Blockchain & Cryptocurrency

CSED 490U
Course Introduction

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Sept. 3, 2018

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Introduction

- This course will be conducted using “flipped learning”
- The lectures will be given online via http://www.postechx.kr
- There will be a number of assignments and a group term project
- Active class participation is expected from all students
- The course website will be used for making various announcements and providing materials to the students: http://dpnm.postech.ac.kr/cs490u

Classes & TA

- **Classes**
  - ❖ Location: PIRL 421
  - ❖ Times: Mon. & Wed. 15:30-16:45 (**from week 2 on Mondays only**)
    - ➢ Class times will be used to have Q&As on the materials covered in the online lectures, student presentations and discussions on various course matters
- **Teaching Assistant (TA):**
  - ❖ Kyungchan Ko, 054-279-5641, kkc90(@)postech.ac.kr (DPNM Lab, CSE)
- **Pre-requisites:**
  - ❖ A course on OS and computer networking are recommended
- **Required Textbook:**
  - ❖ There will not be a textbook for this course. Lecture slides and various materials (videos, papers, software, presentations, etc.) found from the Internet can be used for the course.

How to Communicate with me via

1. Email: jwkhong@postech.ac.kr
2. Phones: 054-279-2244 (o), 010-3810-5641 (m)
3. KakaoTalk
4. Skype: jwkhong
5. Face-to-Face: PIRL 337

How to Communicate with the Class

1. Students will use LMS (Lecture Management System) within POVIS to submit assignments & project materials
2. The TA will make announcements on assignments, project, etc. via email and/or LMS
3. We will have a bulletin board in POSTECHx platform to have online Q&A and discussions

Lectures

- **Lectures will be given online via http://www.postechx.kr/ko/school/2018fall/courseware/50562**
- **Lecture notes in PDF will be provided along with online lectures**
- **Students are expected to view the online lecture before coming to class**
  - ❖ There will be two or three lecture modules per week

Course Evaluation

- Evaluation on each student will be done based on the following:
  - **Assignments** - 40%
  - **Quizzes** - 10%
  - **Term Project** - 40%
  - **Class Participation** - 10%

- Note: the above evaluation scheme may change slightly during the course.

Course Assignments

Will involve a number of things including:

- **Creating your own homepage, blog, wiki, LinkedIn page, Facebook page, etc. and making a link to the course homepage**
- **Installing Blockchain platforms & tools**
- **Developing smart contracts**
- **Developing DApp ideas**
- **Developing actual DApp using blockchain**

Quizzes

- **Quizzes will be given after every online lecture module**
- **Students must do the quizzes as they will be counted towards 10% of the final mark**
  - ❖ You will be given two chances to get the correct answer for each question

Term Project

- Will develop a DApp using a Blockchain platform or introduced in the course or some interesting system related to Blockchain and Cryptocurrencies
- May be done in groups of 2-3 students
- Go through the process of system development life cycle (i.e., project definition, requirements analysis, design, implementation, testing, deployment) and documentation – will be done throughout the course
- There will be a final presentation and demo at the end of the term
- 40% of the course mark will be allocated for this
- Think about what you would like to develop!

Class Participation

- Students are strongly encouraged to listen to all online lectures, do the quizzes, attend all classes.
- Students are also strongly encouraged to participate in discussions during classes.
- 10% of the final mark is assigned for good and active class participation.

Blockchain & Cryptocurency Course Overview

- Week 1: Introduction
- Week 2: Cryptography for Blockchain
- Week 3: Mechanics of Bitcoin (1)
- Week 4: Mechanics of Bitcoin (2)
- Week 5: Ethereum
- Week 6: DApp Development
- Week 7: Reading Week
- Week 8: Public vs. Private Blockchains
- Week 9: Blockchain Platforms
- Week 10: Important Issues in Blockchain
- Week 11: Blockchain Use Cases
- Week 12: ICO (Initial Coin Offering)
- Week 13: Token Economy
- Week 14: Cryptocurrency Exchange
- Week 15: Project Presentations


Q&A