



School of Medicine

University of Missouri

**Biomedical Informatics,
Biostatistics & Medical Epidemiology
Graduate Program**

Master's Program in Health Informatics Student Handbook

University of Missouri-Columbia
March 2024

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CONTACTS

Biomedical Informatics, Biostatistics and Medical Epidemiology
(BBME)

Master of Science (MS) in Health Informatics

University of Missouri School of Medicine
Columbia, MO

<https://medicine.missouri.edu/bbme>

Graduate Program Director



Gillian Bartlett-Esquilant, PhD

Associate Dean for Graduate Research Education

Math Sciences Building,
810 Rollins Street Columbia MO 65211

Tel: (573) 239-2921

Email: gillian.bartlett@health.missouri.edu

Program Staff

Program Advisor



Christopher Brown, MA, BS

Sr. Student Service Coordinator

Math Sciences Building
810 Rollins Street
Columbia MO 65211

Tel: (573) 884-9127

Email: brownchristop2@missouri.edu

Program Coordinator



Dawn Moorehead, BS

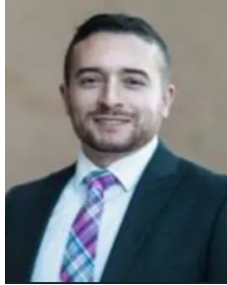
Sr. Educational Program Coordinator

Math Sciences Building
810 Rollins Street
Columbia MO 65211

Tel: (573) 884-9813

Email: mooreheadd@health.missouri.edu

Biomedical Informatics, Biostatistics & Medical Epidemiology Faculty



Fares Alahdab, MD, MSc

Associate Professor

Tel: (573)

Email:



Gillian Bartlett-Esquillant, PhD

Associate Dean for Graduate Research Education

Professor and Director of Graduate Studies

Tel: (573) 239-2921

Email: gillian.bartlett@health.missouri.edu



Nai-Wei Chen, PhD

Assistant Research Professor

Tel: (573) 884-7232

Email: naiwei.chen@health.missouri.edu

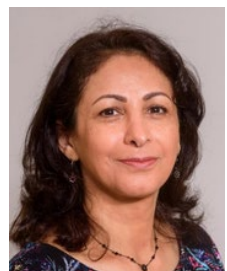


Randi Foraker, PhD

Chair and Professor o

Tel: (573) 882-6178

Email: randi.foraker@health.missouri.edu



Mojgan Golzy, PhD

Assistant Research Professor

Tel: (573) 884-2348

Email: golzym@health.missouri.edu



Jeannette Jackson-Thompson, MA, MSPH, PhD
Research Associate Professor
Co-Director, Center for Medical Epidemiology and Population Health (CMEPH) Director Emeritus, Missouri Cancer Registry and Research Center
Tel: (573) 882- 8861
Email: jacksonthompsonj@health.missouri.edu



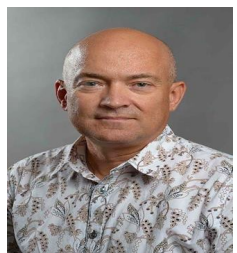
Trupti Joshi, PhD
Assistant Professor
Director of Translational Bioinformatics
Tel: (573) 884- 5963
Email: joshitr@health.missouri.edu



James McClay, MD, MS
Chief Research Informatics Officer
Interim Chair, Professor
Tel: (573) 882- 2473
Email: jmcclay@health.missouri.edu



Abu Mosa, PhD
Associate Professor
Director, Research Informatics
Tel: (573) 882-8349
Email: mosaa@health.missouri.edu



Mihail Popescu, PhD
Professor
Tel: (573) 882-1266
Email: popescum@health.missouri.edu



Chester Schmaltz, PhD
Assistant Research Professor
Tel: (573) 884-6675
Email: schmaltzc@health.missouri.edu



Eduardo J. Simoes, MD, MSc, DLSHTM, MPH

Director, Director for Medical Epidemiology and Population Health (CMEPH) Director
Health Informatics for Diabetes Research (HIDR) Professor
Tel: (573) 882-6179
Email: simoese@health.missouri.edu



Xing Song, PhD Assistant Professor of Biomedical Informatics,

Biostatistics and Medical Epidemiology
Tel: (573) 882-1352
Email: xsm7f@health.missouri.edu



Peter Tonellato, PhD

Professor
Tel: (573) 882-8418
Email: tonellatop@health.missouri.edu



Russ Waitman, PhD

Professor and Vice Chair
Associate Dean for Informatics
Director of Medical Informatics, NextGen Precision Health Initiative
Scientific Director, Tiger Institute
Adjunct Professor, Family and Community Medicine
Tel: (573) 882-2190
Email: russ.waitman@health.missouri.edu

PROGRAM OVERVIEW

The Master of Science in Health Informatics (HI) Program at BBME equips students with the skills and knowledge necessary to excel in diverse healthcare environments. From hospitals and clinics to pharmaceutical firms and governmental agencies, graduates are prepared to make a meaningful impact across a spectrum of healthcare organizations and related settings. Our program is designed to delve into the intricacies of health systems in the 21st century, emphasizing the understanding, design, and development of information technologies pivotal for their transformation and integration. Combining elements of computer science, and health and biomedical informatics, our coursework provides a comprehensive foundation. Within our core HI curriculum, students engage with topics such as health information systems, information storage, retrieval and management, and research methods and outcomes analysis. This holistic approach ensures that graduates possess the multidisciplinary expertise necessary to thrive in the rapidly evolving field of health informatics.

