

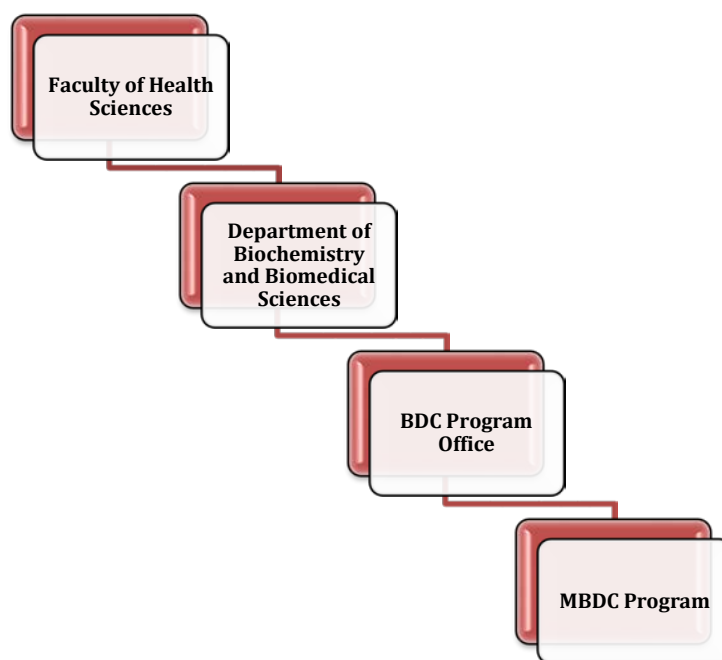


**Biomedical Discovery and  
Commercialization | BDC**  
Strong discovery research skills | Business acumen

## **2022-2023 Graduate Handbook**

## Master of Biomedical Discovery and Commercialization (MBDC) Program Handbook

This handbook outlines the policies and procedures followed by the **MBDC Program**, which operates under the **Faculty of Health Sciences** at McMaster University in the **Department of Biochemistry and Biomedical Sciences**.



**This document is not intended to replicate or modify the information in the [School of Graduate Studies Calendar](#).**

**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)

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## **MBDC PROGRAM OVERVIEW**

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The MBDC Program is a one-year, full-time, course-based Master's that equips graduates with the skillset to apply their biomedical science and fundamental business technical knowledge directly to industries within the health sciences sector. The graduate program provides a mix of biomedical science courses, M.B.A. business courses and an internship placement in the pharmaceutical/life sciences/health sciences community.

## **PROGRAM ADMINISTRATION**

The BDC Program Office is the administrative home of the MBDC Program and oversees all aspects of the program (e.g., applications and admissions, recruitment and marketing, internships). The DeGroot School of Business provides intellectual/curriculum contributions to the program on an ongoing basis.

## **PROGRAM CONTACTS**

### **Director - Andrew McArthur, Ph.D.**

MDCL 2322, HSC 4H30A; 905-525-9140 ext 21663;

mcarthua@mcmaster.ca

Provides faculty-level leadership and oversight of the program

### **Associate Director - Jonathan Schertzer, Ph.D.**

HSC 4H19; 905-525-9140 ext 22254; schertze@mcmaster.ca

Assists the Director in providing faculty-level leadership and oversight of the program

### **Career Development and Relationship Manager - Sheema Yousefzai, B.A.**

HSC 4H30F; 905-525-9140 ext 22631; yousefzs@mcmaster.ca

Provides career support for students and oversees the internship placement

### **Career Development and Relationship Manager - Jennifer Crane, BComm**

HSC 4H30F; 905-525-9140 ext 22631; cranej1@mcmaster.ca

Provides career support for students and oversees the internship placement

### **Academic Administrative Assistant - Michelle Biro, B.A.**

HSC 4H30G; 905-525-9140 ext 26891; birom@mcmaster.ca

Provides administrative support for all aspects of the program, with a focus on supporting undergraduate students

### **Academic Administrative Assistant - Allison Taylor, HBA (On Leave)**

HSC 4H30; 905-525-9140 ext 28733; tayloa1@mcmaster.ca

Provides administrative support for all aspects of the program, with a focus on supporting graduate students

## GENERAL INFORMATION

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### MAC ID AND E-MAIL

MAC ID is your McMaster username that is unique to each student and is used to access various McMaster resources (e.g., McMaster e-mail account, campus wireless internet, Avenue to Learn, MOSAIC). Applicants are pre-assigned a MAC ID upon applying to McMaster and must activate it by going to [MacID Student](#) and supplying the necessary information that is in the acknowledgement e-mail.

University Technology Services (UTS) offers support and resources for students. All UTS student services can be accessed through the [UTS Students' Catalogue](#).

