSci Quark domain** represents a key milestone in our communication strategy, establishing a clear and professional identity that will host the course content, unify our social media presence, and serve as the central hub for community engagement.

The following sections in this report provide **documented proof of completion for Milestone 1**, directly aligned with the approved **Evidence of Completion** criteria for the project. These are organized in the following order:

- **Course Content Document**
- **Uploaded Content**
- **Website and Platform**
- **Social Media**

At the end of the document, we added a section on DeSci Quark "**Contributors**"

1. Course Content Document:

<u>Approved on Acceptance Criteria:</u> *Link to the completed document outlining at least 6 modules and their topics.*

Course Content and Structure Update

The full course content has been expanded and is now distributed across **8 modules**—two more than originally planned. These modules range from Module 0 (Welcome to the Course) to Module 7 (Course Wrap-Up and Final Exam). The structure includes:

- Module 0: Welcome to the Course
- Module 1: Challenges of Science
- Module 2: Introduction to Blockchain and DeSci
- Module 3: Blockchain Generations and Cardano Fundamentals
- Module 4: Token Creation
- Module 5: Exploring Marlowe Smart Contracts
- Module 6: Advanced Topics
- Module 7: Course Wrap-Up and Final Exam

The full course program, including the *Course Overview, General and Specific Objectives, Target Audience, Teaching-Learning Methodology, Evaluation Method, Course Features, Module-Specific Objectives, Complete Course Structure, and Facilitators Summary*, can be found at the following link:

[Full Program Link] or

https://docs.google.com/document/d/1Vs7RUTwTrp3OQp2yR5ix_-Uc4KDkd72_/edit?usp=sharing&ouid=101757312094067245470&rtpof=true&sd=true

In the "Course Structure" section, it can be seen that each module includes more than 2–3 lessons, with each lesson covering multiple topics or sub-lessons. The program also lists the names of the facilitators who contributed to the first three modules. Some facilitators for the second half of the course are still pending confirmation and have therefore not yet been included. All collaborators were given the option to deliver their lessons in either English or Spanish, with the understanding that all content would be transcribed into the other language to maximize accessibility. Currently, the written presentations are available in English only.

Please note that the program structure and content may be adjusted or expanded based on feedback from testers during Milestone 2.

2. **Uploaded Content**:

Approved on Acceptance Criteria: *Screenshots or links to uploaded videos, quizzes, and supplementary materials on the platform.*

For this milestone, we committed to uploading 30% of the course content to the platform. **Currently, 3 out of 8 modules have been published, representing 37.5% of the total content.**

In the acceptance criteria, we mentioned that we would have: *"Uploaded to the platform, including: A minimum of 6-8 videos and at least 2 quizzes and their associated materials"*. However, below we present the creation of **16 videos** corresponding to the first 3 modules, along with their 3 quizzes and bonus material for each. We provide links to the videos, quizzes, and supplementary materials for each of these modules.

Below is a table showing the lesson number for each video along with the YouTube link, which is hidden.

N°	Lesson	Youtube Link
1	Lesson 0.1: Introduction	*https://youtu.be/rfPjq-U42Cc*
2	Lesson 0.2: Course Overview	*https://youtu.be/c45Hc5_s9jU*
3	Lesson 1.1: What is Science?	*https://youtu.be/193_9HX4kmw*

4	Lesson 1.2.1 Research funding.	***https://youtu.be/mc_W6au5PDE***
5	Lesson 1.2.2. Collaboration and data sharing	***https://youtu.be/RoKUIXdEJ-c***
6	Lesson 1.2.3. Intellectual Property.	***https://youtu.be/eqRJFV59O3k***
7	Lesson 1.2.4. Scientific publications.	***https://youtu.be/lunUj8iJbW8***
8	Lesson 1.3: Open Science	***https://youtu.be/6b9JSmjWZOk***
9	Lesson 2.1: Web Evolution & Blockchain Basics	***https://youtu.be/GC1NRiAdgtE***
10	Lesson 2.2: What is DeSci?	***https://youtu.be/RHBaPXsbOzs***
11	2.2.3. Landscape of DeSci and Examples	***https://youtu.be/hmIP2oy9aQE***
12	DeSci World-Menchaca Carolina	***https://youtu.be/lm4bx_-NC18***
13	IP-NFT. Maria Fiorentini	***https://youtu.be/vNc1oNrg7ew***
14	Mushroom Protocol. Tomás Ortega	***https://youtu.be/q6qmOhqwfaA***
15	Andamio - Sebastian Pabón	***https://youtu.be/ladVR_cTyM0***
16	Lesson 2.2.4. DeSci vs TradSci	***https://youtu.be/eN2TS_TytPE***

All videos have been fully edited and subtitled: Spanish-spoken videos have been transcribed into English, and English-spoken videos into Spanish to ensure bilingual accessibility. This can be verified in each video by going to: 1) Settings, 2) Subtitles. There you can see the original YouTube transcript according to the speaker's language, the transcript corrected in the same language by the DeSci Quark team, and 3) the transcript in the other language.

