

MIS 7120 (G01) (1.5 CH)
MANAGEMENT INFORMATION SYSTEMS
SUMMER 2024

TERRITORY ACKNOWLEDGEMENT

The University of Manitoba campuses are located on original lands of Anishinaabeg, Ininewuk, Anisininewuk, Dakota Oyate and Denesuline, and on the National Homeland of the Red River Métis. We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of Reconciliation and collaboration.

INSTRUCTOR

Name:	Wenxi Pu	Office Location:	Drake 404
Phone:	204-474-6464	Office Hours:	By appointment
Email:	Wenxi.Pu@umanitoba.ca	Class Room:	Drake 122
		Class Time:	May 3 rd 08:45 AM – 3:45 PM
			May 4 th 08:45 AM – 3:45 PM
			May 5 th 08:45 AM – 11:45 AM

COURSE DESCRIPTION

This course explores the inter-relationship between information technology (IT), strategic management, competitiveness, and societal impact. Organizations that strategically select, manage, and deploy digital business models prosper in the global economy, thus it is critical for managers to create and analyze strategies for technology-enabled organizational, industrial, and social transformation.

This is a discussion/case-based course with a managerial perspective on IT, competitive strategies, and social implications. Given the rapid advances in IT in recent decades and the transformative nature of IT in any functional area from accounting to marketing, IT is becoming an indispensable resource for not only improving organizational performance but also creating sustainable competitive advantages in virtually every industry. The transformative nature of IT is increasingly evident in the field of artificial intelligence (AI). It is essential for business professionals to not only understand AI and its impact on business and the society, but also use AI to improve their productivity. This course, therefore, also offers opportunities for students to learn how to effectively incorporate Large Language Models (LLMs; e.g., ChatGPT) into their workflow. An introduction to Python programming is also offered in this course.

COURSE OBJECTIVES

On course completion, you should be able to:

- Have a toolkit of conceptual frameworks to systematically make IT related decisions.
- Have a clear understanding of the critical importance of IT for competitive advantages.
- Discuss how IT enables firms to create business opportunities and to formulate sustainable competitive strategies.
- Explain how to deal with risks borne out by IT resources and to secure organizations from them.
- Discuss how data analytics improves business decision making and supports competitive strategies.
- Understand the critical importance of Artificial Intelligence on the transformation of businesses.
- Discuss how to prepare for future career in the digital age.
- Understand AI's implications and how to use LLMs effectively to boost your productivity.
- Understand basic Python programming.

COURSE MATERIALS

Harvard Business Coursepack for MIS7120 will be required. Link to purchase:

<https://hbsp.harvard.edu/import/1165418>

Additional readings will be posted on UM Learn.

COURSE ASSESSMENT

Student progress will be assessed through:

Item	Group or Individual?	Weight
Participation	Individual	20%
Post-Session Reflection Note	Individual	20%
Group Project	Group	30%
Executive Report	Individual	20%
Python Programming Assignment	Individual	10%
Total		100%

Descriptions:

Participations (20%):

- Students are expected to actively participate in class discussions, activities, and debates during synchronous sessions.
- Both frequency and quality are considered in participation grading.

Reflection Note (20%):

- At the end of the first two sessions, a student is required to write a reflection note that summarizes what is learned.
- A reflection note should be at least 500-word long and no longer than 1000 words.
- Refer to the course schedule for the due date.
- A note should be as ***comprehensive*** as possible by covering the whole class, rather than focusing on a few topics.
- It is encouraged to relate what is learned to current work.

- If applicable, you should provide a **one-sentence summary of what you contributed to the class discussion during the sessions.**

Group Project (30%):

- There will be a group project that students will complete and present during the last session.
- Groups will be created during the first session.
- Group Project – Data Monetization and AI Integration (guidelines to be released on UM Learn).
- It is strongly encouraged to have group meetings after each of the first two sessions.
- Grading Rubrics: Value, Revenue Potentials, Feasibility, Sustainability, and Presentation

Executive Report (20%) - One report:

- This is an individual assignment to write one consulting report for senior executives.
- A report should be no more than 2-page long including figures and tables.
- It has to be formatted with 11-point font, Calibri (Microsoft Words default font), single spacing or more, and 1- inch margin in all four sides.
- Six or more topics will be provided. A student can choose any topic for the report.
- Please refer to the course schedule for when executive report is due.
- Late submission is allowed, but there will be 10% penalty per each 12 hours.
- You are allowed to use **ChatGPT or other LLMs** to help with writing the executive report of your choice, however, do compare your experiences of writing with versus without ChatGPT. Check out some prompt engineering tips will be helpful.
- Grading Rubrics: Organization, Originality of Ideas, Addressing the issue, Strategic Recommendations, Grammar & Mechanics

Python Programming Assignment (10%):

- You will learn basic Python programming in this course and an assignment will be used to help you consolidate your understanding of Python programming.