This handbook was developed for the use of BBME MS in Health Informatics students, faculty and staff. The purpose of this handbook is to describe the policies and procedures pertaining to this program, outline the expectations of graduate students, and provide helpful information for prospective and current students. The official rules and policies governing the MS degree are set forth in the Campus Graduate Studies Catalog, which can be accessed online at the following link: <https://catalog.missouri.edu/academicpolicies/>.

Accreditation Statement

BBME's MS in Health Informatics Program (residential and online [Executive]) is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Initially accredited for seven years, the Program's next Comprehensive Program Review for Continuing Accreditation will be in 2029–2030. All inquiries about the program's accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at 312-235-3255; or by email at info@cahiim.org.

BBME Department Overview

Vision: To be a national leader in biomedical informatics, biostatistics, and medical epidemiology education, research, and service.

Mission: To engage in research, education, and service activities for the healthcare community that support the development, translation, and dissemination of healthcare strategies that improve population health.

Guiding Principles and Values: To create value through knowledge about health organizational processes using evidence-based decision-making to achieve the highest level of population-based health. Achieve broad cultural competence in order to work effectively in collaborative and diverse work and community environments. Develop learning partnerships among the faculty,

students, staff, and health professionals for creating, disseminating, and applying knowledge to achieve high levels of performance in healthcare organization. Foster a learning environment in which faculty, staff, and students envision the future and develop strategies for change. Use advanced information technology to improve organizational performance and individual and population health outcomes. Create an environment for excellence in quality and for quality improvement in all educational, research, and health services delivery processes.

Academic Regulations

Students are expected to conduct themselves responsibly and professionally when dealing with all members of the University of Missouri community, as well as at networking events, job interviews, and other functions where they are representing BBME. Students are expected to avoid any impropriety or appearance thereof in the use of social media. In addition, students are expected to help maintain the appearance and functionality of the building, classrooms, and other facilities.

Responsibility for following all policies and meeting all requirements and deadlines for graduate programs rests with the student. As part of these responsibilities, students will be expected to routinely use their official university email for all program correspondence and familiarize themselves with the University of Missouri Learning Management System, Canvas.

It is each graduate student's responsibility to be familiar with the information presented in this handbook, as well as the University of Missouri's guidelines, and to know and observe all regulations and procedures relating to their degree program. In no case will a regulation be waived or an exception granted because students plead ignorance of, or contend that they were not informed of, the regulations and procedures.

Important links to University of Missouri policies include:

- [Academic Policies - University Registrar](#)
- [Student Standard of Conduct](#)
- [MU Academic Integrity website](#)
- [MU Division of IT \(DoIT\)](#)

The academic year starts with orientation for new students 1–2 weeks before the start of classwork, which is typically the third week of August. One week recess is given for Thanksgiving and the Fall academic term ends at close of the examination period in December. The Spring term re-opens with the start of classes during the third week of January and ends with the close of examinations during the second week of May. A one-week spring recess occurs in March. Students should plan all travel or other person arrangements such that they are present for the **full** Fall and Spring terms of each academic year. For exact dates, consult the academic calendar:

<https://registrar.missouri.edu/academic-calendar/>.

Academic Resources

Student E-mail

Please see [Mizzou's Webmail](#) to access your University email. The Program will ONLY use this email for communication.

MIZZOU Information Technology (IT)

Please see the [Division of IT](#) for more information. The MU DoIT website contains information about computing and telecommunications needs. It is designed to be a "one-stop shop" for everything IT, including hardware, software, e-mail, networking, technical support, PawPrints, security, phone services, computer training, web hosting, printing, computing sites, and student ID cards.

Classroom Courses

MU faculty, staff, and students have several options for obtaining computer skills training. All IT training courses are available at no charge. Available courses can be found at the [MU Division of IT](#).

Open Lab Sessions

IT Training conducts Open Lab sessions on most Friday mornings for MU students. Open Lab sessions are from 9 a.m.– noon in 25 Arts and Sciences Building. No appointment is necessary. If you want to work with a particular trainer, contact the trainer in advance to ensure s/he is present.

Health Sciences Library

Current information is maintained at the [J. Otto Lottes Health Science Library](#).

Graduate Tutoring at the Writing Lab, Student Success Center

The Writing Center is funded for undergraduates, but help can be offered to graduates on a more limited basis. Please see the graduate students' page for more information about how to make an appointment at the [Writing Center](#).

English Language Resources

The [Intensive English Program \(IEP\)](#) is for international students who would like to improve their English skills. Information on MU's [International Teaching Assistant Program \(ITAP\)](#) is also available to empower international graduate students and postdoctoral scholars to achieve their academic and career goals through cultural and communicative support. This includes fulfilling linguistic requirements for teaching assistants and graduate instructors.

