

**BUSADMIN K610**  
**Thriving through Digital Transformation**  
**Fall 2024 Course Outline**

**Information Systems Area**  
**DeGroote School of Business**  
**McMaster University**

***COURSE OBJECTIVE***

This introductory course delves into the dynamic and evolving world of digital transformation. It provides students with a foundational understanding of how digital technologies are reshaping business and society. Covering essential topics like data-driven strategy, business intelligence, blockchain, and the emerging concept of the AI, the course prepares students to grasp the opportunities and challenges of digital innovation. Through a blend of theoretical knowledge and real-world examples, students will learn to navigate and lead in the increasingly digital business landscape.

***INSTRUCTOR AND CONTACT INFORMATION***

Course Instructor	Section C01	Section C02
Keiwan Wind Ph.D., M.B.A., M.Sc., B.Eng. email: <a href="mailto:windkei@mcmaster.ca">windkei@mcmaster.ca</a> Office: DSB-A202; Hours: by appointment	<b>RJC 236<sup>1</sup> Thursdays</b>	
	<b>10:30 – 13:20</b>	<b>14:30 – 17:20</b>

The course website (<http://www.avenue.mcmaster.ca>) will be the primary mode of information dissemination. Please check it regularly for posts concerning the course.

**Teaching Assistant**

<b>Javid Nafari</b> (Group Projects)	email: <a href="mailto:nafarij@mcmaster.ca">nafarij@mcmaster.ca</a>
<b>Emad Deilam Salehi</b> (Data Analytics Assignments)	email: <a href="mailto:deilamse@mcmaster.ca">deilamse@mcmaster.ca</a>
<b>Shubham Katiyar</b> (Database Assignment, Case Presetations, and Simulation session)	email: <a href="mailto:katiyars@mcmaster.ca">katiyars@mcmaster.ca</a>

<sup>1</sup> We may change the room to accommodate the large number of enrollment we have

## Course Elements

Credit Value:	3	Leadership:	Yes	IT skills:	Yes	Global view:	Yes
Avenue:	Yes	Ethics:	Yes	Numeracy:	Yes	Written skills:	Yes
Participation:	Yes	Innovation:	Yes	Group work:	Yes	Oral skills:	Yes
Evidence-based:	Yes	Experiential:	Yes	Final Exam:	No	Guest speaker(s):	Yes

## ***COURSE DESCRIPTION***

This course on Digital Transformation equips students with a comprehensive understanding of how to conceptualize, analyze, implement, and manage digital transformation within various organizational contexts. Spanning six conversation modules, the curriculum critically delves into the foundational concepts of digital transformation, explores the pivotal role of data, technology, and AI and addresses strategic and practical approaches to integrating digital innovations. Through interactive discussions, case studies, and hands-on projects, students will learn to navigate the complexities of digital technologies—such as AI, blockchain, and big data—and apply these insights to drive strategic decisions and manage change effectively in their organizations.

## ***LEARNING OUTCOMES***

Upon completion of this course, students will be able to complete the following key tasks:

- Understand the foundational concepts of digital transformation and its impact on businesses and society.
- Analyze the role of data and emerging technologies in shaping organizational strategies and operations.
- Develop skills in constructing visual narratives and using data analytics to inform decision-making processes.
- Evaluate the technical, strategic, and ethical implications of implementing new technologies like IoT, AI, and blockchain.
- Create comprehensive digital strategies that integrate technological innovations with business objectives to enhance competitive advantage.
- Design and execute digital transformation projects, considering the critical aspects of change management and stakeholder engagement.
- Critically assess the effectiveness of digital transformation initiatives, identifying areas for improvement and future innovation.

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**REQUIRED COURSE MATERIALS AND READINGS**

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Avenue registration for course content, readings and case materials	FREE
<ul style="list-style-type: none"> <li>• <a href="http://avenue.mcmaster.ca">http://avenue.mcmaster.ca</a></li> </ul>	
Harvard Business School Publishing Course pack (link will be provided within the course website on Avenue to Learn):	\$41.21
<ul style="list-style-type: none"> <li>• Porter, M. E., Gunther, R., Davenport, T. H., &amp; Lansiti, M. (2021). HBR's 10 Must Reads on Leading Digital Transformation</li> <li>• Porter, M. E., Davenport, T. H., Daugherty, P., &amp; Wilson, H. J. (2018). HBR's 10 Must Reads on AI, Analytics, and the New Machine Age</li> <li>• 10 Cases from Harvard Business School Publishing</li> </ul>	(Required material) + \$42.55 (Optional Items)
Top Hat	FREE
<ul style="list-style-type: none"> <li>• The link will be provided within the course website on Avenue to Learn</li> </ul>	

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**OPTIONAL COURSE MATERIALS AND READINGS**

