

CSCI 1951L: Blockchains and Cryptocurrencies

Course Information and Syllabus

Spring Semester 2022

Lectures	TTh 1pm-2:20pm
Room	Friedman Hall 108
Lecture Notes	http://cs.brown.edu/courses/cs1951l/ A recording of each lecture will be available soon after it is given.
Text	<p>The textbook is by no means required but it may serve you as a nice resource to help you better understand the course material. The textbook is called Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction by Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, and Steven Goldfeder. It can be found on Amazon for around \$31 or you may find it elsewhere.</p> <p>All course materials can be found on the course website. Slides for the lectures are released the day before, and recordings of the lectures are posted the following class. Assignments are also posted on the site when they are released. EdStem, our online QA forum, will also be updated regularly with assignment clarifications and pinned posts relating to frequently-asked questions.</p>
Prerequisite	Either CSCI 300, 320, 330, 1310, or 1330. In particular, you should be a competent programmer.
Instructor	Maurice Herlihy (mph@cs.brown.edu)
Office	CIT 341
Professor's OH	By appointment
Head TA	Parker Ljung (cs1951lheadtas@lists.brown.edu).
UTAs	Benjamin Schornstein, Brian Sutioso, Eshaan Mangat, Michael Foiani, Nathan Luu, Nicholas Vadasz, Rohit Panse
TA Office Hours	See course site.
Time Requirements	The course will require at least 180 hours over the course of the semester (including class time). In addition to three hours per week in class, you will spend 3-10 hours per week on assignments. Assignment times will vary.
Goals	The primary goal is for you to understand how blockchain technology works, and how to separate myth and hype from the reality. Topics covered include consensus and distributed computing, example cryptocurrencies, programming smart contracts, privacy and secrecy, transfer networks, atomic swaps and

	transactions, non-currency applications of blockchains, and legal and social implications. Students will do a programming project and a term project.
Diversity: All are Welcome	Our intent is that this course provide a welcoming environment for all students who satisfy the prerequisites. Our TAs have undergone training in diversity and inclusion; all members of the CS community, including faculty and staff, are expected to treat one another in a professional manner. If you feel you have not been treated in a professional manner by any of the course staff, please contact either Prof. Herlihy (the instructor), Prof. Cetintemel (the department chair), or Laura Dobler (the department's coordinator for diversity and inclusion initiatives). We take all complaints about unprofessional behavior seriously.
Grading	<ul style="list-style-type: none"> • 50% 4 Projects (12.5% each) • 25% 5 Homeworks (5% each) • 15% 1 Written • 10% 2 Labs (5% each) <p>90% guarantees an A, 80% guarantees a B, and 70% guarantees a C/S. We may end up lowering those bars, depending on how students perform on assignments.</p>
Incomplete Policy	We expect everyone to complete the course on time. However, we certainly understand that there may be factors beyond your control, such as health problems and family crises, that prevent you from finishing the course on time. If you feel you cannot complete the course on time, please discuss with Prof. Herlihy the possibility of being given a grade of Incomplete for the course and setting a schedule for completing the course in the upcoming year.
Due Dates	All assignments must be handed in by 11:59 pm on their due dates.
Late Policy	<p>You have a total of 10 Late Days that can be used toward any assignment, with a maximum of 2 per assignment. For every additional day late, we will reduce your grade by 10% (unless you have an exception).</p> <p>If you must miss an assignment deadline because of a religious holiday, you may also get an extension without using late days, please contact Prof. Herlihy.</p>
More Info	For more in-depth information about the course, please refer to the course site.
Accommodations	If you feel you have physical, psychological, or learning disabilities that could affect your performance in the course, we urge you to contact SAS (https://www.brown.edu/campus-life/support/accessibility-services/). We will do whatever we can to support accommodations recommended by SAS.

Mental Health	<p>Being a student can be very stressful. If you feel you are under too much pressure or there are psychological issues that are keeping you from performing well at Brown, we encourage you to contact Brown's Counseling and Psychological Services (CAPS: https://www.brown.edu/campus-life/support/counseling-and-psychological-services/). They provide confidential counseling.</p>
Coping with Unforeseen or Difficult Circumstances	<p>If there are events that are upsetting to you, whether political, family-related, weather-related, etc., that affect your ability to do well in class, we are happy to take them into account with respect to our late and incomplete policies. Please feel free to talk to Prof. Herlihy about this. Additionally, Student Support Services Deans (https://www.brown.edu/offices/student-support/student-support-services) can be a helpful resource for discussing current concerns and academic and personal plans. They are available for both same-day consults and scheduled appointments.</p>