University of Missouri Statement of Nondiscrimination

Nondiscrimination Information

The University of Missouri does not discriminate on the basis of race, color, religion, national origin, ancestry, sex, sexual orientation, gender identity, gender expression, age, disability, or status as a protected veteran. Discrimination on the basis of pregnancy, childbirth, or related medical conditions is also prohibited. The [University's nondiscrimination policy](#) applies to all phases of its employment process, its admission and financial aid programs, and to all other aspects of its educational programs and activities. Further, this policy applies to sexual violence and sexual harassment (forms of sex discrimination) occurring both within and outside of the University context if the conduct negatively affects the individual's educational or work experience or the overall campus environment. Retaliation directed to any person who pursues a discrimination complaint or grievance, participates in a discrimination investigation, or otherwise opposes unlawful discrimination is prohibited.

Compliance

Any person having inquiries concerning the University of Missouri's application of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972*, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 or other civil rights laws should contact one of the following:

Director, Employee and Labor Relations (Affirmative Action and Equal Opportunity)
Veronica Schultz
University of Missouri
Phone: 573-884-2577

[The MU Office of Institutional Equity](#)

Email: equity@missouri.edu

Phone: 573-882-3880 (Heinkel office) or 573-882-2824 (Jesse Hall office)

[U.S. Department of Education](#)

Assistant Secretary for Civil Rights (regarding race, color, sex, national origin, disability, and age issues)

*Title IX prohibits sex discrimination, including sexual harassment and sexual violence, in all educational programs and activities. For more information, please visit the MU Office for Civil Rights & Title IX site.

ADMISSION INTO THE PROGRAM

General Academic Requirements

The Graduate School of the University of Missouri-Columbia requires that all applicants for a graduate degree should have earned a bachelor's degree (or equivalent) from an accredited institution. See <https://gradschool.missouri.edu/admissions/eligibility-process/> for information regarding accreditation. All applicants for a graduate degree program at the University of Missouri-Columbia must have a GPA of 3.0 (A=4.0) or higher in the last 60 hours of undergraduate coursework.

Language Requirement

International applicants and non-native English-speaking applicants must show evidence of English-language ability. Test scores on approved English language exams must be included as part of the application to the BBME MS in Health Informatics Program. Approved English language exams include: (1) Test of English as a Foreign Language (TOEFL); (2) International English Language Testing System (IELTS); (3) Pearson Test of English (PTE) Academic ; (4) Cambridge English Tests (B2 First, C1 Advanced and C2 Proficiency); (5) Duolingo English Test. The MU Graduate School has minimum standards for English proficiency for non-native English-speaking applicants, as described at:

<https://gradschool.missouri.edu/admissions/eligibility-process/international-applicants/>.

International applicants from certain countries where English is considered the native language are exempt from English proficiency requirements. International applicants from non-native English-speaking countries may request a waiver from the English proficiency requirement if certain conditions, such as completing, within the last two years, one year of full-time college-level study in a country where English is the native language. An additional English proficiency test is required for graduate students who have any teaching role in a classroom or laboratory setting. We recommend that international students who need to improve their English language skills enroll in class(es) offered by the Center for English Language Learning, at:

<https://international.missouri.edu/cell/>.

Application Submission and Review

Applications for the BBME MS in Health Informatics Program are available at <https://applygrad.missouri.edu/apply/>. Application components include a completed graduate school online application; unofficial transcripts; three letters of recommendation; a personal statement in essay form that includes prior training and experience and career goals; and an updated curriculum vitae (CV).

The deadline for applications to the BBME MS in Health Informatics Program is December 1 of the year prior to anticipated matriculation into the Program. Completed applications will be reviewed by a faculty committee consisting of the primary teaching faculty in the Program. In January, selected applicants will be invited to interview with faculty and staff. Applicants will be

notified of their status following this process. Students who are accepted into the Program must indicate their commitment to matriculate into the Program by April 15. A required orientation for all first-year students will begin in early August, with the academic year typically beginning the first Monday of the third full week of August.

PROGRAM COSTS AND TUITION

The MS in Health Informatics is a degree targeting professionals and those holding a related undergraduate degree who are interested in researching and applying health information technology to health care. As such, successful applicants should anticipate funding tuition and living costs for the duration of their studies. While there are opportunities for a paid assistantship this is without a tuition waiver and these competitive positions are limited.

The [MU Office of Student Financial Aid](#) processes all financial aid awards. Students who wish to receive a financial aid package must [file a Free Application for Federal Student Aid \(FAFSA®\)](#). The financial aid office also provides [cost of attendance information for MU graduate students](#). Please note that tuition listed for the estimated cost of attendance assumes nine (9) credit hours of enrollment in the Fall and Spring semesters.

Total cost will depend on residency status and each student's specific plan of study—the [tuition calculator](#) can provide estimates taking into account these factors. The MS in Health Informatics degree requires 40 credit hours. Course fees for elective or dual degree courses in other programs and additions or adjustments to the degree plan may increase total tuition and fees.

COURSEWORK REQUIREMENTS

Registration

Registration for courses each term is the responsibility of the student. Course registration should conform to the student's plan of study, as determined by Program requirements. Course information is available through myZou: <https://myzou.missouri.edu>.

Course consent cards may be required for some courses. These are obtained from Chris Brown, Program Advisor.

Full-time Enrollment

Graduate students in the BBME MS in Health Informatics Program must register as full-time graduate students at the University of Missouri-Columbia. The Graduate School of the University defines full-time enrollment as 9 credit hours each for Fall and Spring Semesters.

The maximum number of credit hours in one semester must not exceed 16 credit hours.

Adding/Dropping Courses and Late Registration

University guidelines must be followed for adding or dropping courses. Additional fees may be incurred for late registration and are typically the responsibility of the student.