**Please inform the BDC Office when you receive your MAC e-mail. Unless alternative arrangements have been made, all communication will be sent to your Mac e-mail.**

### THE MOSAIC STUDENT CENTER

The MOSAIC Student Center provides access to academic (class search, enrolment, add/drop courses, grades, transcripts), personal (change mailing address, add emergency contacts) and financial (account inquiry, make a payment, charges due, enrolment/financial letters) information.

**Please check your “Account Inquiry” and “My Academics” on [MOSAIC](#) to ensure that your information is accurate and correct.** There are registration deadlines to drop and add courses in each term. Students registering in, or adding a course after the appropriate deadline, will not receive academic credit for that course. Students dropping a course after the deadline will receive a failing grade in that course. **It is your responsibility to initiate and follow through on dropping and/or adding courses.** Informing the course instructor is not sufficient.

## MBDC COURSES

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The MBDC Program spans three terms: Fall, Winter and Spring/Summer. Faculty in Biochemistry and Biomedical Sciences that have supervisory graduate privileges oversee the BIOMEDDC courses. The BUSINESS courses are offered through the DeGroot School of Business. BUSINESS elective courses are limited and students may not be able to enroll in their first choice.

### COURSE OFFERING SCHEDULE

#### Fall

BIOMEDDC 701	Biomedical Consulting Team Project
BUSINESS B733	Biomedical Entrepreneurship

#### *One of:*

BUSINESS B712	Managerial Negotiations
BUSINESS B716	Strategic Organizational Change
BUSINESS C711	Health Economics and Evaluation for Managers
BUSINESS C727	Pharma/Biotech Business Issues
BUSINESS K723	Data Mining and Business Intelligence
BUSINESS K731	Project Management

#### Winter/Summer

BIOMEDDC 702	Community Internship
BIOMEDDC 703	Scholarly Paper

### EVALUATION

Students will be evaluated in each of the five courses based on a variety of assessments (e.g., presentations, reports, class participation). A letter grade will be assigned by the course instructor/coordinator upon completion of the course requirements. Students must obtain a B- or better in each of their courses in order to remain in the program. A failing grade for a graduate level course is a C+ or below. The internship course will be evaluated as pass/fail.

### BIOMEDDC 701 BIOMEDICAL CONSULTING TEAM PROJECT OVERVIEW

Students will work in small teams leveraging their training and developing career interests to create business plans, market assessments, and/or an entrepreneurial pitch for a new venture in biomedicine or biological products, which may include any aspect of company and product development. Each team will be paired with an entrepreneur/company and will gain first-hand experience in entrepreneurship by helping to advance innovative products/services out of the lab and into the market. The project will be a team effort toward a market assessment, business plan, or entrepreneurial pitch for a new venture in

biomedicine or biological products that encompasses cutting edge science and sound business strategy and will culminate in a written report for the partner company and oral presentation. Team Project objectives will be set by the partner company, in collaboration with the MBDC students and BIOMEDDC 701 course instructor and are expected to provide valuable real-world deliverables to the partner company. MBDC students will work as part of a team to manage their project from conception to completion, including design, manufacturing, quality control, marketing, etc., in the delivery and sale of the final manufactured commercial product with biomedical implications.

## **BIOMEDDC 702 COMMUNITY INTERNSHIP OVERVIEW**

The four to eight-month internship will provide students with the opportunity to explore career options and integrate academic learning through an experiential placement in the health sciences, pharmaceutical and biotechnology industries in Ontario and beyond. In advance of the placement, in the Fall semester, all students will take part in the Career Plan and Employability Preparation milestone, which will assist students in developing the knowledge and skills required to secure an internship. Students will work closely with the Career Development and Relationship Managers to develop an appropriate resume, cover letter, and social media presence (e.g., LinkedIn profile). The BDC Program Office will oversee the appropriateness of the placement.

## **INTERNSHIP PLACEMENT SITE AND ACADEMIC REQUIREMENTS**

Students will be required to fulfill any professional requirements imposed by the placement site. This may include, but is not limited to, signing a non-disclosure agreement, professional conduct agreements, health and safety documents, etc. The BDC Program Office will review and ensure that the employment arrangements and agreements are appropriate. In terms of monitoring the specifics (e.g., whether students sign an NDA or other confidentiality agreements) the Program will not be involved at this level.

The academic requirements include completion of a series of reflective components, recruitment and career plan updates to track student learning and professional development. Students will record and collect evidence that demonstrates a fulfillment of their individual learning objectives and the Program Learning Outcomes. Short and long-term goals will be set for the placement, in conjunction with the site supervisor and/or faculty advisor.

Students will also be required to participate and present on the skills and knowledge that were acquired through the internship, and any key works or projects that were accomplished during their placement.