As an example, using the Andamio video by Sebastián Pabon (***https://youtu.be/ladVR_cTyM0***), you can see the automatically generated English subtitles, the English enhancements, and the Spanish transcript.
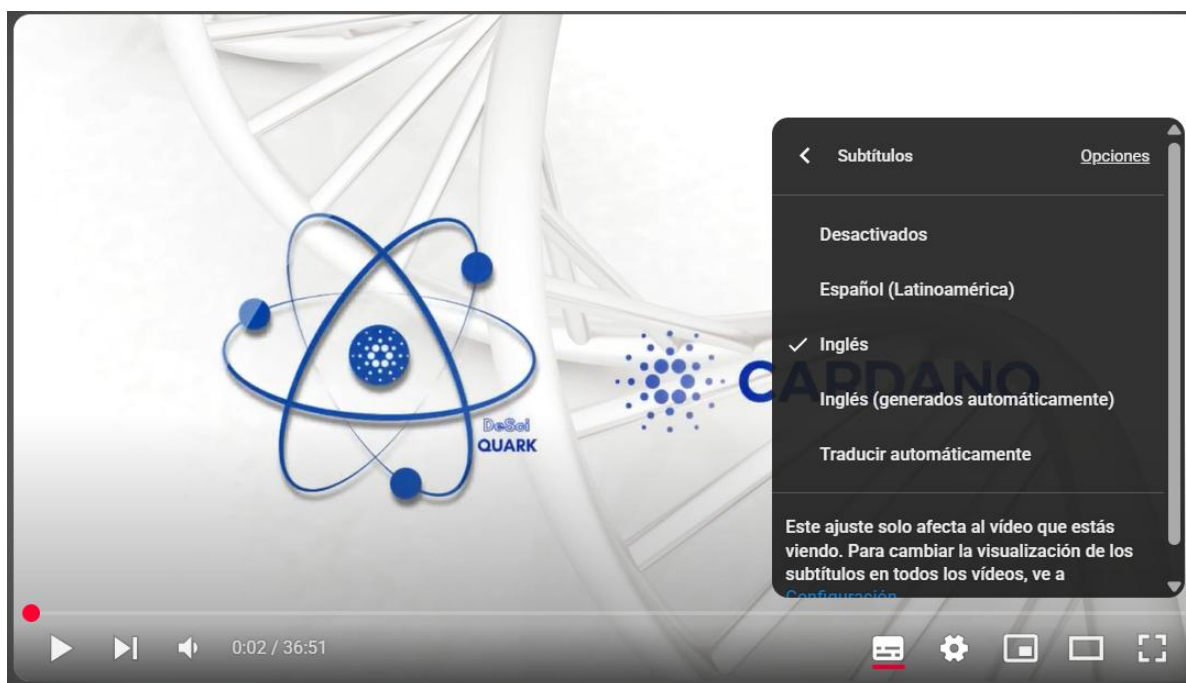
Below are the links to the quizzes and extra material for each module:

- **Module 0**

    -Quiz 0: https://docs.google.com/document/d/1ymO0m9zl-AeZlaf0hTvm0mXji8JzZpyy/edit?usp=sharing&ouid=115671773133812567710&rtpof=true&sd=true or Link

    -Extra Material 0:

https://docs.google.com/document/d/1MWv9US7zMrmkf_5WJoRRj671wf4nDireOzDeuKyKcGA/edit?usp=sharing or Link

- **Module 1:**

    -Quiz 1:

    https://docs.google.com/document/d/1N8vwx90yf6Xvl3QWJRBa28CZuoIZoGQ7/edit?usp=sharing&ouid=115671773133812567710&rtpof=true&sd=true or Link

    -Extra Material 1:

    https://docs.google.com/document/d/1yv4YZaOGZhjgD80HllxVnLZ7PzCTFp_j1Cw7ULHOgCY/edit?usp=sharing or Link

