MASTER OF BIOMEDICAL INNOVATION

Graduate Program Handbook 2023-2024



MARNIX E. HEERSINK SCHOOL OF BIOMEDICAL INNOVATION & ENTREPRENEURSHIP

Welcome from the Executive Director



Welcome to the new Master of Biomedical Innovation (MBI) professional graduate program here at McMaster University. You are the very first class entering a health care entrepreneurial program, which is the first of its kind in Canada.That is exciting for all of us!

Our program is within the Marnix E. Heersink School of Biomedical Innovation and Entrepreneurship and is based in the Department of Surgery. This program was entirely supported by generous donations from several entrepreneurs, including Marnix and Mary Heersink, and the late Michael G. DeGroote. These visionaries anticipated what you are about to experience.

We intend that our graduates will have the knowledge and skills needed to identify, solve, and more importantly, correct healthcare

challenges of all kinds. You are about to become part of a growing biomedical and health technology sector which will be built around ambitious people like you.

McMaster

University

We will be expecting a lot of you, but we're confident that the class who was chosen carefully will not disappoint. Instead, you will have the opportunity to contribute to your own growth, and more importantly, to the health and prosperity to the citizens of Canada.

We are pleased that you have shown the boldness to embark on this journey of discovery, learning and entrepreneurship.

Best regards,

The ker

John G. Kelton, MD Executive Director Michael G. DeGroote Initiative for Innovation in Healthcare Marnix E. Heersink School of Biomedical Innovation & Entrepreneurship







Welcome from the Program Director



Dear Students.

University 🕻

Welcome to the Master of Biomedical Innovation (MBI) program at McMaster University. The MBI program is designed to provide you with a unique educational experience that integrates biomedical innovation and entrepreneurship in the fields of health sciences, business and engineering. Our program stands out for its experiential and project-based approach, allowing students to work on innovative real-world biomedical problems.

Throughout the program, you will be supported by supervisors, mentors and instructors who have experience in healthcare entrepreneurship. Your engagement in courses and bootcamps will

equip you with the knowledge and skills related to identifying biomedical needs, market assessment, intellectual property, prototyping and regulatory/reimbursement processes, as well as basic business model development.

A distinctive feature of the MBI program is our collaboration with the McMaster Health Innovation, Commercialization and Entrepreneurship Initiative (Health-ICE) operated out of The Clinic @ Mac. A vast network of industry mentors will be available to provide valuable industry perspectives and enrich the learning throughout the program.

On behalf of the MBI team, we are excited to have you on board and look forward to seeing your creative ideas, innovative projects, and transformative contributions to the field of healthcare entrepreneurship.

Sincerely,

Alm Weille.

Alan Neville, MBChB Acting Program Director Master of Biomedical Innovation Graduate Degree Program Faculty of Health Sciences, McMaster University





MBI

Purpose of this Handbook

Enclosed you will find details including program overview, objectives, curriculum structure and unique opportunities offered throughout the Master of Biomedical Innovation (MBI) program. This handbook also outlines the policies and guidelines followed by the MBI program, which operates under the Faculty of Health Sciences at McMaster University.

McMaster

University 🕃

This document is not intended to replicate or modify the information in the <u>School of Graduate Studies</u> <u>Calendar</u>.

If there is any discrepancy between this document and the SGS Calendar, then the SGS calendar shall prevail. Students and faculty are encouraged to refer to the SGS Calendar for information about:

- Graduate studies at McMaster
- General regulations of the School of Graduate Studies
- University regulations
- Graduate fees and financial assistance
- University regulations affecting graduate students.
- University services
- Fellowships, scholarships, bursaries or other awards
- University governing bodies
- Student appeals
- Degree programs (including degree requirements)







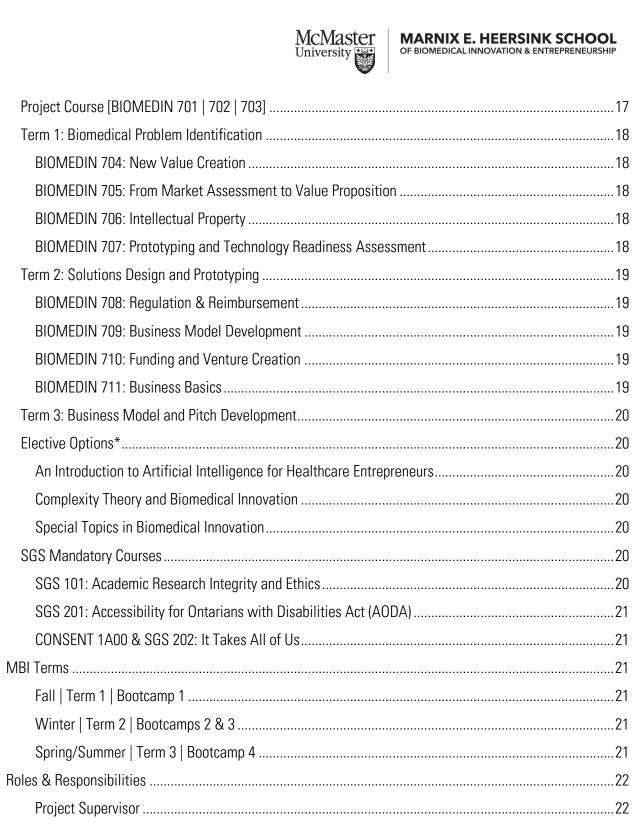
Table of Contents

Welcome from the Executive Director	2	
Welcome from the Program Director		
Purpose of this Handbook	4	
Program Contacts	9	
Program Administrator	9	
Clinical Immersion Director &	9	
Innovation & Strategy Advisor:	9	
Curriculum Coordinator:	9	
Program Overview		
Program Objectives		
Program Offerings	11	
The Health Innovation Ecosystem	12	
What to Expect	12	
Format	13	
Synchronous Content	13	
Asynchronous Content	13	
Self-Directed Time Management	13	
In-Person Attendance	13	
Group Work	14	
Clinical Immersion	14	
Ensuring Your Success in the Program	14	
Completion and Submission of Work	14	
Absenteeism	15	
Attendance specific to BIOMEDIN 701 Project Course:		
Withdrawals	15	
Evaluation & Grading	15	
Transportation & Parking		
McMaster Campus Parking		



