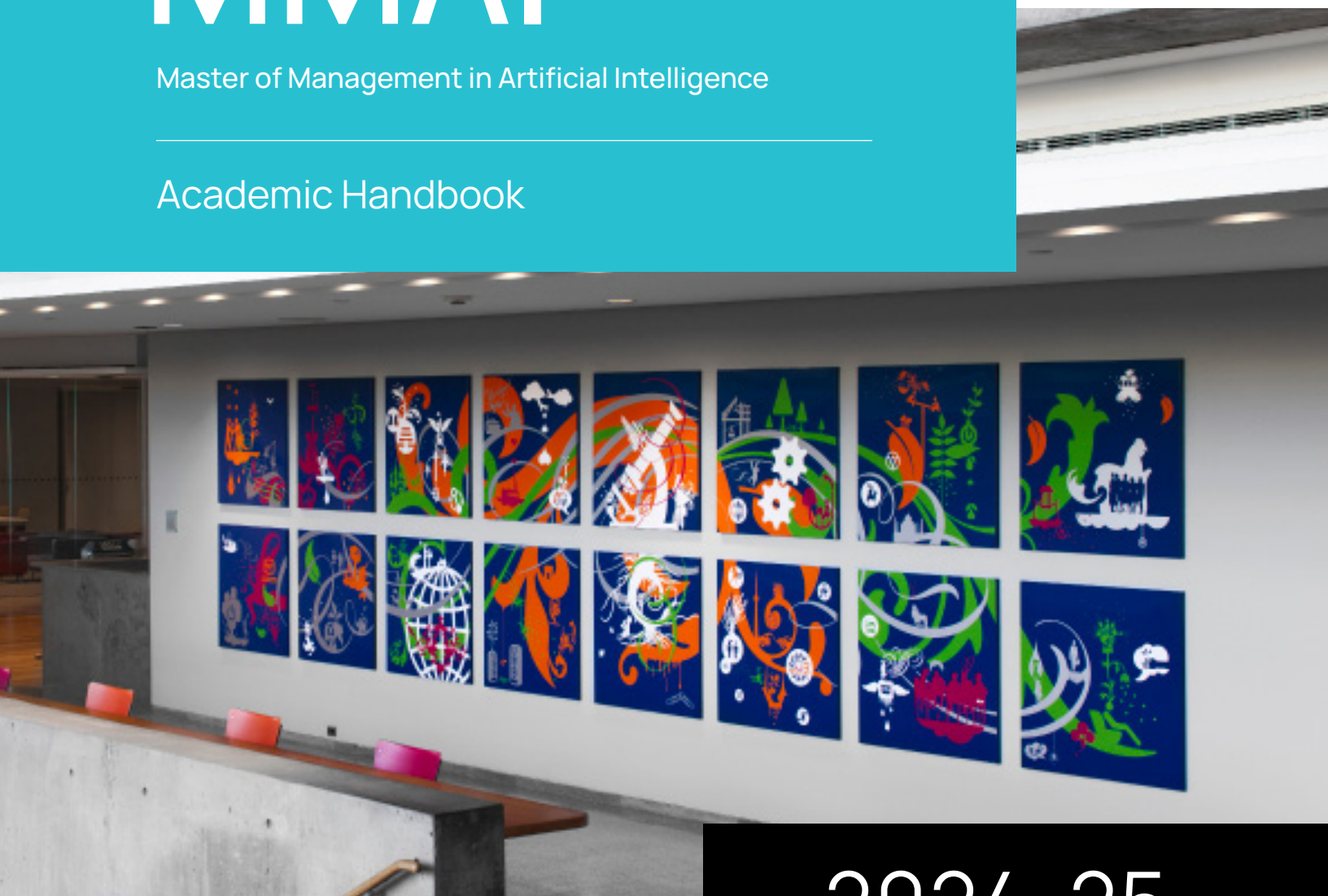


MMAI

Master of Management in Artificial Intelligence

Academic Handbook

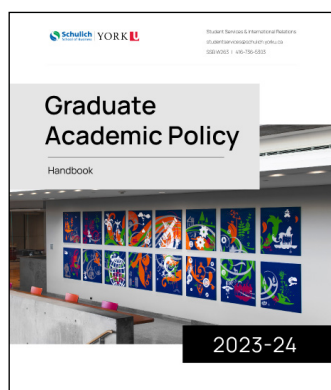


2024-25

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Can't find what you're looking for? Check the Graduate Academic Handbook!