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Knaflic, C. N. (2015). <i>Storytelling with data: A data visualization guide for business professionals</i> . John Wiley & Sons. ISBN-10: 1119002257	37.75 CAD on Amazon
Gupta, S. (2018). <i>Driving digital strategy: A guide to reimagining your business</i> . Harvard Business Press. ISBN-10: 163369268X	28.62 CAD on Amazon
Porter, M. E., McGrath, R. G., Davenport, T. H., & Lansiti, M. (2021). <i>HBR's 10 Must Reads on Leading Digital Transformation, (with bonus article "How Apple Is Organized for Innovation" by Joel M. Podolny and Morten T. Hansen)</i> . Harvard Business Press. ISBN-10: 1647822165	23.80 CAD on Amazon

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**EVALUATION**

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The learning experience in this course is multifaceted, emphasizing both theoretical and practical aspects of digital transformation. Students will engage in in-depth critical conversations and discussions during class sessions, which are essential for understanding and applying course concepts. Participation in group activities, case analyses, and practical

assignments further deepen this learning. The course also incorporates conceptual lectures and weekly readings that provide foundational knowledge and contemporary insights into digital transformation. Hands-on assignments are designed to apply this knowledge in real-world scenarios, enhancing problem-solving and strategic thinking skills.

Missed assignments/exams will receive a grade of zero unless the student has submitted and been approved for a Notification of Absence or McMaster Student Absence Form (MSAF). Your final grade will be calculated as follows:

### Components and Weights

Component	Weight
Three assignments: Data visualization and data analytics ( <i>Individual</i> )	35%
<ul style="list-style-type: none"> <li>a. Storytelling with data (10%)</li> <li>b. Database (10%)</li> <li>c. Predictive analytics (15%)</li> </ul>	
Case facilitation ( <i>In-group</i> )	10%
Final assignment ( <i>In-group</i> )	35%
<ul style="list-style-type: none"> <li>project brief: 10%</li> <li>project plan: 20%</li> <li>project ad/pitch: 5%</li> </ul>	
Class participation ( <i>Individual</i> )	20%
Total	100%
Individual assignments = 55%, Group assignments = 45%	

NOTE: The use of a McMaster standard calculator is allowed during examinations in this course.

See McMaster calculator policy at the following URL: [www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf](http://www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf)

At the end of the course your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme:

Passing Grades				Failing Grades	
Letter Grade	Percent	Letter Grade	Percent	Letter Grade	Percent
A+	90-100	B+	75-79	F	0-59
A	85-89	B	70-74		
A-	80-84	B-	60-69		

## Course Deliverables

### Assignments

Three comprehensive assignments have been designed to provide students with hands-on experience in data analytics and machine learning algorithms. **These assignments constitute 35% of your final grade and will be evaluated individually.** You will receive several datasets and be tasked with developing Python codes for various data analytics or machine learning algorithms. **Weekly course outlines will include essential Python tutorials.**

The first assignment aims to give students practical experience with Python in developing descriptive models and visualizations. The second assignment will assess students' skill in designing a database and running queries to develop reports. In the third assignment, students will create regression models to predict or classify observations. Detailed instructions for each assignment will be provided in class.

All assignment submissions must be uploaded to your Avenue account following the instructions provided with each assignment. **Late submissions will be accepted with a penalty of 10% deducted for each day past the due date.** It is the student's responsibility to ensure assignments are submitted before the deadline. Note that you can upload work-in-progress to Avenue – only the last version uploaded before the deadline will be graded.

### Case facilitation (Group)

Students will be organized into teams and assigned randomly to lead discussions for specific course sessions that include case studies relevant to the session's topic. Each team will facilitate critical discussions focusing on the implications of issues presented in the cases, analyzing them through the lens of the Planet-People-Profit framework. This leadership activity constitutes 10% of the final course grade, with grades awarded to team members as follows:

- **Quality of Presentation (5.0% of the final grade):**
  - Presentation Technology (2.5%): This includes the use of slides, interactive games, and other class activities designed to engage and inform.
  - Discussion Material (2.5%): Assessment of how well the team utilizes articles and additional supporting sources to enhance the depth and breadth of the discussion.
- **Leading Critical Discussion (5.0% of the final grade):**
  - Critical Perspective by Students (2.5%): Evaluation based on the originality and depth of the critical analysis presented by the students.

- Active Engagement of Students (2.5%): Measured by the team's ability to actively involve the class in the discussion, encouraging diverse viewpoints and comprehensive understanding.