BRIGHTER WORLD 5

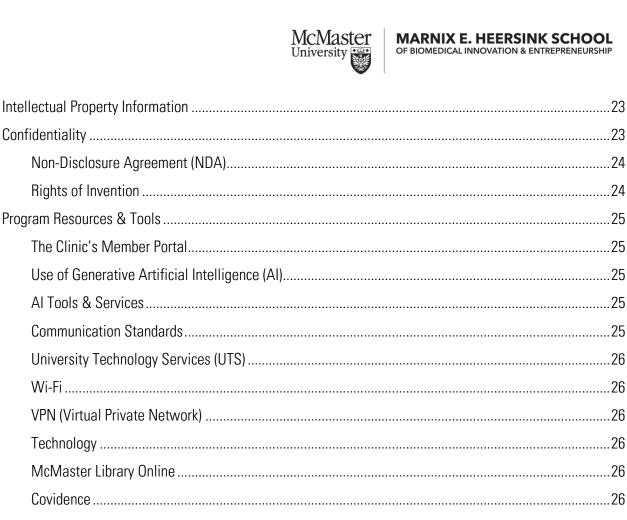












Technology	26
McMaster Library Online	26
Covidence	26
Software Licensing for Students	26
Student Services and Campus Resources	
Health Plan	
Health Sciences Graduate Student Association	
MBI Student Ambassador	
Student Accessibility Services	29
Student Success Centre	29
Student Wellness Centre	29
Library Services	29
Off-Campus Resource Centre (ORC)	29
International Student Resources	
University Health Insurance Plan (UHIP; International Students)	
International Student Services (ISS)	
International Student Permit Requirements	
McMaster Immigration Advisor	









University Policies and Regulations	31
Academic Integrity Policy	31
Accommodation Of Graduate Students With Disabilities	31
Leave Of Absence	31
Petition For Special Consideration	31
Incomplete / Failing Grade	31
Student Code Of Conduct	31
Student Appeals Process	31
Copyright Policy	31
Discrimination, Harassment & Sexual Harassment Prevention And Response Policy	31



Program Contacts

Acting Program Director: Alan Neville

- Bldg/Room: HSC-1B9C, Phone ext. 20447
- McMaster email: <u>neville@mcmaster.ca</u>

Program Administrator: Jennifer Jenkins

- Bldg/Room: HSC-1B9A, Phone ext. 20447
- McMaster email: <u>mbi@mcmaster.ca</u>

Clinical Immersion Director & Innovation & Strategy Advisor: Abubaker Khalifa

Curriculum Coordinator: Anna Korol (MLOA)

McMaster email: <u>korola3@mcmaster.ca</u>

$Curriculum \ Assistant: \ Amy \ Woodworth$

McMaster email: <u>woodwa3@mcmaster.ca</u>





MARNIX E. HEERSINK SCHOOL OF BIOMEDICAL INNOVATION & ENTREPRENEURSHIP















Program Overview

The Master of Biomedical Innovation (MBI) program is a one-year, project-based, professional graduate program focused on bridging the gap between health technology development and its transfer to biomedical markets.

The curriculum across the year is divided into three phases and will guide students through the biomedical innovation and entrepreneurship process. Students will simultaneously acquire and apply the theories and skillsets presented across the three phases to a year-long, venture-oriented project.

The program is full-time and provides in-person clinical immersive experiences anchored by a series of bootcamps and hybrid courses.

Program Objectives

Graduates of the MBI program will have the knowledge and skills needed to seamlessly foster innovative biomedical approaches to current and future health challenges from the earliest stage into practical, market-ready ventures. MBI graduates will contribute to the growing biomedical and health technology sector, thereby attracting and retaining entrepreneurial talent that leads to the creation not only of improved health care, but new jobs, economic growth, and community benefits in Hamilton.

By the end of the program, graduates will have gone through the full cycle of creating a business product. With the personalized support of project supervisors and mentors, graduates will have learned the skills, and acquired the network and expertise in the healthcare space to be successful innovators and disruptors in the healthcare arena.

Graduates of the MBI program will be able to:

- Become a founder of a health-focused startup company.
- Spin out a new health technology from their academic research or clinical area.
- Advance the innovation agenda of an existing health-focused company or organization.
- Work for an emerging health or medical technology company.
- Leverage the entrepreneurial knowledge and skills acquired in the MBI that are required to transition into a leadership position in various industries.



MARNIX E. HEERSINK SCHOOL OF BIOMEDICAL INNOVATION & ENTREPRENEURSHIP



Program Offerings

The MBI is a one-year program requiring three terms to complete. The curriculum across the year will guide learners through the biomedical innovation and entrepreneurship process.

McMaster

University

Bootcamps

Students will be brought together in-person during four bootcamps throughout the program to advance their biomedical project through networking, immersive experiences, high profile guest speakers, and project discussions.

Clinical Immersion

Clinical immersion experiences will be offered where learners will be spread across various clinical areas within local hospitals. This clinical experience will be focused on needs assessment by providing an understanding of the clinical environment, where students will identify and validate a healthcare problem to create a solution for their innovation project. Additional immersive experiences will be planned throughout the various bootcamps (E.g. biotech company, lab, etc.)

