

UNIVERSITY of **HOUSTON** | ENGINEERING

Department of Biomedical Engineering

Graduate Student Handbook

Updated: 06/13/2016

TABLE OF CONTENTS

WELCOME	4
DEPARTMENT INFORMATION	5
FACULTY	6
STAFF	7
DEGREE PLANS & TIMELINES	7
Doctor of Philosophy in Biomedical Engineering (from Bachelors)	7
Doctor of Philosophy in Biomedical Engineering (from Masters).....	7
Masters of Science in Biomedical Engineering (Non-Thesis).....	7
Masters of Science in Biomedical Engineering (Thesis).....	7
Thrust Areas.....	8
ADMISSIONS	8
Requirements	8
Unconditional Admissions.....	8
Conditional Admissions.....	8
Leveling Courses	9
ACADEMIC ADVISING.....	9
Role of Academic Advisor	9
Role of Faculty Advisor/PI	9
Orientation.....	9
Course Enrollment Form.....	9
Credit Load.....	10
Enrolling in Courses.....	10
Dropping a Course	10
Seminar	10
General Courses	10
Masters Research Hours	11
Doctoral Research Hours	11
Master's Thesis Hours.....	11
Doctoral Dissertation Hours	11
ACADEMIC POLICIES	12
Graduate Catalog	12
<i>Policies and Information including: Overall Policies, General Admission Policies, Planning the Graduate Program, College Policies, Programs and Degrees, Courses and Graduate Student Assistantships.....</i>	12
Cullen College of Engineering Graduate Academic Policies	12
<i>Policies including: Admissions, Enrollment and Time Limitations, Transfer Credit, Credit Level Changes, Residency Requirement, Earning Credit, Grade Point Average, Four C-Rule, Qualifying Examination, Practical Training, Graduation, Theses/Dissertation Guide, Committee Formation, Academic Honesty, Grievance Policy, Competitive Scholarships, Presidential Fellowships, and GTF.</i>	12
Graduate School Forms and Procedures	12
<i>Forms and Procedures including: Graduate and Professional Student Petition, Student-Initiated Drop Form, Student Initiated Term Withdrawal, Medical/Administrative Term Withdrawal Request, Letter of Financial Backing, CPT, Reduced Course Load Form</i>	12
Safety Training	12
Human Resources Training.....	12
PROGRAM MILESTONES	13
Coursework.....	13
Qualifying Exam (Ph.D. Only)	13
Form Thesis/Dissertation Committee	14
Prospectus (Ph.D. Only).....	14
Dissertation/Thesis Defense	15
Dissertation Submission.....	15
Graduation	15

FINANCIAL SUPPORT..... 16

 Research Assistantships..... 16

 Teaching Assistantships..... 16

 BME Departmental Scholarship..... 16

 Graduate Tuition Fellowship (GTF) 17

 In-State Waiver..... 17

 University of Houston Scholarship Opportunities 17

 Bill Payment Options 17

 Bill Payment Deadlines..... 18

HEALTH INSURANCE..... 18

 Domestic Students 18

 International Students 19

 Insurance Resources..... 19

INTERNATIONAL STUDENTS..... 19

 Arriving On Campus 19

 Maintaining F-1 Status..... 19

 Optical Practical Training (OPT)..... 19

 Curricular Practical Training (CPT) 20

MISCELLANEOUS ITEMS..... 20

 Student Travel..... 20

 Travel Reimbursements 20

 Purchase Reimbursements 21

 Mileage Reimbursements..... 21

 Space Reservations..... 21

 Resources 21

WELCOME

From the desk of the Department Chair, Dr. Metin Akay



I welcome you to the Department of Biomedical Engineering at the University of Houston, established in 2010. We are dedicated to building one of the most respected Biomedical Engineering programs at the University of Houston, in Texas, in the U.S. and in the world.

We will build an innovative entrepreneurship environment and healthcare focused academic curriculum to meet the demands and requirements of the ever-changing global economy that influences health care technology, management and delivery.

Our main goal is to develop leadership in academia, government, and industry nationally and globally. The importance of global scientific, social, and cultural interaction and the demands of the dynamic, ever-changing global healthcare economy have been strongly emphasized in our undergraduate and graduate programs.

To achieve these goals, we are developing new three emerging academic and research fields including:

Neural and Rehabilitation Engineering

We focus on neural implants, neurogenesis, neurochips, cognitive engineering, neural signal and image processing and modeling, and brain computer interface from hardware to experimentation.