Academic Performance and Probation

To remain in good standing, all MS students must maintain a 3.0 grade point average (GPA) using the scale of A = 4.0, B = 3.0, C = 2.0, etc. This GPA requirement is inclusive to all graduate coursework for which a letter grade (A to F) is received. Courses graded Satisfactory/Unsatisfactory and undergraduate courses (i.e., courses with course numbers below 7000) are **NOT** included in the GPA calculation.

Failure to maintain a cumulative 3.0 GPA will result in the student being put on academic probation. If a student is placed on academic probation due to a cumulative GPA below 3.0 and is able to raise their cumulative GPA to 3.0 or higher by the end of the next semester, the academic probation will be lifted. Note that when a student retakes a graduate course at MU, both the original grade and the grade for the retaken course are included in the cumulative GPA calculation. If the student's cumulative GPA is not 3.0 or higher at the end of the next semester, the student may request one additional probationary semester to raise their cumulative GPA. A student who fails to raise their cumulative GPA to 3.0 after two probationary semesters will be dismissed from the BBME MS in Health Informatics Program.

Individual courses that are required by either the BBME MS in Health Informatics Program or must be passed with a B- (2.7) grade or better. Students who fail to achieve a grade of B- (2.7) grade in any of the required courses will be placed on academic probation and will need to retake the course at the next available opportunity within one year. If, for any reason, the specific course is not offered over the next year, a different course with similar or related content will be substituted, such that the student is able to complete the terms of the probation within one year. Retaking the course (or an appropriate substitute) with a grade of B- (2.7) or better will lift the probation. For this individual course grade requirement, only the grade for the retaken course is considered. If the student fails to achieve a grade of B- (2.7) or better after retaking a required course, the student will be dismissed from the BBME MS in Health Informatics Program.

Course of Study for the MS Degree

The major responsibility of the Program is to provide oversight of the overall training program. This oversight is carried out by the Graduate Program Director, the Program Committee (consisting of core Teaching Faculty) and advised by an external advisory board. We recommend that every student put together an Individual Development Plan (IDP) during their first semester. The Graduate School at the University of Missouri has developed excellent resources for developing an IDP (<https://gradschool.missouri.edu/grad-essentials/individual-development-plan-idp/>). Other IDP resources include the National Institute for General Medical Sciences (NIGMS) (<https://www.nigms.nih.gov/training/strategicplanimplementationblueprint/Pages/IndividualDev>

[elopmentPlans.aspx](#)). The purpose of an IDP is to help the student develop a plan to accomplish their short- and long-term career objectives. An IDP serves as a tool to facilitate communication between the student, their Research Advisor, and the other members of the Research Project Committee. IDPs are most effective when used as dynamic and changeable documents that are periodically reviewed and updated throughout the student's MS training.

Coursework Requirements

The Graduate School of the University of Missouri requires the completion of 40 credit hours of graduate coursework for a MS degree. Below is the required coursework.

1st Year Fall

7410	(3 credits)	Introduction to the US Health Care System for Health Informatics
7430	(3 credits)	Introduction to Health Informatics
7440	(3 credits)	Health Information Technology
8090	(1 credit)	Thesis Research in Informatics

1st Year Spring

8441	(3 credits)	Biomedical and Health Vocabularies and Ontologies
8550	(3 credits)	Health Data Analytics
8460	(3 credits)	Data Design & Analysis I
8090	(1 credit)	Thesis Research Informatics (Project Advisors)

2nd Year Fall

8437	(3 credits)	Data Warehousing and Data/Text Mining for Health Care
8571	(3 credits)	Decision Support in Health Care Systems for Biomedical Informatics
8443	(3 credits)	Enterprise Information and Solutions Architecture for Strategic HealthCare Operations
8090	(1 credit)	Thesis Research in Informatics (Project Advisors)

2nd Year Spring

8870	(3 credits)	Knowledge Representation in Biology and Medicine
8610	(3 credits)	Consumer Health Informatics
8435	(3 credits)	Information Security, Evaluation and Policy
8090	(1 credit)	Thesis Research in Informatics (Project Advisors)

Use of AI-Tools in Research and Courses

While it will be up to individual course instructors to specify their policies on use of AI-tools for course assignments, the MS Program will in general expect students to follow these policies particularly for their thesis or project work. These policies were generated by Spencer Ross at

UMass Lowell (edits to apply for University of Missouri are in square brackets [])
([https://docs.google.com/document/d/1RMVwzjc1o0Mi8Blw - JUTcXv02b2WRH86vw7mi16W3U/edit](https://docs.google.com/document/d/1RMVwzjc1o0Mi8Blw-JUTcXv02b2WRH86vw7mi16W3U/edit)):

The beta release of Dall-E-Mini in July 2022 and ChatGPT in November 2022 are among many tools using artificial intelligence. There is a good possibility that using tools like these are going to become an important skill for careers in the not distant future (<https://www.theguardian.com/commentisfree/2023/jan/07/chatgpt-bot-excel-ai-chatbot-tech>). In the meantime though, it's going to take a while for society to figure out when using these tools is/isn't acceptable. There are three reasons why:

- Work created by AI tools may not be considered original work and instead, considered automated plagiarism. It is derived from previously created texts from other sources that the models were trained on, yet doesn't cite sources.
- AI models have built-in biases (ie, they are trained on limited underlying sources; they reproduce, rather than challenge, errors in the sources)
- AI tools have limitations (ie, they lack critical thinking to evaluate and reflect on criteria; they lack abductive reasoning to make judgments with incomplete information at hand)

Given these (important) ethical caveats, some scholars in computational sciences debate if the hype over AI-based tools-- especially as "automated plagiarism" tools-- should be heeded at all (<https://irisvanrooijcogsci.com/2023/01/14/stop-feeding-the-hype-and-start-resisting/>). This policy was developed from a response by ChatGPT-3 (2023) and edited on critical reflection:

Academic integrity is a core principle at [University of Missouri] and it's vital that all students uphold this principle-- whether using AI-based tools or otherwise. For [any] class, a responsible use of AI-based tools in completing coursework or assessments must be done in accordance with the following:

1. You must clearly identify the use of AI-based tools in your work. Any work that utilizes AI-based tools must be clearly marked as such, including the specific tool(s) used. For example, if you use ChatGPT-3, you must cite "ChatGPT-3. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI. <https://chat.openai.com/>"
2. You must be transparent in how you used the AI-based tool, **including what work is your original contribution**. An AI detector such as GPTZero (<https://gptzero.me/>) may be used to detect AI-driven work.
3. You must ensure your use of AI-based tools does not violate any copyright or intellectual property laws.
4. You must not use AI-based tools to cheat on assessments.
5. You must not use AI-based tools to plagiarize without citation.

Violations of this policy will be dealt with in accordance with [University of Missouri's] academic integrity policy. If you are found in violation of this policy, you may face penalties such as a reduction in grade, failure of the assignment or assessment, or even failure of the course. Finally, it's your responsibility to be aware of the academic integrity policy and take the necessary steps to ensure that your use of AI-based tools is in compliance with this policy. If you have questions, please speak with [your advisor or instructor] first, as we navigate together

how best to responsibly use these tools.

ChatGPT-3. (2023, January 10). "Write a syllabus policy about the academic integrity of students using ai-based tools." Generated using OpenAI. <https://chat.openai.com/>

Teaching Experience

Students in the BBME MS in Health Informatics Program are not required to serve as teaching assistants. MS students interested in developing their teaching skills can pursue relevant opportunities made available at the University. All Teaching Assistants (TAs) who have not taught at the University of Missouri previously must attend Graduate Teaching Orientation which is held twice a year—more information and links to register are found on the University website at https://gradschool.missouri.edu/professional_development/graduate-assistant-teaching-orientation-gato/. International students will need to comply with the MU Graduate School requirements for fluency in the English language before serving as a TA. These requirements are different from those that were required for admission to the program, since a greater degree of fluency serves for best teaching efficacy. These requirements can be found at <https://gradschool.missouri.edu/itap-program/>.

SELECTION OF RESEARCH ADVISOR

Thesis Research in Informatics

Students will register for one (1) credit hour of BBME 8090 during each semester of enrollment in the degree program. Students completing a two-year plan of study will register for four (4) credit hours total of BBME 8090. The first semester of the course will be seminar and protocol development focused. During the first semester, all HI students will enroll in the same section of BBME 8090 with the same instructor of record (section 16). When students have been assigned a Research Advisor at the beginning of the second semester of their first year, they enroll with that Research Advisor (section numbers will be provided). Students will enroll in all future semesters in the section of BBME 8090 for which their Research Advisor is the instructor of record.

Research Advisor

As the BBME MS in Health Informatics Program is a research degree, students will complete a research project or research thesis. At the end of the Fall Semester in the first year, students will be assigned a Research Advisor. Research Advisors are faculty members who serve as research mentors for the research project or thesis of the MS student. The Research Advisor will be selected from among BBME Faculty. Selection of a Research Advisor outside of the BBME Faculty must receive approval from the Graduate Program Director.

Responsibilities of the Research Advisor

- Provide a supportive intellectual and instructional environment in which the student develops and implements a program of rigorous and reproducible research designed to uncover original findings suitable for publication in appropriate scientific journals.
- Acknowledge any student contributions to research and/or creative activity, as appropriate, when the results of such activities are presented at conferences, in professional publications, or in applications for copyrights and patents.
- Have a clear understanding with graduate students about their specific responsibilities regarding academic, creative, and/or research activities, including timelines for completion of research and the thesis or project, as applicable.
- Discuss the authorship policy with graduate students in advance of initiating any collaborative project(s).
- Perform all of the responsibilities above without regard to religion, race, gender, sexual orientation, nationality, or other criteria that are not germane to the execution of those responsibilities.

(See Guidelines for Good Practice in Graduate Education:

[https://gradstudies.missouri.edu/current-students/scholarly-integrity-ethics/guidelines-for-good-practice-in-graduate-education/.](https://gradstudies.missouri.edu/current-students/scholarly-integrity-ethics/guidelines-for-good-practice-in-graduate-education/))

Responsibilities of the MS Student

- Recognize that the Research Adviser provides the intellectual and instructional environment in which the student plans a program of study, is involved with the research, and that the Research Advisor, through access to teaching and research funds, provides the student with support for the research project.
- Expect that their research results, with appropriate recognition, may be incorporated into progress reports, summary documents, applications for continuation of funding, and similar documents authored by the Faculty Adviser, to the extent that the student's research is related to the Faculty Adviser's research program and the grants which support that research.
- Recognize that the Faculty Adviser is responsible for monitoring the accuracy, creativity, validity, integrity, and effective dissemination of the student's research. Careful, well-conceived research reflects favorably on the student, the Research Adviser, the degree program, and MU.
- Exercise the highest integrity in taking examinations, completing master's degree projects, and/or collecting, analyzing and presenting research data in theses and presentations.
- Acknowledge the contributions of collaborators and colleagues to research results that are presented in seminars, on posters, in committee meetings, and in other formats, in accordance with appropriate professional ethics.