Project Course

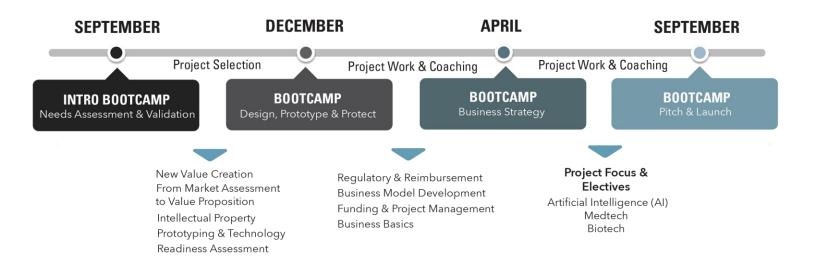
The program will be anchored by a project-based course (BIOMEDIN 701, 702, 703) allowing students the opportunity to apply concepts from courses and bootcamps to their innovation project.

Core Courses

These 1.5-unit core courses will be delivered with in-person and online learning options, for maximum flexibility.

Electives

Students will take two 1.5-unit electives in the spring/summer term based on project focus.





BRIGHTER

WORLD

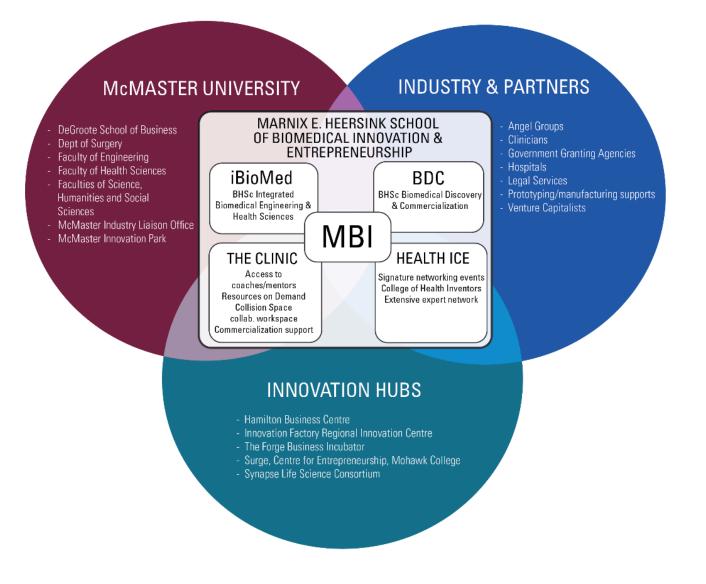




The Health Innovation Ecosystem

The MBI program resides in the Marnix E. Heersink School of Biomedical Innovation & Entrepreneurship and the Department of Surgery, interacting synergistically with McMaster Health Innovation, Commercialization, Entrepreneurship (Health ICE) Initiative inThe Clinic @ Mac and with various other health innovation partners.

Fostered collaboration across this ecosystem creates a culture of multidisciplinary collaborations to develop the next generation of high-impact health innovations.





BRIGHTER

WORLD





What to Expect

Format

The MBI curriculum is designed to be flexible with courses being delivered both in-person and online simultaneously, enabling those who are full-time working professionals to complete the MBI program. Both synchronous and asynchronous content will be delivered throughout the program.

McMaster

University 🕻

Synchronous Content

Synchronous activities refer to activities that require in-person participation. All activities during bootcamps will be synchronous and in-person. MBI courses will be delivered synchronously for approx. three – six hours per week, including lecture and group activities. Hybrid capabilities will be available for students tuning in virtually during this time; details provided in Avenue to Learn. Course content will <u>not</u> be recorded, therefore participation during the scheduled time is required.

Asynchronous Content

Asynchronous content refers to tasks and assignments for students to complete, but do not require attendance at specific times. These items may include:

- Readings
- Pre-recorded content
- Participation in online discussion boards
- Assignments or activities
- Preparation for culminating assessments and final pitch presentation

Self-DirectedTime Management

- Group project collaboration with team members
- Regular scheduled touch points with project supervisor (minimum four times per term)
- Regular scheduled touch points with Project Course Lead & Immersion Director to assess project milestones
- Frequent touchpoints with clinical preceptors, stakeholders and mentors to progress innovation project

In-Person Attendance

BRIGHTER

WORLD

MBI students are expected to attend <u>all</u> program bootcamps in-person. Bootcamps are designed to allow students to have an immersive, focused time to devote to their coursework and project while interacting face-to-face with their instructors and fellow students, and networking with industry professionals and entrepreneurs.





MBI

All remaining courses will be delivered in a hybrid fashion. Any students wishing to participate in person are encouraged to do so, while others may prefer to participate virtually during the scheduled course instruction time. Specific information about the format for each course can be found in the course outline.

McMaste

University 🔛

Group Work

Group-work will be encouraged throughout the program, including the venture-oriented project, clinical immersion and bootcamp activities.

Clinical Immersion

Students will be placed in groups of 3-5 individuals to attend clinical immersion sites. Students will have the opportunity to rank order their top two (2) choices for clinical immersion experience (based on the sites available that program year). In advance of the program start date, the program planning team will do their best to place each student at their desired clinical immersion site to deliver the best experience possible. Students will be notified of any site-specific training for their clinical immersion site in advance.

Ensuring Your Success in the Program

The Master of Biomedical Innovation (MBI) program is a graduate-level program. Students enrolled are responsible for their own success in the program, including how to manage their time during bootcamps and independent study throughout the terms.

While in attendance at bootcamps, it is recommended that students consider this time as a 'retreat', where their time is devoted to collaboration with fellow students and program faculty, while maximizing their networking opportunities to gain the most from the program.

