Master of Science in Medical Sciences
concentration in
Health Outcomes & Implementation Science
Or
Biomedical Informatics
Department of Health Outcomes & Biomedical Informatics
College of Medicine
http://hobi.med.ufl.edu/

Student Handbook
Fall 2019 Cohort

Updated July 10, 2019
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Welcome to the Department of Health Outcomes & Biomedical Informatics, housed in the University of Florida’s College of Medicine. We are excited you have chosen to pursue your graduate degree with us.

The College of Medicine is the largest of the six colleges that make up the UF Health Science Center. It is comprised of 28 research-oriented departments and ranks No. 17 nationally among public medical schools according to US News & World Report. The College’s mission is to improve health care in Florida, our nation and the world through excellence and leadership in education, clinical care, discovery, and service.

The Department of Health Outcomes & Biomedical Informatics is proud to contribute to the mission of the College through our extensive research portfolio and innovative graduate education programs. Last year our department was awarded $23.5 million in research funding. Our total annual research budget exceeds $100 million. Our goal is to continue increasing this amount and remain at the top of the College of Medicine’s funded departments.

Our research focuses on evaluating the health effects of public policies and health care and conducting controlled field trials of preventative interventions in community and clinical settings. We are also home to the Institute for Child Health Policy, which focuses on research promoting the health of children, adolescents, and young adults.

Our Health Outcomes & Biomedical Informatics MS and PhD programs allow us to provide you with innovative and specialized training. You will gain a specialized set of tools allowing you to pursue a variety of career opportunities developing, implementing, and evaluating clinical and community-based programs that promote health.

We are very proud of our students and their development into the next generation of health outcomes and biomedical informatics researchers. Welcome to our department!

Elizabeth Shenkman, PhD  
Chair, Department of Health Outcomes & Biomedical Informatics  
Director, Institute for Child Health Policy  
Associate Director, Cancer Population Sciences, UF Health
Welcome from the Director of Biomedical Informatics

Welcome to the UF College of Medicine’s Department of Health Outcomes and Biomedical Informatics as well as the UF CTSI, where I serve as director of biomedical informatics. There is new educational programming for health and clinical informatics and informatics support services for biomedical researchers. This educational programming is primarily targeted at managing and analyzing large medical data sets. The growth in the volume and diversity of biomedical data, including electronic health record data, has accelerated greatly in recent years. Researchers, practitioners, and administrators in the healthcare system are struggling to keep pace with these developments to make the most of these data.

Previously as chief of the University of Arkansas for Medical Sciences’ division of biomedical informatics, I established biomedical informatics as an academic discipline as well as directed the informatics services to researchers. My own research investigates the very nature of biomedical information, and its essential components, structures, and context. One particular methodology I have helped to develop, and use frequently, is called referent tracking. My mission and research here at the University of Florida remain much the same.

In the fall of 2017, we welcomed our 1st cohort of Biomedical Informatics Ph.D. students, after having both the M.S and Ph.D. concentrations approved under the Medical Sciences graduate degree offerings. I take pride in both teaching and mentoring, as this is one of the most rewarding treasures in academia.

I hope to build an understanding of informatics as not just a facilitator for other scientists' research but as a science in its own right and as an important part of tracking the benefits of scientific innovation.

I welcome you to the Department of Health Outcomes and Biomedical Informatics, and wish you all the success in your educational pursuits!

William Hogan, MD, M.S.
Director of Biomedical Informatics
CTSI Professor, Health Outcomes & Biomedical Informatics
Welcome from the Education Program Director

Welcome to the graduate program in Medical Sciences with a concentration in Health Outcomes & Biomedical Informatics! I hope this handbook will serve as a resource for you during your journey through your degree.

As the Director of the Health Outcomes & Biomedical Informatics Education Programs, I want to ensure that you have the best possible experience during your time with us. Our Academic Specialist, Corinne Flowers and I are here to support and guide you through the completion of your degree.

