

# CS-438

# Decentralized Systems Engineering

Homeworks and Project  
2021/2022

# Teaching Assistants



**Cristina Bănescu**



**Haoqian Zhang**



**Pasindu Tennage**

Instructors (professor and TA) e-mail: [cs438@groupes.epfl.ch](mailto:cs438@groupes.epfl.ch)

# Course Assessment Method

- Homeworks (programming assignments, optional code reviews): 60%
  - Each individual homework accounts for 15% of your overall grade
- Project (accounting for scope, follow-through in implementation quality and documentation): 40%

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## Code intensive

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40%

~5-10 hours per week

(~15-30 hours per homework)

# Homeworks

- Build Peerster
  - Peer-to-peer communication.
  - Starting with (1) a simple and imperfect message broadcast, then (2) gossip messaging and routing for one-to-one communication, (3) file sharing, finishing with (4) consensus on file names.
- Four Programming Assignments
  - Built on top of each other (!!)
- Unit tests and integration tests on GitLab

# [Optional] code reviews

- Code review when using someone else's code
- If you were unable to complete a homework, or you fully implemented your homework but the poor code design makes it hard for you to build on top, we offer you an alternative
  - 3 random assignments of your colleagues that you are strongly encouraged to review
  - Can choose one of them as base for the next assignment
- Warning: no guarantee on the quality of these 3 random assignments



# Project

- Group Project
  - Build on top of (some part of) Peerster
  - Your chance to be creative
- Guided topic selection
- Example project topics
  - Voice communication
  - Distributed password management
  - Simulate autonomous cars in a city
  - Blockchains
- Grading method
  - Intermediate deadlines for project documents and final presentation on January
  - Marks are based on **both** team performance and individual contributions
  - **No winners in a losing team!**



# TA Meetings (aka exercise sessions)

- There will be a TA session on every Friday 3.15-5.00 pm, at EPFL INJ 328 / Zoom and each student is *expected to* actively participate in these sessions.
- The Monday project session ***does not have TA supervision***; it's a time slot in your agendas to work on the project as a group
- All homework/project related questions and issues are discussed on Friday TA session. *However you should not expect the TAs to debug your code.*
- Course Moodle is intended *for general announcements only*. Project/homework-related questions are **not** discussed on Moodle. **Therefore you should fully utilize the Friday session to clarify all your questions.**

# Tentative Schedule

	Homework 0	Homework 1	Homework 2	Homework 3	Project	Project task	TA project feedback
Week 1	Friday Sep 24						
Week 2		Friday Oct 1					
Week 3							
Week 4	Tuesday Oct 12				Friday Oct 15	Set up teams, describe project idea	
Week 5			Friday Oct 22				
Week 6		Tuesday Oct 26			Friday Oct 29		
Week 7				Friday Nov 5			
Week 8			Tuesday Nov 9		Friday Nov 12	Rewrite project idea	
Week 9							
Week 10				Tuesday Nov 23	Tuesday Nov 23		
Week 11							
Week 12						Work on project	
Week 13							
Week 14							
Exam session							

Questions?