Course Outline

RSM 420 H1S (Winter 2023)
Advanced IT Audit and Data Analytics

Course Meets:

LEC0101	T9AM-11AM	WO25
LEC0201	T11AM-1PM	WO25
LEC0301 `	T3PM-5PM	WO35
TUT5101	T5PM-6PM	OI5150
TUT5201	T6PM-7PM	OI5250
TUT5301	T7PM-8PM	OI5250

Instructor:	Michael Khan (RT 503)
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Office Hours:	See Quercus
Teaching Assistant:	Hadi Ahmad, hadi.ahmad@mail.utoronto.ca
	Note: The TA should be your first point of contact for course content or administrative matters

Course Scope and Mission

The main objective of this course is to provide a basic understanding of information systems, their importance, and auditing in a computer based environment. In particular, the course will cover:

- a broad knowledge of the risks and exposures introduced by computer based information systems;
- the types of controls that may be used to reduce such risks to an acceptable level;
- a framework for and case based practice of controls evaluation in a computer based information system;
- the impact of computer controls on audit strategy; and
- the opportunities and risks associated with computer assisted audit tests during the audit.

This course is about the understanding and management of the risks associated with computer based information systems. It covers potential means to provide control and how to perform audits in these environments.

The course uses lectures, case discussion, and assignments, as well as examinations. These methods are used to develop an understanding of business information system risks, management controls and techniques, computer control and security, and the audit process with respect to computer-based systems.

There is a heavy emphasis in this course on class participation. Readings will be assigned for students to have completed prior to each session. Students will be expected to contribute actively during these sessions. The main focus will be on problem solving and providing clarification of the reading material and related subject matters.

Course Prerequisites
RSM323H1

Required Readings
- **CPA Canada Learning e-book** (See document on Quercus > Module "How to Access the CPA Canada Learning eBook")
- **CPA Canada Handbook** (available through e-resources)
- Additional required and recommended readings will be posted on the course website.

Evaluation and Grades
Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he, they or she has command of the course materials.

Evaluation	Weight	Due Date
Class Contribution & Professional Behaviour	15%	Ongoing
Midterm	25%	See Course Schedule
Group Project	25%	See Course Schedule
Final Exam	35%	Exam Period

COURSE FORMAT AND EXPECTATIONS

Class Contribution & Professional Behaviour
Active student participation in class is encouraged. Most students typically tend to *under*-estimate — rather than *over*-estimate — the worth of what they have to say. Thus, if you are ever in doubt, speak up instead of staying quiet. Please draw on personal experiences as appropriate (particularly, if you believe they are relevant, insightful and generalizable).

Students are expected to attend classes and to contribute to class discussions on a *constructive and regular* basis. All students are expected to have completed the reading assignment and prepared the cases, problems and exercises assigned for classroom discussion. This way, we can devote the bulk of the class time to thinking about and responding to each other's analyses of the problems and cases, and only the necessary minimum to getting the facts out.

The vast majority of managers' interactions with others are oral. Managers generally spend little time reading, and even less time writing reports. Please consider the classroom a laboratory in which you can test your ability to convince your peers of the validity of your idea. This course will emphasize participatory and collaborative learning. As a result, a significant portion of your mark will be based on your verbal participation and contribution to class discussions. This mark is based on both quantity and quality of your contributions. Good responses demonstrate critical thought, class preparedness, understanding analysis of the topic, idea generation and promote further discussion. i>clicker responses if applicable are not used to evaluate participation.

You are required to display your name card in front of you in <u>every class</u> in order to earn credit for participation. Please note that <u>attendance does not constitute contribution</u> and class contribution is based on <u>verbal</u> contribution in class.

My role in the class is to help facilitate discussion. In part, I serve as a clarifier and intensive questioner in order to help you present and develop your ideas. We must work together to ensure that each class session is a lively, stimulating and intellectually rewarding venture in group learning. We are individually and collectively responsible for achieving this end.

In order to track participation, a class seating map may be prepared based on your choice of seating in the classroom. You are requested to sit in the same seat each class and always have your name card clearly visible. This approach helps ensure an organized and objective assessment of participation. It is **your responsibility** to ensure your name is on the **seating map** in order to earn credit for your participation. Be sure to approach your instructor if you miss the first class to ensure your name is recorded on the seating map if your instructor is using one to track participation.