Dress code is considered business casual when attending bootcamps or other activities in person.

Completion and Submission of Work

It is the student's responsibility to ensure assessments are submitted to the correct location, on time, and in the specified format. The MBI program policy for missed work and absenteeism is the same across all courses.

If a student does not submit documentation for a missed deliverable or the course instructor determines that the reason is not legitimate, the student will automatically lose 10% for each day the deliverable is late.





Absenteeism

Attendance during each scheduled course instructional event is mandatory. In the case of unavoidable absence, students must notify the instructor in advance or, if unforeseen, as soon as possible. If a student misses more than two (2) course instruction/tutorials, for any reason, they will <u>not</u> receive credit for the course. Students must then withdraw from the course (before the drop date) or will receive an F grade (after the drop date).

McMaster

University 🔛

Attendance specific to BIOMEDIN 701 Project Course:

In person or virtual attendance at each Roundtable Milestone Assessment is mandatory during the Project Course. Attendance is also mandatory for a minimum of four project supervisor meetings during the term. In the case of an unavoidable absence, you must notify your instructor in advance or, if unforeseen, as soon as possible. If you are absent from a Roundtable Milestone Assessment you will not receive credit for this Milestone of the course. If you do not attend the minimum of four project supervisor meetings, your final course score will be reduced by 10%.

Withdrawals

Before making the decision to drop or withdraw from courses (or the program entirely), it is important to understand the academic and financial implications. Any student considering withdrawal or dropping of a course should discuss considerations with the MBI Program Director.

Details regarding withdrawals at McMaster can be found <u>here</u>. Consult the academic calendar for <u>deadline</u> <u>for enrolment and course changes</u>.

Evaluation & Grading

Students will be evaluated on their project course (MBI 701, MBI 702, MBI 703) by assessment of the achievement of milestones. Project supervisors, as well as the Project Course Lead and Clinical Immersion Director will meet with student groups to monitor and guide progress and evaluate milestone achievement throughout the program. Students will be assessed in each course throughout the program and will receive a final letter grade. Course evaluation criteria will differ from course to course and can include the following factors:

- Written reports
- Class discussion
- Oral presentations and pitches
- Hands-on activities
- Course-content reflections



The grading system is outlined below:

A+	=	90 to 100
А	=	85 to 89
A-	=	80 to 84
B+	=	77 to 79
В	=	73 to 76
B-	=	70 to 72
F	=	Fail

The minimum passing grade in a graduate course is B-. The MBI program follows McMaster's policy on Failing Grades and Incomplete Grades (section 2.6.8 in the Graduate Calendar).

McMastei

University

Transportation & Parking

Students are responsible for their own transportation to and from McMaster Main Campus, as well as to and from clinical immersion sites and any special events throughout the program. If an off-site group experience is planned where transportation and/or parking is arranged, students will be notified in advance.

McMaster Campus Parking

The cost of parking throughout the program is the responsibility of the student. Please contact <u>McMaster</u> <u>Parking Services</u> to apply for a parking permit on campus.

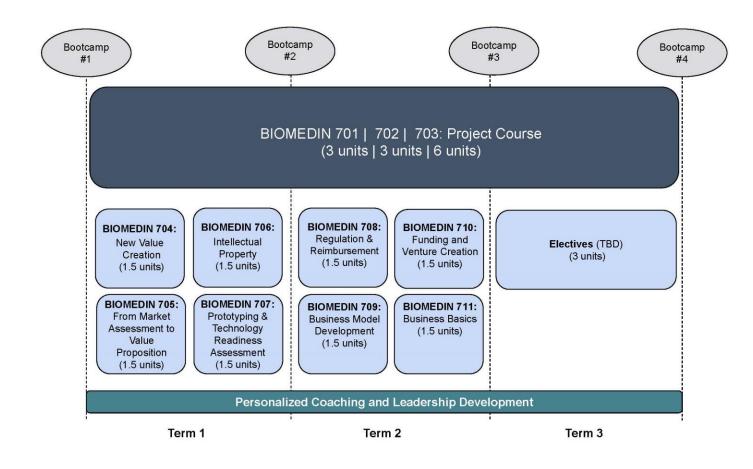
McMaster University Medical Centre (MUMC) Parking

Should a student wish to park underground at McMaster hospital, the <u>McMaster Parking Office</u> is located in the underground parking garage, next to the Main Street entry/exit. Hours of operation are Monday-Friday (8am-4pm), contact 905-521-2100 ext. 76156 or <u>parkingoffice@hhsc.ca</u>. Standard parking rates apply.





Program Overview



McMaster

University 🕃

Project Course [BIOMEDIN 701 | 702 | 703]

The program has been designed to take students through the process of clinical needs finding, creating a novel biomedical solution, to the formation of an early-stage biomedical venture. The project course will take students through the following phases:

BIOMEDIN 701 – Biomedical Problem Identification [Term 1] BIOMEDIN 702 – Solutions Design and Prototyping [Term 2] BIOMEDIN 703 – Business Model and Pitch Development [Term 3]

During the first bootcamp, MBI students will participate in a clinical immersion experience where they will have the opportunity to observe and identify unmet needs, challenges and/or opportunities that exist within a healthcare environment.



BRIGHTER

WORLD



Through systematic data collection, analysis and synthesized validation, students will refine their list of unmet needs until a project idea emerges. In small groups, student will work through the stages of their biomedical innovation project.

McMaster

University 🔀

Groups will be assigned a project supervisor who will guide and evaluate students based on the completion of milestones that focus on establishing the desirability, feasibility and viability of their innovative solution.

