



Georgia
Tech.

Wallace H. Coulter Department of
Biomedical Engineering



EMORY
UNIVERSITY

M.S. BMED PROGRAM HANDBOOK

2022-2023

*A supplement to the General Catalogs and Student
Handbooks of Georgia Tech*

TABLE OF CONTENTS

1 Overview	4
1.1 Purpose	4
1.2 People & Roles	4
1.2.1 Organization Structure.....	4
1.2.2 Primary vs. Program Faculty	5
1.2.3 Faculty Committees	6
2 New Student Orientation.....	6
2.1 Orientations	6
2.1.1 Institute.....	6
2.1.2 Department.....	7
2.1.3 International	7
3 Roles & Responsibilities of Faculty and Students	7
3.1 Honor Code	7
3.2 Student Performance Policy	7
3.2.3 Student Performance Concerns.....	7
3.2.4 Dismissal	8
3.2.5 Leaves of Absence.....	8
3.2.5 Readmission	9
3.2.6 Rights & Responsibilities.....	10
3.3 Student Petitions and Grievances.....	10
4 Registration.....	10
4.1 Tuition & Fees	10
4.2 BMED Courses.....	11
4.3 Non-BMED Courses.....	11
4.4 Course Load Expectations	11
4.5 Registration Calendars & Deadlines.....	11
4.6 Improper Registration or Failure to Register	11
4.7 International Students	12
5 Master’s Degree Requirements	12
5.1 MS BMED Program Overview	12
5.2 Curriculum & Academic Requirements.....	12
5.2.1 MS BMED Non-Thesis Option	12
5.2.2 MS BMED Thesis Option	13

5.3 Transfer Credit Policy.....	14
5.4 Opportunities During Summer Term	15
5.4.1 Research and Independent Projects	15
5.4.2 MS BMED Galway Study Abroad Program	15
6 MS BMED Thesis Program Milestones.....	15
6.1 Overview	15
6.2 Faculty Advisor – Student Matching	16
6.2.1 Tips on Finding a Master's Thesis Advisor.....	16
6.2.2 Confirming a Student – Faculty Advisor Match	17
6.2.3 Financial Commitments for MS Students	17
6.3 Program of Study	18
6.4 Thesis Committee	18
6.5 Thesis Presentation.....	19
6.5.1 Presentation Requirements	19
6.5.3 Announcing the Presentation	19
6.5.4 Forms Needed for the Presentation	20
6.6 Thesis Submission	20
6.6.1 Format Check	20
6.5.5.1 Policy on Open Publication.....	21
7 Degree Completion & Graduation	21
7.1 Registration Payment in the Term of Graduation	21
7.1.1 Option 1: In School Entire Term.....	21
7.1.2 Option 2: In School Part of Term	21
7.1.3 Option 3: Away From School & Working on Thesis Remotely.....	22
7.1.4 Option 4: Completely Finished; Missed Deadline for Graduation in the Previous Term.....	22
7.2 Degree Application.....	22
7.3 Required Forms.....	22
7.4 Commencement.....	22
7.5 Diplomas	23
7.6 Transcripts.....	23

M.S. BMED PROGRAM HANDBOOK

1 Overview

1.1 Purpose

This handbook outlines the policies and procedures of the Wallace H. Coulter Department of Biomedical Engineering (BME) for students in Master of Science in Biomedical Engineering Program (MS BMED). For students in other majors and interdisciplinary programs, please reach out to your program leadership or staff for information specific to your degree program.

This handbook is intended to supplement the General Catalogs and Student Handbooks of [Georgia Tech](#). It does not replace nor supersede the materials in those resources. All BME students are responsible for understanding and complying with all Georgia Tech policies and procedures. In the event of a conflict in the interpretation of policies or procedures, the interpretation of the General Catalog shall prevail. Although students are encouraged to seek advice from faculty advisors and the Academic Office, it is ultimately the student's responsibility to meet the rules and regulations of the institution for degree completion.

Questions should be directed primarily to the MS Academic Program Manager in the BME Academic Office. The Associate Chair for Graduate Studies and the Director of Student Services are also key resources. Staff and Faculty contact information is provided on the [BME website](#).

Suggestions for improvements to this document can be sent anonymously via this link: <https://ao.bme.gatech.edu>.

1.2 People & Roles

1.2.1 Organization Structure

The Organizational Structure, relating to the M.S. Program is described below

Associate Chair for Graduate Studies

The Associate Chair for Graduate Studies acts as the senior administrator and academic leader for graduate studies including but not limited to academic instruction, research, and graduate services; Working closely with the Academic Office (Director of Student Services, program managers, retention advisor, program coordinators, financial and campus administrators, and faculty to lead and manage the day-to-day operations of the Graduate Offices at Georgia Tech and Emory University.

1.2.1.1 Academic Office

The Academic Office is responsible for advisement, career services, industry relations, and the day-to-day operations of the graduate program.

- **Director of Student Services** is the senior academic professional in the Academic Office primarily responsible for representing and advocating for students; mainly responsible for supervising the student services

staff, managing academic operations, and ensuring compliance to Institute and program regulations, policies, and practices.

