CSC299 Sophomore Lab in Applied Computing
Blockchains and Smart Contracts
Syllabus for Fall 2017

Corin Pitcher

3 Sep 2017

Overview

In this course, students investigate a particular application of computing. Students learn tools, methodologies, and formalisms used in a particular computing area, and apply them to develop working systems. Courses stress student initiative in investigating the application context, learning new tools (including languages and APIs), studying algorithms and code examples, and working on projects.

This course will focus on the technology that supports cryptocurrencies such as Bitcoin and Ethereum. You will investigate distributed ledgers / blockchains via Ethereum. Ethereum's smart contracts will be used to illustrate relevant economic incentives, security concerns, and protocol design.

Instructor Information

- **Instructor** Dr. Corin Pitcher
- **Loop Office** 835, CDM Building, 243 S. Wabash Avenue
- **Email** `cpitcher@cs.depaul.edu`
- **Tel** +1 312 362 5248
- **Instructor's Homepage**
  http://fpl.cs.depaul.edu/cpitcher/

- **Course's Homepage**
  http://fpl.cs.depaul.edu/cpitcher/courses/csc347/
  (for lectures slides, assignments, reading schedules, examples, learning outcomes)
- **LMS Homepage**
  http://d2l.depaul.edu
  (for grades, quizzes, and video recordings)
- **Office Hours** : http://www.cdm.depaul.edu/about/Pages/People/facultyinfo.aspx?fid=104

Prerequisites

If you are not sure that you have satisfied the prerequisites, speak to the instructor before the second lecture.

Prerequisite Courses

- **Introduction to Computer Science II** (CSC242); OR
- **Python for Programmers** (CSC243)

Prerequisites

- You *must* have programmed with Python before this course.
- You *do* need a laptop to bring to class.

Textbooks

There is one required textbook and one optional textbook:

- Required: *Introducing Ethereum and Solidity: Foundations of Cryptocurrency and Blockchain Programming for Beginners* by Chris Dannen, first edition. Published by Apress.
- Optional: *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction* by Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, Steven Goldfeder. Published by Princeton University Press.

Assessment

The course grade will be based on:

Item	Weight
Quizzes	30%
Lab	30%
Project	40%

A homework assignment—typically consisting of reading online materials or following tutorials—will be assigned most weeks. You will need to complete this assignment prior to the next class meeting during which I will give a short quiz based on the assignment. Each week, I will also grade your work during class (i.e., lab) time. If you do not come to class you will get 0 points for the quiz (if given) and 0 points for the lab work. You can get points back if you complete the quiz and/or the lab work at a later date, but you can do so only twice.

Policies I

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via the course mailing list.

Attendance

1. Students are expected to attend every class. Students who miss class are responsible for catching up on missed material by asking for notes from their peers.

2. Students are expected to subscribe to the class mailing list, and read posts in a timely fashion.

Work

1. Students must keep backup copies of all submitted work.

2. Work (including projects) must be submitted to D2L or in some cases handed in during class. Email submissions will not be accepted.

3. Submitted work must be worked on individually. You must not use or look at anyone else's solution, and you must clearly acknowledge any code that you obtain from other sources (such as books, magazines, or the Internet). If you are in any doubt, contact the instructor well before the submission date for advice. You may use as much code as you like (without acknowledgement) from the examples discussed in class. **Plagiarism will result in penalties up to and including failing the course.**

Expectations

1. The course requires that students actively engage the material on your own. Students should not only read the notes and example programs, but also do self-tests, modify code, and run it. As always, figure out what you can definitely code, code it, try it, and then consider extending the boundaries.

2. Students must keep up with the assigned textbook reading.

3. Students are strongly encouraged to ask questions and offer comments relevant to the day's topic.

4. All electronic interactions are an extension of the classroom and should be treated as such. While disagreement can be part of the discourse, online communication should remain respectful and appropriate rather than demeaning and/or unprofessional.

5. Classroom use of a laptop or tablet must normally be restricted to class-related tasks such as note taking, checking references, testing code examples, etc.

Policies II

Retro-Active Withdrawal

CDM understands certain extenuating circumstances can hinder one's ability for academic success and completion of course work. Please see http://www.cdm.depaul.edu/Current%20Students/Pages/Enrollment-Policies.aspx for additional information.

Absence Notifications

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the Absence Notification process through the Dean of Students office. The form can be accessed at http://studentaffairs.depaul.edu/dos/academicprocesses.html. Students must submit supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at http://academicintegrity.depaul.edu/. If you have any questions be sure to consult with your professor.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: http://cdm.depaul.edu/enrollment

Incomplete Grades

An incomplete grade is defined in the Student Handbook as follows (note that the policy in the undergraduate student handbook applies to both undergraduate and graduate students): A temporary grade indicating that the student has a satisfactory record in work completed, but for unusual or unforeseeable circumstances not encountered by other students in the class and acceptable to the instructor is prevented from completing the course requirements by the end of the term. Please see http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx for additional information.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive

the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: csd@depaul.edu

- Lewis Center 1420, 25 East Jackson Blvd.
- Phone number: 312 362 8002
- Fax: 312 362 6544
- TTY: 773 325 7296

Dean of Students' Office

The Dean of Students' Office (DOS) helps students navigate the college experience, particularly during difficulty situations such as personal, financial, medical, and/or family crises. For a list of support services and advocacy information, please visit http://studentaffairs.depaul.edu/dos/.

Online Course Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.