Our education programs have a lot to offer, and our high quality and experienced faculty facilitate learning that leads to a foundation for stronger research capabilities, leadership skills, teaching methods and successful tools to help not only clinicians as researchers, but also to help our students prepare for a wide range of careers in the health sciences. I encourage you to pursue as many additional experiences as you can during your time with us.

We have compiled this handbook to serve as a resource for you as you journey through your degree program. We are committed to helping you graduate with an outstanding education and a strong foundation for growth as you move on to the next phase of your career.

I look forward to working with you.

Ryan Theis, PhD
Director, Health Outcomes & Biomedical Informatics Training Education
Assistant Professor, Dept. of Health Outcomes & Biomedical Informatics
The University of Florida

The University of Florida is one of the nation’s largest research universities. It is Florida’s oldest university and has been enrolling students at its Gainesville campus since 1906. UF is an important component of Florida’s economy, providing over 100,000 jobs throughout the state and having an annual economic impact of over $12.56 billion.

UF is home to 16 academic colleges and more than 200 research centers and institutes. It employs nearly 5,000 faculty members and enrolls over 56,000 students per year. UF is one of only 17 public, land-grant university members of the Association of American Universities.

Health Science Center

The UF Health Science Center (HSC) is the country’s only academic health center with six health-related colleges (Dentistry, Medicine, Nursing, Pharmacy, Public Health and Health Professions, and Veterinary Medicine) located on a single, contiguous campus. UF Health Shands Hospital, UF Health Children’s Hospital, UF Health Shands Cancer Hospital, UF Health Heart & Vascular and UF Health Neurmedicine Hospital and nine research institutes and centers – UF Health Cancer Center, Clinical and Translational Science Institute, Emerging Pathogens Institute, Genetics Institute, Institute on Aging, Diabetes Institute, Institute for Child Health Policy, Norman Fixel Institute for Neurological Diseases and the Evelyn F. and William L. McKnight Brain Institute – are also located on the HSC campus.

The mission of the HSC is to promote health through outstanding patient care, innovative and rigorous education in the health professions and biomedical sciences, and high-impact research across the spectrum of basic, translational and clinical investigation.
College of Medicine

The College of Medicine is the largest of the six colleges in the HSC. The Gainesville campus is composed of 28 clinical and basic science departments with over 1,300 faculty members. The Jacksonville campus houses an additional 400 physicians and scientists. The UF College of Medicine works in close collaboration with UF Health Shands Hospitals, the Malcom Randall Veterans Affairs Medical Center, and several other community healthcare sites and other affiliated hospitals in Florida.

The College’s medical education program has graduated over 4,000 MD physicians since its first graduating class in 1960. The College also offers graduate degree programs in Medical Sciences, Biomedical Engineering, Physician Assistant Studies, and the Interdisciplinary Program in Biomedical Sciences, allowing talented researchers and professionals not interested in pursuing an MD the opportunity to pursue careers in medical and health care fields.

Department of Health Outcomes & Biomedical Informatics

The Department of Health Outcomes and Biomedical Informatics is a diverse, multidisciplinary faculty of health services researchers, epidemiologists, biomedical informaticians, economists, biostatisticians, psychologists and social scientists whose goal is to advance the scientific knowledge necessary to improve health care delivery, leverage big data, advance health research, and help the most vulnerable populations. The Department is also the home of the Institute for Child Health Policy, which conducts innovative policy studies and intervention trials to promote the health of children, adolescents and young adults.

The department is home to approximately 25 faculty members and more than 100 full-time research and administrative staff. Faculty and staff information, including contact information, can be found on the HOBI website.
HOBI Graduate Programs Overview

Our graduate programs are designed to give graduates the necessary knowledge to conduct health outcomes assessments and clinical effectiveness research in a range of biomedical, clinical and community-based research settings. Upon completion of the program, students will understand how to develop and evaluate health interventions, treatments, prevention practices, and policies, and to determine what works on a large-scale level and why.