- **PhD Academic Program Manager** is the primary contact person for students on academic and research matters and practices at the program level supporting PhD students and faculty, providing advisement and administrative support on program admission requirements, degree requirements, campus policies and procedures, campus services, and funding opportunities.
- **MS Academic Program Manager** is the primary contact person for academic and research matters and practices at the program level supporting master's students and faculty, providing advisement and administrative support on program admission requirements, degree requirements, campus policies and procedures, campus services, and other programmatic student/faculty matters.
- **Retention Advisor** is the primary contact person providing advisement and guidance to students, faculty, and administrators in the preparation, implementation, and assessment of academic, research, and professional intervention plans to proactively support student development and success in the program; assisting with monitoring academic standing, program benchmarks, and student progress.
- **Graduate Corporate Relations Manager** is the primary contact person providing career development and professional advising in support to students in preparing for, identifying, and pursuing corporate job opportunities, and establishing and maintaining relations with corporate representatives, other Institute units and alumni for purposes of promoting student recruiting and placement opportunities in internships, co-op positions and regular employment.

1.2.1.2 Finance Office

The Finance Office is responsible for the general accounting of the department, student payroll, and other financial matters. Information regarding the type of funding that students receive and the faculty or department accounts through which they shall be paid is maintained by this office. Students are responsible for initiating their hire requests each semester and faculty members are responsible for reviewing and approving these requests. The Academic and Finance Offices work in conjunction to ensure that student tuition waivers are handled appropriately.

1.2.2 Primary vs. Program Faculty

Faculty members with primary academic appointments in the BME department are commonly referred to as “Primary Faculty” while those who participate in one or more of the department’s academic programs but who have primary appointments in other departments are members of the overall “Program Faculty.” Either Primary or Program Faculty of the BME department can serve as the faculty advisor for a MS BMED student pursuing the Thesis Option.

1.2.3 Faculty Committees

Several committees exist within the department's faculty to assist with various aspects of the department's operations and strategic planning. Those related to current students in the graduate program are described below.

1.2.3.1 BME Graduate Committee

The BME graduate committee, led by the Associate Chair of Graduate Studies, is responsible for program assessment, development, and coordination of related activities relevant to the graduate program. Specific duties include the consideration of all proposed new courses, texts, curricula modifications, and program assessment data. Additionally, the committee reviews qualifying exam committee assignments, thesis committee assignments, and student grievances and petitions.

In addition to Primary Faculty, one Program Faculty member and two active graduate students are assigned to the committee. Graduate student representatives for the BME graduate committee are solicited via a self-nomination and the review process managed by the Associate Chair for Graduate Studies and Director of Student Services in collaboration with existing student committee members. Students serve a one- to two-year term with the appointment in alternating years to ensure continuity. Factors heavily considered for appointment include the year of matriculation, location of the lab (Georgia Tech/Emory), and any other criteria deemed necessary by the committee to maintain diversity of representation.

1.2.3.2 Georgia Tech Institute Committee

The Georgia Tech Institute Graduate Curriculum Committee is the body responsible for all institute-wide academic policies and degree requirements at the graduate level. This committee reviews curriculum and student petitions such as new course proposals, changes in graduate programs or standing, grade disputes, and readmissions. Student petition forms are generally available via the Graduate office or Registrar's office. Students filing such petitions should discuss the matter with the MS Academic Program Manager and Associate Chair for Graduate Studies.

2 New Student Orientation

2.1 Orientations

2.1.1 Institute

Representatives from offices involved with enrollment, acclimation to campus, and essential business (i.e., Human Resources) are present at the Institute orientation. Students must attend all orientations relevant to their respective degree programs.

Georgia Tech: <https://grad.gatech.edu/orientation-gradexpo>

2.1.2 Department

The Academic Office sponsors a department-specific orientation for all new BME graduate students, which is typically held the week before the first day of classes. Academic, financial, administrative, and technical information particular to BME is reviewed in detail by appropriate department faculty and staff. A panel of current students is available to discuss various topics such as student-led organizations, networking, and social opportunities.

2.1.3 International

In addition to critical immigration and related financial matters, the specific international student orientation includes key sessions regarding academic and cultural transitions. Personal health and spouse orientation sessions are also offered. Details on the GT Office of International Education (OIE) orientation and pre-arrival information for accepted international students are found online [HERE](#).

3 Roles & Responsibilities of Faculty and Students

3.1 Honor Code

Honesty is expected of all members of the BME and Georgia Tech communities. The institute has an [honor code](#) that is intended to remind students and faculty of the importance of honesty in their professional lives. This code also serves to increase awareness of the institutional policies related to academic honesty and the process to be followed when these rules are broken <https://catalog.gatech.edu/rules/6/>.

3.2 Student Performance Policy

Graduate students are expected to make sufficient progress towards degree completion to remain in the MS BMED Program. This includes the successful completion of required coursework, fulfillment of all departmental requirements, and maintaining all minimum GPA of 3.0.

In addition to the above, MS BMED students pursuing the Thesis Option must also ensure timely progress toward research milestones as defined by their faculty advisor. Faculty advisors must accurately report student research progress in the laboratory and performance by assigning a grade for BMED 7000 – Master’s Thesis courses of either ‘S’ or ‘U,’ for satisfactory or unsatisfactory progress, respectively.

3.2.3 Student Performance Concerns

If at any point a Thesis Option student is not performing satisfactorily, the faculty advisor must notify the MS Academic Program Manager, BME Retention Advisor, Associate Chair for Graduate Studies, and student in writing, and cite specific reasons and examples.

Upon initial notification of unsatisfactory performance, the student should schedule a meeting with the BME Retention Advisor. The faculty advisor must develop a performance improvement plan (PIP) that describes specific goals and a timeline that is

deemed reasonable to all parties. The PIP must be reviewed, agreed upon, and signed by both student and faculty advisor and the final plan must be submitted to the BME Retention Advisor, MS Academic Program Manager, and Associate Chair for Graduate Studies.