- **Module 2:**

    -Quiz 2:

https://docs.google.com/document/d/1G54ouBmaW4YSRkZAwRbaa5TzXov16zoi/edit?usp=sharing&ouid=11567177313312567710&rtpof=true&sd=true

or Link

-Extra Material 2:

https://docs.google.com/document/d/1Iq6jEzLP_lWz0p2gFDPANVCzl60FLGdsTB9kNmoCzgM/edit?usp=sharing or Link

3. **Website and Platform**:

Approved on Acceptance Criteria: *Links to the live course website and platform, showcasing functionality.*

Progress Report:

We are actively advancing in the development of our educational platform, which is being built on WordPress using the LearnDash plugin— a robust and flexible tool for managing online courses.

Several key technical stages have already been completed:

- The domain has been acquired, and Cloudflare has been implemented to enhance both security and performance.
- The website is hosted on a dedicated server with optimized hosting services.
- WordPress has been installed and configured, including its basic structure and initial functionality.
- The landing page structure is being built (a link to the mockup is provided at the end).
- On the homepage of the course platform, users can choose their preferred language: English or Spanish.
- The quiz system has been fully evaluated.
- The digital certificate of course completion is currently being designed (a preliminary version is included -link-).

Regarding the course system, we have defined that modules will be progressively unlocked upon successful completion of each corresponding quiz. This approach enables a more structured and focused learning experience.

In terms of access, the platform will begin with invitation-only access for pre-approved users (specifically, the 10 testers for Milestone 2). Following feedback and improvements, the platform will open to public registration for anyone interested.

This hybrid launch strategy allows us to test and refine the user experience in a controlled environment before scaling up with broader reach and stability.

- **Website: https://desciquark.com/**

- **Landing page mockup:**

  -English version: https://drive.google.com/drive/folders/1I3xxxydWJEd2M8CjHIZEllCZSAnNHtjk?usp=sharing or Link

  -Spanish version: https://drive.google.com/file/d/1en7dp0iMnpwSnh9g7n-7FRgqADU9_O0j/view?usp=sharing or Link

- **Video showing features: https://youtu.be/CHRAvfv6d98**

4. Social Media:

<u>Approved on Acceptance Criteria:</u> *Links to active social media accounts with at least 3 published posts.*

Social Media Presence:

We have successfully launched our official social media channels:

- **X (formerly Twitter):** https://x.com/DeSciQuark

- **Instagram:** https://www.instagram.com/desci.quark/

- **LinkedIn:** https://www.linkedin.com/company/desci-quark/

Additional communication channels:

- **Official contact email:** info@desciquark.com

- **Linktree for multi-platform access:** https://linktr.ee/DeSciQuark
- **Linktree QR code: Link**

Published Posts (Minimum of 3):

1. **Introducing DeSci Quark**

   - X: Post Link or https://x.com/DeSciQuark/status/1889086643446539504

   - Instagram: Post Link or https://www.instagram.com/p/DF6MOiBBFZN/

   - LinkedIn: Post Link or https://www.linkedin.com/feed/update/urn:li:activity:7298009010283200512

2. **What is Decentralized Science (DeSci) and why is it revolutionizing research?**

   ○ X: [Post Link](#) or   https://x.com/DeSciQuark/status/1892239153439330682

   ○ Instagram: [Post Link](#) or https://www.instagram.com/p/DGQm4p1xX34/

   ○ LinkedIn: [Post Link](#) *or*
     https://www.linkedin.com/feed/update/urn:li:activity:7298009010283200512

3. **Recording Announcement and Invitation to Collaborate**

   ○ X: [Post Link](#) or https://x.com/DeSciQuark/status/1895256651898462334

   ○ Instagram: *[Post Link](#) or*
     https://www.instagram.com/p/DIKwKQER1qm/?utm_source=ig_web_copy_link
   ○ LinkedIn: *[Post Link](#) or*
     https://www.linkedin.com/feed/update/urn:li:activity:7315182225015103489

These efforts mark the beginning of our digital communication strategy to engage the scientific and blockchain communities through consistent, informative, and impactful updates.