Final grades are based on the sum of the marks for all the assessment components. will be assigned as follows (subject to curve).

Cumulative Marks	Grade	GPA	Performance
93-100	A+	4.5	Excellent
90-92.99	A	4.0	Very Good
85-89.99	B+	3.5	Good
80-84.99	B	3.0	Satisfactory
75-79.99	C+	2.5	Marginal
70-74.99	C	2.0	Unsatisfactory
50-69.99	D	1.0	Unsatisfactory
49.99 and below	F	0.0	Unsatisfactory

NOTE: Class attendance is required. Missing more than 20% of this course due to absences may result in a failing grade. It is your responsibility to inform your professor in advance of your absence

and the reason for it (medical documentation or employer note if away for a work commitment) is required. The professor decides how to deal with the impact of missed classes on your final grade.

COURSE SCHEDULE

*Subject to change at the discretion of the instructor.

Session	Topics	Assignments	Due
Session 1	Introduction and Overview of MIS.	<p>Read:</p> <ul style="list-style-type: none"> • HBR – Investing in IT That Makes a Competitive Difference • HBR - Digital Ubiquity: How Connections, Sensors, and Data Are Revolutionizing Business • HBR – How Smart, Connected Products Are Transforming Companies • MIT CISR Case – Schneider Electric • HBR – Why Some Platforms Thrive • HBR – Break Your Industry’s Bottleneck • HBS Case – Cyberattack: The Maersk Global Supply-Chain Meltdown • HBS Case – iPremier • HBR – The End of Cybersecurity • HBR – Sizing up Your Cyberrisks 	<p>Due: Friday, 3/5 by 08:45 AM</p>
	IT, Digital Platforms and Competitive Strategies.	<p>Recommended Readings:</p> <ul style="list-style-type: none"> • HBR – Designing Better Online Review Systems • HBR – Thriving in an Increasingly Digital Ecosystem 	
	IT Risk Management.	<p>Attend: Class Session 1</p> <p>Potential Class Discussion Questions (include but not limited to):</p> <ul style="list-style-type: none"> • Why is IT critical for business success? • Why does IT make competition more dynamic and turbulent? • Why is Amazon.com so powerful? 	<p>On: Friday, 3/5 from 8:45 AM – 3:45 PM</p>

		<ul style="list-style-type: none"> • What is the rationale behind Schneider’s move from manufacturing to service? • How does its IoT platform support this move? • What challenges should Schneider expect in implementing a digital services platform? • How can Schneider achieve sustainable competitive advantages with its IoT platform? • What constitutes as a bottleneck in an industry? • Why are Amazon.com and Uber so disruptive? • Why are two-sided network effects so powerful? • How to manage the health of digital platform? • What make your industry inefficient? • How does technology affect industry competition? • How can Schneider capture greater value from the IoT platform? • What happened to Maersk? • What are the managerial failures in this incident? • What are the lessons learned from both Maersk case and iPremier case? • What should your organization do to prevent ransomware attack? • What helped Maersk recover from the incident? 	
Session 2	Artificial Intelligence Future of Work	<p>Read:</p> <ul style="list-style-type: none"> • HBR – Should an Algorithm Tell You Who to Promote • HBR – When Data Creates Competitive Advantage 	Due: Saturday, 4/5 by 08:45 AM

	<p>Introduction to Python Programming Download: Anaconda</p>	<ul style="list-style-type: none"> • HBR – Collaborative Intelligence: Humans and AI Are Joining Forces • HBR – Building the AI-Powered Organization • Capturing Value from Artificial Intelligence • What Managers Should Ask About AI Models and Datasets • The Working Limitations of Large Language Models <p>Societal Debates about AI</p> <ul style="list-style-type: none"> • Watch: The AI Dilemma • NYT - Out of Blue Pills • The New Yorker – What Kind Of Mind Does ChatGPT Have? • Time - The “Don’t Look Up” Thinking That Could Doom Us with AI • Harari-LeCun Debate on AI <p>Recommended reading:</p> <ul style="list-style-type: none"> • HBR - Competing In the Age of AI. • Human-AI Ensemble • Surveillance Capitalism • Situated AI • How Large Language Models Reflect Human Judgment • Managing the Risks of Generative AI • What Smart Companies Know About Integrating AI 	
		<p>Attend: Class Session 2</p> <p>Potential Class Discussion Questions (include but not limited to):</p> <ul style="list-style-type: none"> • Why is data important for decision making? • How can data create competitive advantages? • What is machine learning? • How is machine learning different from traditional algorithm? • What can machine learning do for business? 	<p>On: Saturday, 4/5 from 8:45 AM – 3:45 PM</p>