## **INTERNSHIP SUPERVISION**

The student will have a primary site supervisor but will also be co-supervised by their faculty advisor. The co-supervisor will be responsible for assessing and providing feedback on the student's progression throughout the program. Midway through the placement, the site supervisor and student will each receive formative feedback to ensure a positive, healthy and



productive learning environment with ample opportunity for growth. Any issues or concerns from the supervisor or the student will be brought to the attention of the Program Office, and every attempt will be made to arrive to an earnest resolution.

### **INTERNSHIP PLACEMENT AND RELOCATION**

The BDC Program Office will notify students throughout the fall term of potential internship placements. Students will view and apply to postings on the BIOMEDDC 702 Community Internship Avenue to Learn course, or as specified on the job posting. Students have the option of securing their own internship placements, subject to the approval of the BDC Program Office. The BDC Program Office will offer assistance/advice to those students who are interested in securing their own placements.

Depending on the industry/company, students may be required to relocate for their internship placement. **Students who are unable to relocate will be required to notify the BDC Program Office as soon as possible.**

All students must complete the community internship course to fulfill their degree requirements. In the rare event that a student does not secure a placement due to circumstances that are beyond the Program's control, the student will be required to withdraw from the program.

### **CAREER PLAN AND EMPLOYABILITY PREPARATION MILESTONE**

The Career Plan and Employability Preparation milestone will assist students in developing the knowledge, research, and communication skills required to secure an internship. To fulfill the milestone requirement, students will attend internship recruitment preparation workshops on a variety of topics (e.g., resume creation, building cover letters, creating and using a LinkedIn account, conducting a self-initiated job search, interview preparation), develop a career plan, create an application portfolio, and complete a weekly log of recruitment efforts.

### **BIOMEDDC 703 SCHOLARLY PAPER OVERVIEW**

Each student will have obtained an individual learning experience that is unique to them. The scholarly paper will provide an opportunity for creative exploration of Biomedical Research and Commercialization. Students will select a topic for their scholarly paper in consultation with their faculty advisor. Students will be expected to draw from the primary literature and ground their work and experiences on established principles and theories from Biomedical Sciences and Business. The type/theme of paper (e.g., scientific review, business case study) will depend on the student's interest and career goals. For example, a student may be interested in doing a business case study on biologics introduced into the market over the past five years as this may align with their career goal to work in the biologics field.

## SGS MANDATORY COURSES

In addition to the BIOMEDDC and BUSINESS 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.** To access the course material:

- Log into [MOSAIC](#).
- Click on: Student Center tab (centre icon).
- Click on the Search tab.
- Course career: select “Graduate” from the drop down menu.
- Course Subject: enter “SGS”, then click: SEARCH
- SGS 101 will be listed under the search results.
- Click on: Enrol tab (at the top).
- Enter course Section.
- Click: Save. After enrolling, it will take 24 hours to feed into Avenue to Learn.
- Log into [Avenue to Learn](#). Your student MacID and password are required.
- Under “My Courses”, you will have an entry for “SGS 101”. Click on the link.
- Click the “Content icon” at the top of the page.
- Content must be viewed before the final quiz is released.
- To access the quiz, click on the “Assessments icon” at the top of the page. The drop down box will then show quizzes; click on the link.
- Students must successfully pass the quiz with a mark of 14 out of 20 or greater. The student is informed of their mark on the quiz immediately after submitted electronically, and is given three attempts.

### 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 with the start of 2010. Senate passed the requirement for all graduate students to complete this training. To access the course material:

- Log into [MOSAIC](#).
- Click on: Student Center tab (centre icon).
- Click on the Search tab.
- Course career: select “Graduate” from the drop down menu.
- Term: select appropriate term.
- Course Subject: enter “AODA”, then click SEARCH

- SGS 201 will be listed under the search results.
- Click on: Enrol tab (at the top).
- Enter course Section.
- Click: Save. After enrolling, it will take 24 hours to feed into Avenue to Learn.
- Log into **Avenue to Learn**. Your student MacID and password are required.
- Under “My Courses”, you will have an entry for “SGS 201”. Click on the link.
- Click the “Content icon” at the top of the page.
- Content must be viewed before the final quiz is released.
- To access the quiz, click on the “Assessments icon” at the top of the page. The drop down box will then show quizzes; click on the link.
- The student is informed of their mark on the quiz immediately after submitted electronically, and is given unlimited attempts.

## **FACULTY ADVISOR AND STUDENT RELATIONSHIP**

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Upon entering the MBDC program, each student will be assigned a faculty advisor by the BDC Program Office. The faculty advisors are members affiliated with the BDC graduate program who have supervisory privileges at the graduate level (typically Biochemistry faculty). Students may independently arrange an MBDC advisor, subject to the approval of the BDC Program Office. Students should contact his/her advisor during the first week of the term. Students and advisors will be required to complete a series of touchpoint forms throughout the year. The SGS graduate calendar outlines the responsibilities of graduate students, their advisors, and the expectations of a graduate student-advisor relationship.

