



We acknowledge that we are on the traditional, ancestral and unceded territory of the hən̓q̓əmiṇəm 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: 2021-2022, WT1

Course Schedule: Mondays, 2-4:50pm. Due to Covid-19, this course will include a blend of synchronous classroom-based and asynchronous online instruction.

Location: Barber Learning Centre, Room 157 (<https://ikblc.ubc.ca/spaces/wayfinding/>)

Instructor: Victoria Lemieux

Office location: IBLC 488

Office phone: 604-822-9199

Office hours: Mondays and Tuesdays, 1-2pm PT (online, or by appointment (online))

E-mail address: v.lemieux@ubc.ca

Canvas: <http://lthub.ubc.ca/guides/canvas/>

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 of records and information-related risks.

Learning Outcomes:

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 [MLIS: 4.1, 5.1, 5.2, 5.3] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]
2. Fluently articulate and apply Information Assurance and Risk Management concepts and terms [MLIS: 4.1] [MAS: 1.4, 4.2]
3. Articulate and critically evaluate Security Management and Information Assurance practices [MLIS: 4.1, 5.1, 5.2, 5.3] [MAS: 1.4, 4.2]
4. Understand Risk Management practices and critically reflect upon how they can be applied to managing records and information-related risks [MLIS: 1.1, 1.3, 3.2, 5.1, 5.2, 5.3] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]
5. Articulate Access control practices and critically evaluate how they can be applied to managing records and information-related risks [MLIS: 1.1, 1.3, 3.2] [MAS: 1.1, 1.2, 1.3, 1.4, 1.5]
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 [MLIS: 1.1, 1.3, 3.2] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]
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 [MLIS: 1.1, 1.3, 3.2] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]
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] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]
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] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]
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] [MAS: 1.1, 1.2, 1.4, 1.5, 4.2]

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: Self-paced online asynchronous learning. Students can expect to spend approximately 10 hours a week (120 hours per term) in study/practice and online activities for this course.

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]:

The full reading list will be made available online in CANVAS to students registered in the course.

Course Assignments:

Assignment Name	Due Date	Weight	Graduate Competencies
Module Quizzes (weekly online). All quizzes are available on the course site in CANVAS.	Throughout	30% (Each quiz is worth 10 points. Final results will be scaled to comprise 30% of the final grade).	MLIS: 1.1, 1.2, 1.4, 1.5, 3.2 MAS: 1.1, 1.2, 1.4, 1.5, 4.2
Weekly Activities (weekly online). Details of Weekly Activities are available on the course site on CANVAS.	Throughout	40% (Each activity is worth 10 points. Final results will be scaled to comprise 40% of the final grade)	MLIS: 1.1, 1.2, 1.4, 1.6, 2.1, 2.3, 3.1.2, 4.1, 5.1, 5.2, 5.3 MAS: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 4.2
Risk Assessment Assignment. Details about this assignment are available on the course site on CANVAS.	Dec. 7, (last day of term)	30%	MLIS: 1.1, 1.2, 1.4, 1.6, 2.1, 2.3, 3.1.2, 4.1, 5.1, 5.2, 5.3 MAS: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 4.2

Course Schedule [week-by-week]:



Topic	Date
<ul style="list-style-type: none">• Introduction to instructor• Introduction to the course• Introduction to IT Security, Information Assurance and Risk Management and their relationship to records and archives administration Watch introductory video Complete Weekly Activity 1	Week 1 (Sept. 14)
<ul style="list-style-type: none">• IT Security and Risk Management Perspectives and Standards• Information Security Governance and Risk Management• The Open Systems Interconnection Model Watch introductory video Complete Required Readings for the week Complete Module Test 1 in Canvas Complete Weekly Activity 2	Week 2 (Sept. 21)
<ul style="list-style-type: none">• Application & Presentation Layer Attacks and Risk Mitigation Strategies• Access Control• Secure Software Development Watch introductory video Complete Required Readings for the week Complete Module Test 2 in Canvas Complete Weekly Activity 3	Week 3 (Sept. 28)
<ul style="list-style-type: none">• Telecommunications and Network Attacks and Risk Mitigation Strategies, Part I Watch introductory video Complete Required Readings for the week Complete Module Test 3 in Canvas Complete Weekly Activity 4	Week 4 (Oct. 5)
<ul style="list-style-type: none">• Thanksgiving (Public Holiday)	Oct. 11
<ul style="list-style-type: none">• Telecommunications and Network Attacks and Risk Mitigation Strategies, Part 2 Watch introductory video Complete Required Readings for the week Complete Module Test 4 in Canvas Complete Weekly Activity 5	Week 5 (Oct 18)



<ul style="list-style-type: none">• Cryptography• Blockchain <p>Watch introductory video Complete Required Readings for the week Complete Module Test 5 in Canvas Complete Weekly Activity 6</p>	Week 6 (Oct. 26)
<ul style="list-style-type: none">• Risk Management, Part I <p>Watch introductory video Complete Required Readings for the week Complete Module Test 6 in Canvas Complete Weekly Activity 7</p>	Week 7 (Nov. 1)
<ul style="list-style-type: none">• Risk Management, Part II <p>Watch introductory video Complete Required Readings for the week Complete Module Test 6 in Canvas Research and submit target system for Risk Assessment Assignment to instructor for approval</p>	Week 8 (Nov. 8)
<ul style="list-style-type: none">• Security Operations• Incident Response Management <p>Watch introductory video Complete Required Readings for the week Complete Module Test 7 in Canvas Complete Weekly Activity 8</p>	Week 9 (Nov. 15)
<ul style="list-style-type: none">• IT Security, Information Assurance and Risk Management Policy Issues in Society<ul style="list-style-type: none">○ Fake news○ Privacy vs. Security○ Active Defense○ BYOD○ Remote working <p>Watch introductory video Complete Required Readings for the week Complete Weekly Activity 9</p>	Week 10 (Nov. 22)
<ul style="list-style-type: none">• Physical Security• Business continuity and disaster recovery <p>Watch introductory video Complete Required Readings for the week Complete Module Test 8 in Canvas</p>	Week 11 (Nov. 29)