The curriculum provides training in research methods, methods for translating research into policy and practice, and health policy processes and their influence on health care practices and delivery in both clinical and community settings. Students will learn to evaluate the effects that existing and proposed health policies have on health care access, quality, and costs. They will also gain in-depth exposure to current issues in dissemination research and implementation science. Throughout the curriculum, special focus will be placed on health disparities and vulnerable populations. The structure of the program provides one-on-one mentored research experience with faculty and the opportunity to be a part of ongoing research being conducted in the department. **MS students in the department of Health Outcomes and Biomedical Informatics can be part-time or full-time students.**

Student Mentoring and Guidance

**Choosing a Research Mentor**

It is recommended that students meet with several faculty members whose research interests coincide with their educational goals before selecting a research mentor. The Education Director will provide advice/recommendations to students about potential mentor matches during the student’s first semester. Students will be expected to identify a mentor by the mid-point of their first semester. The student’s research mentor will serve as the Chair of their thesis or Capstone Research Project (BMI) for the M.S. Supervisory Committee. An M.S. student may have an external member from the University serve on their committee if their initial committee members and chair approve the external member’s participation. Additionally, primary members of your committee must have Graduate Faculty status.

Students who wish to change research mentors after the mid-point of their first semester may do so by providing a written request to the HOBI Academic Coordinator or Education Director. To request such a change, the student must be in good academic standing, and both the original and proposed new mentors must be aware of and agree to the change. Research mentor changes can occur for a number of reasons, including a change in research interests or funding availability.

If the change request involves a personality conflict between the student and Research Mentor, students must first meet with the Education Director or other HOBI leadership before initiating the change request.
Supervisory Committee

Supervisory Committees must be selected by the end of the semester in which the student has accumulated 12 credits. This is typically the end of the student’s second semester; however, students enrolling in 12 credits their first semester must select their Committee by the end of that semester. The Dean of the Graduate School is an ex-officio member of all Supervisory Committees.

Once the Supervisory Committee has been selected, the student must complete the **HOBI Supervisory Committee Agreement**. The student must obtain signatures from all committee members before submitting the Agreement to the Academic Coordinator. The signed Agreement will be reviewed and approved by the Education Director before the committee is entered into the UF Graduate School system.

The **MS Supervisory Committee** will be composed of a minimum of 2 and maximum of 5 members. MS Supervisory Committee qualifications are as follows:

<table>
<thead>
<tr>
<th>Member</th>
<th>Member Type</th>
<th>Required to be HOBI faculty?</th>
<th>Graduate Faculty (GF) Status</th>
<th>Must be tenured or accruing tenure?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (required)</td>
<td>Chair/Research Mentor</td>
<td>Yes</td>
<td>Required, must have GFS in Medicine</td>
<td>Yes</td>
</tr>
<tr>
<td>2 (required)</td>
<td>Co-Chair -or- Member</td>
<td>Yes</td>
<td>Required, must have GFS in Medicine or another department</td>
<td>Yes</td>
</tr>
<tr>
<td>3-5 (optional)</td>
<td>Additional Members</td>
<td>No</td>
<td>GF status not required. Requires special approval</td>
<td>No</td>
</tr>
</tbody>
</table>

Students who wish to have a Supervisory Committee Chair different from their Research Mentor must obtain approval from the Research Mentor, Education Director, and the proposed Chair.

Changes in Supervisory Committee members are acceptable until the midpoint of the student’s final term as long as the thesis defense has not occurred. No changes in Supervisory Committee are allowed after the defense.

**Curriculum Committee**

The HOBI Education Curriculum Committee is comprised of HOBI faculty from both concentrations and two current doctoral students, one from each concentration. The curriculum committee members participate in the evaluation and review of all degree and non-degree educational activities in the department. The committee reviews and votes on new courses, requests from students to transfer credits, and any course modifications. This committee meets monthly.