## **Group Project: Digital Transformation for Business and Social Problems**

### **Project Overview:**

The group project is an integral component of the "Thriving through Digital Transformation" course, aimed at providing students with practical experience in leveraging digital transformation to solve real-world business and social challenges. This multi-stage project requires groups to identify a significant issue, devise a digital solution grounded in data and evidence, plan its implementation, and ultimately, create an advertising pitch to promote their solution. Collectively, these elements will contribute 35% to the final course grade, emphasizing hands-on application, teamwork, strategic planning, and effective communication. The primary objectives of this project are to:

- Apply digital transformation theories to practical scenarios.
- Cultivate collaborative problem-solving and project management skills.
- Develop strategic, data-driven solutions with real-world applicability.
- Create compelling digital content to effectively communicate project value.
- Critically assess the broader impacts of digital solutions on society and the environment.

### **Project Stages and Deliverables**

#### **Project Brief (10% of final grade)**

**Content Requirements:** A 3-page document that introduces the project with a clear title, outlines the significance of the chosen (business/social) issue, and provides a preliminary feasibility analysis.

**Purpose:** Sets the foundation for the project, ensuring the team has a clear and shared understanding of the goals and scope.

#### **Project Plan (20% of final grade)**

**Content Requirements:** A detailed 12-page document that covers the operational and financial planning necessary to implement the solution. This should include specific objectives, detailed steps for implementation, resource allocation, risk management, and metrics for evaluating success.

**Purpose:** Demonstrates the project's feasibility, sustainability, and the strategic pathway to achieving its objectives.

Presentation (5% of final grade)

**Content Requirements:** A 10-minute video or digital media presentation designed to market the proposed solution. The presentation should be engaging, utilize digital tools for enhanced presentation, and effectively communicate the project's value to attract stakeholders' support or funding.

**Evaluation Method:** Other student groups, acting as investors with a limited budget, will evaluate and "fund" the pitches. Each group can ask a question to the presenting team before allocating their funds, simulating a real-world funding scenario.

**Note:** The submission of the fund allocation report is required to receive the grade for the presentation. This report should detail how the student group allocated their limited budget among the projects presented.

**Additional Notes:**

- Use university resources and external interviews for comprehensive research.
- If you use Generative AI in your project, report the process: your prompts, AI generated outcomes, your approach to apply these outcomes in your project.
- Final presentations will be evaluated by other groups of students.

**Submission Deadlines:**

- Project Brief: September 25 before midnight
- Project Plan: December 03 before midnight
- Presentation: December 04 before midnight
- Fund Allocation Report: December 06 before midnight
- **The final assignment will not be accepted after the due date.**

**In-Class Participation**

Students are encouraged to engage actively in discussions related to the material being presented by the instructor and TAs in the synchronous sessions. It is very important that you prepare for each class. Debate and challenge are important activities that help in the learning process, and the willingness of students to engage in such activities is appreciated.

Opportunities for in-class participation include taking part in discussions during the lecture part of class by:

- Sharing new concerns, issues, and advancements in the world of AI
- Engaging in class discussions
- Asking questions
- Responding to questions posed by the instructor or other students
- Making relevant comments on material covered
- Engaging in regular retrospective

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### ***COMMUNICATION AND FEEDBACK***

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Students that are uncomfortable in directly approaching an instructor regarding a course concern may send a confidential and anonymous email to the respective Area Chair or Associate Dean:

<http://mbastudent.degroote.mcmaster.ca/contact/anonymous/>

Students who wish to correspond with instructors or TAs directly via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information as well as confirms the identity of the student. Emails regarding course issues should NOT be sent to the Administrative Assistant.

Instructors are encouraged to conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery. Instructors should provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

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### ***ACADEMIC INTEGRITY***

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You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.



It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at:

[www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity)

Students are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Such behaviour includes:

- following the expectations articulated by instructors for referencing sources of information and for group work;
- asking for clarification of expectations as necessary;
- identifying testing situations that may allow copying;
- preventing their work from being used by others (e.g., protecting access to computer files); and
- adhering to the principles of academic integrity when conducting and reporting research.

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### ***AUTHENTICITY/PLAGIARISM DETECTION***

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**Some courses may** use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software.

**All submitted work is subject to normal verification that standards of academic integrity have been upheld** (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to [www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity).

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### ***COURSES WITH AN ON-LINE ELEMENT***

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**All courses** use some online elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access

the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course.

Students may be required to use the Respondus LockDown Browser and Respondus Monitor. The Respondus LockDown Browser is a downloadable program that allows a student to take an Avenue to Learn quiz in a secure environment. Quizzes can be set to use LockDown Browser or LockDown Browser.

For more details about McMaster's use of Respondus Lockdown Browser please go to <https://avenuehelp.mcmaster.ca/exec/respondus-lockdown-browser-and-respondus-monitor/>

The available information is dependent on the technology used. Continuation in a course that uses online elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

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### ***ON-LINE PROCTORING***

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**Some courses may** use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

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### ***CONDUCT EXPECTATIONS***

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As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online.**

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be

investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

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### ***ATTENDANCE***

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Arriving late or missing class disrupts the learning experience for both you and your peers. Punctuality and attendance are crucial to maintaining a respectful, professional, and productive environment for everyone, including our faculty. Attendance will be recorded in each class to help identify students who may be at risk or in need of additional support.