You will be required to complete a self-evaluation of your class contribution towards the end of the course. Part of the evaluation is completed via a link on Quercus the second part involves handing in your customized name card template tracking your participation on a class by class basis on the back, at the last class. You should keep a copy/photograph of all materials. Not completing any of the requirements above will result in a grade of zero for class contribution.

Class preparedness is a critical component of this course in order to facilitate rich classroom discussions. As such, the instructor will randomly request students to submit their written attempt at class discussion problems/cases from time to time at the beginning of class. These submissions will be considered when assessing classroom contribution. Your assigned activity/case for class should be completed in advance and printed with your name and student number ready for submission in the event that the instructor chooses to collect on a particular class.

Professionalism is a component of class contribution. As such late arrivals, unexplained absences and disruptive behaviour (including internet surfing, texting, use of FaceBook etc.) will be heavily penalized via your class contribution assessment.

See: *Appendix A – Participation Evaluation Rubric.* Additional information on the participation marks will be discussed in the first week of class.

Group Project
For the group project, you will work in a group of **5-6 people**. You may select group members from either section of the course. You should maintain the same group members for both group projects. Exceptions to the above requirements will be made only in very unusual cases and are subject to the approval of the Course Instructor.

Group project must be uploaded to Quercus by 11:59PM sharp on the specified due date, listed on the course schedule. If one or both submissions are late, the entire submission will be considered late. Full details of the group projects are posted on Quercus.

Peer evaluations will be undertaken to ensure that all members of each group are contributing equally; that is, the contribution of each member of the group will be assessed by all members of

the group at the end of the term and appropriate rescaling of each individual's grade for group work will be made.

Groups with conflicts will be required to submit a written request to redistribute the grades based on the discretion of the instructor.

Remarking requests for assignments: Requests to have assignments remarked will be considered if the following conditions are met:

a) The request is submitted to the TA no later than one week after the marked assignment has been returned to the student;
b) The student submits with their request a written (e-mail to the TA) explanation as to why and where (s)he believes (s)he is entitled to more marks; and
c) The instructor has no reason to believe the student has made any changes subsequent to the assignment being returned.

Students should be aware of the following:

a) Several assignments are randomly photocopied before being returned
b) Items submitted for remarking will be remarked in their entirety and the mark awarded may increase, decrease, or remain the same.

Final Exam

The final examination will be comprehensive and will include all topics covered throughout the semester.

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Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (https://uoft.me/pdt-faq).

For Written Assignments:

How well you communicate your ideas, in writing or orally, will be considered in the evaluation of the assignment. In your written assignments, you should aim for clarity, strong organization, concision, professionalism, and correct grammar. Your presentations should reflect strong planning and organization, clarity of speech, and an engaging demeanour. Sources, whether in written or presentation assignments, should always be correctly attributed.

Support is available through the RC Centre for Professional Skills (CPS) for students who would like help or feedback on their writing or speaking (presentations). CPS offers both individual and group appointments with trained writing instructors and presentation coaches who are familiar with the RC program and common types of business assignments. You can also access your college Writing Centres for help with written assignments.

You can book an appointment with a writing or presentation coach through the RC Centre for Professional Skills Writing Centre. For more information about writing centres, student supports, and study resources, see the Writing and Presentation Coaching academic support page.

For Group Work:

Both the in-class work and the research project require group-work.

Learning to work together in teams is a crucial transferrable skill you will use not only in your coursework, but also in your future careers. Support is available if you encounter common teamwork challenges such as:

- Team members feeling left out of the team.
- Team members not responding in a timely manner to communication.
- Division or quality of work among team members being unequal or unfair.

Consult the Centre for Professional Skills Teamwork Resources page for tips, strategies, and best practices. You can also book an appointment with a teamwork mentor through the RC Centre for Professional Skills Writing Centre. Teamwork mentors can help you resolve or mitigate conflict, strategize on planning, or improve team communication.

If you are a student registered with Accessibility Services, and extensions are one of your academic accommodations, consult with your Accessibility Advisor about the teamwork in this course.

POLICY AND PROCEDURE

Missed Tests and Assignments (including midterm assessments)

Students who miss a test or assignment for reasons entirely beyond their control (e.g. illness) may request special consideration.