**Student Recruitment and Admissions Committee**

The HOBI Student Recruitment and Admissions Committee is comprised of HOBI faculty from both concentrations and two current graduate students, one from each concentration. The committee is charged with the responsibility to review and make decisions on admissions, and to assist in student recruitment methods and efforts. The committee meets monthly.
**MS Curriculum in Health Outcomes and Implementation Science (HOIS)**

The MS in Medical Sciences with a concentration in Health Outcomes & Implementation Science is a minimum 32 credit hour degree program. The curriculum is comprised of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core – 9 credits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6822</td>
<td>Measuring and Analyzing Health Outcomes</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6851</td>
<td>Fundamentals of Dissemination and Implementation Research</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6885</td>
<td>Translational Health Research Design</td>
<td>3</td>
</tr>
<tr>
<td>Research Rigor and Ethics – 2 credits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 7877</td>
<td>Responsible Conduct of Biomedical Research</td>
<td>1</td>
</tr>
<tr>
<td>GMS 6848</td>
<td>Ensuring Rigor and Reproducibility in Clinical and Translational Research</td>
<td>1</td>
</tr>
<tr>
<td>Statistics Courses – 3 credits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHC 6052 or STA 6166</td>
<td>Introduction to Biostatistical Methods –or- Statistical Methods in Research I</td>
<td>3</td>
</tr>
<tr>
<td>Methods – Select 3 courses (6-9 credit hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6829</td>
<td>Longitudinal Research Design</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6832</td>
<td>Economic Methods for Evaluating Value in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6844</td>
<td>Time Series and Quasi-Experimental Design for Health Outcomes Research</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6813</td>
<td>Pragmatic Clinical Trials</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6846</td>
<td>Meta-Analysis in Clinical, Health Services Research, &amp; Public Health</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6803</td>
<td>Data Science for Clinical Research</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6850</td>
<td>Foundations of Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6020 or PHC 6022</td>
<td>Clinical Trial Methods –or- Design &amp; Conduct of Clinical Trials</td>
<td>3</td>
</tr>
<tr>
<td>Health Outcomes Courses – Select 1 course (3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6833</td>
<td>Health Outcomes Research in Vulnerable Populations</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6835</td>
<td>Health Outcomes Research in Children</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6812</td>
<td>Health Outcomes Research in Cancer</td>
<td>3</td>
</tr>
<tr>
<td>GMS 6802</td>
<td>Health Outcomes Research for Chronic Diseases</td>
<td>3</td>
</tr>
<tr>
<td>Implementation Science Foundations Courses (minimum 3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6836</td>
<td>Foundations of Learning Health System Research</td>
<td>1</td>
</tr>
<tr>
<td>GMS 6852</td>
<td>Community Engaged Research for Clinical Effectiveness and Implementation Science Studies</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6853</td>
<td>Applied Topics in Dissemination &amp; Implementation Science</td>
<td>3</td>
</tr>
<tr>
<td>Capstone Mentored Research Experience – (6 credit hours of one course option)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6905</td>
<td>Independent Study in Medical Sciences (Non- Thesis Eligible) –or- Research for Master’s Thesis (Thesis Eligible)</td>
<td>6</td>
</tr>
<tr>
<td>GMS 6971</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