Instructors will be using Top Hat to capture attendance in their classes. Attendance is recorded by submitting a unique 4-digit code displayed in your physical classroom using your personal device.

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### ***MISSED ACADEMIC WORK***

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#### **Missed Mid-Term Examinations / Tests / Class Participation**

Please do not use the online [McMaster Student Absence Form \(MSAF\)](#) as this is for Undergraduate students only. The MBA program will not accept an MSAF.

When students miss regularly scheduled term work which contributes 10% or more to the final grade, for legitimate reasons as determined by the Student Experience – Academic Office (SEAO), the activity necessary to compensate for the missed work will be determined by the course instructor. The compensatory activities assigned will vary with the nature of the course and the missed requirement. They include, but are not restricted to, an alternative assignment, a rescheduled midterm exam, or re-weighting the marks for the missed component to other mark components. Documentation explaining such missed work must be provided to the SEAO within five (5) working days of the scheduled date for completion of the work.

Acceptable reasons for missed work, along with the [Petition for Missed Term Work](#) and the [MBA Student McMaster University Student Health Certificate](#), can be found on the DeGroote MBA Student website ([mbastudent.degroote.mcmaster.ca](http://mbastudent.degroote.mcmaster.ca)). Please direct any questions about acceptable documentation to the MBA Academic Advisors ([askmba@mcmaster.ca](mailto:askmba@mcmaster.ca)).

University policy states that a student may submit a maximum of three (3) [Petition for Missed Term Work](#) per academic year, after which the student must meet with the Director of the program.

If term work is missed without an approved reason, students will receive a grade of zero (0) for that component.

### **Missed Final Examinations**

Students must be available for the duration of the posted exam period regardless of their personal exam schedule. This is to ensure student availability throughout the entire exam period in the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm policy, etc.). A student who misses a final examination without valid reason will receive a mark of 0 on the examination.

Students who have missed a final exam for a valid reason can apply to the SEAO to write a deferred examination by submitting an [Application for Deferring a Final Exam](#) with supporting documentation. The application must be made within five days of the scheduled exam.

The [Application for Deferring a Final Exam](#) and the [MBA Student McMaster University Student Health Certificate](#) can be found on the DeGroote MBA Current Student website ([mbastudent.degroote.mcmaster.ca](http://mbastudent.degroote.mcmaster.ca))

Deferred examination privileges, if granted, are normally satisfied during the examination period at the end of the following semester. In select cases, the deferred examination may be written at a time facilitated by the SEAO and agreed to by the course instructor.

Requests for a second deferral or rescheduling of a deferred examination will not be considered.

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### ***ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES***

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Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

<http://sas.mcmaster.ca>

***Use of Test Accommodations at McMaster University Burlington Campus Ron Joyce Centre***

Whereas Student Accessibility Services (SAS), on Main Campus, determines all MBA student accommodations, the MBA Faculty Office manages the coordination of accommodations for tests, midterms, and exams at the Ron Joyce Centre in Burlington.

### **Process for Students**

- Students must activate their accommodation(s) (e.g., extra-time, memory aid, etc.) for each upcoming test, midterm, or exam, at least two weeks in advance. Students can do this by emailing their Instructor and the DeGroot MBA SAS scheduling office at [DSBSAS@mcmaster.ca](mailto:DSBSAS@mcmaster.ca). If a student cannot meet this deadline, they should contact [DSBSAS@mcmaster.ca](mailto:DSBSAS@mcmaster.ca) to discuss alternative arrangements. The program is committed to exploring flexibility where possible to support students.
- All tests, midterms, and exams are booked synchronously with the class's start time. Any deviations from the start time (e.g. start earlier than the class to enable completion at the same end time) requires a discussion with their instructor on protocol at the time of accommodation activation.
- Students will leverage the accommodation (e.g., extra-time, memory aid, etc.), in a designated testing room. Rooms will be booked according to the student's SAS accommodation. Unless the accommodation states otherwise, students should expect that they will be writing in a room with other students. One or more invigilators will always be in the room.
- Following the request to activate the accommodation(s), [dsbsas@mcmaster.ca](mailto:dsbsas@mcmaster.ca) will reach out to the student with their test, midterm, or exam details, including the date, time, and room number. As there may be other students writing tests in the room, we ask that students enter the room quietly and leave all personal items at the front of the room.

All policies and procedures, including restroom access, how extra-time is allocated for assessments under Universal Design, and the submission of memory aids in advance, are consistent with those of SAS on Main Campus. The only variance in procedure is communication around, and physical location of, assessment. There is not a dedicated testing space at RJC. Existing classrooms and lecture halls will be used for most testing. All SAS-approved accommodations will be honoured by our staff; however, core testing elements are not eliminated in alternative testing formats. Students should expect and plan for invigilation, incidental noise, and other potential distractions.