Review important information about:

- Tuition and fees
- Scholarships and financial aid
- Exams, grades and conduct
- Petitions and appeals
- Student services and enrolment
- Student life and clubs
- Libraries, transit, childcare, health services

Available on the [Academic Resources webpage](#)

Disclaimer

The material contained in this Handbook has been submitted by the administrative departments and academic units concerned. All general information and course references have been checked for accuracy as much as possible. If errors or inconsistencies do occur, please bring these to the attention of the responsible department. York University reserves the right to make changes to the information contained in this publication without prior notice.

It is the responsibility of all students to familiarize themselves each year with the information contained in this handbook, as well as with any additional regulations relating to academic policy as communicated by the Division of Student Services and International Relations in the Schulich School of Business.

It is the responsibility of all students to be familiar with the specific requirements associated with the degree, diploma or certificate sought. While advice and counseling are available, it is the responsibility of each student to ensure that the courses in which registration is affected are appropriate to the program requirements of the Schulich School of Business.

While the University will make every reasonable effort to offer courses and classes as required within programs, student should note that admission to a degree or other program does not guarantee admission to any given course or class.

Every student agrees by the act of registration to be bound by the regulations and policies of York University and of the Schulich School of Business.

In the event of an inconsistency between the general academic regulations and policies published in student handbooks and calendars, and such regulations and policies as established by the Schulich School of Business and Senate, the version of such material as established by the Schulich School of Business and the Senate shall prevail.

York University Policies

York University disclaims all responsibility and liability for loss or damage suffered or incurred by any student or other party as a result of delays in or termination of its services, courses, or classes by reason of force majeure, fire, flood, riots, war, strikes, lock-outs, damage to University property, financial exigency or other events beyond the reasonable control of the University.

York University disclaims any and all liability for damages arising as a result of errors, interruptions or disruptions to operations or connected with its operations or its campuses, arising out of computer failure or non-compliance of its computing systems.

York University is a smoke-free institution. Smoking is permitted in designated areas only.

Important Websites

Resource	URL	Go here for...
The Schulich School of Business official website	schulich.yorku.ca	Program Information, Financial Aid, International Opportunities, Career Development Centre, MySchulich student portal
Schulich Current Graduate Students page	schulich.yorku.ca/current-students/graduate-students	Important Dates, Course Offerings, Wait List, Upcoming Events, Enrolment Details, Academic Petitions and Appeals
Student Services GradBlog	gradblog.schulich.yorku.ca	Student stories, Regular updates about courses, important dates, enrolment and events
York Online Services	currentstudents.yorku.ca	Enrolment & fees, Housing & Transportation, Academic Regulations & Grade Reports
Student Accessibility Services	accessibility.students.yorku.ca	Resources for academic and personal development, individual and group counselling, Learning Skills Workshops
Graduate Business Council	gbcschulich.ca	Mission statement, executive reps, student clubs, services and events

2024-2025 Sessional Dates

SUMMER 2024

Activity	Term S	Term E	Term G
Class Start Date	May 6	May 6	Jun 17
Class End Date	Jul 26	Jun 14	Jul 26
Reading Week	N/A	N/A	N/A
Examinations	Jul 29 - Aug 4	Jun 21	Jul 29 - Aug 4
Last date to enrol without permission	May 13	May 13	Jun 24
Last date to enrol with permission	May 20	May 20	Jul 1
Last date to drop courses	Jun 10	May 27	Jul 8

FALL 2024

Activity	Term F2	Term A	Term M
Class Start Date	Sept 9	Sept 9	Oct 28
Class End Date	Dec 6	Oct 21	Dec 6
Reading Week	Oct 22 - 25	N/A	N/A
Examinations	Dec 9 - 13	Oct 22 - 27	Dec 9 - 15
Last date to enrol without permission	Sept 16	Sept 16	Nov 4
Last date to enrol with permission	Sept 23	Sept 23	Nov 11
Last date to drop courses	Oct 14	Sept 30	Nov 18