Biomedical Imaging

We focus on in vivo molecular and cellular imaging research with strong emphasis on the imaging of cancer biomarkers, therapy assessment, and cancer biology models etc. We also focus on clinical cardiovascular and brain imaging and develop an advanced interdisciplinary research field based on human cardiovascular and brain imaging.

Bionanoscience

We focus on gene regulatory networks, genetics of systems biology, computational biology, and infectious diseases. We also focus on innovative drug discovery and design, translational research and personalized medicine, as well as the recent advances in bionanoscience and engineering.

Best regards,

A handwritten signature in black ink, appearing to read 'Metin Akay', written in a cursive style.

Metin Akay, Ph.D.

Founding Chair, John S Dunn Endowed Chair Professor

Department of Biomedical

Engineering 3605 Cullen Blvd,

Room 2027

Houston, TX 77204-5060

DEPARTMENT INFORMATION

University of Houston: <http://uh.edu/>

Graduate School: <http://www.uh.edu/graduate-school/>

Cullen College of Engineering: <http://www.egr.uh.edu/>

Department of Biomedical Engineering: <http://bme.uh.edu/>



Location:

Science & Engineering

Research Center

(SERC – Building 545)

2nd Floor

Office Hours: Monday to Friday; 8am to 5pm

Address:

University of Houston

Department of Biomedical Engineering

3517 Cullen Blvd, Room 2027

Houston, TX 77204-5060



Phone:

Main Phone: 832-842-8813

Fax:

Fax: 713-743-0226

Metin Akay, Ph.D.

Founding Chair, John S Dunn Endowed Chair Professor

Office Location: SERC 2027

Phone: 832-842-8813

E-mail: makay@uh.edu

Kirill Larin, Ph.D.

Director of Graduate Program & Associate Professor

Office Location: N338 ENGR 1

Phone: 832-842-8834

E-mail: klarin@uh.edu

Kaitlin Mallory

Associate Director of BME Academic Programs

Office Location: SERC 2019

Phone: 713-743-2681

E-mail: kmallory@central.uh.edu

Deborah Hernández

Academic Advising Assistant

Office Location: SERC 2018A

Phone: 713-743-2761

E-mail: dherna28@central.uh.edu

FACULTY

<p>Metin Akay, Ph.D.</p> <p>Founding Chair of BME Department & John S. Dunn Endowed Chair Professor</p> <p>makay@central.uh.edu</p>	<p>Chandra Mohan, MD, Ph.D.</p> <p>Vice Chair of BME Department & Hugh Roy and Little Cranz Cullen Endowed Professor</p> <p>cmohan@central.uh.edu</p>	<p>Kirill Larin, Ph.D.</p> <p>Director for Graduate Programs & Associate Professor</p> <p>klarin@central.uh.edu</p>	<p>Sergey Shevkoplyas, Ph.D.</p> <p>Director for Undergraduate Program & Associate Professor</p> <p>sshevkop@central.uh.edu</p>
<p>Ahmet Omurtag, Ph.D.</p> <p>Associate Professor</p> <p>aomurtag@central.uh.edu</p>	<p>Andrei Dragomir, Ph.D.</p> <p>Instructional and Research Assistant Professor</p> <p>adragomir@central.uh.edu</p>	<p>Mohammed Abidian, Ph.D.</p> <p>Associate Professor</p> <p>mabidian@uh.edu</p>	<p>Elebeoba May, Ph.D.</p> <p>Associate Professor</p> <p>eemay@central.uh.edu</p>
<p>Howard Gifford, Ph.D.</p> <p>Associate Professor</p> <p>hgifford@central.uh.edu</p>	<p>Nuri Ince, Ph.D.</p> <p>Assistant Professor</p> <p>nfince@central.uh.edu</p>	<p>Ravi Birla, Ph.D.</p> <p>Associate Professor</p> <p>rkbirla@central.uh.edu</p>	<p>Tianfu Wu, Ph.D.</p> <p>Assistant Professor</p> <p>twu13@central.uh.edu</p>
<p>Ting Y. Chen, Ph.D.</p> <p>Instructional and Research Assistant Professor</p> <p>tchen23@central.uh.edu</p>	<p>Yasemin Akay, Ph.D.</p> <p>Instructional and Research Assistant Professor</p> <p>ymakay@central.uh.edu</p>	<p>Yingchun Zhang, Ph.D.</p> <p>Assistant Professor</p> <p>yzhang94@central.uh.edu</p>	<p>Yong Du, Ph.D.</p> <p>Research Assistant Professor</p> <p>ydu9@central.uh.edu</p>
<p>Muayyad Al-Ubaidi, Ph.D.</p> <p>Full Professor</p> <p>malubaid@central.uh.edu</p>	<p>Joe Francis, Ph.D.</p> <p>Associate Professor</p> <p>jtfrancis@uh.edu</p>	<p>David Gorenstein, Ph.D.</p> <p>Adjunct Professor</p> <p>David.G.Gorenstein@uth.tmc.edu</p>	<p>Sheereen Majd, Ph.D.</p> <p>Assistant Professor</p> <p>smajd9@uh.edu</p>
<p>Muna Naash, Ph.D.</p> <p>John S. Dunn Endowed Professor</p> <p>mnaash@central.uh.edu</p>			