Term 1: Biomedical Problem Identification

BIOMEDIN 704: New Value Creation

This course is designed to allow learners to identify unmet needs, identify potential root causes of observed problem(s), and validate them. Students will also learn how the healthcare system functions so that they can identify important stakeholders in the healthcare space. They will practice ideation methods to develop the framework for potential solutions that address unmet needs within the confines of complex healthcare systems.

BIOMEDIN 705: From Market Assessment to Value Proposition

In this course, students will learn to assess whether there are available alternatives already on the market that solve the identified problem and estimate market size, including dollar size and number of users. They will identify potential barriers to market entry and strategies to overcome them. They will validate the product-market fit for the proposed problem solution (innovation), identify risks and risk mitigation strategies in alignment with industry standards, and learn how to articulate a competitive advantage for their proposed solution.

BIOMEDIN 706: Intellectual Property

This course will cover how to conduct patent searches and how intellectual property (IP) can be protected in a variety of innovation domains, including medical device, therapeutics and diagnostics, and digital health. Students will learn how to maintain confidentiality in external-facing communications and how to develop and execute an IP strategy.

BIOMEDIN 707: Prototyping and Technology Readiness Assessment

This course will guide students through topics such as design thinking, proof of concept, and rapid prototyping alongside health professionals and users in both simulated and operational environments. Students will gain the knowledge and skills required to prototype various health innovations including



BRIGHTER WORLD





digital health, therapeutics, diagnostics, and medical devices. The students will also learn how to integrate design factors into their prototypes and successfully test new prototype iterations in real-world environments to prepare for full-scale implementation.

McMaster

University 🔛

Term 2: Solutions Design and Prototyping

BIOMEDIN 708: Regulation & Reimbursement

This course explores the regulation and reimbursement landscape in biomedical innovation. Students will gain an understanding of the regulatory frameworks governing the development and approval of medical products, including drugs, devices, and diagnostics. Practical skills will be developed in ensuring compliance with regulatory requirements and ethical considerations. Students will learn to navigate the complex reimbursement systems, analyze reimbursement models, and evaluate the implications for biomedical innovations.

BIOMEDIN 709: Business Model Development

This course explores the key components necessary for success in the biomedical industry. Through a combination of theoretical knowledge and practical application, students will learn to identify and analyse the critical elements of a business model specific to biomedical innovations. They will learn how to evaluate and determine the most appropriate business model for viability and revenue generation that aligns a biomedical innovation with a target market, maximizes value creation and ensures long-term sustainability.

BIOMEDIN 710: Funding and Venture Creation

This course explores funding and venture creation for new startups. Students will gain an understanding of various funding sources available to startups, including venture capital, angel investors, crowdfunding, and government grants. They will learn to develop an effective funding strategy and navigate the negotiation process when securing funding. Students will also gain insight into how biomedical ventures are established, nurtured and scaled. How raised funds are used for growth of the new venture, how people are hired and retained, and what is needed to ensure the stability of a new venture.

BIOMEDIN 711: Business Basics

This course provides an introduction to the essentials of running and managing a startup company. Students will develop skills in strategic planning, and business development to drive growth and market success. Students will evaluate tools for financial planning, budgeting, and forecasting to make informed business decisions. This course will also focus on effective leadership and team management, including managing conflicts and challenges, building company culture, as well as human resources management.



20

SGS Mandatory Courses

In addition to the MBI core courses, students are required to complete SGS 101 (Academic Research Integrity and Ethics) and SGS 201 (Accessibility for Ontarians with Disabilities Act [AODA]). These courses are to be completed within the first month of entering the program.

SGS 101: Academic Research Integrity and Ethics

All incoming students must complete the SGS 101 course administered by the School of Graduate Studies within the first month after their admission into graduate studies at McMaster University. The purpose of this course is to ensure that the standards and expectations of academic integrity and research ethics are communicated early and are understood by incoming students. A graduate student may not obtain a graduate degree at McMaster without having passed this course. In the event that a student fails this course, they must retake it at the earliest opportunity.

Term 3: Business Model and Pitch Development

Elective Options*

An Introduction to Artificial Intelligence for Healthcare Entrepreneurs

This course will provide the students with foundational knowledge and skills to take advantage of artificial intelligence (AI) tools in developing practical solutions for health-related applications. It will cover an introduction to the main paradigms of machine learning and AI, main inflection points in development of AI, and scripting skills to train/deploy models based on available foundational/pre-trained models.

ComplexityTheory and Biomedical Innovation

This elective course introduces entrepreneurship learners to complexity theory through a healthcare lens. A complex system is inherently adaptable within a range of conditions that may change in response to a change in context. This course will include case studies to illustrate leadership, innovation and management challenges and how to overcome them.

SpecialTopics in Biomedical Innovation

An individual reading course on an advanced topic in biomedical innovation. A student may register only once in this course with the permission of the Program.

*The program endeavours to deliver the above program electives pending final approval from the Graduate Program Curriculum Committee. These are not yet published in the School of Graduate Studies Calendar for student enrollment.





MARNIX E. HEERSINK SCHOOL OF BIOMEDICAL INNOVATION & ENTREPRENEURSHIP





SGS 201: Accessibility for Ontarians with Disabilities Act (AODA)

The Ontario government has enacted a Customer Service regulation of the Accessibility for Ontarians with Disabilities Act, 2005, which came into effect at the start of 2010. The Senate passed the requirement for all graduate students to complete this training. The <u>AODA Office</u> maintains the course content and a record of all McMaster students who have taken the course. Completed results will appear on student records. Once you have completed SGS 201, AODA will send you a completion confirmation email. Please forward your email to the MBI Program Office and keep a copy for your record.

