THE UNIVERSITY OF BRITISH COLUMBIA
iSchool (Library, Archival & Information Studies)
Faculty of Arts

We acknowledge that we are on the traditional, ancestral and unceded territory of the hәṅ̓q̓әmiṅ̓әṁ 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.

ARST 575J/LIBR 514K: IT Security, Information Assurance, and Risk Management – Course Syllabus (3)

Program: Master of Archival Studies/Masters in Library and Information Science
Year: 2019-2020, WT1
Course Schedule: Thursdays, 2-4:50pm
Location: IKBLC Terrace Lab
Instructor: Victoria Lemieux
Office location: IBLC 488
Office phone: 604-822-9199
Office hours: Thursdays, 1-2pm
E-mail address: vlemieux@mail.ubc.ca
Canvas: www.canvas.ubc.ca

Course Goal:

In the digital era, records and information are being created and kept using a wide variety of digital technologies – web- and mobile-based user interfaces, databases, cloud, blockchain – running over the Internet. This has exposed records and information to new risks and introduced unprecedented challenges for records and information professionals charged with the management and long-term preservation of authentic records and information. In response, records and information professionals must learn new knowledge and skills, such as IT Security, Information Assurance and Risk Management.

This course therefore provides an overview of the fields of IT Security, Information Assurance and Risk Management. IT Security and Information Assurance are concerned with threats to the Confidentiality, Integrity and Availability (CIA) of information systems. Risk management comprises a set of coordinated activities to direct and control an organization with regard to risk. This course will explore how IT Security, Information Assurance, and Risk Management intersect with the management of records and information in digital environments and will address the application of IT Security, Information Assurance and Risk Management theories, principles, and techniques to the management records and information-related risks.

Course Objectives: The numbers below each objective indicate which iSchool Graduate Competency is served by the objective. The full list of competencies is located here:
http://slais.ubc.ca/programs/about-department/graduate-competencies/

Upon completion of this course students will be able to:

1. Articulate and critically reflect upon the history and development of the fields of IT Security, Information Assurance and Risk Management and appreciate the differences between the three approaches [4.1, 5.1, 5.2, 5.3]
2. Fluently articulate and apply Information Assurance and Risk Management concepts and terms [4.1]
3. Articulate and critically evaluate Security Management and Information Assurance practices [4.1, 5.1, 5.2, 5,3]
4. Understand Risk Management practices and critically reflect upon how they can be applied to managing records and information-related risks [1.1, 1.3, 3.2, 5.1, 5.2, 5.3]
5. Articulate Access control practices and critically evaluate how they can be applied to managing records and information-related risks [1.1, 1.3, 3.2]
6. Articulate and critically evaluate Telecommunications and Network Technologies, risks to records and information arising from these technologies, and ways in which these risks may be managed [1.1, 1.3, 3.2]
7. Articulate and critically evaluate the Application Technologies and the Application Development Life Cycle, risks to records and information arising from these technologies and ways in which these risks may be managed [1.1, 1.3, 3.2]
8. Articulate and critically evaluate Business Continuity and Disaster Planning practices and how these may be used to address risks to records and information [1.1, 1.3, 3.2]
9. Articulate and critically evaluate Physical Security practices and how these may be used to address risks to records and information [1.1, 1.3, 3.2]
10. Articulate and critically discuss recent technology trends (e.g. Cloud Computing, Social Networking and Mobile Technologies, the risks to records and information to which these technologies may give rise, and ways in which these risks may be managed [1.1, 1.3, 3.2]

Course Topics:

- History and development of the fields of IT Security, Information Assurance and Risk Management and appreciate the differences between the three approaches.
- IT Security, Information Assurance and Risk Management concepts and terms.
- Security Management and Information Assurance practices.
- Risk Management practices and how they can be applied to managing records and information-related risks.
- Telecommunications and Network Technologies, risks to records arising from these technologies and ways in which these risks may be managed.
- Application Technologies and the Application Development Life Cycle, risks to records and information arising from these technologies and ways in which these risks may be managed.
- Access Control
- Business Continuity and Disaster Planning practices and how these may be used to address risks to records and information.
- Physical Security practices and how these may be used to address risks to records and information.
- Technology trends (e.g. Cloud Computing, Social Networking and Mobile Technologies), the risks to records and information to which these technologies may give rise, and ways in which these risks may be managed.