STAFF

My-Dung Lieu
Brenda Madrigal

Department Business Administrator
Financial Coordinator

mnlieu@central.uh.edu
bcmadrig@central.uh.edu

Kaitlin Mallory, M.A.
Deborah Hernández

Advisor
Advising Assistant

kamllory@central.uh.edu
dherna28@central.uh.edu

Nickolas Plosko
Katelyn Finnegan
Jola Adesanya
Zainab Zikar

Electronics Technician
Program Coordinator
Office Assistant
Student Worker

naplosko@central.uh.edu
krfinneg@central.uh.edu
jladesan@central.uh.edu
zzikar@uh.edu

DEGREE PLANS & TIMELINES

Doctor of Philosophy in Biomedical Engineering (from Bachelors)

The program requires the completion of a minimum of 84 credit hours of approved coursework, completion program milestones and a successful Dissertation defense.

Degree Plan: (as of Fall 2013)

36 Coursework Credits

- 2 Math Courses
- 1 Statistics Course
- 1 Core Course
- 8 Elective Courses

36 Research Credits

12 Dissertation Credits

Timeline (4- 6 Years)

- Coursework
- Qualifying Exam
- Form Dissertation Committee
- Prospectus
- Dissertation Defense
- Graduation

Doctor of Philosophy in Biomedical Engineering (from Masters)

The program requires the completion of a minimum of 54 credit hours of approved coursework, completion of program milestones and a successful Dissertation defense.

Degree Plan: (as of Fall 2013)

24 Coursework Credits

- 1 Math Courses
- 1 Core Course
- 6 Elective Courses

18 Research Credits

12 Dissertation Credits

Timeline (3-5 Years)

- Coursework
- Qualifying Exam
- Form Dissertation Committee
- Prospectus
- Dissertation Defense
- Graduation

Masters of Science in Biomedical Engineering (Non-Thesis)

The program requires the completion of a minimum of 36 credit hours of approved coursework.

Degree Plan: (as of Fall 2013)

36 Coursework Credits

- 1 Math Course
- 1 Statistics Course
- 1 Core Course
- 9 Elective Courses

Timeline (2 Years)

- Coursework
- Graduation

Masters of Science in Biomedical Engineering (Thesis)

The program requires the completion of a minimum of 30 credit hours of approved coursework and a successful Thesis defense.

Degree Plan: (as of Fall 2013)

21 Coursework Credits

- 1 Math Course
- 1 Statistics Course
- 1 Core Course
- 4 Elective Courses

3 Research Credits

6 Thesis Credits

Timeline (2 Years)

- Coursework
- Form Committee
- Thesis Defense
- Graduation

Thrust Areas

- Each Track allows for a specialized focus within a prominent area of Biomedical Engineering. Below are the three Tracks offered by the UH BME program:
 - **Neural and Rehabilitation Engineering:** We focus on neural implants, neurogenesis, neurochips, cognitive engineering, neural signal and image processing and modeling, and brain computer interface from hardware to experimentation.
 - **Biomedical Imaging:** We focus on in vivo molecular and cellular imaging research with strong emphasis on the imaging of cancer biomarkers, therapy assessment, and cancer biology models etc. We also focus on clinical cardiovascular and brain imaging and develop an advanced interdisciplinary research field based on human cardiovascular and brain imaging.
 - **Genomics, Proteomics and Bionano Engineering and Science:** We focus on gene regulatory networks, genetics of systems biology, computational biology, and infectious diseases. We also focus on innovative drug discovery and design, translational research and personalized medicine, as well as the recent advances in bionano science and engineering.

ADMISSIONS

Requirements

- **Course Requirements:** These courses are required, should an applicant not have a Biomedical Engineering background.
 - 2 years of Calculus
 - 1 year of Engineering Physics
 - 1 year of Biology
 - 1 year of Chemistry
- **Admission Criteria**
 - B.S. Degree: Biomedical Engineering or related field
 - GPA: (MS) 3.00/4.00 on last 60 hours (Ph.D.) 3.30/4.00 on last 60 hours or Graduate hours if hold MS degree
 - GRE: (Current scale) Q-159, V-150 (Prior scale) Q-750, V-450
 - (International Applicants) TOEFL: PBT- 580, CBT- 236, IBT- 92
 - (International Applicants) IELTS: 7.0
- For the most up to date information regarding Admission Process, please visit: <http://www.bme.uh.edu/graduate/admissions>

Unconditional Admissions

- Unconditional Admissions means an incoming student was accepted into the program without any conditions. The student can proceed throughout the semester without certain requirements.