WINTER 2025

Activity	Term W2	Term C	Term N
Class Start Date	Jan 6	Jan 6	Feb 24
Class End Date	Apr 4	Feb 16	Apr 6
Reading Week	Feb 18 - 21	N/A	N/A
Examinations	Apr 7 - 13	Feb 18 - 23	Apr 7 - 13
Last date to enrol without permission	Jan 13	Jan 13	Mar 3
Last date to enrol with permission	Jan 20	Jan 20	Mar 10
Last date to drop courses	Feb 10	Jan 27	Mar 17

2024-2025 Important Dates

DATE	REMINDER
May 6	First day of Summer classes
May 10	Summer Term fees due
May 20	Victoria Day (university closed)
May 24	Mandatory Make-up Day (in lieu of Victoria Day)
July 1	Canada Day (university closed)
July 5	Mandatory Make-Up Day (in lieu of Canada Day)
August 5	Civic Holiday (university closed)
September 2	Labour Day (university closed)
September 9	First day of Fall classes
September 10	Fall Term fees due
October 14	Thanksgiving (university closed)
December 6	Last day of Fall classes

Find Important Dates online!
[schulich.yorku.ca/current-students/graduate-students/
key-dates](https://schulich.yorku.ca/current-students/graduate-students/key-dates)



Contact Us

The School's Division of Student Services & International Relations should be consulted on questions related to admissions, enrolment, registration, grade or course problems, financial assistance or special advising.



MEET US ONLINE!

schulich.yorku.ca/student-enrolment-services

TITLE	NAME	E-MAIL
Associate Dean, Students	Kiridaran (Giri) Kanegaretnam	kkanagaretnam@schulich.yorku.ca
Executive Director	Lindsay Hillcoat	lhillcoat@schulich.yorku.ca
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Lyndsay Vair
Student Success Coordinator
Student & Enrolment Services
studentservices@schulich.yorku.ca

Enrolment

Registration and Enrolment

- The course enrolment process at York is completed by students online
- The process of making enrolment changes at York is also automated (e.g. changing course sections, substituting one course for another by dropping one and adding another, or dropping a course)
- Students without immediate access to a computer may use on-campus terminals, including the library, computer lab, or the computers in the Schulich Student & Enrolment Services Office, W263
- Students normally enrol for Summer term courses in March and for Fall and Winter courses in June
- Enrolment is on a first-come, first-served basis
- Students cannot add or drop courses after the deadline (see page 4 for details)

Enrolment Blocks

All students having an outstanding balance of \$1,500.00 or more will be blocked from enrolling in the Summer, Fall and/or Winter terms.

Enrolment Access Notification

A student's Enrolment Access Period begins on the date and time posted online at currentstudents.yorku.ca. Enrolment access start dates are posted on the Registrar's Office website (registrar.yorku.ca) by selecting "Find out when I can enrol." Enrolment access times are determined according to the number of completed credits a student obtains. Schulich access periods begin on different days. Students with the highest number of credits completed begin first. Once the enrolment access has begun, it continues until the final date to enrol in courses for that term.

We recommend that students enrol as early as possible once their access period begins. We also encourage students to verify their enrolment periodically online.

Course Offerings And Withdrawals

The Master of Management in Artificial Intelligence is a one year, full-time program with a specialized set of courses. Students are not permitted to take additional courses within the MMAI program at Schulich or out of Faculty, except by permission from the program director.

Course Withdrawals

- Dropping one or more courses will prevent a full-time student from completing the MMAI degree program within the prescribed program length and will result in withdrawal from the program
- See your academic advisor ahead of time to discuss the implications of dropping a course
- This program is offered on a full-time basis only

Course Cancellations

If a course is cancelled, Student & Enrolment Services immediately informs those enrolled via their Schulich e-mail.

Revised Course Offerings

Revisions to course offerings are also posted on the [Schulich Course Offerings database](#).