		<ul style="list-style-type: none"> • How can machine learning be utilized in your business? • How does AI destroy jobs? • What jobs or skills will survive in the future? • What skills will be more valuable in the future? • How should we work with AI? • How should we deal with risks and bias in AI? • How will the nature of jobs (lawyers, journalists, Wall Street bankers) change in the age of AI? • How can predictive analytics be used in your work? • How can ChatGPT be used in your work? 	
Session 3		Presentation preparation	Due: Sunday, 5/5 by 08:45 AM
		Attend: Class Session 3 Group Presentation and Course Wrap-up	On: Sunday, 5/5 from 08:45 AM – 11:45 AM
		Submit: Reflection Note	Due: Sunday, 5/5 by 9:00 PM
		Submit: Executive Report	Due: Wednesday, 8/5 by 9:00 PM
		Submit: Python Programming Assignment	Due: Friday, 10/5 by 9:00 PM

ACADEMIC REGULATIONS AND STUDENT SERVICES

HUMAN ETHICS APPROVAL FOR DATA COLLECTION

As part of coursework, if you will be collecting data from people who are not students in this class, you must obtain Human Ethics approval from the UofM's Research Ethics Board (REB) prior to data collection. This applies to data collection such as surveys, interviews, focus groups, experiments, video recording, etc., where a respondent is solicited for participation.

If the entire class will be working on the same project, your instructor will apply for human ethics approval from the REB. If individuals or small groups of students will be working on different projects, it

is the responsibility of the students to obtain approval (only one group member needs to apply). Your instructor will tell you whether s/he will be or you need to. When in doubt, please talk to your instructor.

Instructions and forms to apply for human ethics approval can be found at:

<http://umanitoba.ca/research/orec/ethics/guidelines.html>

In most cases, you will be using the "Protocol Submission Form" which is under the "REB Forms - Fort Garry Campus" heading. It can take up to six weeks to process human ethics applications and obtain approval. Therefore, plan early. Note that approval must be obtained prior to data collection and cannot be obtained during the data collection phase or retroactively. Violation can get you, your instructor, and the Asper School in serious trouble with the REB. If you will be collecting data only from other students in the class, you do not need REB approval. If you have any questions, please contact humanethics@umanitoba.ca or your instructor.

UNCLAIMED ASSIGNMENT POLICY

Pursuant to the FIPPA Review Committee's approved recommendations of August 15, 2007, all unclaimed student assignments will become the property of the faculty and will be subject to destruction six months after the completion of any given academic term.

STUDENT SERVICES AND SUPPORTS

The University of Manitoba provides many different services that can enhance learning and provide support for a variety of academic and personal concerns. You are encouraged to visit the below websites to learn more about these services and supports. If you have any questions or concerns, please do not hesitate to contact your instructor or the Graduate Program Office.

For Information on...	...follow this link
Course Outlines, Year-at-a-Glance, Concentrations, Textbooks, VW Dates and Final Exams	Asper Graduate Student Resources
Exam Rescheduling Policy - <i>Please refer to Missing a Test/Exam on page 18 of the MBA Student Handbook</i>	MBA Student Handbook
Help with research needs such as books, journals, sources of data, how to cite, and writing	Library Resources
Tutors, workshops, and resources to help you improve your learning, writing, time management, and test-taking skills	Writing and Learning Support
Support and advocacy for students with disabilities to help them in their academic work and progress	Student Accessibility Services
Copyright-related questions and resources to help you avoid plagiarism or intellectual property violations	Copyright Office
Student discipline bylaws, policies and procedures on academic integrity and misconduct, appeal procedures	Academic Integrity
Policies & procedures with respect to student discipline or misconduct, including academic integrity violations	Student Discipline
Students' rights & responsibilities, policies & procedures, and support services for academic or discipline concerns	Student Advocacy
Your rights and responsibilities as a student, in both academic and non-academic contexts	Your rights and responsibilities
Full range of medical services for any physical or mental health issues	University Health Service
Information on health topics, including physical/mental health, alcohol/substance use harms, and sexual assault	Health and Wellness
Any aspect of mental health, including anxiety, stress, depression, help with relationships or other life concerns, crisis services, and counselling.	Student Counselling Centre
Support services available for help regarding any aspect of student and campus life, especially safety issues	Student Support Case Management
Resources available on campus, for environmental, mental, physical, socio-cultural, and spiritual well-being	Live Well @ UofM
Help with any concerns of harassment, discrimination, or sexual assault	Respectful Work and Learning Environment
Concerns involving violence or threats, protocols for reporting, and how the university addresses them	Violent or Threatening Behavior