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***ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL  
OBSERVANCES (RISO)***

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Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the [RISO](#) policy. Students should submit their request to their Faculty Office **normally within 10 working days** of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

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***COPYRIGHT AND RECORDING***

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Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors.

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

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***POTENTIAL MODIFICATION TO THE COURSE***

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The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

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***RESEARCH USING HUMAN SUBJECTS***

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***ONLY IF APPLICABLE***

Research involving human participants is premised on a fundamental moral commitment to advancing human welfare, knowledge, and understanding. As a research intensive institution, McMaster University shares this commitment in its promotion of responsible research. The fundamental imperative of research involving human participation is respect for human dignity and well-being. To this end, the University endorses the ethical principles cited in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans:

<http://www.pre.ethics.gc.ca>

McMaster University has mandated its Research Ethics Boards to ensure that all research investigations involving human participants are in compliance with the Tri-Council Policy Statement. The University is committed, through its Research Ethics Boards, to assisting the research community in identifying and addressing ethical issues inherent in research, recognizing that all members of the University share a commitment to maintaining the highest possible standards in research involving humans.

If you are conducting original research, it is vital that you behave in an ethical manner. For example, everyone you speak to must be made aware of your reasons for eliciting their responses and consent to providing information. Furthermore, you must ensure everyone understands that participation is entirely voluntary. Please refer to the following website for more information about McMaster University's research ethics guidelines:

<http://reo.mcmaster.ca/>

Organizations that you are working with are likely to prefer that some information be treated as confidential. Ensure that you clarify the status of all information that you receive from your client. You **MUST** respect this request and cannot present this information in class or communicate it in any form, nor can you discuss it outside your group. Furthermore, you must continue to respect this confidentiality even after the course is over.

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***ACKNOWLEDGEMENT OF COURSE POLICIES***

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Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of **MBA K610** will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be

announced during lecture and/or on A2L. **It is your responsibility to read this course outline, to familiarize yourself with the course policies and to act accordingly.**

Lack of awareness of the course policies **cannot be invoked** at any point during this course for failure to meet them. It is your responsibility to ask for clarification on any policies that you do not understand.

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### ***ARTIFICIAL INTELLIGENCE***

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This is where you include your statement on artificial intelligence and its use in your class. Can refer to this page for additional information and guidelines: [Generative Artificial Intelligence - Academic Excellence - Office of the Provost \(mcmaster.ca\)](#)

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### ***PLACES TO GET HELP WITH YOUR WORK***

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- For help with course content, your instructor is the best source for help. Feel free to ask the professor for explanation of any topic covered in the course. Be sure to read the assigned materials before contacting the course instructor. The best way to interact with your instructor is e-mail.
- For help with assignments, it is best to first talk to the Teaching Assistants for the course (contact information can be found above).



**COURSE SCHEDULE**

**MODULE ONE) DIGITAL TRANSFORMATION: CRITICAL CONVERSATIONS ON CONCEPTS**

Explore the foundational concepts of digital transformation, examining its impact on business and society, and delving into the technological advancements driving socioeconomic changes.

Date	Class Components	
01)	<b>Topic</b>	<ul style="list-style-type: none"> <li>Welcome and Overview</li> </ul>
Sep 12	<b>Readings</b>	<ul style="list-style-type: none"> <li>Tohidian, I., &amp; Rahimian, H. (2019). Bringing Morgan’s metaphors in organization contexts: An essay review. <i>Cogent Business &amp; Management</i>.</li> <li>The New Analytics of Culture. <i>By: Matthew Corritore, Amir Goldberg, Sameer Srivastava</i></li> <li>(Optional) <a href="#">How Strategists Really Think: Tapping the Power of Analogy. By: Giovanni Gavetti, Jan W. Rivkin</a></li> </ul>
	<b>Cases</b>	
	<b>Activities</b>	<ul style="list-style-type: none"> <li>Class Outline, Schedule, Participation, Courseware</li> <li>Students’ introduction and team selection</li> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>Python set up and environment</li> </ul>
	<b>Assignments</b>	Module ONE/FIIVE deliverables (Group project requirements)
02)	<b>Topic</b>	<ul style="list-style-type: none"> <li>Digital Transformation, firms, and socioeconomic disruption</li> </ul>
Sep 19	<b>Readings</b>	<ul style="list-style-type: none"> <li>HBRLDT<sup>2</sup>_01) Discovery-Driven Digital Transformation. <i>by Rita McGrath and Ryan McManus</i></li> <li>HBRLDT_03) Digital Doesn’t Have to Be Disruptive, <i>by Nathan Furr and Andrew Shipilov</i></li> <li>(Optional) <a href="#">Digital Transformation Is Not About Technology. By: Behnam Tabrizi; Ed Lam; Kirk Girard; Vernon Irvin; Kirk Gerard</a></li> </ul>
	<b>Cases</b>	<ul style="list-style-type: none"> <li>Will be announced on Sep 12</li> </ul>
	<b>Team TBD</b>	<ul style="list-style-type: none"> <li>Presented by Team ONE</li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>Python basics and data structure</li> </ul>
	<b>Assignments</b>	