McMaster

University 🕃

CONSENT 1A00 & SGS 202: ItTakes All of Us

All incoming graduate students will be automatically enrolled in this online learning module that increases awareness of gender-based and sexual violence that fosters a campus culture of respect and consent. All students are strongly encouraged to take this module, however completion is optional and students may choose to drop the course, no questions asked. Further details <u>can be found here</u>.

MBITerms

Fall |Term 1 | Bootcamp 1

- BIOMEDIN 701 Project Course | 3 units
- BIOMEDIN 704 New Value Creation | 1.5 units
- BIOMEDIN 705 From Market Assessment to Value Proposition | 1.5 units
- BIOMEDIN 706 Intellectual Property | 1.5 units
- BIOMEDIN 707 Prototyping & Technology Readiness Assessment | 1.5 units

Winter |Term 2 | Bootcamps 2 & 3

- BIOMEDIN 702 Project Course Cont'd | 3 units
- BIOMEDIN 708 Regulation and Reimbursement | 1.5 units
- BIOMEDIN 709 Business Model Development | 1.5 units
- BIOMEDIN 710 Funding and Venture Creation | 1.5 units
- BIOMEDIN 711 Business Basics | 1.5 units

Spring/Summer |Term 3 | Bootcamp 4

BRIGHTER

WORID

McMaster

University

- BIOMEDIN 703 Project Course Cont'd | 6 units
- Elective Opportunities | 1.5 units (each) x 2

*Outgoing cohort will be invited to participate in activities during Bootcamp 1 of the incoming cohort.





Roles & Responsibilities

Project Supervisor

Project Supervisors are McMaster faculty members who are closely affiliated with the MBI program/The Clinic @ Mac. Each project supervisor will be responsible for 1-2 groups of graduate students for the duration of the program. They will be expected to check in with their groups every couple of weeks or as frequently as deemed necessary. The project supervisor may liaise with the Clinical Immersion Director to monitor needs-finding, prioritization, and needs-validation for each group. They will provide groups with ongoing feedback and advice, while supporting achievable, focused goals directed by project milestones as laid out in the project course guidelines. Project supervisors will connect groups with specialist mentors for additional advice and support where necessary. They will liaise with the Project Course Lead to evaluate project progress and assess student achievement during student presentations at bootcamps.

Mentor

Throughout the project course, students may need to access mentors or experienced professionals in the biomedical field to help understand or address elements of their project. Where required, students will be connected with mentors through their project supervisor or program faculty. Mentors can provide guidance and support to students by sharing their expertise and knowledge in their field of work. They may offer insights into the biomedical industry, research methodologies and/or emerging trends or technologies. Mentors are meant to be called upon for advice around a specific area of question or clarification.

Course Instructor

The primary responsibility of each course instructor is to facilitate student learning and provide students with the necessary knowledge and skills where it applies to the specific course objectives. The course instructor possesses expertise in the specific subject area of the course being taught and delivers all course content and activities. They develop assessments to evaluate students' understanding and application of course material, while also providing timely and constructive feedback to help students apply what they are learning to their project. Course instructors will be responsible for evaluating and grading each student for their respective course. They may also serve as mentors or advisors to students throughout the program.

CourseTutor

Tutors will be assigned to specific courses throughout the program and be responsible for tutorial assessments. The primary role of the tutor is to support students in their academic journey, supplement the course instruction, and enhance students' understanding and application of the course material. They are available for students to ask questions, seek further explanations and engage in discussions related to course material.

Clinical Preceptor

A healthcare professional leading the clinical immersion experience at a designated hospital or clinical site. These leaders are highly skilled and knowledgeable in their specific clinical area, dedicated to improving



BRIGHTER WORLD

2023-2024 MBI Program Handbook | Approved September 2023



patient care outcomes, promoting best clinical practice and identifying areas for continuous quality improvement. During the clinical immersion experience and thereafter, clinical preceptors will serve as mentors, educators and leaders who share their expertise and provide guidance to MBI students where required.

McMaster

University 🔛

Intellectual Property Information

When exploring design thinking and prototyping of a novel health innovation, unique ideas and concepts may emerge. These can be considered intellectual property. If this is the case, such ideas can be protected by patents. This prevents others from copying your work and ensures that you have the exclusive rights to use, manufacture, and sell the innovation.

Your proposed solution might satisfy IP requirements if it is:

- Novel Not disclosed in the public domain, i.e., there are no patents or publications.
- Useful It can provide benefit to society.
- Non-obvious- It would not have been easily thought of by an expert in the field.

During the development process, you'll likely be working with a team, and possibly external advisors or partners. It's important to maintain confidentiality to protect your ideas, work, and that of your peers.

Please see additional information outlined in McMaster's Senate Policy regarding <u>ownership of student</u> <u>work</u>.

Confidentiality

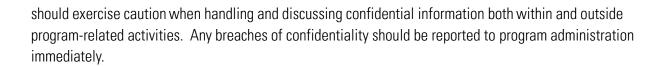
BRIGHTER

WORID

By participating in the Master of Biomedical Innovation program, all individuals in the program agree to abide by <u>confidentiality guidelines</u> set out by McMaster University and shall be responsible for the handling and protection of confidential information throughout the program and upon its completion. This includes, but is not limited to, intellectual property (IP), inventions and experimental data, research findings and financial business plans. This policy will apply to students when discussing ideas with peers, as well as all instructors, project supervisors, and course tutors in the program, and as McMaster Faculty members. When discussing ideas with project supervisors or presenting them to instructors through course assessments, all content will be held in the strictest confidentiality and will remain as student's own intellectual property.

McMaster faculty do not have ownership rights to student projects for which they serve as supervisors during the MBI program. Program participants must not disclose or use confidential information for any purpose other than what is required for their participation in the program. Those involved in the program





McMaster

University 🔀

Throughout the course of the program, students may interact with individuals who are not a part of McMaster's faculty (i.e., clinical preceptors, industry mentors, guest speakers at bootcamps, etc.). In discussions with these individuals, students should always take care not to disclose any confidential aspects of their intellectual property. If students are not sure which aspects of their project may be considered intellectual property if disclosed externally, they can discuss this with their project supervisor or course instructors.

