We acknowledge that we are on the traditional, ancestral and unceded territory of the həṅ̓q̓əmiṅ̓əṁ speaking Musqueam people.

iSchool Mission: Through innovative research, education and design, our mission is to enhance humanity's capacity to engage information in effective, creative and diverse ways.

ARST575M/LIBR559T: Blockchain Technology for Information Professionals (3) – Course Syllabus (3)

Program:	MAS/MLIS/MASLIS and Blockchain/DLT graduate pathway
Year:	2020
Course Schedule:	Mondays, 9-11:50am
Location:	IKBLC, Rm 461
Instructor:	Victoria Lemieux
Office location:	iSchool, Rm 488 and ICICS, Rm 179
Office phone:	1-604-822-9199
Office hours:	Mondays, 1-2pm (iSchool, Rm 488); Tuesdays, 1-2pm (ICICS, Rm. 179)
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Learning Management Site:	http://lthub.ubc.ca/guides/canvas/

Course Goal: The goal of this course is to provide students with a foundational understanding of blockchains as socio-technical systems, with recordkeeping at their core, said to establish trust at societal, institutional, informational and technical levels. Students will interact with and apply blockchain technology as a means of evaluating the relationship between trust and blockchain technology, and assess the role of the information professional in relation to requirements for trustworthy recordkeeping and effective information management in the context of blockchain technology.

Course Objectives:

Upon completion of this course students will be able to:

Module 1: Foundations
- Demonstrate an understanding of all of the salient features and architectures of blockchain technology (1.3)
- Employ a blockchain wallet and simple scripts to conduct basic cryptocurrency transactions on a blockchain
- Distinguish different types of blockchains, including differences and similarities between major blockchain platforms (1.3)
- Critically evaluate notions, and the basis, of trust from different disciplinary perspectives (legal, historical, archival and technical), and through time, and how blockchain operates to solve problems of trust (1.3, 4.1)

Module 2: Blockchain Recordkeeping and Information Management
- Identify how interacting layers in blockchains, in particular the keeping of records, contribute to the attainment of trust in the context of blockchains (1.3)
- Demonstrate an understanding of the main elements of an archival and diplomatics examination of records for trustworthiness and apply them to the evaluation of blockchain system designs (1.1, 1.3, 4.1)
- Design and configure a basic blockchain network and appraise its operation in relation to principles of trustworthy recordkeeping and information management (4.2)
- Critically assess the Crypto-Anarchist's manifesto and the Cypherpunk manifesto in relation to the management of records and information and the role of trusted records repositories and the role of the records and information professional (1.1, 1.3, 1.4, 4.1, 5.1)

Module 3: Information Governance, Risk and Compliance
- Critically evaluate discourse on privacy and transparency in relation to blockchain technology and evaluate the implications for the design of blockchain systems (1.1, 1.2, 1.3, 4.1)
- Demonstrate an understanding of techniques of forensic analysis of blockchain transactions, including those used to trace cryptocurrency transactions (1.3)
- Analyze blockchain transactions and critically evaluate the implications in relation to user privacy (4.2)
- Demonstrate an understanding of laws and regulations applicable to blockchains and cryptocurrency tokens, and critically reflect upon these in relation to the notion of "code as law" (1.3)
- Design and implement a smart contract and assess it in relation to the archival and diplomatic theory relating to records and trustworthy recordkeeping (4.2)

Course Topics:

Module 1: *Foundations*
- Blockchain use cases related to archives and libraries
- Features and architectures of blockchain technology
- Different types of blockchains, including differences and similarities between major blockchain platforms
- Notions of trust from different disciplinary perspectives (legal, historical, archival, technical)
- How blockchains operate to solve problems of trust

Module 2: *Blockchain Recordkeeping and Information Management*
- Interacting layers in blockchains, in particular, how recordkeeping contributes to the attainment of trust in the context of blockchains
- Main elements of an archival and diplomatics examination of records for trustworthiness and their application
- Public Archives, long-term preservation and blockchains
- The Crypto-Anarchist's manifesto and the Cypherpunk manifesto

Module 3: *Blockchain Information Governance, Risk and Compliance*
- Privacy and transparency in blockchain technology
- Forensic analysis of blockchain transactions

- Laws and regulations applicable to blockchains and cryptocurrency tokens,
- "code as law"
- smart contracts

Prerequisites: MAS and Dual Students, completion of the MAS core courses. MLIS students, completion of the MLIS core and of LIBR 579G or LIBR 516.

 Format of the course: Combination of lectures, labs and guest speakers.

Required and Recommended Reading: To be distributed separately.