<sup>2</sup> Porter, M. E., Gunther, R., Davenport, T. H., & Lansiti, M. (2021). HBR's 10 Must Reads on Leading Digital Transformation

**MODULE TWO) DIGITAL TRANSFORMATION: CRITICAL CONVERSATIONS ON DATA**

Focus on the role of data in digital transformation by constructing visual narratives, analyzing biases in algorithms, and building foundational models for predictive analytics.

Date	Class Components
03)	<b>Topic</b> <ul style="list-style-type: none"> <li>Data, information, knowledge, and wisdom in business and society</li> </ul>
Sep 26	<b>Readings</b> <ul style="list-style-type: none"> <li>HBRLDT_04) What's Your Data Strategy? <i>by: Leandro DalleMule and Thomas H. Davenport</i></li> <li>HBRLDT_07) How Smart, Connected Products Are Transforming Companies. <i>by Nocolaj Siggelkow ad Chrisian Teriesch</i></li> <li>(Optional) <a href="#">Data Analytics: From Bias to Better Decisions. By: Megan MacGarvie; Kristina McElheran</a></li> <li>(Optional) <a href="#">The Subtle Sources of Sampling Bias Hiding in Your Data. By: Sam Ransbotham</a></li> </ul>
	<b>Cases Team TBD</b> <ul style="list-style-type: none"> <li>Will be announced on Sep 19</li> <li>Presented by Team TWO</li> </ul>
	<b>Activities</b> <ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b> <ul style="list-style-type: none"> <li>Data Exploration with Python</li> </ul>
	<b>Assignments</b> <p>Module TWO Deliverable (Story Telling and Descriptive Analytics) will be released before <b>Sep 26 before midnight.</b></p> <p>Module ONE deliverable (Project Brief) should be submitted by <b>Sep 25 before midnight.</b></p>
04)	<b>Topic</b> <ul style="list-style-type: none"> <li>Storytelling with Data</li> </ul>
Oct 03	<b>Readings</b> <ul style="list-style-type: none"> <li>(Optional) <a href="#">Data Science and the Art of Persuasion. By: Scott Berinato</a></li> <li>(Optional) <a href="#">Visualizations That Really Work. By: Scott Berinato</a></li> </ul>
	<b>Cases Team TBD</b> <ul style="list-style-type: none"> <li>Will be announced on Sep 26</li> <li>Presented by Team THREE</li> </ul>
	<b>Activities</b> <ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b> <ul style="list-style-type: none"> <li>Data visualization with Python</li> </ul>
	<i>Assignments</i>

**MODULE THREE) DIGITAL TRANSFORMATION: CRITICAL CONVERSATIONS ON TECHNOLOGIES**

Dive into the technical components that underpin digital transformation including software development, big data, cloud computing, cybersecurity, IoT, AI, and blockchain technologies.

Date	Class Components
05)	<b>Topic</b> <ul style="list-style-type: none"> <li>Databases, Internet of Things, Cybersecurity, and Cloud Computing</li> </ul>
Oct 10	<b>Readings</b> <ul style="list-style-type: none"> <li>HBRAIAM<sup>3</sup>_06) Drones Go to Work. <i>by Chris Anderson</i></li> <li>HBRLDT_08) The Age of Continuous Connection. <i>by: Nicolaj Siggelkow, Christian Terwiesch</i></li> <li>(Optional) <a href="#">The Digitization of Just About Everything. By: Erik Brynjolfsson, Andrew McAfee</a></li> <li>(optional) <a href="#">Act, Don't React: A Leader's Guide to Cybersecurity. By: Michael Parent, Greg Murray, David Beatty</a></li> </ul>
	<b>Cases Team TBD</b> <ul style="list-style-type: none"> <li>Will be announced on OCT 03</li> <li>Presented by Team FOUR</li> </ul>
	<b>Activities</b> <ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b> <ul style="list-style-type: none"> <li>Data base management with Python</li> </ul>
	<b>Assignments</b> <p>Module TWO Deliverable (Story Telling and Descriptive Analytics) should be submitted by <b>Oct 09 before midnight.</b></p> <p>Module THREE Deliverables (Database) will be released before <b>Oct 10 before midnight</b></p>
<i>06) Oct 17: Midterm Recesses (No Classes)</i>	
07)	<b>Topic</b> <ul style="list-style-type: none"> <li>Additive Manufacturing, Big Data and Blockchain.</li> </ul>
Oct 24	<b>Readings</b> <ul style="list-style-type: none"> <li>HBRAIAM_07) The Truth about Blockchain. <i>by Marco Iasiti and Karim R. Lakhani</i></li> <li>HBRAIAM_08) The 3-D Printing Playbook. <i>by: Richard A. D'Aveni</i></li> <li>(Optional) <a href="#">An Introduction to Blockchain. By: Stylianos Kampakis, Theodosios Mourouzis, Gerard Cardoso, Marialena Zinopoulou</a></li> <li>(Optional) <a href="#">Big Data, Analytics and the Path From Insights to Value. By: Steve LaValle, Eric Lesser, Rebecca Shockley, Michael S. Hopkins, Nina Kruschwitz</a></li> </ul>
	<b>Cases Team TBD</b> <ul style="list-style-type: none"> <li>Will be announced on Oct 17</li> <li>Presented by Team FIVE</li> </ul>
	<b>Activities</b> <ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b> <ul style="list-style-type: none"> <li>Simple blockchain with Python</li> </ul>
	<b>Assignments</b>