ACADEMIC INTEGRITY

I. H. Asper School of Business, The University of Manitoba

It is critical to the reputation of the I. H. Asper School of Business and of our degrees that everyone associated with our faculty behaves with the highest academic integrity. As the faculty that helps create business and government leaders, we have a special obligation to ensure that our ethical standards are beyond reproach. Any misconduct in our academic transactions violates this trust. The University of Manitoba Graduate Calendar addresses the issue of academic misconduct under the heading "Plagiarism and Cheating." Specifically, acts of academic misconduct include, but are not limited to:

- using the exact words of a published or unpublished author without quotation marks and without referencing the source of these words
- duplicating a table, graph or diagram, in whole or in part, without referencing the source
- paraphrasing the conceptual framework, research design, interpretation, or any other ideas of another person, whether written or verbal (e.g., personal communications, ideas from a verbal presentation) without referencing the source
- copying the answers of another student in any test, examination, or take-home assignment
- providing answers to another student in any test, examination, or take-home assignment
- taking any unauthorized materials into an examination or term test (crib notes)
- impersonating another student or allowing another person to impersonate oneself for the purpose of submitting academic work or writing any test or examination
- stealing or mutilating library materials
- accessing tests prior to the time and date of the sitting
- changing name or answer(s) on a test after that test has been graded and returned
- submitting the same paper or portions thereof for more than one assignment, without discussions with the instructors involved.

Many courses in the I. H. Asper School of Business require group projects. Students should be aware that group projects are subject to the same rules regarding academic misconduct. Because of the unique nature of group projects, all group members must exercise extraordinary care to insure that the group project does not violate the policy on Academic Integrity. Should a violation occur on a group project, all group members will be held jointly accountable, no matter what their individual level of involvement in the specific violation.

Some courses, while not requiring group projects, encourage students to work together in groups (or at least do not prohibit it) before submitting individual assignments. Students are encouraged to discuss this issue as it relates to academic integrity with their instructor to avoid violating this policy.

In the I. H. Asper School of Business, all suspected cases of academic misconduct involving a graduate student (i.e. MBA, MFin, MScM, MSc or PhD student) will be reported directly by the instructor to the Dean of the Faculty of Graduate Studies.

AI TOOLS

AI tools can be used to enhance learning and problem-solving skills, but they should not replace independent thinking and learning. Students must exercise critical thinking when using AI tools and acknowledge their use in academic work. Prohibited uses include generating or completing academic work with AI tools without appropriate acknowledgement. Academic honesty is paramount, and students should accurately represent their individual effort and knowledge. Faculty will provide guidance on AI tool usage and incorporate discussions on AI ethics and academic integrity. Violations may lead to disciplinary actions, including academic penalties or suspension.

FACULTY BIOGRAPHY

I.H. Asper School of Business, The University of Manitoba

Wenxi Pu

Department of Accounting and Finance
I.H. Asper School of Business

Wenxi Pu is an Assistant Professor of Management Information Systems at the Department of Accounting and Finance at Asper School of Business. He is the Associates Fellow in Innovation. He earned his Ph.D. degree from Clemson University. He has taught Business Statistics and Management Information Systems at Clemson University, where he won multiple teaching awards for his teaching performance. Besides teaching, Wenxi is also doing research to investigate self-identity, stigma, human dignity, and mental health in the context of digital technologies such as machine learning algorithms. His work is published on *Personnel Psychology*, *Communications of the Association for Information Systems*, *Information and Management*, *Computers and Security*, and *Environmental Research Letters*. Wenxi is a husband to an artist specialized in traditional Chinese painting and a father to two kids (a daughter and a son). He loves to go to museums with his family in his spare time. He is a devoted runner, and he runs like the rest of the world does not exist.