<p>Complete Weekly Activity 10</p>	
<ul style="list-style-type: none"> • The human factor in IT Security • IT Security, Information Assurance and Risk Management Training and Awareness <p>Watch introductory video Complete Required Readings for the week Complete Module Test 8 in Canvas Complete Weekly Activity 11</p> <p>RISK ASSESSMENT ASSIGNMENT DUE BY DEC. 7 (last day of WT1)</p>	<p>Week 12 (Dec. 6)</p>

Covid-19 safety in class: During class, you are required to wear a non-medical mask during our class meetings, for your own protection and for the safety and comfort of everyone else in the class. For our in-person meetings in this class, it is important that all of us feel as comfortable as possible engaging in class activities while sharing an indoor space. Non-medical masks that cover our noses and mouths are a primary tool for combating the spread of Covid-19. Further, according to the provincial mandate, masks are required in all indoor public spaces including lobbies, hallways, stairwells, elevators, classrooms and labs. There may be students who have medical accommodations for not wearing a mask, in which case, please inform the course instructor. Please maintain a respectful environment. UBC Respectful Environment Statement.

Attendance: Attendance will be taken at each class for purposes of contact tracing in the event of Covid 19 exposure. If you are sick, it is important that you stay home. Complete a self-assessment for Covid-19 symptoms here: <https://bc.thrive.health/covid19/en>. In this class, the marking scheme is intended to provide flexibility so that you can prioritize your health and still succeed. If you miss class because of illness, the following strategies can be adopted to ensure that you do not fall behind:

- Make a connection early in the term to another student or a group of students in the class. You can help each other by sharing notes. If you don't yet know anyone in the class, post on the discussion forum to connect with other students.
- Consult the class resources on Canvas.
- Use the discussion forum for help.
- Attend office hours.
- If you are concerned that you will miss a key activity due to illness, contact the instructor to discuss.

If I, as the course instructor, am unwell, I will not come to class. I will make every reasonable attempt to communicate plans for class as soon as possible via Canvas. Our classroom will still be available for you to sit in, and alternate arrangements will be made for covering any scheduled in-class content deemed essential for that class.

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 assignments will be dealt with according to the policy outlined under academic concessions (below).



Required Materials: Students will need a stable internet connection, and access to UBC's Canvas system. Students should ensure that they have registered to receive communications via Canvas.

Academic Concession: Students who miss marked coursework for the first time (assignment, exam, presentation, participation in class) and the course is still in-progress, should **speak with the instructor immediately** to find a solution for missed coursework. Any concessions that will result in a change to the student record (such as late withdrawal from the course) will be referred to the Faculty of Graduate and Postdoctoral Studies for evaluation. If this is not the first request for a concession or classes are over, please consult the [Faculty of Graduate and Postdoctoral Studies' webpage on academic concession](#), and then contact the instructor as appropriate.

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>)

Academic Integrity: The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply when the matter is referred to the Office of the Dean. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the [UBC Calendar: Student Conduct and Discipline](#).

Academic Accommodation for Students with Disabilities: Academic accommodations help students with a disability or ongoing medical condition overcome challenges that may affect their academic success. Students requiring academic accommodations must register with the [Centre for Accessibility](#) (previously known as Access & Diversity). The Centre will determine that student's eligibility for accommodations in accordance with [Policy LR7: Accommodation for Students with Disabilities \(Joint Senate and Board Policy\)](#). Academic accommodations are not determined by your instructors, and instructors should not ask you about the nature of your disability or ongoing medical condition, or request copies of your disability documentation. However, your instructor may consult with the Centre for Accessibility should the accommodations affect the essential learning outcomes of a course.

Conflicting Responsibilities: UBC recognizes that students may occasionally have conflicting responsibilities that affect their ability to attend class or examinations. These may include: representing the University, the province or the country in a competition or performance; serving in the Canadian military; or observing a religious rite. They may also include a change in a student's situation that unexpectedly requires that student to work or take responsibility for the care of a family member, if these were not pre-existing situations at the start of term.



Students with conflicting responsibilities have a duty to arrange their course schedules so as to avoid, as much as possible, any conflicts with course requirements. As soon as conflicting responsibilities arise, students must notify either their instructor(s) or their Faculty Advising Office (e.g. Arts Academic Advising), and can request [academic concession](#). Instructors may not be able to comply with all such requests if the academic standards and integrity of the course or program would be compromised. Varsity student-athletes should discuss any anticipated and unavoidable regular-season absences with the instructor at the start of term, and provide notice of playoff or championship absences in writing as soon as dates are confirmed.

Religious observance may preclude attending classes or examinations at certain times. In accordance with the [UBC Policy on Religious Holidays](#), students who wish to be accommodated for religious reasons must notify their instructors in writing at least two weeks in advance. Instructors provide opportunity for such students to make up work or examinations missed without penalty.

Issues for students studying abroad and remotely: During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad, you will be subject to the laws of your local jurisdiction, and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom, but has no control over foreign authorities (please visit <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0> for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). Thus, we recognize that students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks, until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit: <http://academic.ubc.ca/support-resources/freedom-expression>.