See Guidelines for Good Practice in Graduate Education:

[https://gradstudies.missouri.edu/current-students/scholarly-integrity-ethics/guidelines-for-good-practice-in-graduate-education/.](https://gradstudies.missouri.edu/current-students/scholarly-integrity-ethics/guidelines-for-good-practice-in-graduate-education/)

Changing Research Advisors

If either the student or the Research Advisor determines, in good faith, that they are not capable of working together, either may contact the Graduate Program Director and request that the Advisor-Advisee relationship be dissolved. The Graduate Program Director will separately meet with the student and Research Advisor as well as with the other members of the student's Committee to obtain insight into the underlying issue(s). If the student is making satisfactory progress, the Graduate Program Director will assist the student in finding a new Research Advisor capable of providing support for the duration of the student's training. If a new Research Advisor is not identified, the student will be allowed to withdraw or be dismissed from the program. If the student is not making satisfactory progress, the student can be allowed to withdraw or be dismissed from the program, following the MU Graduate School guidelines for Probation and Dismissal (<https://gradschool.missouri.edu/policy/probation-termination-and-appeals/>).

Selection of a Research Advisory Committee

After selecting a Research Advisor, the student and Advisor will put together a Research Advisory Committee, consisting of the Research Advisor and at least two other faculty members with appropriate expertise. In selecting the faculty members of the Research Advisory Committee, the Research Advisor and the MS student should work together to identify faculty with complementary research expertise relevant to the likely project(s) that will form the student's project or thesis. The faculty membership of a student's Research Advisory Committee should be identified by the end of the Spring Semester during the MS student's first year, with the first meeting to be held prior to the beginning of the Fall Semester of the student's second year.

All students will be required to complete the M-2 form (<https://gradschool.missouri.edu/faculty-staff-resources/forms/>) confirming their Research Advisor and members of their project or thesis committee. They must submit the completed form to the Program Advisor, Chris Brown, who will verify that at least two committee members have Graduate School Faculty status, a Graduate Faculty requirement. The M-2 form is needed for all students; however, only Thesis students' forms will be submitted to the Graduate Faculty.

Responsibilities of the Research Advisory Committee

The purpose of a Research Advisory Committee is to assist the Research Advisor and the MS student to develop a course of study, define a research project, carry out the research and describe the findings. The Research Advisory Committee will also provide critical review of the student's progress and evaluate the student's thesis or project. The student should schedule regular meetings of the Research Advisory Committee, with at least one committee meeting per year.

Thesis/Project Oral Defense

Each student must demonstrate mastery of the fundamental principles of the work included in the course of study offered for the degree. All candidates for the MS degree must complete either a thesis or a substantial independent project, which cannot be co-authored. The final step in earning a MS degree is the oral defense of a thesis or project that describes the research findings resulting from research investigation(s) carried out by the MS student.

The first step in preparing for the oral defense is preparation of the written thesis or project. The written thesis or project must be submitted to the student's Research Advisory Committee at least two weeks prior to the scheduled oral defense. While all students must defend their project or thesis in a time that will be scheduled by the Graduate Program, for thesis students, the defense must occur by the date listed in the M-3 Report of the Master's Examining Committee deadline in the intended semester of graduation. This date is available at <https://gradstudies.missouri.edu/current-students/graduation-commencement/graduation-checklist/>. If completing a thesis, the approved thesis and all required documentation must be submitted via Canvas by the deadline listed for the intended semester of graduation. See <https://gradstudies.missouri.edu/current-students/graduation-commencement/graduation-checklist/>.

The oral defense must occur when MU is in session. The oral defense will be a public seminar, in which the MS student will present the important findings of their research. All faculty, students, and staff are invited to attend this portion of the defense. In a separate closed session, each member of the Research Advisory Committee will vote to Pass or Fail. The votes of the committee members will be recorded on the appropriate form. An oral defense will be deemed successful if there is no more than one vote to Fail. The members of the Research Advisory Committee must also approve the written thesis or project by signing the approval page of the thesis or project. The Research Advisory Committee may request alterations or clarifications to the written thesis or project. The necessary revisions must be completed prior to submission of the written thesis, along with the signed examination form, to the MU Graduate School (for thesis only). A copy of the completed thesis or project along with the evaluation form must also be provided to Chris Brown, Program Advisor.