In such cases, students must:

1. Notify the instructor AND the Rotman Commerce Program Office **on the date** of the missed course deliverable, e.g. missed test, final assessments, assignment or class (in the case of participation marks).
2. Complete a Request for Special Consideration Form and submit it along with your Absence Declaration on ACORN (please read the instructions on how to use the Absence Declaration in ACORN) within **2 business days** of the originally scheduled course deliverable. Please email your documents to rotmancommerce.info@utoronto.ca .

Students who do not provide this information will be given a grade of 0 (zero) for the missed course deliverable.

Students who miss the midterm examination for a legitimate and approved reason, will have the weight transferred to the final exam.

Requests for regrades of midterm tests must be submitted to the professor by the end of the class that it is handed back in along with a note explaining the query related to the marking. The entire test will be regraded and the grade could go up/down or stay the same.

Late Assignments

A penalty of 30% per day will be applied for late assignments. Students who, for reasons beyond their control, are unable to submit an assignment by its deadline must obtain approval from the instructor for an extension. Supporting documentation will be required as per the policy on missed tests and assignments.

Commitment to Accessibility

The University is committed to inclusivity and accessibility, and strives to provide support for, and facilitate the accommodation of, individuals with disabilities so that all may share the same level of access to opportunities and activities offered at the University.

If you require accommodations for a temporary or ongoing disability or health concern, or have any accessibility concerns about the course, the classroom or course materials, please email Accessibility Services or visit the Accessibility Services website for more information as soon as possible. Obtaining your accommodation letter may take up to several weeks, so get in touch with them as soon as possible. If you have general questions or concerns about the accessibility of this course, you are encouraged to reach out to your instructor, course coordinator, or Accessibility Services.

Academic Integrity

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectively, responsibly, and fairly in this academic community ensures that the UofT degree that you earn will continue to be valued and respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously.

The University of Toronto's Code of Behaviour on Academic Matters
http://www.governingcouncil.utoronto.ca/policies/behaveac.htm outlines the behaviours that constitute academic misconduct, the process for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

In papers and assignments:
- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes collaborating with others on assignments that are supposed to be completed individually).

On test and exams:
- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:
- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to), medical notes.

All suspected cases of academic dishonesty will be investigated by the following procedures outlined in the *Code of Behaviour on Academic Matters.* If you have any question about what is or is not permitted in the course, please do not hesitate to contact the course instructor. If you have any questions about appropriate research and citation methods, you are expected to seek out additional information from the instructor or other UofT resources such as College Writing Centres or the Academic Success Centre.

Email

At times, the course instructor may decide to communicate important course information by email. As such, all UofT students are required to have a valid UTmail+ email address. You are responsible for ensuring that your UTmail+ email address is set up AND properly entered on the ROSI system. For more information please visit http://help.ic.utoronto.ca/category/3/utmail.html

Forwarding your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that important messages from your course instructor may end up in your spam or junk mail folder.

Quercus and the Course Page

The online course page for this course is accessed through Quercus. To access the course page, go to q.utoronto.ca and log in using your UTORid and password. Once you have logged in, you will be at the Quercus Dashboard. On this page you will see all of the courses you are presently enrolled in. If you don't see the course listed here but you are properly registered for the course in ACORN, wait 48 hours.

Recording Lectures

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. Students wishing to record a lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted (note: students who have been previously granted permission to record lectures as an accommodation for a disability are, of course, excepted). This includes tape recording, filming, photographing PowerPoint slides, Quercus materials, etc.

If permission is granted by the instructor (or via Accessibility Services), it is intended for the individual student's own study purposes and does not include permission to "publish" them in anyway. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.

Statement on Equity, Diversity and Inclusion

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Conduct of Class and Expectations

Students are expected to conduct themselves in a professional manner and arrive on time so as not to disrupt the class. Laptops/tablets may be used in class only with prior permission from the instructor. It is considered offensive behaviour to use an electronic device for surfing, email, Facebook etc. during class. This type of activity will be considered when assigning participation/class contribution grades and will result in a grade of zero (0) for class contribution.