Conditional Admissions

- Conditional Admissions means an incoming student was accepted into the program with conditions that they **MUST** meet in order to stay in the program.
- An example of a condition:
 - Student is required to complete the first 12 credit hours with a “B” or 3.0/4.0 average. (This means the student must get a 3.0 or above to stay in the program.)
- To change the Conditional Admission, the conditions must be met. At the end of that semester, the student will be evaluated and if the condition has been met, a **GRADUATE AND PROFESSIONAL STUDENT PETITION** will be submitted to change their status to Unconditional.
- The Conditional status **MUST** be changed no later than the end of the students first year of enrollment.

- If it is a part-time student, the Conditional admission must be changed to Unconditional admission at the completion of the first 12 hours of graduate credit.
- Should a student NOT meet their condition, within the specified time period, they will be ineligible for any advanced degree at this institution and will not be permitted to re-enroll for graduate study.

Leveling Courses

- If leveling courses are required for admission, the leveling courses must be completed prior to the student taking graduate level courses. Leveling courses must be completed with a minimum grade of B. Leveling courses cannot be counted towards graduate level credit.

ACADEMIC ADVISING

Role of Academic Advisor

- The Graduate Academic Advisor is responsible for confirming course enrollment, processing petitions for changes or adjustments to the degree plan, coordinating degree plan audits, assisting with academic plans, managing student records and facilitating dialogue between students, staff and faculty.
- All petitions will initially go through the Graduate Advisor, who will then begin the process required to gain signatures. Once a decision has been made regarding the petition, the approval or denial confirmation will come from the Graduate Advisor.
- The Graduate Advisor is available to meet with students Monday through Friday, 8am to 5pm. Advising is done preferably by appointment as the advisor may be busy or occupied with another student. Walk-In hours may change and should be checked on the Biomedical Engineering Website.

Role of Faculty Advisor/PI

- The Faculty Advisor/PI is responsible for the overall learning that occurs while Graduate students are actively engaged in their studies.
- The Faculty Advisor/PI should meet with each student at the beginning of each semester to determine their plan for academic engagement and learning.
- The Faculty Advisor/PI is a mentor and role model within their academic field.

Orientation

- At the beginning of each Semester, incoming Biomedical Engineering (BME) students will have multiple Orientations to attend:
 - Cullen College of Engineering Orientation
 - Graduate School Orientation
 - Biomedical Engineering Departmental Orientation
 - (If Applicable) International Student Orientation
- It is important that students make a strong effort to attend all Orientations.
- The BME Departmental Orientation is Mandatory. During the BME Orientation students will meet the faculty, staff and students. Additionally, information will be shared regarding expectations and departmental policies. Doctoral student hires will be given a New Hire Check List and required to complete all tasks within 30 days of Enrollment.

Credit Load

- Doctoral students, who hold an Assistantship and receive GTF, are required to take 9 credit hours per semester.
- Doctoral students not receiving funding or an Assistantship can take up to 12 credit hours per semester.
- Master's students who hold an assistantship must take 12 hours per semester.
- Master's students can take up to 12 credit hours per semester.

Enrolling in Courses

- The students are encouraged to enroll themselves but may consult the Graduate Advisor if help is needed.
- Any student seeking to take a course outside of the Engineering College will need to fill out a general petition, stating why they would like to take the course.
- There are deadlines for enrolling in courses; they change each year but can be found in the Academic Calendar.

Dropping a Course

- If a student wants to Drop a course, meaning no longer take it, they can. But there are restrictions.
 - If a PhD student is funded (meaning they are receiving stipend and GTF) they must remain in at least 9 credit hours; a funded MS students must remain in at least 12 credit hours.
 - If they drop BELOW 9 credit hours they will lose their GTF, therefore need to pay all tuition.
 - The student will need to submit the **STUDENT INITIATED DROP FORM** in order to have the course dropped. The form should be turned into the Registrar (graduate advisor).
 - International students CANNOT drop below 9 credit hours due to their Visa Restrictions, UNLESS they submit the **REDUCED COURSE LOAD (RCL) FORM**.
 - RCL form is traditionally used for International students who will be in their final semester and only need less than 9 credit hours to graduate.