Non-Disclosure Agreement (NDA)

A Non-Disclosure Agreement (NDA), also known as a confidentiality agreement, is a legal contract that outlines information, knowledge, or material that the parties wish to share with each other but want to restrict from wider dissemination. The types of information covered by an NDA may include business plans, customer lists, proprietary technology, trade secrets, and other sensitive information. The agreement often outlines what information is to be kept confidential, the scope of the confidentiality obligation, and the duration of the agreement. Given the specificity of an NDA between two parties, members of the program, including supervisors and students, are not required to sign a general non-disclosure agreement. If an MBI student's proposed solution might be considered as intellectual property and they wish to share confidential information with those external to McMaster, then the decision to use an NDA should be made individually.

Rights of Invention

The MBI program provides an opportunity for students to identify an unmet healthcare need. An innovative solution to this need becomes the focus of a year-long venture project. Students in the program will own all rights to the IP they may generate during the course of their project.

For IP generated conjointly by members of a student team, it is up to the students to discuss amongst themselves and come to an agreement as to how they would like to split up the IP ownership or equity in any company that may be formed.

During this year, if a student seeks advice or consultation from a McMaster clinician or researcher to validate their idea, there are no co-inventor rights. However, if a student collaborates with a McMaster clinician or researcher and **the clinician's or researcher's data and resources are being utilized**, this might lead to co-inventor rights for the clinician or researcher, if desired. In such scenarios, consultation with the with <u>McMaster Industry Liaison Office</u> (MILO) can be arranged to effectively manage any agreements or potential <u>Joint IP Policy</u>, if the need arises.







Program Resources & Tools

The Clinic's Member Portal

This online platform provides members with access to a vast array of resources and information on health innovation & entrepreneurship topics. Students can delve deeper into key topics tailored to their innovation stage from the Introduction to Innovation landing page or find information on a specific challenge in their projects from the extensive resource library of >750 externally curated resources. The Portal also features a comprehensive database of local ecosystem programs and funding opportunities.

This portal is a resource for all learners in the Heersink School, including all MBI students and all members of The Clinic's various educational programs. All MBI students will be granted access to the Portal via the <u>Member Login</u> with their MAC ID for the duration of their time in the program.

Use of Generative Artificial Intelligence (AI)

While we acknowledge that the use of Generative AI, such as ChatGPT, AI may be helpful to your learning, the MBI program requires you to act with <u>academic integrity</u> when being assessed.

As a student at McMaster University, you are expected to practice intellectual honesty and to fully acknowledge the work of others by providing appropriate references in your scholarly work. Further McMaster policy guidelines <u>can be found here</u>.

AlTools & Services

A curated directory of the latest AI tools and services may help students discover resources at the forefront of AI. Along with using <u>ChatGPT</u>, we encourage students to learn more about <u>AIIThings AI</u>.

Communication Standards

While there will be plenty of tools used throughout the program, all curriculum/course activities will be managed through <u>Avenue to Learn</u> (A2L). This will include course information, assignments (including submissions and feedback), course updates, etc. All official communication will be disseminated to students' McMaster email. It is the student's responsibility to regularly and frequently check both A2L and McMaster email accounts for updates.

Individual course instructors may choose to communicate with their class using MicrosoftTeams where desired. Instructors will establish the expected communication method at the beginning of each course to ensure effective communication between both instructor and student.



BRIGHTER WORLD

UniversityTechnology Services (UTS)

As McMaster's IT support department, if students run into any issues with their MAC ID, email, Microsoft 365, etc. they can visit their website at <u>https://uts.mcmaster.ca</u> or open a support ticket directly by emailing <u>uts@mcmaster.ca</u>

McMaste

University

MARNIX E. HEERSINK SCHOOL OF BIOMEDICAL INNOVATION & ENTREPRENEURSHIP

Wi-Fi

The on-campus wireless network is *Mac-WiFi*. To connect, select the network from your available wireless networks and enter your MAC ID and password when prompted.

For more information and detailed instructions on how to connect on various devices, visit <u>https://wireless.mcmaster.ca</u>

VPN (Virtual Private Network)

Certain McMaster resources may not be accessible or may not function correctly due to Wi-Fi settings, internet security, or other access controls. If you experience any issues, you can use McMaster's VPN. Information on how to access <u>can be found here</u>.

Technology

The ideal computer configuration is a PC running the latest version of Windows, though nearly all systems are fully compatible with Mac OS. Tablets running mobile operating systems are not recommended.

McMaster Library Online

Students at McMaster get full access to library resources at https://library.mcmaster.ca.

Covidence

<u>Covidence</u> is a web-based software platform that streamlines the production of systematic reviews. It supports citation screening, full text review, risk of bias assessment, and more. McMaster now provides unlimited access to university affiliates.

Software Licensing for Students

Find licencing information on a variety of software and services available for students here.



BRIGHTER WORLD



avenue

to learn

Office 365

Your **McMaster Mail** account can be accessed using your MAC ID at <u>https://mail.mcmaster.ca</u>, and setup instructions to access email on your devices can be found here: <u>https://office365.mcmaster.ca/office-365-3/email-calendaring/</u>

McMaste

University

All official program correspondence must be conducted through your McMaster email account.

Avenue to Learn (A2L) is a web-based course management system designed to create a rich online learning environment for students. Avenue to Learn includes features such as an electronic dropbox, automated gradebook, discussion boards and quizzes, and gives you quick access to information and feedback provided by your course instructors.