Revisions can include:

- cancelled courses
- new courses
- schedule changes (day/time)
- room changes
- new instructors

Additional enrolment information can be found in the Graduate Academic Policy Handbook: schulich.yorku.ca/handbooks.

Enrolment updates are also communicated to students via their academic advisors and e-mail updates from the Director, Student & Enrolment Services.

Master of Management in Artificial Intelligence (MMAI)

Artificial Intelligence (AI) is undergoing a landmark evolution, transforming the private and public sectors. As organizations adopt and invest in AI technology, a new style of management is needed – one that pairs a leader’s vision with a scientist’s mastery over a growing body of specialized knowledge.

The 12-month full-time Master of Management in Artificial Intelligence (MMAI)* is designed to meet the growing need for talented professionals with the skills and advanced applied knowledge to develop, evaluate, refine and implement AI-related applications and technologies. The capstone Artificial Intelligence Consulting Project (AICP) provides students with an opportunity to solve a significant business problem by designing an AI-centered approach. Working in the Deloitte Cognitive Analytics and Visualization Lab student teams will deliver a solution to a client organization, interacting with industry managers, technicians, suppliers and other stakeholders.



PROGRAM LENGTH

- 12 months, 45.00 credits

GRADUATION REQUIREMENTS

To graduate, a student must achieve an overall GPA of at least 4.40 (B-). Students must complete the following to be eligible to graduate from the program(s):

- 45.00 credits of Required Core Courses

ORIENTATION

- Attendance is mandatory for MMAI orientation in September.

Academic Advisor

Fern Best
Student Success Coordinator
studentservices@schulich.yorku.ca



Lyndsay Vair
Student Success Coordinator
studentservices@schulich.yorku.ca

Career Opportunities

Graduates will possess a competitive combination of management skills, technical expertise and the ethical sensibilities required to execute solutions to business challenges.

Career support is embedded throughout the MMAI program journey, with structured training in Apache Hadoop, Structured Query Language (SQL), Tableau Data Visualization and Microsoft Azure.

Please contact Ricardo Luhm, MMAI Corporate Leads & Projects, with any career related questions:

MMAI Corporate Lead & Projects
Ricardo Luhm
career@schulich.yorku.ca



FIND PROGRAM DETAILS ONLINE!
schulich.yorku.ca/programs/mmai

Promotion Standards

1. Students enrolled in the Master of Management in Artificial Intelligence (MMAI) program will be reviewed as follows to determine whether or not they have met promotion requirements below:

- initial review upon completion of Term 2
- subsequent review at the end of each following term

2. To maintain their standing in the program, all students must maintain a GPA of at least 4.20 and not receive a grade of F in more than 3.00 credits of course work.

3. Students who do not meet these requirements will be withdrawn.

4. Students who fail a required course must retake it. Students who fail an elective course may retake it, or may elect to take another course. Students who re-take a failed course and receive a second failing grade will be withdrawn.

5. A student who has been withdrawn from the program is advised to seek the help of their Academic Advisor to discuss the best way forward. The student may petition to the Student Affairs Committee to be allowed to continue in the program without having met the promotion requirements.

Master of Management in Artificial Intelligence (MMAI)		
Term 1 (Summer) 15.00 credits	Term 2 (Fall) 15.00 credits	Term 3 (Winter) 15.00 credits
MMAI 5000 3.00 Artificial Intelligence Fundamentals	MMAI 5040 3.00 Business Applications of Artificial Intelligence I	MMAI 5090 3.00 Business Applications of Artificial Intelligence II
MMAI 5100 3.00 Database Fundamentals	MMAI 5400 3.00 Natural Language Processing	MMAI 5140 3.00 Visual Analytics & Modelling
MBAN 6110 3.00 Data Science I	MMAI 5500 3.00 Applications of Neural Networks & Deep Learning in Business	MMAI 5200 3.00 Algorithms for Business Analysis
MGMT 6300 3.00 Case Analysis & Presentation Skills	MBAN 5110 3.00 Predictive Modelling	SUST 5100 3.00 Ethics & Technology
OMIS 6750 3.00 Project Management	MMAI 6050 6.00 AI Consulting Project	

Note: Courses and sequencing subject to change.