Appendix A – Participation Evaluation Rubric

Grade	9-10	7-8	5-6	3-4	< 3
Participatory Contribution					
Relation to Peers	Displays leadership in actively supporting, engaging and listening to peers (ongoing).	Actively supports, engages and listens to peers (ongoing).	Makes a sincere effort to interact with peers.	Limited interaction with peers.	No interaction with peers.
Participation	Displays leadership in playing an active role in discussions (ongoing). Participates verbally in classroom discussions <u>every class</u>.	Plays an active role in discussions (ongoing).	Participates constructively in discussions (ongoing).	When/where prepared, participates constructively in discussions.	Never participates.
Intellectual Contribution					
Preparation	Arrives fully prepared, having also done additional readings.	Arrives fully prepared.	Arrives mostly, if not fully, prepared.	Arrives noticeably less than entirely prepared.	Unprepared.
Quality of Comments	Comments advance the level and depth of the dialogue (consistently).	Comments occasionally advance the level and depth of the dialogue.	Makes relevant comments based on the assigned material (ongoing).	When/where prepared, makes relevant comments based on the assigned material.	Demonstrates a noticeable lack of interest in the material.
Contribution to Learning Community					
Impact on Group Dynamic	Group dynamic and level of discussion are consistently better because of the student's presence.	Group dynamic and level of discussion are often better because of the student's presence.	Group dynamic and level of discussion are occasionally better (and never worse) because of the student's presence.	Group dynamic and level of discussion are not affected by the student's presence.	Group dynamic and level of discussion are harmed (perhaps significantly) by the student's presence.

Note: while the grade is out of 10, the weight is as per the course outline above.

APPENDIX B - TENTATIVE COURSE SCHEDULE (SUBJECT TO CHANGE)

CLASS #	Rotman Class Date	TOPIC	CPA Learning eBook	CASES & SUPPLEMENTAL MATERIAL ON PORTAL FOR CLASS DISCUSSION	Rotman TUTORIAL Date	TUTORIAL Case (Available on Quercus)	DELIVERABLES
1	Jan-10	Introduction to Information Systems & Review of Auditing	Audit and Assurance - Chapter 11 – System Concepts			No Tutorial	
2	Jan-17	Information Systems Foundations, Risk and Reliance	Audit and Assurance - Chapter 6 - Risk	Automotive Parts Inc.	Jan-17	Burlington	
3	Jan-24	Internal Control & Governance	Management Accounting - Chapter 11 - Information Systems - Data Integrity Audit and Assurance - Chapter 12 - Test of Controls	Progressive Realtor Greenway Health Insurance	Jan-24	Arlington, Future Life	
4	Jan-31	Systems Life Cycle I	Management Accounting - Chapter 10 - Information Systems - Design, Acquisition, Development		Jan-31	Glendale	
5	Feb-07	Systems Life Cycle II Information Systems Strategy eBusiness (Self Study)	Management Accounting - Chapter 10 - Information Systems - Design, Acquisition, Development	Global Case Management Sys. Hometown Telephone	Feb-07	Gusher	
	Feb-14	Midterm Examination (Midterm Date: Wednesday Feb 15, 2023 8am-9:30am)					
	Feb-21	Reading Week					
6	Feb-28	Application Controls	Management Accounting - Chapter 11 - Information Systems - Data Integrity Audit and Assurance - Chapter 12 - Test of Controls	Dragnet Application Controls	Feb-28	CBS	Group Formulation Deadline (Due Tues Feb 28th at 11:59 PM online)
7	Mar-07	Data Analytics and the Audit	Audit and Assurance - Chapter 17 - Computer-Assisted Auditing Techniques Audit and Assurance - Chapter 10 - Analytical Procedures		Mar-07	Leung Enterprise	
8	Mar-14	Data Integrity and Security	Management Accounting - Chapter 11 - Information Systems - Data Integrity	Global Products	Mar-14	Audit Receivable Module	
9	Mar-21	Audit Data Analytics Workshop	Required Reading on Quercus in Session 8 Folder: An Inside Look at How Auditors in Canada Are Using Data Analytics	Canadian Building Supply Module 1.zip	Mar-21	Audit Receivable Module	Group Project (Due Fri Mar 24th at 11:59 PM online)
10	Mar-28	Special Reports & Other Assurance Engagements	Audit and Assurance - Chapter 23 - Special Reports and Other Engagements	ABN AMRO 20 Questions...IT Outsourcing	Mar-28	Gazelle	
11	Apr-04	Assurance Integrated IT Case Writing Simulation	None	To be provided in class			

Last Update – January 4, 2023
Note: The last day to drop this course without academic penalty is **Sunday, March 19, 2023**