If a student fails to meet the agreed-upon goals and/or timelines by the completion of the semester in which the PIP is in place, the faculty must submit a final grade of 'U' for thesis hours. If a student has earned a grade of 'U' for thesis hours, a faculty advisor may withdraw financial support for the student (if provided) or may result in dismissal from their lab, the MS BMED Program, and the Institute.

All MS BMED students who are not meeting the minimum 3.0 GPA BME departmental minimum academic standards may result in the dismissal of unsatisfactory scholarships.

3.2.4 Dismissal

A student who is dismissed from the program is required to participate in an exit interview with the BME Graduate Academic Office to ensure that all academic and applicable financial matters are handled properly as well as with the advisor (or designee) to ensure that all access mechanisms and property of the lab are returned.

3.2.5 Leaves of Absence

Purpose: A Leave of Absence is intended to cover the temporary interruption of the student's academic program. Students are expected to enroll for each academic term unless a formal Leave of Absence (LOA) is requested and granted. The reason(s) for requesting a LOA must be consistent with the Institute and the student's academic program guidelines.

A Leave of Absence (LOA) may be granted for up to one academic year (3 semesters/terms). The LOA is granted, if following review of the student's academic record it is deemed consistent with the student's academic objectives and progress toward degree and with approval required by the Associate Chair for Graduate Studies.

A request for a Leave of Absence requires submission of an [Application for Leave of Absence \(DocuSign\)](#) and should be completed as outlined below.

Complete the form according to the role specified. **Note:** *Do not print and bring the DocuSign form to the Dean of Students, Office of Student Life, or Registrar's Office.* The form, once complete, will be forwarded to the appropriate department. Complete the document with all the required information:

- The Associate Chair for Graduate Studies must approve the document first. You must identify this person in the "Approver at School or College" recipient field.
- Search the DocuSign Address Book (gray icon in recipient field) to find the correct *@gatech.edu* format email addresses for the intended recipient. Click SEND after choosing the intended recipient.
- Complete the form with the required information. Be sure to correctly state the term(s) for which the leave of absence is requested and the anticipated term for your return.

- Use the file attachment field to provide supplemental documentation regarding your reason for requesting a leave of absence.
Sign the form and select FINISH. This will automatically route the form to the person you identified as the Associate Chair for Graduate Studies.
- In your DocuSign account, you can follow the forms progress through the approval workflow or void the form at a later date.
- Please allow 7-14 business days for a review of your application by the Dean of Students and Registrar's Office.
- Contact the Registrar's Office if you need assistance completing the form.

The Leave of Absence policy does not supersede any other policy. For example, a student who needs to withdraw or petition to withdraw from a given term must follow the Institute withdrawal and/or petition procedures. All Leave of Absence applications must adhere to the policies and deadlines of the Institute – Office of the Registrar. Application deadlines for a leave of absence are as follows:

- Spring – December 1
- Summer – April 1
- Fall – July 1

Georgia Institute of Technology also requires students to submit an application to return from an approved Leave of Absence. Please review [Guidelines for Application to Return from Leave of Absence](#). The electronic and pdf forms are available below:

- [Application to Return from Leave of Absence \(DocuSign\)](#)
- [Application to Return from Leave of Absence \(PDF\)](#)

A student who expects to be out of enrollment for more than one academic year should withdraw from the MS BMED program and apply for readmission at the time they expect to resume graduate studies.

3.2.5 Readmission

Any student who has been out of enrollment for two or more consecutive terms (including summer semester) and/or has taken an official Leave of Absence must apply for readmission to resume graduate studies. Students applying for readmission should first contact the MS Academic Program Manager and the BME Retention Advisor before submitting their application to the Office of the Registrar.

Readmission applications with all pertinent supporting information must be submitted to the Office of the Registrar (with advisement from the MS Academic Program Manager and the BME Retention Advisor) by the deadlines below:

- Spring – December 1
- Fall – July 1

Applications received after these deadlines will not be accepted – no exceptions will be permitted. Readmission is not guaranteed. Schools/Colleges must recommend readmission for any student wishing to return to their majors under their jurisdiction.

A graduate student who is dismissed by the department for academic or disciplinary reasons will not be readmitted. A student who takes an approved Leave of Absence from the program and is in good standing should follow the procedure for applying for readmission outlined above.

Any student, except a part-time graduate student, who withdraws from the Institute during an academic term and wishes to return the following academic term must complete a [Petition to the Faculty](#) for consideration. This petition must be submitted to the Office of the Registrar and your major school/academic program before the deadline above for the academic term for which readmission is requested.

3.2.6 Rights & Responsibilities

All parties involved have both the rights and responsibilities for the following at every point in the process: confidentiality, clear communication, constructive and professional interactions, appropriate and fair expectations, clarification of expectations, timeliness of actions and communication, and consultation with the BME Academic Office and/or departmental administration whenever needed.

3.3 Student Petitions and Grievances

Students with a grievance related to some aspect of their program in the Wallace H. Coulter Department of Biomedical Engineering should first report it to the MS Academic Program Manager. The student should describe the grievance and relevant details in writing to the MS Academic Program Manager, who will try, if possible, to resolve the grievance in conversation with the student and relevant parties. If this is not successful, the MS Program Manager will refer the grievance to the Associate Chair for Graduate Studies, who will review the grievance and propose an appropriate response in conversation with the student, relevant parties, and the BME Graduate Committee (if necessary).