<sup>3</sup> Porter, M. E., Davenport, T. H., Daugherty, P., & Wilson, H. J. (2018). HBR's 10 Must Reads on AI, Analytics, and the New Machine Age

**MODULE FOUR) DIGITAL TRANSFORMATION: CRITICAL CONVERSATIONS ON AI**

Explore AI's impact on digital transformation through model building and machine learning, assessing strategic, ethical, and operational dimensions within various sectors.

Date	Class Components	
08)	<b>Topic</b>	<ul style="list-style-type: none"> <li>Statistics and fundamentals of model building</li> </ul>
Oct 31	<b>Readings</b>	<ul style="list-style-type: none"> <li>HBRAIAM_01) Artificial Intelligence for the Real world. <i>by Thomos H. Daveport and Rajeev Roanki</i></li> <li>HBRAIAM_03) Algorithms Need Managers, Too. <i>by: Michael Luca, Jon Kleinberg, Sendhil Mullainathan</i></li> <li>(Optional) <a href="#">A Refresher on Regression Analysis. By: Amy Gallo</a></li> <li>(Optional) <a href="#">An Introduction to Data Science/AI for the Nontechnical Person. By: Stylianos Kampakis; Theodosios Mourouzis; Gerard Cardoso; Marialena Zinopoulou</a></li> </ul>
	<b>Cases Team TBD</b>	<ul style="list-style-type: none"> <li>Will be announced on Oct 24</li> <li>Presented by Team SIX</li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>Linear Regression with Python</li> </ul>
	<b>Assignments</b>	<p>Module THREE Deliverable (Database) should be submitted by <b>Oct 30 before midnight.</b></p> <p>Module FOUR Deliverables (Predictive Analytics) will be released before <b>Oct 31 before midnight</b></p>
09)	<b>Topic</b>	<ul style="list-style-type: none"> <li>Machine Learning and Artificial Intelligence</li> </ul>
Nov 07	<b>Readings</b>	<ul style="list-style-type: none"> <li>HBRAIAM_03) Marketing in the Age of Alexa. <i>by: Niraj Dawar</i></li> <li>HBRLDT_04) Competing in the Age of AI. <i>by: Marco Iansiti, Karim R. Lakhani</i></li> <li>(Optional) <a href="#">An Introduction to Data Science/AI for the Nontechnical Person, By: Stylianos Kampakis, Theodosios Mourouzis, Gerard Cardoso, Marialena Zinopoulou</a></li> <li>(Optional) <a href="#">How to Win with Machine Learning. By: Ajay Agrawal, Joshua Gans, Avi Goldfarb</a></li> </ul>
	<b>Cases Team TBD</b>	<ul style="list-style-type: none"> <li>Will be announced on Oct 31</li> <li>Presented by Team SEVEN</li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>Logistic Regression with Python</li> </ul>
	<b>Assignments</b>	

**MODULE FIVE) DIGITAL TRANSFORMATION: CRITICAL CONVERSATIONS ON STRATEGY**

Develop comprehensive digital strategies that integrate data-driven insights, assess the practical implications of digital tools, and align digital initiatives with broader business objectives for competitive advantage.