Seminar

- The Seminar Course (BIOE 6111) is not a traditional lecture/lab course.
- BIOE 6111 is a professional development opportunity aimed at engaging students outside of the classroom by bringing in professionals within the field as well as an opportunity for students to present their research endeavors.
- Students are required to register for ONE Seminar course per SEMESTER as they are enrolled in research hours.
- BIOE 6111 is a one credit course, but the credit does not count towards the overall credit hours. For example, if a student is completing their Masters and doing a Thesis, their credit hour total is 30. In adding BIOE 6111, at least once a semester during their academic program, they will roughly have taken 32 credit hours. The additional 2 are from the Seminar courses and do not count towards the 30 credits needed to complete the degree but do count towards the overall semester credit count.
- Adding this One Credit Course to the Semester Course Schedule can cause the student to register for 10 credits instead of the traditional 9. In this case, students can reduce their research credits by 1, so the total credit hours equal 9 or simply take an extra credit.

General Courses

- General Courses are taken with the entire BME Graduate population and potentially some upper level undergraduate students.
- Doctoral students and Master's students should follow the degree plan that was being used during the year they entered the program.

- A listing of courses can be found within the Graduate Catalog and on the BME website: <http://bme.uh.edu/graduate/thrust-area>
- Students may have the opportunity to take Electives outside of the BME program. If this is the case, confirm that the Elective can be used, by speaking with the Graduate Academic Advisor. Only twenty-five percent of your coursework may be completed outside of the BIOE department. The BIOE Statistics for BME is the only statistics course allowed to fulfill the statistics requirement.
- In the first semester of the graduate program, all students may only take courses within the BIOE department, unless specified by their PI.

Masters Research Hours

- Masters Research Codes start with a “6” and end with “98”. For example... 6198.
- The second number in the code represents the amount of credit hours being offered. For example... 6398 = 3 credit hours or 6598 = 5 credit hours.
- Course enrollment options include:
 - 6198= 1 credit
 - 6298= 2 credits
 - 6398= 3 credits
 - 6498= 4 credits
 - 6598= 5 credits
- For students interested in enrolling in 6 credits, they must enroll in two of the above options. For example... 6198 and 6598 = 6 credits.
- Master's students first enroll in the 6x98 as soon as they begin working on their master's research.

Doctoral Research Hours

- Doctoral Research Codes start with an “8” and end with “98”. For example... 8198.
- The number in the middle is the number of credit hours being offered. For example... 8398 = 3 credit hours or 8598 = 5 credit hours.
- Course enrollment options include:
 - 8198= 1 credit
 - 8298= 2 credits
 - 8398= 3 credits
 - 8498= 4 credits
 - 8598= 5 credits
- For students interested in enrolling in 6 credits, they must enroll in two of the above options. For example... 8198 and 8598 = 6 credits.
- Doctoral students first enroll in the 8x98 as soon as they begin working on their Doctoral research.

Master's Thesis Hours

- Master's Thesis Codes are 6399 and 7399; 6399 occurs first, then 7399.
- Students traditionally complete their thesis hours during the last two semesters.
- Master's students are awarded a final thesis grade in 6399 and 7399 from their Thesis Advisor after successfully defending their thesis.

Doctoral Dissertation Hours

- Doctoral Dissertation Codes are 8399, 8699 and 8999.
- Students traditionally complete their Dissertation hours during the last two- three semesters.
- Doctoral students are awarded a final dissertation grade in 8399, 8699 and/or 8999 (12 hours of dissertation courses) from their dissertation chair after successfully defending their dissertation and submitting 5 copies of their dissertation to the Engineering Dean's Office for binding. If students have taken/are taking more than 12 credit hours, only the last 12 hours of thesis will be graded.

ACADEMIC POLICIES

Graduate Catalog

- The Catalog is updated annually and houses all policies and information related to Graduate study. Please, follow this link and select the most current Graduate Catalog: <http://catalog.uh.edu/index.php>

Policies and Information including: Overall Policies, General Admission Policies, Planning the Graduate Program, College Policies, Programs and Degrees, Courses and Graduate Student Assistantships.

Cullen College of Engineering Graduate Academic Policies

- For a full list of the Engineering College, Graduate Student Academic Policies, please follow this link: <https://www.egr.uh.edu/academics/graduate-programs-policies>

Policies including: Admissions, Enrollment and Time Limitations, Transfer Credit, Credit Level Changes, Residency Requirement, Earning Credit, Grade Point Average, Four C-Rule, Qualifying Examination, Practical Training, Graduation, Theses/Dissertation Guide, Committee Formation, Academic Honesty, Grievance Policy, Competitive Scholarships, Presidential Fellowships, and GTF.