Academic Requirements:

REQUIRED COURSES (45.00 credits)

MBAN 5110 3.00	Predictive Modelling
MBAN 6110 3.00	Data Science
MMAI 5000 3.00	Artificial Intelligence Fundamentals
MMAI 5040 3.00	Business Applications of Artificial Intelligence I
MMAI 5090 3.00	Business Applications of Artificial Intelligence II
MMAI 5100 3.00	Database Fundamentals
MMAI 5140 3.00	Visual Analytics & Modelling
MMAI 5200 3.00	Algorithms for Business Analysis
MMAI 5400 3.00	Natural Language Processing
MMAI 5500 3.00	Applications of Neural Networks & Deep Learning In Business
MMAI 6050 6.00	AI Consulting Project
MGMT 6300 3.00	Case Analysis & Presentation Skills
OMIS 6750 3.00	Project Management
SUST 5100 3.00	Ethics & Technology

Co-curricular Experience:

REQUIRED WORKSHOPS

Analytics and Professional Development workshops augment academic learning, promote professional development, and are facilitated by industry experts. Participation is expected.

Workshops will be offered over the course of the academic year, and may require single day or multiple day scheduling. Though workshops will not be offered each week, the expectation is that students will be available and attend workshops as they are scheduled. Additionally, some workshops may extend to the weekend.

Students will be informed of upcoming workshops by the MBAN/MMAI Program Office.

PROFESSIONAL DEVELOPMENT SERIES

MMAI students have access to a variety of specialized services and resources that will support them in their success.

MMAI career related activities include:

- networking events
- information sessions
- interviews
- workshops
- résumé book

MMAI Faculty

Program Director

Julian Scott Yeomans
MAsc (Toronto); BAdmin
& BSc (Regina); PhD
(MacMaster)
Professor of Operations
Management and
Information Systems

Adam Diamant

BSc (Toronto); MSc (Boston);
PhD (Toronto)
Associate Professor of
Operations Management and
Information Systems

David Elsner

Associate Director, MBAN
Program
Adjunct Professor, Master
of Management in Artificial
Intelligence (MMAI) Program
and Master of Business
Analytics (MBAN) Program;
President, DHE Consulting;
Managing Partner, illuminaite

Divinus Oppong-Tawiah

BSc (Kwame Nkrumah
University); MBA (University
of Ghana); MSc (Queen's);
PhD (McGill)
Assistant Professor of
Operations Management and
Information Systems

Henry M. Kim

BASc (Toronto); MEng
(Michigan); PhD (Toronto)
Associate Professor of
Operations Management and
Information Systems

Hemant Sangwan

Lecturer, Master of Business
Analytics and Master of
Management in Artificial
Intelligence

Hjalmar Turesson

Associate Director, MMAI
Program
Deloitte Data Scientist;
Lecturer, Master of Business
Analytics and Master of
Management in Artificial
Intelligence



Course Descriptions

Summer 2024

REMINDER



Not all courses listed are offered every term. For full course details, visit the [Schulich Course Offerings database](#).

Term 1

MMAI 5000 3.00

Artificial Intelligence Fundamentals

This course introduces students to the field of artificial intelligence, with a focus on AI-driven business applications. It provides a historical perspective tracing the emergence of basic concepts of contemporary AI. Students learn key artificial intelligence techniques including knowledge representation and symbolic reasoning, biologically inspired approaches to AI, supervised, unsupervised and reinforcement learning, multi-agent systems and natural language processing.

MMAI 5100 3.00

Database Fundamentals

Database Management Systems are computer-based systems used by organizations to manage the vast amount of data that accompany daily operations, support data analysis, and enable intelligent decision making. This course provides an applied introduction to database management systems and their use in the business environment. The course covers the fundamentals of database analysis and design.

MBAN 6110 3.00

Data Science I

An introduction to data science techniques designed for students who will work with data scientists or invest in related ventures. The course introduces fundamental concepts and techniques for the analysis of data-centered business problems, the creation and evaluation of solutions, the data science strategies, the basic cycle of a data-mining project, and the integration into business strategies.