If it is impossible to resolve the grievance within this committee or within the frameworks of the GT/Emory BME administrative structure, the Associate Chair will forward the grievance to the Asst. Vice Provost for Advocacy & Conflict Resolution at Georgia Tech. If the issue is with the Associate Chair, the student should go directly to the [Asst. Vice Provost for Advocacy & Conflict Resolution](#).

Students may also request to modify any policy and/or requirement stated in this handbook by following the procedure above. The student should describe the request and justification in detail in writing to the MS Academic Program Manager who will refer the request to the Associate Chair and the BME Graduate Committee as a petition for review. A ruling on these requests from the BME Graduate Committee will be communicated to the appropriate parties as soon as one is available.

4 Registration

4.1 Tuition & Fees

Students in the MS BMED program have their tuition and fees assessed by Georgia Tech. Each student is personally responsible for the balance shown in their OSCAR account, including the

resolution of any charges that may be handled through another mechanism depending on the terms of a student's funding status (e.g., the application of a GRA tuition waiver – see [Section 6.2.2 on Financial Commitments for MS Students](#) for more information).

4.2 BMED Courses

MS BMED program students can register for BMED courses within the Georgia Tech registration system (OSCAR). No privilege is extended for registration of classes outside of the Georgia Tech Atlanta campus except for those listed within OSCAR.

4.3 Non-BMED Courses

Students may register for courses in other Georgia Tech departments with the appropriate permits by using OSCAR. [Registration Permits and Overloads](#) are only issued by the department teaching the course.

Additionally, students may take courses outside of Georgia Tech through the [Atlanta Regional Council for Higher Education](#) (ARCHE) cross-registration program.

Note: ARCHE has an independent application process along with specific deadlines that vary among participating institutions. Credits earned while participating ARCHE are subject to the overall [Transfer Credit Policy \(Section 5.3\)](#). Visit <https://registrar.gatech.edu/registration/cross-registration> for more information.

4.4 Course Load Expectations

All MS BMED students are expected to maintain full-time status at Georgia Tech each semester, [as defined by the Registrar](#), unless special circumstances arise and are approved.

MS BMED students conducting research must adjust the hours for the Thesis course (BMED 7000) to ensure maximum hours to fulfill the terms of their Graduate Research Assistantships (GRA) and/or Fellowships and ensure proper payments, if applicable. MS BMED students fulfilling a Graduate Teaching Assistantship (GTA) may register for Teaching Assistantship credit (BMED 8997) to maintain full-time student status.

During the semester in which a student plans to graduate, there are modifications to course load expectations and payments. MS BMED Thesis Option students should consult with the MS Academic Program Manager before registration and payment deadlines.

4.5 Registration Calendars & Deadlines

Important dates including the timelines and deadlines for registration each term can be found on the [Registrar website](#). Students are responsible for registering via OSCAR promptly and before the final deadline.

4.6 Improper Registration or Failure to Register

The Registrar's Office is strict concerning registration deadlines and fee payment. All fees associated with improper registration are the responsibility of the student. Failure to register may require a petition to the Institute for reinstatement or result in lost status and payment for the term. Failure to register properly in the final term of enrollment may prevent a student from graduating.

4.7 International Students

US immigration law dictates various enrollment options for international students. To ensure that an international student remains in compliance concerning their visa types, they should consult with the [Office of International Education](#) (OIE) for all possible exceptions to full-time enrollment. International students should also consult with OIE about employment options that coincide with reduced enrollment.

5 Master’s Degree Requirements

5.1 MS BMED Program Overview

The MS BMED Program aims to prepare students for successful Biomedical Engineering related careers, whatever their next step; educate students in methods of advanced analysis and appropriate problem solving; provide a depth of knowledge in professionally relevant biomedical engineering fields; provide a breadth of knowledge that fosters interdisciplinary approaches to problem solving; and develop the skills pertinent to the research process, including working collaboratively and communicating effectively.

MS BMED Credit Hour Requirements	MS BMED Non-Thesis <i>(total 30 hrs coursework)</i>	MS BMED with Thesis <i>(21 hrs coursework + 9 hrs thesis)</i>
Bioscience Course(s)	≥ 3	≥ 3
Engineering Course(s)	≥ 3	≥ 3
Data Science Course(s)	≥ 3	≥ 3
Electives	≥ 9	≥ 6
Research Coursework	See MS BMED Project Option (BMED 8901)	≥ 9 (BMED 7000)

5.2 Curriculum & Academic Requirements

Fundamental courses focus on foundational knowledge in bioscience, data science, and engineering. These courses may be offered by the Wallace H. Coulter Department of Biomedical Engineering or by other units at Georgia Tech.

5.2.1 MS BMED Non-Thesis Option

The MS BMED Non-Thesis Option is oriented toward students seeking further education and deeper content knowledge for industry careers. Some credits may be transferred if accepted into the Ph.D. program.

5.2.1.1 Required Coursework

All MS BMED students must complete *at least one* approved course in each of the three (3) fundamental categories (for a total of 9 credits); a current list of approved courses can be found on the [Projected Grad Course Offering and Categories](#) spreadsheet.

Of the remaining twenty-one (21) required credits, courses may come from any category including fundamentals or electives. Any graduate-level course in the College of Engineering, College of Science, or College of Computing may qualify as an elective. Courses must be documented on the Program of Study and must be approved by the MS Academic Program Manager.

5.2.1.2 Project Option (BMED 8901)

The Non-Thesis Project Option is targeted toward MS BMED students interested in conducting research, independent study, or are contemplating pursuing a master's thesis.