Graduate School Forms and Procedures

- For a full list of the Graduate School Forms and Procedures, please follow this link: <http://www.uh.edu/graduate-school/forms/>

Forms and Procedures including: Graduate and Professional Student Petition, Student-Initiated Drop Form, Student Initiated Term Withdrawal, Medical/Administrative Term Withdrawal Request, Letter of Financial Backing, CPT, Reduced Course Load Form.

Safety Training

- At the beginning of each Semester, incoming students are required to take Laboratory safety training.
- These training(s) are Mandatory in accordance with safety regulations from the department of Environmental Health and Life Safety (<http://www.uh.edu/ehls/>)
 - Students working INSIDE a Laboratory within the SERC building will need to take the Biological Safety (EH12) Course. <http://www.uh.edu/ehls/training/eh12/>
 - Students working in a Laboratory OUTSIDE of the SERC building will need to take the General Laboratory Safety and Hazardous Materials Orientation (EH06) <http://www.uh.edu/ehls/training/eh06/>
- In addition to these trainings, we ask that students follow the posted Laboratory Safety Expectations and Policies located within each Laboratory.

Human Resources Training

For Ph.D/M.S. TA & RA's

only

- Human Resources requires the following Trainings to be completed within 30 days of enrollment
 - *Conflict of Interest/Responsible Conduct Online Training*
 - *Mandatory Online Hiring Training (Accessed through MyUH)*
 - Completion certificates can be emailed to DBA.

PROGRAM MILESTONES

Coursework

- Coursework as outlined in the degree plan must be completed by the time of graduation. However, the more common option is to have it done in two to three years, then focus on research.
- Students must get a C+ or better in a course to earn credit toward their degree. Please refer to the “Grading Policies” in the Graduate Catalog of the appropriate year.

Qualifying Exam (Ph.D. Only)

- **Eligibility**
 - Doctoral students are eligible to sit for the Qualifying Exam after the second semester of graduate studies. Doctoral students MUST complete the Qualifying Exam by the end of their fourth semester, but traditionally complete it by the end of their third semester.
 - Students must confirm with the Graduate Advisor that they plan to complete their Qualifying Exam in a given semester.
- **Components of Exam**
 - The Qualifying Exam is administered orally and students must submit two abstracts (1) current research and (2) future research, one week prior to the exam.
 - Notes, PowerPoint slides or electronic displays are prohibited.
- **Committee**
 - The Graduate Advisor will create the Qualifying Exam committee based on faculty availability and the student’s schedule.
 - The committee will consist of at least four (4) members: candidate’s Research Advisor, Department Chair, and two (2) additional faculty members from the department. Additional faculty should represent the candidate’s research focus area and are primarily responsible for the examination of the candidate.
 - The Research Advisor may ask questions but is expected to fulfill the advocate role for the candidate as he/she prepares for the examination. The Chair’s primary function is to ensure that there is consistency across all candidate qualifying examinations.
- **Overview**
 - Qualifying Exam Committees are coordinated by the Graduate Advisor. Students will be notified of the date and time of their Exam via email.
 - Examinations are expected to span about 1 hour but may vary between 1 to 1.5 hours.
 - The oral component will start with a general overview provided by the candidate on their research thrust area and prospective research project.
 - Committee members will be given hard copies of the two abstracts (supplied by the Doctoral student).
 - The Exam Committee will then ask questions and engage in discussions with the student for the remainder of the session. The following is the goal and scope of the oral exam:
 - Determine student’s depth of understanding of the Biomedical Engineering graduate core.
 - Assess student’s capacity to think critically and apply engineering tools to solve problems.
 - Assess student’s capacity to integrate skills in an area of research in biology and/or biomedical engineering.
 - A successful student will be knowledgeable, able to think critically, and demonstrate the ability to integrate and/or apply course information to topics pertinent to their research area.
 - Immediately following the oral examination session, the Exam Committee will meet in a closed session to discuss the student’s performance and determine the results of the exam. The following results are possible.
 - **Pass:** the candidate may continue in the PhD program, complete course work, and prepare to defend a prospectus.

- **Contingent Pass:** the candidate is allowed to continue in the PhD program only if they successfully fulfill a contingency plan recommended by the Exam Committee.
- **Fail:** the candidate will be removed from the PhD program. A contingent plan may be developed to enter the Masters program, either thesis or non-thesis. The candidate may petition to retake the qualifying exam during which time he/she may be retained in the PhD program until the petition is resolved. If the petition is not accepted, he/she will be removed from the PhD program. If the petition is accepted, a continuation in the PhD program will be contingent upon results of a re-examination.
- The **QUALIFYING EXAM SCORE SHEET** will be filled out and turned into the Graduate Advisor, so the results can be put into the students file.

