

Writing Smart Contracts

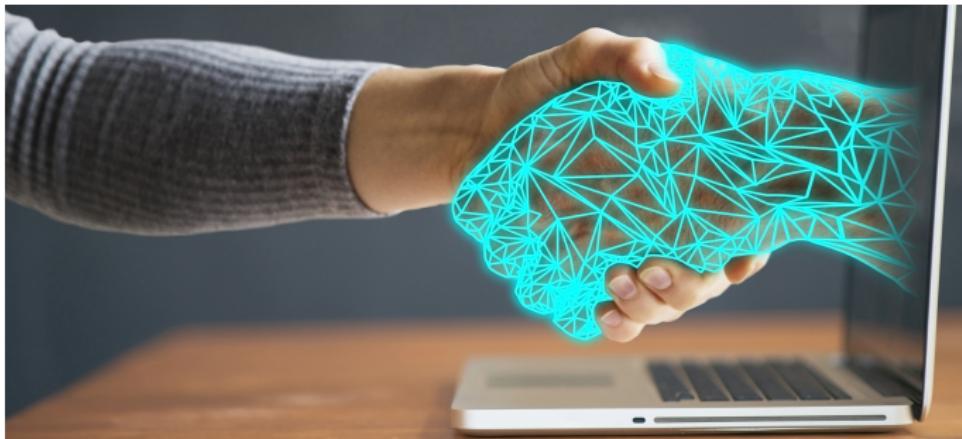
00 Welcome

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Supported by the Algorand Foundation

About

Start with why



Why smart contracts?

Automate trust

Create new business models

Create new assets

Marketable skill

Why Algorand?

Good programming

Fast + reliable

Low transaction costs

Carbon neutral

Goals (1)



Add a few tools to your toolbox . . .
with the **smallest possible number of obstacles**.

Goals (2)

Be able and confident to . . .

- ① Understand the principles of the blockchain, particularly the Algorand blockchain
- ② Create your own token or NFT
- ③ Understand the differences between classical and smart contracts programming
- ④ Translate into a smart contact:
 - ▶ a financial asset
 - ▶ a governance structure
- ⑤ Test and deploy smart contracts
- ⑥ Understand blockchain businesses
- ⑦ Work and collaborate efficiently

I hear and I forget
I see and I remember
I do and I understand

Confucius

Structure

- **Preparation @home**

- ▶ Preview sections

- **Class Structure**

- ▶ Discuss previous exercise
 - ▶ Quiz
 - ▶ Introduce and explain new concept
 - ▶ Explore code examples (“guided tour”)
 - ▶ Individual/group exercises (“unguided tour”)
 - ▶ Discuss potential applications (projects)

- **Exercise @home**

- ▶ Small exercises (individually/group work)

Timetable

February 2022

W7	Mon 14	Tue 15	Wed 16	Thu 17	Fri 18
all-day					
09:00		09:00 WSC class	09:00 WSC class	09:00 WSC class	09:00 WSC class
10:00	09:30 Registration				
11:00	10:30 WSC class	10:45 WSC class	10:45 WSC class	10:45 WSC class	10:45 WSC class
12:00					
13:00					
14:00	13:30 WSC class				
15:00					
16:00	15:15 WSC class	15:15 WSC class	15:15 WSC class	15:15 WSC class	
17:00	WSC spare time (questions)				

Material

Course hub: www.icorsi.ch

- Slides
- **Jupyter notebooks**
- Exercises (plus solutions)
- Cheat sheets
- Extra literature
- Classroom video material (panopto)
- Additional video material

Grading

Crediting

- 3 ECTS for USI (Conditions <https://www.usi.ch/wsc>)
- Other universities: crediting to be arranged by participants

Course work

- 20% – Exercises (daily during the week)
- 80% – Final projects

Deadline **Sun, April 10, 23:59 hrs** (7 weeks), no repetition

Criteria (order of decreasing importance)

- Contract(s) work
- Correctly deployed
- Observes coding and documentation guidelines
- Quality and creativity of application

Group work (more complex topics)

- Upon request, up to 3 people

Warning



- The blockchain is public and it does not forget!
Do not use secret/private data in exercise transactions
Do not make dubious statements on the blockchain
- If you loose cryptos, they are lost forever!
Do not mix real assets with studying/experimentation
Testnet credentials are also valid on the mainnet
- Code examples are simplified and not audited!
Do not copy-paste this code for real-world projects

A Version 1.0 product

First instance of a world-wide series of lectures

Your feedback is highly appreciated ...

- Things you did not understand immediately
- Resources that we should include
- Examples that you have seen
- Examples that you would like to see

Contact

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