The project's logo and visual identity—including the color palette—were designed to reflect the values of decentralized science and Cardano's scientific foundation.
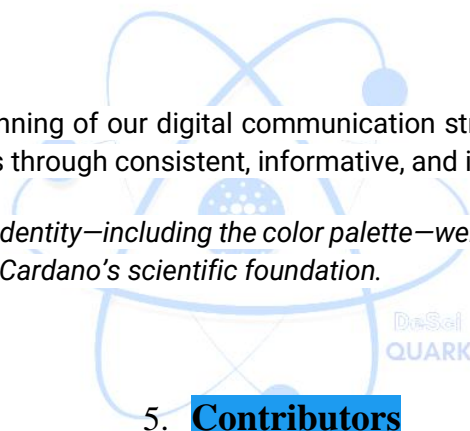
5. **Contributors**

For modules 0-2 (Milestone 1), we have established collaborations with professors with diverse backgrounds whose experience can complement the course content. We seek diverse expertise (scientific, DeSci, legal, Cardano, technical, business, etc.), countries, and genders.
Among them are:

1- Carolina Menchaca, MsC, scientist from Uruguay, core member of DeSci World.
2- María Fiorentini, Argentine specialist in Legal Tech and core member of "Mujeres en Cripto" (Women in Crypto).
3- Mushroom Protocol, a US-based DeSci company, represented by scientist Tomás Ortega (Chile), which enables investment in biotech startups through NFTs.
4- Andamio, represented by Sebastian Pabon (Colombia), a Cardano-based educational platform, presenting the use case of Syngenta (an agritech company) in India.

For the following modules, 3-7, we have already established some collaborations. We will only mention those who have already recorded their classes:

5- Rodrigo Oyarzun from Chile, Cardano SPO, DRep, and one of the creators of the Spanish-language Cardano podcast "Individuo digital."

6- Txpipe, represented by Weill Federico, PhD. He tells us about his transition from science to blockchain technology, TxPipe, and some of the tools they have developed such as Demeter.run.

6. **PoA reviews**

Dear Reviewers,

Thank you very much for yours thoughtful feedbacks and for recognizing the quality and structure of the PoA and the course content. We truly appreciate your detailed review and would like to address each of the points you raised:

- *Clarification on Midnight:*

You're right—Midnight is not a sidechain but a partner chain to Cardano. We've corrected this in the program, and the updated version can be reviewed below and in the full course document

https://docs.google.com/document/d/1Vs7RUTwTrp3OQp2yR5ix_-Uc4KDkd72_/edit?usp=sharing&ouid=101757312094067245470&rtpof=true&sd=true

Module 6: Advanced Topics in Cardano

6.1 Infrastructure and Scalability in Cardano

- Hydra: Layer 2 Protocol
- Sidechains in Cardano:
    - Milkomeda: Compatibility with the Ethereum Virtual Machine (EVM).
    - Wanchain: Interoperability with multiple blockchains.
- Midnight: Privacy and security through Zero-Knowledge Proofs (ZKPs).
- Demeter.run - Txpipe. *Weill Federico, PhD. (Argentina)*

- *Access to the English Version of the Landing Page Mockup:*

We apologize for the restriction on the English mockup file. The sharing permissions have now been updated to allow full public access.

https://drive.google.com/file/d/1kZPTIf_fczkrai7BqiT0GHI0bRQZO2Hi/view?usp=sharing