**Total:** 32-35
### MS Curriculum in Biomedical Informatics

The MS in Medical Sciences with a concentration Biomedical Informatics is a minimum 36-credit hour degree program, with at least 22 credits specific to the BMI concentration. The curriculum is comprised of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Grade Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Courses - select all (16 credits)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6803</td>
<td>Data Science for Clinical Research</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6804</td>
<td>Translational Bioinformatics</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6805</td>
<td>Introduction to Applied Ontology</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6806</td>
<td>Security and Privacy for Clinical Research</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6850</td>
<td>Foundations of Biomedical Informatics</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 7887</td>
<td>Health Outcomes &amp; Biomedical Informatics PhD Research Seminar</td>
<td>1</td>
<td>S/U Letter-grade</td>
</tr>
<tr>
<td><strong>Foundation Courses – select 2 courses (6 credits)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6856</td>
<td>Introduction to Biomedical Natural Language Processing</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>BME 6938</td>
<td>Introduction to Biomedical Image Analysis and Imaging Informatics</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>CEN 5035</td>
<td>Software Engineering</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>COP 5725</td>
<td>Database Management Systems</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6822</td>
<td>Measuring and Analyzing Health Outcomes</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>PHC 6410</td>
<td>Psychological, Behavioral, and Social Issues in Public Health</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>PHC 6405 or</td>
<td>Theoretical Foundations of Public Health or Principles of Epidemiology in Public Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHC 6001</td>
<td></td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 7866</td>
<td>Principles of Referent Tracking in Biomedical Informatics</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td><strong>Statistics Courses - select 1 course (3 credits)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STA 6166</td>
<td>Statistical Methods in Research I</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>PHC 6050</td>
<td>Statistical Methods for Health Science Research I</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>PHC 6052</td>
<td>Introduction to Biostatistical Methods</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td><strong>Advanced Electives - select 2 courses (5-6 credits)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAP 5100</td>
<td>Human-Computer Interaction</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>CAP 5510</td>
<td>Bioinformatics</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>CAP 5635</td>
<td>Artificial Intelligence Concepts</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>CAP 6610</td>
<td>Machine Learning</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>COP 5725</td>
<td>Database Management Systems</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>COT 5405</td>
<td>Analysis of Algorithms</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>COT 5615</td>
<td>Mathematics for Intelligent Systems</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>COP 5618</td>
<td>Concurrent Programming</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>PHI 5135</td>
<td>Graduate Logic</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>BME 6938</td>
<td>Special Topics: Machine Learning for Health and Biomedical Applications</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>STA 6167</td>
<td>Statistical Methods in Research II</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>STA 5325</td>
<td>Fundamentals of Probability</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6885</td>
<td>Translational Health Research Design</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 7093</td>
<td>Introduction to Clinical and Translational Research</td>
<td>3</td>
<td>Letter-grade</td>
</tr>
<tr>
<td><strong>Capstone Mentored Research Experience (6 credit hours of one course option)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS 6905</td>
<td>Independent Studies in Medical Sciences (Non-Thesis Eligible) –or-</td>
<td>6</td>
<td>Letter-grade</td>
</tr>
<tr>
<td>GMS 6971</td>
<td>Research for Master's Thesis (Thesis Eligible)</td>
<td>6</td>
<td>S/U</td>
</tr>
</tbody>
</table>

**Total (36 credits minimum)**
Transfer of Credits/Course Substitutions

The HOBI Curriculum Committee will consider:

(1) Accepting previously completed graduate courses in place of HOBI degree requirements (retrospective Transfer of Credit). This includes courses previously completed at the University of Florida.

(2) Allowing degree credit for courses not included in HOBI degree curriculum (prospective Course Substitutions).

All transfer of credit and course substitution requests must follow the UF Graduate School guidelines for graduate degrees. Only graduate level courses (5000-7999) with a grade of B or higher will be considered for transfer of credit. No more than 9 previously earned credits can be transferred towards a MS degree. An MS degree earned in a discipline other than HOP will require special consideration before being considered for transfer of credit.

Before submitting a request, students should review all official UF Master’s guidelines.

Transfers of credit and course substitutions are requested by submitting the HOBI Course Substitution/Transfer of Credit Form to the Academic Coordinator. A rationale for the substitution(s) that explains how the course(s) relate directly to the HOBI degree must be included. The student’s Research Mentor must approve and sign each request.

Transfer of Credit requests must be submitted during the first semester of enrollment. Previous academic transcripts and syllabi for all courses proposed for transfer of credit must be included. Course Substitution requests must be submitted at least one month before scheduled registration for the proposed course. Syllabi for all proposed courses must be included.