EVALUATION OF SATISFACTORY PROGRESS

Satisfactory Progress in Academic Coursework

All MS students in the BBME MS in Health Informatics program must maintain a 3.0 GPA, inclusive to all courses taken following matriculation into the BBME MS in Health Informatics Program. All individual courses must be passed with a B- (2.7) grade or better. Failure to meet these academic standards will result in the student being placed on probation for the subsequent semester. The student must resolve the academic issue(s), either by retaking an individual course (or an appropriate alternate course with similar or related content, as approved by the Executive Committee) or by bringing up their GPA. If a student is not able to meet these academic standards during the probationary semester, the student may be dismissed from the program. If additional time is needed to meet these academic standards, the student may request that probationary status continue for a second semester. If a student is not able to meet these

academic standards during the second probationary semester, the student will be dismissed from the program, following review of the student's performance by the Research Advisor and the Program Committee.

After the student has identified a Research Advisor and formed a Research Advisory Committee, the Research Advisor, in consultation with the Research Advisory Committee, will evaluate the academic progress of the student.

Satisfactory Progress in Research

Failure to identify a Research Advisor at the end of the first semester in the Program is sufficient cause for the student to be placed on probation. The Graduate Program Directory will review progress in the first semester 8090 course and make a recommendation to the Program Committee regarding probation. The Program Committee will determine if the student should be placed on probation and inform the student of that outcome.

After the student has identified a Research Advisor and formed a Research Advisory Committee, the Research Advisor, in consultation with the Research Advisory Committee, will evaluate the student's research progress. MS students are required to organize a meeting with their Research Advisory Committee at least once per year. At each of these annual meetings, the student will present their research progress to the committee members, describing major accomplishments as well as any difficulties they have encountered. The student and the Research Advisory Committee will formulate a set of goals and objectives for the second year. If needed, the student and the Research Advisory Committee can meet more than once per year, to help the student stay on track with respect to research progress.

The Research Advisor and the Research Advisory Committee will provide separate evaluations of the student's research progress to the Program Committee. A student can be placed on probation by the Graduate Program Director following an unsatisfactory review of research progress by the Research Advisory Committee. In such situations, the Graduate Program Director will discuss the student's progress with the Research Advisor and the other members of the student's Research Advisory Committee and, separately, meet with the student to discuss issues that are impeding research progress. The Research Advisory Committee will work with the student to formulate a plan to regain appropriate progress in the student's research project. Failure to accomplish the goals of the formulated remediation plan or following two consecutive annual reports indicating unsatisfactory progress, the student may be dismissed from the program following review by the Program Committee.

Dismissal and Appeal Process

The Program Committee will review any recommendations for dismissal from the Program. This review will include any documentation of the student's academic and research progress. The student may request to meet with the Program Committee and provide additional information. A majority vote of the Program Committee is required for dismissal. A decision to dismiss can be appealed to the MU Graduate Faculty Senate (<https://gradschool.missouri.edu/policy/probation-termination-and-appeals/>).

Time Limitations

The program for the master's degree must be completed within a period of three (3) years beginning with the first semester of enrollment in which the student is accepted to a degree program. Time spent in the armed services will not count toward the three-year limit. For any extension of this time limitation, the student must petition the Graduate School by submitting a request to the Research Advisor who, in turn, submits a written recommendation to the Graduate School that is endorsed by the Director of Graduate Studies. The Graduate School will notify the Research Advisor in writing of the final decision.

GRADUATE STUDENT ASSOCIATION

The graduate students in the BBME MS in Health Informatics Program have formed a Graduate Student Association. The purpose of this Graduate Student Association is to provide both social and academic support to all graduate students in the BBME Department. The Graduate Student Association holds annual elections to identify leaders who will speak on behalf of the graduate students to the faculty and administrators in BBME. A representative of the Graduate Student Association will attend every Program Committee meeting of the BBME MS in Health Informatics Program, except when the Committee is discussing confidential matters including, but not limited to, discussions regarding individual graduate students, faculty members, or staff.

STUDENT CONDUCT AND CONFLICT RESOLUTION

Mizzou provides policies, training programs, and other resources designed to guide graduate students in research, intellectual property, academic honesty, and professional conduct. For details, go to <https://gradstudies.missouri.edu/policycategory/academic-integrity-ethics>.

Expectations for Graduate Students' Professional and Acceptable Behavior

- Devote an appropriate amount of time and energy toward achieving academic excellence and earning your advanced degree.
- Be aware of time constraints and other demands imposed on faculty members and program staff.
- Take the initiative to ask questions that promote understanding of academic subjects and advances in the field.
- Communicate regularly with Research Advisor, especially in matters related to research and progress within the graduate program and with any teaching responsibilities.

Conflicts with Faculty

Graduate students are encouraged to work out any conflicts with their Research Advisor. If they cannot come to a mutual agreement, the student should seek assistance from members of their Research Advisory Committee or the Graduate Program Director. The Graduate Program Director, along with other members of the Program Committee, will work with the student and mentor until a mutual agreement is established.

Travel Funds

The MU Graduate School has travel awards to help graduate students attend research conferences. Further information on these awards can be found at <https://gradschool.missouri.edu/graduate-awards-travel-scholarships/travel-scholarships/>. Through the endowed scholarship of Barron Informatics Travel Award, the BBME MS in Health Informatics Program will provide travel awards to residential MS students in good standing to present their research at a scientific conference. Students must be first authors and presenting. To qualify for a travel award, an abstract must be submitted to, and accepted by, a recognized national or international meeting or conference. Travel award requests must be submitted in advance and BBME sponsorship must be acknowledged during the presentation or on the poster. Proof of acceptance of the abstract for presentation must be attached to the award application. Please note that students are eligible to receive only one award for the duration of their program.