Students use their MAC ID and password to access this learning management system (LMS) at <u>http://avenue.mcmaster.ca</u>. Support documentation can be found at <u>http://avenue.mcmaster.ca/help/</u>.

As a student at McMaster, you will have full access to **Microsoft Office 365**. This license is only applicable while you are enrolled as a student.

More information and a quick start guide can be found at: <u>https://office365.mcmaster.ca/microsoft-365-for-students-start-here/</u>

Linked in Learning

LinkedIn Learning is an online training site providing access to thousands of high-quality instructional videos on a broad range of topics, and much more. For instructions on how to access, visit:

https://uts.mcmaster. ca/services/teaching-andlearning/linkedin-learning/









Zoom is an easy and reliable online platform offering video conferencing, meetings and collaboration. All McMaster students are able to sign up for a Zoom license by logging in with your MAC ID at <u>https://mcmaster.zoom.us</u>

Student Services and Campus Resources

The <u>Graduate Students Association (GSA)</u> is a non-profit corporation that represents all students registered in the School of Graduate Studies in matters dealing with the University (excluding employment) and serves to promote the welfare and interests of students by providing social, athletic and intellectual activities. Students registered in the School of Graduate Studies are required to pay GSA dues during registration. Included in the dues are enrollment in the **health and dental plan**.

Health Plan

Please visit the GSA website for more information on the **health plan**. All health plan questions should first be directed to **I Have A Plan**. If further assistance is required, please contact macgsa@mcmaster.ca.

The GSA Health Plan was designed to provide many important services and cover expenses not covered by your basic health-care plan (i.e. OHIP or UHIP), such as prescription drugs, travel health coverage, physiotherapy, medical equipment and more. Graduate students are charged an annual premium for a group health plan. All graduate students who are GSA members and who pay GSA and McMaster fees are automatically enrolled in the plan. Coverage starts once you are fully registered with Graduate Studies.

Health Sciences Graduate Student Association

The <u>HSGSA</u> provides students with opportunities to further develop and strengthen their graduate experience.

MBI Student Ambassador

The general role of a student ambassador would be to contribute to the success of the program, gain leadership experience and connect with fellow students, faculty and staff. The student ambassador will serve as a positive and knowledgeable representative of the MBI program both on and off campus. There may be opportunity for the student ambassador to engage in outreach activities to help promote the program; share insights, experience and advice with prospective students interested in the program. The student ambassador will serve as a liaison between classmates and program faculty/staff, providing feedback and insights to help improve the program. The MBI Student Ambassador will be appointed as a



BRIGHTER WORLD



MBI

contact for current and future students through the <u>Faculty of Health Sciences Graduate Students</u> <u>Association</u>.

Student Accessibility Services

<u>Student Accessibility Services</u> offers various supports for students who have been diagnosed with a disability or disorder, such as a learning disability, ADHD, mental health diagnosis, chronic medical condition, sensory, neurological or mobility limitation.

AcMaster

University 🕃

Student Success Centre

The <u>Student Success Centre</u> offers a variety of services, resources and programs to help you succeed in your career pursuits. Among the many services the Centre provides are orientation programs, leadership/experiential development opportunities, and company networking events.

Student Wellness Centre

The <u>Student Wellness Centre</u> provides services to all graduate students that will enhance their personal and academic success by providing a range of health services, including personal counseling and health care. Staffed by highly qualified service providers with a special interest in university students, they provide student-centered, accessible, confidential and caring services for you.

Library Services

There are a variety of print and electronic resources available to students. McMaster has four libraries: Health Sciences, Thode (science and engineering), Innis (business), and Mills (humanities and social sciences). To learn more about the library resources, please visit the <u>Health Sciences</u> and <u>Thode</u>, <u>Innis</u>, <u>Mills</u> library websites.

McMaster Health Sciences Library Guides and Tutorials can be found <u>here</u>. Please login to the Health Sciences Library website to access all of the electronic resources to which the University is subscribed. Do not hesitate to contact a librarian from the Health Sciences Library for assistance.

Off-Campus Resource Centre (ORC)

The <u>ORC</u> serves as a rental listing service for landlords and provides a variety of housing- related resources for students.







International Student Resources

University Health Insurance Plan (UHIP; International Students)

VISA students are required to obtain health coverage under the University Health Insurance Plan (UHIP). After successfully registering, students may pick up their UHIP card from the International Student Services' Office located in Gilmour Hall, Room104.

International Student Services (ISS)

ISS provides a variety of services and supports to international students. The following list is a sampling of the services and supports offered by ISS: cultural transition support; referral services on issues related to Citizenship and immigration Canada (CIC), employment, access to Service Canada resources, Canada Revenue Agency (CRA); mentorship program; workshops and information sessions.

International Student Permit Requirements

International students are required to obtain a <u>study permit</u> and visitor VISA (some countries exempt) and present this information to the MBI Program Office upon arrival at McMaster.

McMaster Immigration Advisor

- Contact <u>immigration@mcmaster.ca</u>
- Immigration Advising: <u>https://studentsuccess.mcmaster.ca/international-students/immigration-advising/</u>



University Policies and Regulations

To access the relevant policy and/or information on a specific University regulation, please click on the title below.

McMaster

University 🕃

MARNIX E. HEERSINK SCHOOL

OF BIOMEDICAL INNOVATION & ENTREPRENEURSHIP

K

Academic Integrity Policy

Accommodation Of Graduate Students With Disabilities

Leave Of Absence

Petition For Special Consideration

Incomplete / Failing Grade

Student Code Of Conduct

Student Appeals Process

Copyright Policy

Discrimination, Harassment & Sexual Harassment Prevention And Response Policy





HEALTH SCIENCES