The HOBI Curriculum Committee will review all requests and approve, deny, or request more information. Students will be informed of the approval/denial of prospective course substitution requests by the start of the semester of the proposed course. Students have the right to appeal any elective Course Substitution not approved by their mentor. Appeals will be reviewed and voted on by the Curriculum Committee. Appeals should be submitted to the Academic Coordinator on the HOBI Course Substitution/Transfer of Credit Form and be accompanied by the syllabus and rationale for how the course directly applies to the student’s curriculum.

All requests approved by the HOBI Curriculum Committee are then submitted by petition for approval by the Dean of the Graduate School before credits will officially be transferred or substituted.
Registration

Prior to the start of each semester, students must meet with their Research Mentor to review their academic progress, plan their courses for the next semester, and complete the **HOBI Course Registration Form**. Courses being offered will be posted on the HOBI [Current Course Schedule site](#). Deadlines for submission of the Course Registration Form will be communicated by e-mail each semester by the Academic Coordinator.

The Academic Coordinator will complete the student’s registration. Students will receive e-mail confirmation when their registration is complete.

**Elective Courses**
MS students may propose to take additional courses as electives beyond their degree requirements, with the approval of their Research Mentor. These courses will not count towards the credits required for completion of the degree.

**Research Courses**
**MS students** will complete 6 credits of GMS 6905 Independent Studies in Medical Sciences (Capstone project for non-thesis) or GMS 6971 *Research for Master’s Thesis*.

Students enrolled in GMS 6905 *Independent Studies for Medical Sciences* (Capstone project for non-thesis option) will work with their primary mentor at the beginning of their first semester registering for GMS 6905 to develop a project proposal. The supervisory committee shall meet with the student to discuss the fitness of the project. A week before the final exam milestone, the student shall meet and present the final report to the supervisory committee members. No formal presentation is required.

Students enrolled in GMS 6971 *Research for Master’s Thesis* will design and conduct a research thesis with the guidance of their Research Mentor. This mentored research experience is designed to lead to a publishable manuscript. GMS 6971 will culminate with the preparation of the MS thesis paper and an oral thesis defense (see page 12 for thesis defense information). Per Graduate School policy, thesis students are required to take 3 credits of 6971 in their final term (2 credits if the final term is summer).

To enroll in GMS 6971, students must initiate the process several weeks prior to registration. To enroll each semester, students must:
- Complete a Thesis/Dissertation **Research Contract**. This will outline the contact time with the instructor (Research Mentor), time allocated by the student, and specific plans and deliverables to be completed during the semester.
- Submit the signed Contract to the Academic Coordinator for registration.

At the end of each semester, students must have completed the work in the contract in order to receive credit (S/U). Incomplete deliverables will result in the student receiving a grade of Incomplete (“I”), which will be changed once the student has completed the work.
MS Non-Thesis Option

MS degree students taking the non-thesis option must participate in at least one mentor approved Grad Development Professional Skills seminar. Upcoming topics and registration information are available at: [https://graddev.ufhealth.org/professional-skills/](https://graddev.ufhealth.org/professional-skills/).

The MS degree for students taking the non-thesis option will culminate with the preparation and presentation of a Capstone project to their full committee that shows independent investigation. The Capstone project will be based on work completed during GMS 6905 Independent Studies in Medical Sciences.

MS Thesis and Defense

The MS degree for students taking the thesis option will culminate with the preparation and presentation of a thesis that shows independent investigation. The thesis will be based on work completed during GMS 6971 Research for Master’s Thesis.

The oral thesis defense will be scheduled once the Supervisory Committee has determined the thesis is ready to be defended. This defense typically occurs at the midpoint of the semester during which the student plans to graduate. The thesis defense will be open to all members of the department, College of Medicine and anyone outside of the College who wishes to attend. All members of the student’s Supervisory Committee must be present during the oral thesis defense. The Committee Chair must be physically present at the defense. Other committee members may be present electronically by phone or video conference per UF Graduate School policy. Immediately following the formal open thesis defense, the student will meet privately with the Supervisory Committee to finalize completion of the degree.