Form Thesis/Dissertation Committee

- The Thesis/Dissertation Committee members are determined by the student and their Advisor.
 - A Dissertation Committee must consist of at least five members, with
 - the advisor as chair,
 - at least two additional faculty members from the Biomedical Engineering Department, and
 - at least one additional University of Houston tenure-track faculty;
 - In total, you need a minimum of **four** tenure-track faculty members from the University of Houston.
 - A Thesis Committee must consist of at least three members, with
 - the advisor as chair,
 - at least one additional faculty members from the Biomedical Engineering Department, and
 - at least one additional University of Houston tenure-track faculty member;
 - In total, you need a minimum of **three** tenure-track faculty members from the University of Houston.
- The Committee members must fill out the **COMMITTEE APPOINTMENT FORM** with their acknowledgement that they will participate. The form must be submitted well before the proposal defense is scheduled since the committee must be approved by the Department and Dean's Office prior to the defense. A student need not be enrolled while requesting to form a committee but must be enrolled when the defense takes place.
- If a Committee member is outside of the University of Houston, that member's CV must be sent to the Graduate Advisor.
- **Doctoral Dissertation Committee formation Deadline:**
 - The Committee must be formed at least two weeks prior to the Prospectus.
- **Master's Thesis Committee formation Deadline:**
 - The Committee must be formed by the 12th school day/ ORD of the semester the student plans to defend.

Prospectus (Ph.D. Only)

- **Eligibility**
 - Doctoral students must complete their Prospectus at least one semester before Graduation.
- **Components**
 - A rough draft of a research proposal should be shown to the student's research advisor for approval of content prior to scheduling the oral presentation.
 - The oral presentation of the dissertation prospectus is made to the student's Dissertation committee. Other interested members of the faculty are invited to attend the presentation but are encouraged to leave prior to the questioning by the dissertation committee.
- **Overview**
 - The student's presentation should take advantage of appropriate audio visual aids and should be limited to no more than 50 minutes.

- Copies of the written dissertation prospectus must be distributed to all members of the student's dissertation committee no later than one week prior to the oral presentation. In the oral examination, the student is expected to defend their prospectus and justify that the proposed research is of the acceptable quality and magnitude consistent with quality doctoral education.
- Following the oral presentation of the research proposition, questions are welcomed from members of the departmental faculty. Following general questions, departmental faculty members other than those on the student's dissertation committee are excused and the student's dissertation committee and interested faculty from the student's major will remain to ask questions of the candidate regarding his proposed research. Generally, the oral discussion of the dissertation prospectus is limited to three hours.

- After questioning, the candidate is excused from the room while the dissertation committee conducts its deliberations.
- **Committee**
 - The Prospectus Committee is comprised of the Dissertation Committee members that were listed on the approved Committee form.
 - The decision regarding whether or not the dissertation prospectus is acceptable is the decision of the dissertation committee alone.
 - The student's dissertation committee conveys its evaluation of the acceptability of the dissertation prospectus to the chair of the departmental graduate committee by signing the **PROSPECTUS APPROVAL FORM**.
 - If the student's dissertation prospectus is considered acceptable, the chair of the departmental graduate committee will recommend to the Graduate College that the student be advanced to PhD candidacy status.
 - If the student's dissertation prospectus is unacceptable, the chair of the dissertation committee formulates recommendations for future action and submits them to the chair of the departmental graduate committee and the chair of the department. Either of two recommendations is possible:
 - A re-examination may be scheduled and the entire process repeated, or
 - The student may be removed from the doctoral program. The results of the dissertation prospectus presentation are conveyed to the student by the chair of the departmental graduate committee.

Dissertation/Thesis Defense

- The student will coordinate their Defense date with their committee and Advisor.
- If a room needs to be reserved, the student can contact the Graduate Advisor.
- Results should be reported to the Graduate Advisor, either via email or in person.
- **Dissertation/ Thesis Defense Deadline**
 - The Graduate School and Cullen College of Engineering has set a deadline for defending. All students must defend by the given date or they will not be able to graduate that semester. The deadline changes each semester; the Academic Calendar will note the date.
 - For example, in Fall 2014, all students planning to defend, had to have their defense completed by Friday, December 05.

Dissertation Submission

- All information necessary for submission can be found here: <https://www.egr.uh.edu/academics/graduate-programs-policies/guide-preparation-thesesdissertations>
- If there are questions or if clarification is needed regarding this two-step process, contact the College Graduate Coordinator located in E421 in the Dean's Office of Engineering Bldg 2 (D3): Miranda Vernon-Harrison, phone 713-743-4219.