With this option, students enroll in a special problems course (also called a directed study course) in which the student works independently with a faculty member on an academic research project of their choosing. This course credit counts towards the MS BMED Electives requirement.

Note: This is NOT the same as completing a master's thesis. Unlike a thesis, which is submitted to the Office of Graduate Education and Research, any final deliverables produced for the Project Option course are submitted to the faculty member listed as the instructor of record for evaluation.

Students interested in the Project Option should meet with faculty members whose research interests them to discuss research topics, opportunities, and apply for an [MS BMED Project Permit](#). The student is responsible for finding a BME faculty member willing to supervise their project the semester *before* they intend to conduct independent research.

Students may NOT receive credit for both a master's project and a master's thesis. After completion of the Non-Thesis Project Option, if a student is interested in pursuing a master's thesis, they should consult their project supervisor and the MS Academic Program Manager to discuss the MS BMED Thesis Option.

5.2.2 MS BMED Thesis Option

This program option is designed to support graduate students who are interested in continuing their education and are contemplating pursuing a Ph.D. in the future. Some credits may be transferred if accepted into the Ph.D. program.

5.2.2.1 Required Coursework

In addition to 21 total credit hours of coursework – with *at least one* approved course in each of the three (3) fundamental categories (9 credits) – students pursuing the MS BMED Thesis Option must *also* satisfactorily complete nine (9) credit hours of BMED 7000 – Master's Thesis AND submit an approved M.S. thesis to the Georgia Tech Office of Graduate Education with an announcement and public presentation and defense of their thesis.

Of the remaining twelve (12) required credits, courses may come from any category including fundamentals or electives. Any graduate-level course in the College of Engineering, College of Science, or College of Computing may qualify

as an elective. A current list of approved courses can be found on the [Projected Grad Course Offering and Categories](#) spreadsheet. Courses must be documented on the Program of Study and must be approved by the MS Academic Program Manager.

5.2.2.2 Faculty Advisor

Only BME Primary and Program Faculty are eligible to serve as thesis advisors. If a faculty member at Georgia Tech or Emory University who is not associated with BME is selected, a BME Primary or Program Faculty member must serve as a co-advisor. See Section 6.2: Faculty Advisor-Student Matching for more information and tips.

5.2.2.3 Thesis Hours

All students pursuing the Thesis Option must enroll in a section of BMED 7000 – Master's Thesis with their faculty advisor listed as the instructor of record each semester they conduct research. See [Section 6.2: Faculty Advisor-Student Matching](#) for more information.

Thesis hours are variable. Students should adjust the thesis hours to account for courses taken during a term. A student should first enroll in courses for credit and then enroll in thesis hours, adjusting the variable hours to ensure full-time student status (i.e., at least 12 hours per semester, up to 21 credit hours).

If not taking courses for credit (only conducting research) you must register for 12 credit hours total in any semester to maintain full-time student enrollment status. See [Section 4: Registration](#) for more information.

5.2.2.3 Thesis Milestones

See [Chapter 6: MS BMED Thesis Program Milestones](#) for more information.

5.3 Transfer Credit Policy

The Wallace H. Coulter Department of Biomedical Engineering transfer credit policy is consistent with the Georgia Tech Institute policy outlined in the [Catalog](#). For the most detailed information please visit [Catalog: Graduate Policies and Regulations](#). In the event of a conflict between the interpretation of the information herein and the Catalog, the interpretation of the Institute Catalog shall prevail.

Master's students are eligible to transfer up to six (6) graduate-level credit hours into the MS BMED Program. These credits may not count toward another degree. Emory University courses may count towards the MS BMED; however, they will apply toward the overall six (6) transfer credit limit.

Additionally, both the Thesis and Non-Thesis options of the MS BMED are conferred by Georgia Tech only. This means Emory University will not be represented on diplomas awarded from this program.

Potential transfer credits must be reviewed by the BME Graduate Committee before being applied to a student's Program of Study. For petitions to be considered complete, students must have or be prepared to submit:

- Detailed course information and syllabus
- A statement of purpose covering the nature of your request
- Support from your thesis advisor (if applicable)
- Transcripts and course equivalents (if applicable)
- *A back-up plan in the event your request cannot be approved*

Students can submit all materials by completing the [BMED Transfer Credit Form](#). After submitting this form, your request will be forwarded to the BME Graduate Committee (or a subcommittee) for review. A decision will be communicated by the MS Academic Program Manager as soon as one is available. Please allow extra time for requests that require additional input or cover extenuating circumstances.

Approved transfer credit for master's students will appear online in [DegreeWorks](#). The BME Graduate Academic Office will retain copies of all paperwork for the petition (initial request, notification of results, revised Program of Study). Copies should also be retained by the student for their records.

5.4 Opportunities During Summer Term

5.4.1 Research and Independent Projects

Summer semesters are a great time for research towards the Thesis Option or progress toward the Project Option. See [Thesis Option](#) and [Project Option](#) sections for more information.

5.4.2 MS BMED Galway Study Abroad Program

The West of Ireland has become the European capital for the healthcare and medical device industries. Most of the companies (e.g., Medtronic, Boston Scientific, Cook Medical, Abbott, etc.) are international. This program, a collaboration between the Coulter Department of Biomedical Engineering and the National University of Ireland, Galway, seeks to leverage this remarkable concentration of medical device companies. It is designed for students who are interested in an international experience which enables them to combine classroom learning with field trips to medical device companies to learn first-hand their R&D and manufacturing practices. For more information see <https://bme.gatech.edu/bme/programs-study-abroad-galway-ireland>.