The written thesis must be of publishable quality and in a form suitable for publication. This format is guided by the UF Graduate School. Students should review the [Guide for Preparing Theses and Dissertations](https://gradschool.ufl.edu/guides) before beginning to prepare their thesis.

General Graduation Requirements

**Credits**

MS students must earn a minimum of 32 credits for the Health Outcomes & Implementation Science concentration or 36 credits for the Biomedical Informatics concentration to obtain a degree. No more than 9 credits (earned with a grade of B or higher) can be transferred from previous coursework. At least half of the MS program credits must be courses within HOBI.

**Grade Point Average**
Students must achieve an overall GPA of **B (3.0) or better to be awarded a degree.** Grade point averages are computed on all courses at the 5000 level or above and the first 6 semester credit hours of eligible 3000/4000 level course work outside the major.

Grades earned in courses transferred for credit do not count towards the student’s grade point average.

Students must also maintain an overall GPA of 3.0 or better throughout their graduate career. Students who fall below a GPA of 3.0 during any semester may request an exemption to remain in the program one additional semester. This exemption must be requested through the student’s Research Mentor and approved by the Curriculum Committee. If the exemption is granted and the student fails to upgrade their GPA during the following semester, or falls below a 3.0 GPA in any subsequent semester, the student is subject to dismissal from the program.

**Policies and Resources**

**Conduct and Honor Codes**
We expect our students to maintain the highest levels of honesty, integrity, and ethical conduct. Students are expected to be familiar with and abide by all UF Student Conduct and Honor Codes. Any incident involving violation of these codes – including fraud, plagiarism, and cheating – will not be tolerated and may be grounds for dismissal from the program.

- **Fraud** typically involves intentional and deliberate misuse of data leading to falsification of results. This includes the fabrication of data or omission or concealment of conflicting data.
- **Plagiarism** is the use of someone else’s work or ideas and passing them off as one’s own. This includes the use of material with only slight modification or without proper credit given to the original source.

Ignorance of UF student honor codes by a student will not be an excuse for any actions that occur in violation. All incidents will be handled according to the guidelines of the UF Office for Student Conduct and Conflict Resolution.

**Counseling & Wellness Center**
The UF Counseling & Wellness Center provides a number of counseling services for students. Their staff is comprised of licensed psychologists, licensed mental health counselors, clinical social workers, psychiatrists, psychiatric fellows, psychiatric nurse practitioners, postdoctoral associates, psychology interns, counselor education interns, and practicum counselors. All of their staff are generalists and see students presenting with a variety of issues. The Counseling & Wellness Center website also contains many Self-Help Resources that are available 24 hours.

**Dates and Deadlines**
The Graduate School Academic Calendar publishes all annual critical dates and deadlines. This includes deadlines for drop/add, fee payments, thesis/dissertation submission, and graduation.
The Graduate School also sends notification of important deadlines and critical dates via the Graduate Student Listserv. This Listserv also keeps all UF graduate students informed of academic, research, and financial opportunities. All currently enrolled graduate students are added to the listserv by their GatorLink e-mail account; there is no way to opt out of the listserv.

**E-mail and Off-Campus access**
HOP graduate students are required to use their GatorLink e-mail as their primary e-mail address to ensure they receive important information from the University and department. **GatorLink e-mail addresses are not allowed to be forwarded to a non-ufl.edu account.** This can result in important information being lost, as third-party providers often block forwarded messages or designate them as SPAM.

If you need to access UF web resources from off-campus, such as online journals for which UF has purchased a license/subscription, you must log in via the UF Health Science Center VPN or UF Gatorlink VPN. This will allow your off-campus computer to act like it is at UF, so you can access sites that are restricted to UF computers and GatorLink-registered users.

**HIPAA Training**
In addition to conduct and honor codes, we require our graduate students to maintain active HIPAA General Awareness training (PRV800) training for the duration of their graduate degree.