Date	Class Components	
10) Nov 14	<b>Topic</b>	<ul style="list-style-type: none"> <li>• Data-Driven Strategy                             <ul style="list-style-type: none"> <li>◦ Focus on leveraging data to formulate and implement effective business strategies.</li> </ul> </li> </ul>
	<b>Readings</b>	<ul style="list-style-type: none"> <li>• HBRLDT_02) The Transformative Business Model. <i>By: Stelios Kavadias, Kostas Ladas, Christoph H. Loch</i></li> <li>• HBRLDT_06) Building the AI-Powered Organization. <i>By: Tim Foutaine, Brian McCarthy, Tamim Saleh</i></li> <li>• (Optional) <a href="#">Strategy as a Wicked Problem</a>. <i>By: John C. Camillus</i></li> </ul>
	<b>Cases Team TBD</b>	<ul style="list-style-type: none"> <li>• Data Analytics Simulation: Strategic Decision Making. <i>By: Thomas H. Davenport</i></li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>• Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>• Data, Change Management, and Strategy Dynamics</li> </ul>
	<b>Assignments</b>	<p>Module FOUR Deliverables (Predictive Analytics) should be submitted by <b>Nov 13 before midnight.</b></p>
11) Nov 21	<b>Topic</b>	<ul style="list-style-type: none"> <li>• Digital Strategy                             <ul style="list-style-type: none"> <li>◦ Create integrated strategies that incorporate digital technologies across business functions.</li> </ul> </li> </ul>
	<b>Readings</b>	<ul style="list-style-type: none"> <li>• HBRLDT_09) The Problem with Legacy Ecosystems. <i>By: Maxwell Wessel; Aaron Levie; Robert Siegel</i></li> <li>• HBRAIAM_11) Managing Our Hub Economy. <i>By: Marco Iansiti, Karim R. Lakhani</i></li> <li>• (Optional) <a href="#">Is Your Business Ready for a Digital Future?</a> <i>By: Gerald C. Kane; Doug Palmer; Anh Nguyen Phillips; David Kiron</i></li> <li>• (Optional) <a href="#">Pipelines, Platforms, and the New Rules of Strategy</a>. <i>By: Marshall W. Van Alstyne; Geoffrey Parker; Sangeet Paul Choudary</i></li> </ul>
	<b>Cases Team TBD</b>	<ul style="list-style-type: none"> <li>• Will be announced on Nov 14</li> <li>• Presented by Team EIGHT</li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>• Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>• Data, Change Management, and Strategy Dynamics</li> </ul>
	<b>Assignments</b>	

**MODULE SIX) DIGITAL TRANSFORMATION: CRITICAL CONVERSATIONS ON IMPLEMENTATION**

Explore the nuts and bolts of executing digital transformation projects, focusing on change management, stakeholder engagement, and the step-by-step methodologies essential for successful digital integration and adoption within organizations.

12) Nov 28	<b>Topic</b>	<ul style="list-style-type: none"> <li>Implementation and Change Management               <ul style="list-style-type: none"> <li>Dive deep into the strategies for effectively managing the human and technical changes involved in digital transformation projects.</li> </ul> </li> </ul>
	<b>Readings</b>	<ul style="list-style-type: none"> <li>HBRLDT_03) Digital Transformation Comes Down to Talent in Four Key Areas. <i>By: Thomas H. Davenport; Thomas C. Redman</i></li> <li>HBRLDT_10) Your Workforce Is More Adaptable Than You Think. <i>By: Joseph B. Fuller, Judith K. Wallenstein, Manjari Raman, Alice de Chalendar</i></li> <li><a href="#">(Optional) 3 Stages of a Successful Digital Transformation. By: Didier Bonnet</a></li> <li><a href="#">(Optional) Organizational Implementation of AI: Craft and Mechanical Work. By: Konstantin Hopf, Oliver Muller, Arisa Shollo, Tiemo Thiess</a></li> </ul>
	<b>Cases</b>	<ul style="list-style-type: none"> <li>Will be announced on Nov 14</li> </ul>
	<b>Team TBD</b>	<ul style="list-style-type: none"> <li>Presented by Team NINE</li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>Group based activity will be announced in class.</li> </ul>
	<b>Workshop</b>	<ul style="list-style-type: none"> <li>Data, Change Management, and Strategy Dynamics</li> </ul>
<b>Assignments</b>		
13) Dec 05	<b>Topic</b>	<ul style="list-style-type: none"> <li>Group Presentations               <ul style="list-style-type: none"> <li>Students present their digital transformation project proposals developed throughout the course.</li> </ul> </li> </ul>
	<b>Readings</b>	<ul style="list-style-type: none"> <li></li> </ul>
	<b>Cases</b>	<ul style="list-style-type: none"> <li></li> </ul>
	<b>Team TBD</b>	<ul style="list-style-type: none"> <li></li> </ul>
	<b>Activities</b>	<ul style="list-style-type: none"> <li>This session serves as a platform for students to showcase the culmination of their learnings and project work. Each group presents their comprehensive digital transformation strategy, covering conceptualization, strategy, technology integration, and potential challenges and solutions.</li> </ul>
<b>Workshop</b>		
<b>Assignments</b>		Group project plan report should be submitted by <b>Dec 03 before midnight</b> . Group presentation should be submitted by <b>Dec 04 before midnight</b> . Fund allocation report should be submitted by <b>Dec 06 before midnight</b> .