MGMT 6300 3.00

Case Analysis & Presentation Skills

This course is designed to give students the opportunity to practice and develop their analytical thinking and presentation skills. The key objective of the course is to train students to successfully participate in national and international case competitions. A secondary objective is to prepare students to successfully interview for management consulting positions. Second-year MBA students who enjoy analyzing cases and delivering presentations are encouraged to take the course.

Corequisite: SB/SGMT 6000 3.00

OMIS 6750 3.00

Project Management

Previously MGMT 6700 3.00

This course covers the strategic, organizational and operational aspects of managing projects. Students learn to manage the technical, behavioral, political and cultural aspects of temporary groups performing unique tasks. Topics covered include: defining deliverables, formulating project strategy, effective group organization, and management, dynamically allocating resources, managing without authority and resolving conflict. Traditional cost and time management techniques are covered using Microsoft Office and open-source, free project management software.

Course Credit Exclusion: SB/MGMT 6700 3.00

Term 2

MMAI 5040 3.00

Business Applications Of Artificial Intelligence I

This course focuses on understanding the opportunities that artificial intelligence offers an organization to improve value creation. Students learn skills to develop, analyse and integrate artificial intelligence into business decision-making. Using case studies and hands-on in-class exercises students will be able to use machine learning to analyse text and social networks using Python and R.

MMAI 5400 3.00 Natural Language Processing

This course focuses on the principles and technologies of statistical machine-learning-based natural language processing and their application in text analytics, including retrieval, extraction, recognition, and analysis of information from large textual collections.

Prerequisite: MMAI 5040 3.00 Business Applications of Artificial Intelligence I and MMAI 5300 3.00 Numerical Analysis.

MMAI 5500 3.00 Applications of Neural Networks and Deep Learning In Business

Deep learning systems, embodied by a variety of neural network models, are used increasingly in modern business applications. Students will learn about the basics of neural network and deep learning, and their applications to a range of business issues. By the end of the course, students will have sufficient domain knowledge to address practical business problems.

MBAN 5110 3.00 Predictive Modelling

This course provides the tools needed to build models from data sets, validate models, and make predictions. The course emphasises the SAS environment. Major areas for discussion include analysis of variance, regression, categorical data analysis, and predictive modelling. The course emphasizes both theory and practice, allowing students to use statistical theory for purposes of business case analysis.

MMAI 6050 6.00 AI Consulting Project

The AI Consulting Project is an intensive, 2-term course where groups of 4 students undertake a comprehensive artificial intelligence (AI) project of an organization and provide business insights to enhance the site's success. At the conclusion of the project students present their work to a panel of at least two experts, including the course director, and to the client site.

Term 3**MMAI 5090 3.00 Business Applications of Artificial Intelligence II**

This course bridges the theoretical foundation and the business applications of artificial intelligence technology. Through in-class lecturing and hands-on activities, students learn fundamentals of AI technology, formulate business problems in AI paradigm and Applications of AI in addressing business problems. The class covers up-to-date AI applications such as Recommendation Systems, FinTech, Social Network Analytics, Sentiment Analysis etc.

MBAN 5140 3.00 Visual Analytics & Modelling

This course is an introduction to the fundamental theories of visual communication design applied in data visualization and visual analytics. Students become familiar with data-driven decision making workflows and storytelling best practices. Major areas for discussion include visual design principals, data structures, taxonomy of data visualization models and weekly technical tutorials using the Tableau software.

MMAI 5200 3.00 Algorithms for Business Analysis

The course covers main approaches to design and analysis of algorithms used in business contexts, including important algorithms and data structures, and results in complexity and computability. This course is a pre-requisite for MMAI 5300.

SUST 5100 3.00 Ethics & Technology

This course explores the ethical underpinning of several technological issues including Artificial Intelligence, Privacy, Machine Replacement, etc. Students will seek to understand the implications of such technological developments on society, and to manage employees and organizations in a way that balances the tension between technological advancement and human ethics.

Notes

[illegible]

Notes

[illegible]

**Master of Management in
Artificial Intelligence**
Academic Handbook
2024-25

CONNECT:

Student Services &
International Relations

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Last Updated: April 23, 2024