6 MS BMED Thesis Program Milestones

6.1 Overview

This section outlines the major steps of milestones that each student in the MS BMED with Thesis Program must complete to progress towards earning a degree. Official forms are associated with most of the milestones and are completed online.

The Georgia Tech Office of Graduate Education maintains several online resources for current students on creating and submitting their theses. Visit the Graduate Education Thesis Office website at <https://grad.gatech.edu/theses-dissertations> for more information including important deadlines, the GT Thesis & Dissertation Manual, a Thesis Submission Checklist, links to required forms, and more.

6.2 Faculty Advisor – Student Matching

Currently the BME department does not facilitate matching or assign MS students to a lab. MS students are responsible for finding and securing their own thesis advisor. Students are encouraged to talk to various faculty members regarding possible thesis topics and to begin this process immediately upon embarking on the MS BMED with Thesis Option.

6.2.1 Tips on Finding a Master's Thesis Advisor

- **Identify potential advisors and projects.** Visit <https://bme.gatech.edu/bme/faculty> to learn more about BME Primary and Program faculty and their research. Take note of research labs, faculty, and projects that are related to your scientific interests.
- **Conduct informal faculty interviews.** Most faculty are willing to talk about their research during their office hours, but you should do your due diligence before approaching a potential advisor. Visit their lab website and familiarize yourself with published research. Be prepared to ask questions and discuss how your scientific interests are related to their research, current projects, and available opportunities in the lab. Informal meetings are also a valuable opportunity to find out if you and a potential advisor have compatible work styles and could perform well together.
- **Attend research seminars.** Seminars, such as the [Coulter BME Seminar Series](#), are great venues to learn more detailed information about faculty research. Afterwards you may have an opportunity to speak with the presenter(s) about their lab and current projects available for student research.
- **Consult your peers.** Ask in-project students about their projects, thesis advisors, research groups, and how they found their thesis advisor.
- **Take a course and go to office hours.** Often, faculty members will advise students who have taken courses that they offer. Register for courses related to your scientific interests and take advantage of office hours to get to know your instructor(s) and discuss research or possible opportunities for students.
- **Ask for recommendations.** For a variety of reasons faculty may be unavailable to serve as a thesis advisor (too many advisees, prior commitments, planned leaves of absence, etc.) If a faculty member you approached is unavailable, you are encouraged to ask if they can recommend another faculty you could contact and connect with.
- **Consult potential lab members.** Once you have found a compatible thesis advisor, you should inquire about observing lab meetings and/or meeting others who work in their lab (graduate students, post-docs, other collaborators). Your research project may involve collaborating with lab-mates and your potential thesis advisor's other advisees. Observing the lab culture and talking to other

advisees' first-hand experience in the lab can be invaluable when making a final decision to confirm a student-faculty advisor match.

- **Discuss finances early.** Master's thesis projects do not normally have stipend and tuition reimbursements associated with them. For any faculty member you are seriously considering matching with, you should discuss the availability of funded projects, stipends, and tuition reimbursements early to manage expectations of both parties in the event of a financial arrangement.
- **Follow-up.** You may need to follow-up if you do not get a response to your first email. Take care to use current addresses or inboxes that faculty check most frequently (e.g., using Emory email addresses for Emory-based faculty). Inquire about their office hours and make an appointment to discuss if they are willing to serve as your advisor. Some faculty may also have a Faculty Support Coordinator you can reach out to for assistance with scheduling.

6.2.2 Confirming a Student – Faculty Advisor Match

Once a student has found a master's thesis advisor, both parties must review and sign the [MS BMED Advisor-Graduate Student Thesis Commitment Form](#), which details the mutual expectations and responsibilities of each party upon entering the student-advisor relationship. Completion of this form does not imply nor guarantee a financial commitment on behalf of the faculty advisor.

6.2.3 Financial Commitments for MS Students

Once a student-faculty advisor pair is confirmed, it is at the sole discretion of the Faculty Advisor to offer funding in the form of a Graduate Research Assistantship (GRA) to MS BMED students conducting research.

Financial arrangements are made on an individual basis and are considered above and beyond the advisement and mentorship expected of the Faculty Advisor. Funded research opportunities are NOT guaranteed upon admission nor matriculation into the MS BMED program regardless of the degree option selected.

6.2.3.1 MS BMED Financial Arrangement Form

If funding is available, both parties must review the [MS BMED Financial Arrangement Form](#), which is signed and approved by the faculty advisor. The faculty advisor commits to being responsible for the student's stipend and tuition costs for one semester.

The MS BMED Financial Arrangement Form must be completed EVERY semester the Faculty Advisor agrees to provide funding. Signed MS BMED Financial Commitment Forms should be submitted to the MS Academic Program Manager during Phase I of registration. Students should retain all completed copies of this form for their records.

6.2.3.2 Tuition & Fees (GRA)

In the event of a financial arrangement, the MS BMED student will receive a tuition waiver and tuition remission will be charged to the faculty advisor as outlined on the MS BMED Financial Arrangement Form.

However, most students are typically still responsible for some [mandatory student fees](#). The exact amount of tuition and fees is dictated by the type of funding and varies annually with any changes in costs set by the University Systems of Georgia Board of Regents (USG BOR).

Residents of the State of Georgia and Non-Residents (i.e., out-of-state and international students) are charged different tuition rates. Residency or Tuition Classification is determined by the BOR policies and questions regarding a student's status should be directed to the Georgia Tech Registrar's Office.