Course Assignments:

Assignment Name	Due Date	Weight	Graduate Competencies
Four Quizzes on the Foundations of Blockchain Technology as a Technology of Trust		20%	1.3, 4.1
Critical analysis of a blockchain solution design: Students will review a whitepaper, technical paper, or case study of a blockchain solution or solution design and critically assess it from an archival or information management perspective.	Apr. 6	20%	1.1, 1.3, 1.4, 4.1, 5.1
Technical Labs: Students will be expected to complete a series of five in-class technical labs as follows: 1. Setting up a cryptocurrency wallet and sending and receiving cryptocurrency on a blockchain testnet (5%) 2. Generating blockchain key pairs and sending and receiving cryptocurrency on a testnet using generated key pairs (5%) 3. Designing and configuring a basic blockchain network (10%) 4. Analysing a network of blockchain transactions (10%) 5. Designing and implementing a smart contract (10%)	Lab 1= Jan. 22 Lab 2 = Jan. 29 Lab 3 = Mar. 11 Lab 4 = Apr. 1 Lab 5 = Apr. 8	50%	1.1, 1.2, 1.3, 4.1, 4.2, 5.1
Class participation: Students will be expected to demonstrate their ability to comprehend, critically reflect upon and discuss the readings in class.	Throughout	10%	1.2, 1.3, 1.4, 4.1, 5.1

Course Schedule [week-by-week]:

CONTENT:	DATE:
Module 1: *Foundations*	

Blockchain Use Cases in archives and libraries	January 13
Features and architectures of blockchain technology and Lab #1	January 20
Different types of blockchains, including differences and similarities between major blockchain platforms and Lab #2	January 27
Notions of trust from different disciplinary perspectives (legal, historical, archival, technical)	February 3
How blockchains operate to solve problems of trust	February 10
Module 2: *Blockchain Recordkeeping and Information Management*	
Interacting layers in blockchains, in particular the keeping of records, contribute to the attainment of trust in the context of blockchains	February 24
Main elements of a archival and diplomatics examination of records for trustworthiness and their application in the design of blockchain systems	March 2
Public Archives, Long-term Preservation and Blockchains and Lab #3	March 9
The Crypto-Anarchist's manifesto and the Cypherpunk manifesto	March 16
Module 3: *Blockchain Information Governance, Risk and Compliance*	
Privacy and transaparency in blockchain technology	March 23
Forensic analysis of blockchain transactions and Lab #4	March 30
Blockchains and the law Laws and regulations applicable to blockchains and cryptocurrency tokens "code as law" and Lab #5 *Critical analysis assignment also due	April 6

Attendance: Attendance is required in all class meetings. If you know you are going to be absent you must inform the instructor beforehand if at all possible. Excessive absences from class may affect the class participation grade.

Evaluation: All assignments will be marked using the evaluative criteria given on the iSchool web site.

Required Materials: Students will access to a computer to complete the labs. If students do not have their own computer, or prefer not to use their own computer, computers may be borrowed from the iSchool.

Policies and Resources to Support Student Success: UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (https://senate.ubc.ca/policies-resources-support-student-success)

Centre for Accessibility: Centre for Accessibility works with the University to create an inclusive living and learning environment in which all students can thrive. The University accommodates students with disabilities who have registered with the Centre for Accessibility unit: [https://students.ubc.ca/about-student-services/centre-for-accessibility]. You must register with the Disability Resource Centre to be granted special accommodations for any on-going conditions.

Religious Accommodation: The University accommodates students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Please let your instructor know in advance, preferably in the first week of class, if you will require any accommodation on these grounds. Students who plan to be absent for family obligations, or other similar commitments, cannot assume they will be accommodated, and should discuss with the instructor before the course drop date. UBC policy on Religious Holidays: http://equity.ubc.ca/days-of-significance-calendar/

Academic Integrity
Plagiarism

The Faculty of Arts considers plagiarism to be the most serious academic offence that a student can commit. Regardless of whether or not it was committed intentionally, plagiarism has serious academic consequences and can result in expulsion from the university. Plagiarism involves the improper use of somebody else's words or ideas in one's work. The UBC policy on Academic Misconduct is available here: http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,54,111,959.

It is your responsibility to make sure you fully understand what plagiarism is. Many students who think they understand plagiarism do in fact commit what UBC calls "reckless plagiarism." The UBC Learning Commons has a resource page on how to avoid plagiarism, with policies on academic integrity and misconduct found here: [http://learningcommons.ubc.ca/resource-guides/avoid-plagiarism/

If after reading these materials you still are unsure about how to properly use sources in your work, please ask your instructor for clarification.