Prerequisites: MAS and Dual Students: completion of the MAS core courses
MLIS students: LIBR 516 and completion of the MLIS core courses, plus permission of the SLAIS Graduate Adviser.

Format of the course: One three-hour class per week. There will be an emphasis on reading and discussion with a lecture/seminar format, as well as individual assignments and module tests.

Required and Recommended Reading: The course textbook is Stewart, James M., Chapple, Mike, and Gibson, Darril (2012). *CISSP: Certified Information Systems Security Professional Study Guide : Certified Information Systems Security Professional Study Guide, Sixth Edition.* NY, NY: John Wiley & Sons. Available online from the UBC Library.

Readings [week by week]: To be distributed on the first day of class.

Course Assignments,

Assignment Name	Due Date	Weight	Graduate Competencies
Class Participation	Throughout	10%	3.1
Assignment 1: In-class Discussion Leadership	Varied	20%	2.1, 2.2, 3.1
Module Quizzes (online)	Throughout	30%	1.1, 1.2, 1.4, 1.5, 3.2
Assignment #2: Risk Assessment	Nov. 28	40%	1.1, 1.2, 1.4, 1.6, 2.1, 2.3, 3.1.2, , 4.1

Course Schedule [week-by-week]:

Topic	Date
• Introduction to the course • Introduction to IT Security, Information Assurance and Risk Management and their relationship to records and archives administration • Selection of discussion topics and determination of discussion leadership schedule	Sept.5
• IT Security and Risk Management Perspectives and Standards • Information Security Governance and Risk Management • The Open Systems Interconnection Model **Complete Module Test 1 in Canvas**	Sept. 12
• Application & Presentation Layer Attacks and Risk Mitigation Strategies • Access Control • Secure Software Development • Presentation of discussion(s) **Complete Module Test 2 in Canvas**	Sept. 19
• Telecommunications and Network Attacks and Risk Mitigation Strategies, Part I • Presentation of discussion(s)	Sept. 26

Complete Module Test 3 in Canvas	
• Telecommunications and Network Attacks and Risk Mitigation Strategies, Part 2 • Security Architecture • Presentation of discussion(s) **Complete Module Test 4 in Canvas**	Oct. 3
• Cryptography • Blockchain • Presentation of discussion(s) **Complete Module Test 5 in Canvas**	Oct. 10
• Risk Management, Part I • Presentation of discussion(s)	Oct. 17
• Risk Management, Part II • Presentation of discussion(s) **Complete Module Test 6 in Canvas**	Oct. 24
• Security Operations • Incident Response Management • Presentation of discussion(s) **Complete Module Test 7 in Canvas**	Oct. 31
• Guest lecture: Michael Arghast, CEO Kobalt: https://www.kobalt.io/ who be lecturing on "Real life IT security from the Trenches" • Instructor traveling • Work on risk management assignment	Nov. 7
• IT Security, Information Assurance and Risk Management Policy Issues in Society • Privacy vs. Security • Active Defense	Nov. 14
• Physical Security • Business continuity and disaster recovery • Legal, regulations, compliance and investigations • Presentation of discussion(s) **Complete Module Test 8 in Canvas**	Nov. 21
• IT Security, Information Assurance and Risk Management Training and Awareness • **ASSIGNMENT #2 DUE**	Nov. 28

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.

Evaluation: All assignments will be marked using the evaluative criteria given on the iSchool web site, and, more specifically, in accordance with assignment grading rubrics. Assignments will be regraded only in exceptional circumstances. Missed in-class assignments will be given a mark of zero unless prior arrangements have been made with the instructor or the student has a note from a health care professional or the Centre for Accessibility.

Required Materials: Reading materials will be made available either through the CANVAS system or through the UBC library system.

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.