The MS Academic Program Manager is responsible for entering GRA tuition waivers into the Georgia Tech campus system and submitting nominations to the financial aid office for Non-Resident tuition waiver requests. Waivers are processed only for students who submit their online hiring requests via [Gradworks](#) promptly. The online hiring request must be completed every semester a student is receiving financial support from their Faculty Advisor. Otherwise, students must be prepared to pay full tuition rates.

6.3 Program of Study

The Program of Study (POS) form is due before the start of Phase I registration during the second semester after matriculation. After considering the expertise required for the chosen research area and consulting with their advisor (if applicable), the student must complete the POS form. All MS BMED students must declare for each requirement of the curriculum the specific courses and terms for which they will register. Forms must be submitted electronically. The MS Academic Program Manager reviews each student's form and students receive notification of approval or required changes.

6.4 Thesis Committee

Students should contact their proposed committee members for their approvals before submitting the [Request for Approval of MS Topic](#) form. The form must then be completed by the student, signed by all proposed members (including the thesis advisor), and submitted to the MS Program Manager in the "Graduate Coordinator (PLEASE CONSULT DEPARTMENT)" field and Associate Chair for Graduate Studies in the "School Chair (PLEASE CONSULT DEPARTMENT)" field.

A master's student's thesis committee must consist of at least three (3) members (including the advisor). At least two (2) of the thesis committee members must be BME Primary or Program Faculty, including the advisor. The remaining member(s) may be selected from outside of this category if so desired.

If a committee member outside of Georgia Tech or BME Program Faculty at Emory University is selected, the Associate Chair for Graduate Studies must approve the proposed member. Before the thesis committee form can be approved, the student must submit the completed form and

an NIH Biosketch for the proposed outside member to the MS Academic Program Manager, who will facilitate its review by the Associate Chair. Affiliates of Georgia Tech who are not faculty but who possess expertise relevant to the dissertation project and/or industry professionals may be suitable as committee members but must receive the same approval described above.

If the membership of a thesis committee needs to change, students should submit a new [Request for Approval of MS Topic](#) form. When a student submits a completed thesis, the membership of the thesis committee must match the members listed on the most recent Request for Approval of MS Topic form submitted and approved by the Associate Chair for Graduate Studies.

6.5 Thesis Presentation

MS BMED students who are preparing a thesis are required by the Coulter Department to give an oral presentation of their work. This presentation is not a formal defense. Rather, approval of the thesis is based upon the written document. The presentation may be scheduled only after the student's thesis advisor has reviewed the completed written document and considers the thesis to be satisfactory.

6.5.1 Presentation Requirements

In addition to determining with the faculty advisor that the thesis is satisfactory and ready for presentation, a student must submit the Online Application for Graduation (OAG) for Graduate Students by the published deadlines and be registered for the term in which the presentation occurs. If an enrollment waiver is applicable, no registration is required (see Section 7.1 for registration options for the last term of the program).

The oral presentation should be scheduled to occur no later than one (1) month before the submission deadline to leave ample time for edits required by the thesis committee. The presentation should include two portions: an open presentation of the research/thesis and a closed question and answer session between the student and the thesis committee.

6.5.2 Scheduling the Presentation

The student is responsible for surveying the thesis committee to establish a mutually convenient date and time for the presentation. The student must also reserve space and the necessary audio/visual equipment for the presentation. The student should submit a copy of the preliminary draft of the thesis to all committee members at least two (2) weeks before the thesis presentation.

6.5.3 Announcing the Presentation

Students must submit the details of the thesis presentation (date, time, location, committee members, title, and abstract), to the MS Academic Program Manager via the [MS Thesis Presentation Announcement form](#), at least two weeks before the scheduled presentation. The MS Academic Program Manager will distribute the announcement inviting the department to the thesis presentation.

6.5.4 Forms Needed for the Presentation

Each committee member must complete the BME Milestone Evaluation Form at the conclusion of the oral presentation. The BME Milestone Evaluation Form is accessible online via Qualtrics. The form will be routed to the BME Graduate Academic Office for further processing.

Note: MS BMED degrees will *NOT* be awarded until all [BME Milestone Evaluation Forms](#) are received by the BME Graduate Academic Office.

After the thesis presentation, students must initiate and send the Certificate of MS Thesis Approval Form to their thesis committee via DocuSign. <https://app.docusign.com/templates/details/b55486e0-db0f-42a0-b0f8-99e138461990> Please list the MS Academic Program Manager as the “Graduate Coordinator or School Chair” on this form. If initiated correctly, the completed form with signatures will automatically be routed to the BME Graduate Academic Office for filing. The MS Academic Program Manager is available to assist students with any questions during this process.

6.6 Thesis Submission

6.6.1 Format Check

Students are urged to have their thesis format checked before making final copies for the thesis committee. Shortly after the writing process has begun, students should submit a draft of the thesis to the Graduate Education Thesis Office for an initial format check. For thesis format checking, emailing a PDF of the document is acceptable. Students may send a PDF to format check to thesis@grad.gatech.edu.

The latest that any format check can be requested is one (1) week before the final thesis submission deadline. This is the published final deadline, but initial format checks for drafts will not be done in the week leading up to the thesis deadline; only final submissions will be checked that week.

6.6.2 Electronic Submission of Theses & Dissertations

Georgia Tech requires all theses and dissertations to be submitted electronically. Once approved by your committee, visit the Electronic Thesis and Dissertations (ETD) Submission System. Please follow the instructions and upload your approved thesis or dissertation as a PDF. Review the OGE Theses & Dissertations resources and the Georgia Tech Thesis Manual for more specific instructions.