Health Insurance

Health benefits are available to all MU students through the Student Health Center and the Accident and Sickness Insurance program. Payment of the Student Health Center fee is mandatory for full-time students and optional for part-time students. The Student Health Center treats short-term conditions such as colds and flu and refers students to specialists or hospital care if necessary. Accident and Sickness Insurance has been available for all students for many years, on a voluntary basis for domestic students, but mandatory for international students since 1998. For detailed information about the optional insurance plans, consult <https://gradstudies.missouri.edu/funding/student-medical-insurance/>. Health insurance subsidies are waived for all qualifying full-time graduate students in the program.

A graduate student may enroll in the Accident and Sickness Insurance for Graduate Assistants while attending MU. Students can enroll when they register for classes, either in person or by phone. If the student wishes to enroll in the insurance through the cashier's office or on myZou, they must do so within 30 days of the start of classes. For more health and medical insurance information visit <https://gradstudies.missouri.edu/funding/student-medical-insurance/>.

Leave of Absence

It will be the responsibility of the student to resolve all issues pertaining to their support (e.g., graduate research assistantship (GRA), graduate teaching assistantship (GTA), Fellowship, or Scholarship) with their adviser or other relevant authority prior to taking an approved leave of absence. These issues include the date when support will be terminated and whether or under what conditions the student will be reinstated for support upon their return. Prior to the

completion of the Leave of Absence, the student must notify the program's Director of Graduate Studies (DGS) and the Office of Graduate Studies so that the re-entry process can be initiated.

A GRA or GTA unable to fulfill the duties of their appointment because of illness or injury must notify the administrator of their major unit as soon as circumstances permit. Similarly, a GRA/GTA unable to fulfill the duties of their appointment because of birth or adoption of a child must notify the administrator of their major unit as soon as circumstances permit. The appointing unit may adjust the graduate assistant's workload duties as the GRA's or GTA's physical circumstances reasonably dictate. If total absence from duties becomes necessary, the major unit shall hold the appointment, provided the graduate assistant is still enrolled, for a period of two months, or to the end of the appointment period or of the semester, whichever should occur first. The GRA/GTA shall have the right to return to the assistantship, within the original terms of the appointment, at such time as he or she is able to reassume the duties of the position. For details, go to <https://gradstudies.missouri.edu/policycategory/requested-leave-of-absence>.

Graduate Student Maternity/Paternity Leave Policy

Graduate students are allowed a total of two months' parental leave, of which up to one month may be paid leave upon the approval of the adviser and/or chair. For details, go to <https://gradstudies.missouri.edu/policycategory/requested-leave-of-absence>.

UNIVERSITY RESOURCES FOR GRADUATE STUDENTS

Key Contacts

Students are referred to the UM website (<http://www.missouri.edu/>) for the most up-to-date listings of phone numbers and e-mail addresses.

The University of Missouri-Columbia Columbia, MO 65211 https://www.missouri.edu/	Mizzou Online 212 Heinkel, 201 S. 7 th St., Columbia, MO 65211 Phone: (573)882-2491 https://online.missouri.edu/
Disability Services S5 Memorial Union Phone: (573)882-4696 https://disabilityservices.missouri.edu/	Transcripts & Certifications Office of the University Registrar 125 Jesse Hall https://registrar.missouri.edu/transcripts-certifications
Graduate Admissions Graduate School 210 Jesse Hall Phone: (573)882-6311 or 1-800-877-6312 Fax: 1-877-632-6316 https://gradschool.missouri.edu	Registrar Office of the University Registrar 125 Jesse Hall M-F 8:00-5:00 Phone: (573)882-7881 https://registrar.missouri.edu
International Center N52 Memorial Union Phone: (573)882-6007 https://international.missouri.edu	Financial Assistance Student Financial Aid 230 Jesse Hall Phone: (573)882-7786 https://admissions.missouri.edu/costs-aid/financial-aid/
Student Veterans Resources & Support Center N-5 Memorial Student Union Phone: (573)884-4383 Fax: (573) 884-4387 https://veterans.missouri.edu/	Housing Residential Life, Division of Student Affairs 0780 Defoe-Graham Hall; 901 Hitt Street, Columbia, MO 65211-4050 Phone: (573)882-7275 https://housing.missouri.edu

Other Important Links and Forms

[Mizzou Academic Calendar](#)

[MyZou](#)

[Canvas](#)

[MU Alert](#)

[Course substitution form](#)

[M1 Form](#)

[M2 Form](#)

[M3 Form](#)

[DM1 Form](#) – For Dual Students

[DM2 Form](#) – For Dual Students

[DM3 Form](#) – For Dual Students

[Thesis Submission Deadlines](#)

Additional Student Resources

[Graduate School Information](#)

[GradEssentials](#)

[Student Organizations and Relevant Groups](#)

[Graduation and Commencement](#)

[Handshake](#), [Hire Mizzou Tigers](#), [MU Healthcare](#) – On and Off-campus Employment Opportunities

[Career Services – Graduate School](#)

[Alum Relations](#)

[Counseling Center](#)

[Tiger Pantry](#)

[Truman Closet](#)

Campus Information and Resources

[Athletic Information](#)

[Campus Map](#)

[The Mizzou Store](#)

[Parking and Transportation](#)

[Recreation Services](#)

[University Security](#)

[Student Health Center](#)