**Health Insurance**
Effective summer 2014, UF now requires all newly admitted students, both domestic and international, to show proof of health insurance. Students can purchase the UF Student Health Insurance Plan, administered through the UnitedHealthcare StudentResources or provide evidence of comparable coverage from an outside entity.

UF graduate students on an appointment as a graduate assistant, teaching assistant or research assistant, or those on a Predoctoral Fellowship appointment may also qualify for the GatorGradCare health insurance plan.

**Housing**
On-campus housing is available on a limited basis for both single and married students who are admitted or enrolled and maintain proper academic progress toward a degree at the University of Florida. Generally a waiting period of at least several months is encountered. Contact Housing & Residence Education for more information. This office can also provide information on off-campus rental options. More information on off-campus living can be found at http://www.offcampus.ufl.edu/.

**Leave of Absence**
Students who do not enroll at UF for two consecutive terms must apply for readmission to the Graduate School.
**Libraries**

The **Health Science Center Library** is located in the Communicore Building of the Health Science Center. It has a large collection of journals, texts, and reference materials, over 100 computers, and ample study space. A Gator1 card is required to check out materials.

Health Outcomes & Biomedical Informatics, like other study programs, is assigned a specific librarian liaison who can help you find resources in your particular subject area. A list of librarian liaisons in the Health Science Center Library can be found at [http://library.health.ufl.edu/services/library-liaisons/](http://library.health.ufl.edu/services/library-liaisons/).

The HOBI librarian liaison has prepared a guide to library resources for HOBI students at [http://guides.uflib.ufl.edu/hobi](http://guides.uflib.ufl.edu/hobi).

There are also several other libraries across the main UF campus, including **Library West**, which houses the Humanities, Business and Social Sciences holdings, and **Marston Science Library**, containing the Agriculture, Life Sciences, Engineering, Physical Sciences, Mathematics and Earth Sciences holdings.

A list of subject specialists for other libraries can be found at [http://apps.uflib.ufl.edu/staffdir/SubjectSpecialist.aspx](http://apps.uflib.ufl.edu/staffdir/SubjectSpecialist.aspx).

**Sexual Harassment**

It is the policy of the University of Florida to provide an educational and working environment for its students, faculty, and staff that is free from sex discrimination and sexual harassment. Sex discrimination and sexual harassment will not be tolerated, and individuals who engage in such conduct will be subject to disciplinary action. The University encourages students, faculty, staff, and visitors to promptly report sex discrimination and sexual harassment.

The Division of Student Affairs provides more information on [Sexual Harassment](https://studentaffairs.ufl.edu) definitions, policies, and procedures for reporting.

**Traffic and Parking Regulations**

All UF students can register a car and obtain a parking decal. Eligibility for parking decals is determined by the student's local address and academic classification. To obtain a parking decal:

UF Transportation and Parking Services
1273 Gale Lemerand Drive
Gainesville, FL 32611-2400
352-392-7275
[http://www.parking.ufl.edu](http://www.parking.ufl.edu)

**UF Police Department**

UFPD should be contacted for any non-emergency situations occurring on campus by calling 392-1111. All emergencies should be reported by dialing 911.
The Student Nighttime Auxiliary Patrol (SNAP) is a free nightly service for students that can provide an escort after dark to anywhere on campus. They can be reached at 392-SNAP.

**Work-related Injuries (Worker's Compensation)**
For non-serious injuries, you should first contact the Worker’s Compensation office at 392-4940 for assistance filling out the forms. You may then go to the Student Infirmary or another designated site for treatment. For serious injuries, you should go directly to the Shands Emergency Room for treatment. Upon arrival, you should inform the admitting clerk of your graduate status and that the injury is work related. As soon as possible after treatment, contact the Worker’s Compensation office so that a worker’s compensation form and accident/injury form can be prepared. After year 1, you should report to your departmental worker’s compensation representation (the department in which your payroll is processed).