Once submitted, the Graduate Office will check each electronic document and inform students of any necessary corrections. If notified, students must make the required changes and resubmit the corrected file. After the Graduate Office has received all the correct and finalized documents, the thesis will be approved, and the Registrar will be notified that the student is eligible to graduate. The student’s thesis will be released for electronic circulation post-graduation.

6.5.5.1 Policy on Open Publication

According to Georgia Tech policy, masters and doctoral theses should be openly published. However, students can request that the thesis be withheld from release for one year for intellectual property reasons. The Graduate Thesis Office must receive a Request for Withholding form, endorsed by the faculty advisor, at the same time as the other thesis documents via ETD. The Request for Withholding form is available via DocuSign.

Research arrangements that would preclude publication for an extended time or permanently for reasons of national security or a sponsor's proprietary interest, however, are not appropriate for dissertations or theses. It is anticipated that all graduate thesis work will be published in the open, refereed literature.

7 Degree Completion & Graduation

7.1 Registration Payment in the Term of Graduation

Registration and payment options for the final term in which a graduate student is scheduled for graduation are listed below. The student and faculty advisor should discuss these options consulting the Academic and Finance Offices when necessary. The decision on which option will be used must be communicated to both offices by the Institute's application for degree deadline, which occurs in the term before the term of planned graduation. Unexpected changes that may alter/delay the student's plan after this decision is made must be discussed as soon as possible with the Academic and Finance Offices.

7.1.1 Option 1: In School Entire Term

A student who will work in the lab the entire term, in addition to defending their thesis and submitting all required paperwork by the Institute's outlined deadlines for graduation, should enroll in the standard 21 credit hours and be paid normally as a GRA or by Fellowship. This represents the same process as previous terms.

NOTE: The following options (2-4) are not for students on Fellowships. Those students can use Option 1 only if receiving fellowship funding during the term of graduation.

7.1.2 Option 2: In School Part of Term

A student who plans to work until the thesis defense and submission of paperwork then leave school for outside employment or other reason has two options depending on when the defense is scheduled.

Reduced Course Load with No Tuition Waiver: If the thesis defense is scheduled for a date before Georgia Tech's withdrawal date (published by the Registrar's Office and typically around two-thirds of the way into the term) the student should enroll in one (1) credit hour and be paid as a GA (not GRA) only through the defense date. In this case, Georgia Tech's minimum enrollment requirement of three (3) credit hours is waived. The student should register for one (1) credit of thesis hours (BMED 7000) and

must pay for that hour personally. The student is hired as a Graduate Assistant (not GRA, meaning no tuition waiver is available) and should be paid for the part, or all, of the term based on the wage, negotiated with the faculty advisor. The student and faculty advisor may also negotiate reimbursement of the tuition and fees. The 1-credit hour option may be used only one time.

If issues that prolong the completion of the program arise and a student has exhausted their 1-credit hour option, the student must then register for 3-credits of thesis hours and must pay those hours personally. Typically, the student is not working or paid and a tuition waiver is not applied.

Full Course Load with Tuition Waiver: If the thesis defense is scheduled for a date after Georgia Tech's withdrawal date, the student should enroll in 21-credit hours and be paid as a GRA for the entire term.

7.1.3 Option 3: Away From School & Working on Thesis Remotely

A student who will no longer be working in the lab by the start of the term, but will be working on their thesis remotely and returning to campus only for the thesis defense, should enroll in one (1) credit hour and should not be paid for any duration of the term.

7.1.4 Option 4: Completely Finished; Missed Deadline for Graduation in the Previous Term

A student who will defend the thesis and submit all paperwork by the end of the first week of the term should submit an [Enrollment Waiver](#) and should not register for any credit hours. If the student will be leaving for outside employment or other reasons immediately, then no payment should be made for any duration of the term. If the student will be working for some, or all, of the term, that individual may be hired as a non-student (e.g., as a Tech Temp). A student is eligible for this option only if they were registered in the previous term.

7.2 Degree Application

The Online Application for Graduation (OAG) for Graduate Students must be submitted well in advance of the thesis defense and planned graduation.

7.3 Required Forms

Forms and documents required during the graduation process can be found at <https://bme.gatech.edu/bme/ms-bmed-program-forms>. All institutional level forms (e.g., Request for Approval of Master's Thesis Topic, Certificate of Thesis Approval) must be submitted before a student can be cleared for graduation. Students are responsible for ensuring that all requirements have been met and all forms and documents submitted. The MS Academic Program Manager is available to assist students with any questions during this process.

7.4 Commencement

Students in the MS BMED program may attend only the Georgia Tech commencement ceremonies and must notify that attendance is planned. Students may purchase their regalia

from the Georgia Tech bookstore. Students attending the Georgia Tech commencement must purchase caps and gowns.

7.5 Diplomas

Diplomas for students in the MS BMED program are produced by Georgia Tech; it is critical that students provide their current mailing address before commencement. The MS BMED diplomas include the seal from Georgia Tech only – Emory University is not represented on diplomas awarded by the MS BMED program.

7.6 Transcripts

Students in the MS BMED program can order transcripts directly from Georgia Tech, as needed, for a fee assessed by the Registrar's Office. All MS BMED coursework will be reflected on transcripts held at Georgia Tech; applicable courses taken at Emory (or other institutions) will be transferred and recorded in [DegreeWorks](#).