### **GENERAL OBJECTIVES FOR THE FACULTY ADVISOR-STUDENT RELATIONSHIP**

The faculty advisor should have regular contact with the student and should be aware of the student’s interests, goals and progress in the program. The primary role of the faculty advisor is to offer ongoing advice to the student to assist them in achieving their educational and professional goals. **It is the student’s responsibility to maintain regular contact with his/her advisor and to keep them informed about their progress in the program.**

### **SPECIFIC OBJECTIVES FOR THE FACULTY ADVISOR-STUDENT RELATIONSHIP**

- The advisor and the student should aim to have regular discussions to discuss the student’s progress through the program. The advisor and student will be required to meet at minimum six times throughout the year when formal touchpoints are due.

- Whenever possible/appropriate, the advisor should assist the student in identifying/and or contacting other faculty members or external individuals who might serve as a resource for the student during their course projects or internship.
- Although it is the student's responsibility to identify an appropriate scholarly paper topic, the advisor may help in the process by suggesting resources and identifying faculty members with an appropriate area of expertise. The advisor will be involved with the evaluation of the final scholarly paper.

## **FINANCIAL INFORMATION**

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### **STUDENT AFFAIRS OFFICE**

The [McMaster Student Affairs Office](#) oversees the delivery of government and University financial aid and scholarship programs.

### **ONTARIO STUDENT ASSISTANCE PROGRAM (OSAP)**

To be eligible to apply for [OSAP](#), students must be Canadian citizens or permanent residents of Canada or must meet Ontario residency requirements. Students apply for OSAP in the summer for the academic year and will be required to estimate the amount they could earn while on an internship. The value can always be updated and reassessed later.

### **OUT-OF-PROVINCE AND OUT-OF-COUNTRY STUDENT LOANS' PROGRAMS**

Please contact the student affairs office for more information.

### **MBDC AWARDS**

With the exception of the BDC Internship Travel Scholarship, applicants will be notified at the time of their offer whether they have received an award. The following awards are available for the 2022 - 2023 academic year.

Scholarship payments will be sent by e-transfer to a student's McMaster email account.

### **BDC PROGRAM SCHOLARSHIPS (\$5,000)**

Awarded to students in the MBDC program at the time of their offer who demonstrate excellence in academic achievement.

### **THE FACULTY ONTARIO GRADUATE SCHOLARSHIP (\$15,000)**

Awarded to a student who has achieved a first-class average (which is an A- at McMaster) in each of the last two completed years of study (full-time equivalent). The Faculty Ontario Graduate Scholarships are only available to domestic students.

### **BDC INTERNSHIP TRAVEL SCHOLARSHIP (up to \$5,000)**

Awarded to two students in the MBDC program who demonstrate excellence in academic achievement and who will be completing an out-of-province internship. An application process is required. Further details will be communicated to students at a later date.

### **WORKING DURING YOUR MBDC STUDIES**

Full-time students should work no more than an average of 10 hours per week (excluding work related to the Community Internship course) during their graduate studies. Consult the SGS calendar for more information.

## **STUDENT SERVICES AND RESOURCES**

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### **GRADUATE STUDENTS ASSOCIATION (GSA)**

The [GSA](#) 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.

### **GSA HEALTH AND DENTAL INSURANCE PLAN**

Included in the GSA dues is enrolment in the [health and dental plan](#). Please visit the GSA website for more information on the coverage provided. All health and dental plan questions should first be directed to [macgsa@mcmaster.ca](mailto: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.

### **UNIVERSITY HEALTH INSURANCE PLAN (UHIP; INTERNATIONAL STUDENTS)**

VISA students are required to obtain health coverage under the University Health Insurance Plan (UHIP). For more information, please refer to the [UHIP Website](#).

### **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 [study permit](#) and visitor VISA (some countries exempt) and present this information to the BDC Program Office upon arrival at McMaster.

A separate [co-op work permit](#) must also be obtained in order for students to be eligible to work during their community internship placement. Please contact the BDC Program Office for a Letter of Explanation outlining the mandatory nature of the internship.

### **STUDENT ACCESSIBILITY SERVICES**

[Student Accessibility Services](#) 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.

### **STUDENT SUCCESS CENTRE**

The [Student Success Centre](#) 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 Student Wellness Centre (<http://wellness.mcmaster.ca/>) 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 [library website](#).

## **OFF-CAMPUS RESOURCE CENTRE (ORC)**

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

## **MCMASTER UNIVERSITY POLICIES AND REGULATIONS**

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

[ACADEMIC INTEGRITY POLICY](#)

[ACCOMMODATION OF GRADUATE STUDENTS WITH DISABILITIES](#)

[PETITION FOR SPECIAL CONSIDERATION – LEAVE OF ABSENCE](#)

[STUDENT CODE OF CONDUCT](#)

[STUDENT APPEALS PROCESS](#)

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