- *Centralized Storage of Deliverables*

Thank you for your valuable suggestion regarding the centralization of deliverables. Based on your feedback, we have now created a dedicated GitHub organization (**DeSciQuark-** https://github.com/desciquark) and a public repository titled **desci-cardano-course** (https://github.com/desciquark/desci-cardano-course).
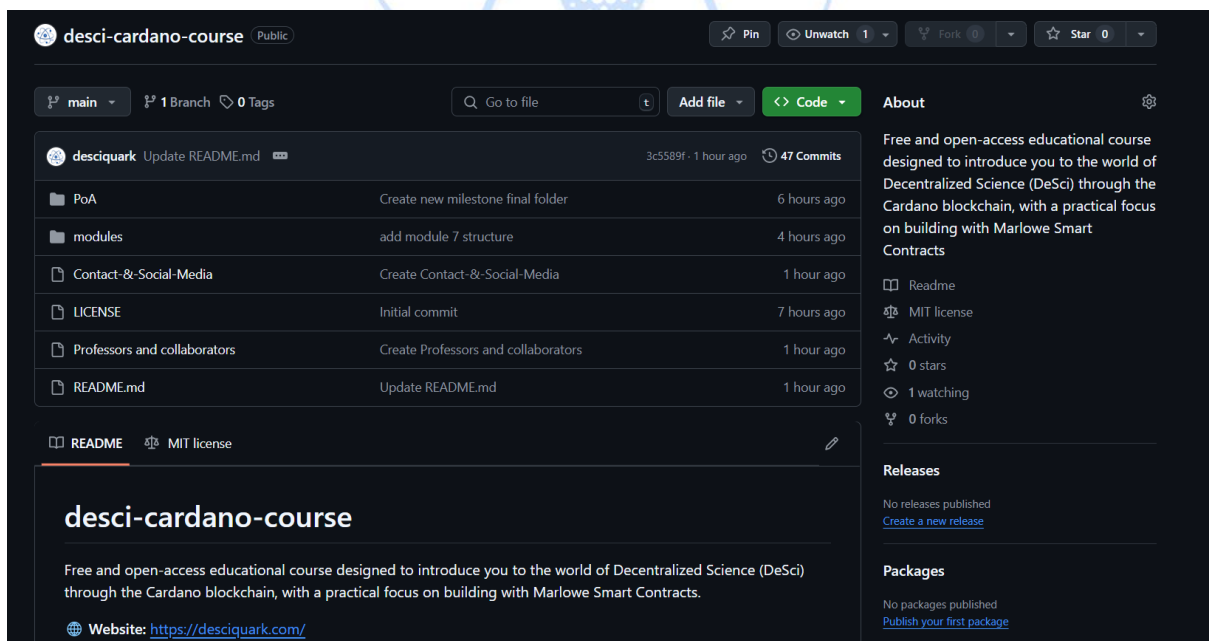

In this repository, we have organized the content into the following key folders:

- **PoA**: Structured storage of all milestone-related documentation.
- **Modules**: Includes all 8 course modules with completed lesson structures and planned content.

- **Contact-&-Social-Media**: Contains project contact information and social media links.
- **Professors and Collaborators**: Lists contributors involved in the course development.

This setup ensures better version control, transparent progress tracking, and a clear overview of all components, in line with our commitment to collaborative development and ongoing community engagement.
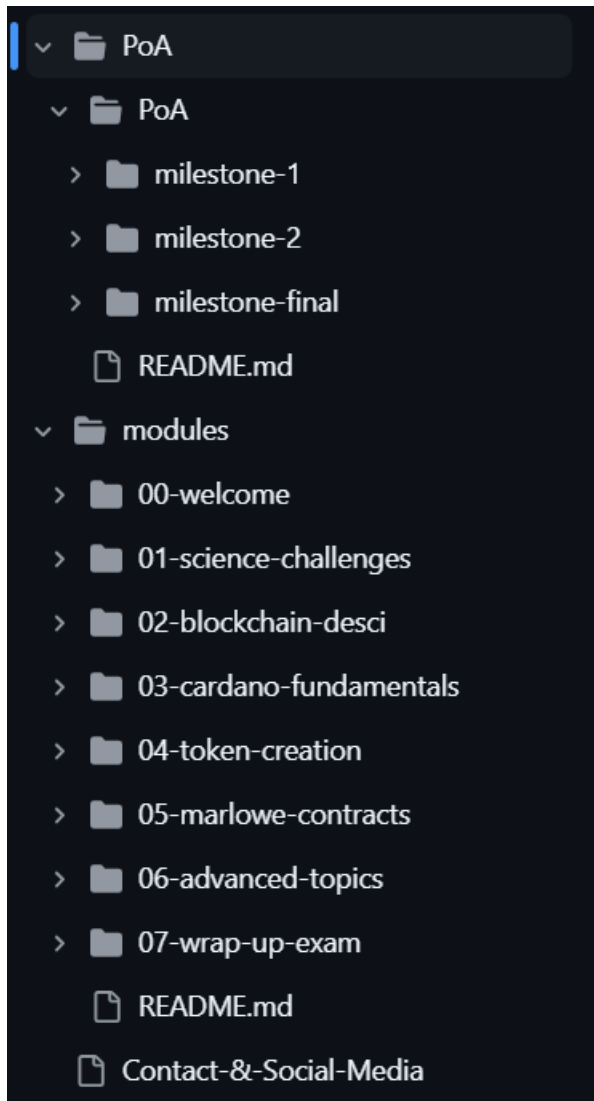
Once again, thank you for your valuable input. These refinements will significantly improve the clarity and accessibility of our project. Please don't hesitate to share any additional recommendations.

Warm regards,
Martín Rivero
Project Lead – DeSci Quark
ID: 1300094