Graduation

- **Graduation Application Deadline**
 - Students must apply for Graduation by the deadline or else they will not be able to graduate in that given semester. The Graduation Application deadline can be found in the Academic Calendar.
 - For example, in Fall 2014, the deadlines for graduation application were (1) October 3, 2014 with a \$25 fee and (2) October 31, 2014 with a \$50 fee.
 - After October 31, 2014, if students did not apply for graduation, they are NOT allowed to graduate in that semester.

- **Steps for Graduation**

- Apply for Graduation via MyUH and pay fee (\$25- if late, \$50)
- Complete final degree plan (get blank form from Graduate Advisor)
- Complete Dissertation/Thesis
- Submit Electronic Dissertation/Thesis into the Vireo website
- Submit approved hard copy of Dissertation/Thesis to Miranda Vernon-Harrison (E-421)
- Pay for binding (\$40)
- Attend Commencement
- Make sure your address is updated and accurate in your MyUH account
- For more information: <https://www.egr.uh.edu/academics/graduate-programs-policies/graduation>

FINANCIAL SUPPORT

Research Assistantships

- Research Assistantships are awarded directly to students by the department faculty. The sources for RA funding are derived from research grants and contracts awarded to the faculty. Typically, the faculty sponsor arranges to do research with a student who is pursuing a PhD or MS degree. It is the responsibility of all applicants to find a faculty member with whom he/she can conduct research projects. Research assistantships are usually given to students that the faculty member has had in class and with whom the faculty member or research group intends to do research.
- RA positions are highly competitive and are traditionally awarded to Ph.D. students.

Teaching Assistantships

- Teaching Assistantships are awarded to applicants by the chair of the Department and are usually given to new graduate students for one year only. The awards are based on the potential of the candidate to make an outstanding contribution to the BME graduate program. Usually, students who have been given a TA for one year are expected to transition into being supported as an RA after their first year.
- TA positions are highly competitive and are only awarded to Ph.D. students.
- Not all students recommended for a TA will receive one due to the limited available positions.

BME Departmental Scholarship

- The scholarship is awarded through the Department of Biomedical Engineering. Applicants are eligible upon acceptance into the Graduate Program. Scholar selections are determined by the department's scholarship committee. Criteria used for awarding this competitive scholarship are as follows:
 - Academic record in undergraduate program, the quality of the undergraduate program, the reputation of the academic institution and any previous other academic experience
 - Graduate record examination results
 - Letters of recommendation
 - Job experience
 - Publications
 - Research Interests and research statements
 - Research Experience
 - Journal Publications
 - Poster and oral presentation record/evidence
- In order to maintain the BME Departmental Scholarship, current scholars must complete a minimum of 6 credit hours each Fall/Spring/Summer semester and maintain a minimum 3.0 semester GPA. Awarding of the scholarship is contingent upon available funds.

Graduate Tuition Fellowship (GTF)

- The Graduate Tuition Fellow or GTF is awarded each semester to students with RA or TA positions. GTF traditionally covers tuition and *some* fees (not all fees are covered). The GTF award is submitted by the department on behalf of the student.

In-State Waiver

- In-State Waivers are awarded to students with TA or RA positions who are from outside the state of Texas. The waiver grants out-of-state students, in-state tuition. This is submitted by the department on behalf of the student.
- \$1,000+ scholarships awarded to a student from an Advisor or UH affiliate, can grant out-of-state students, in-state tuition. Proof of the award needs to be given to the Graduate Advisor, prior to the start of the semester.

University of Houston Scholarship Opportunities

- Scholarship opportunities for Graduate students can be reviewed here:
<http://www.uh.edu/financial/undergraduate/types-aid/scholarships/index.php>

Bill Payment Options

There are three options for students in regards to paying their bill: <http://www.uh.edu/financial/payment/plans/#IPP>

- **Installment Pay Plan:** This plan is available to any student unable to pay the full amount due by the university due date.
 - Does not cover prior unpaid balances.
 - \$25.00 non-refundable origination fee.
 - Provides for 4 separate installments.
 - The 1st installment is due by the initial due date for all students and must be at least 25% of the current semester's tuition and fees.
 - Requires that any credits to the account (financial aid, etc) must first be applied to the unpaid balances.
 - A late fee charge of \$25.00 will apply for each installment not paid by the due date.
 - Any additional charges added to the student's account after the initial installment will be included in the installment plan. However, the student may be required to immediately pay an amount equal to at least 25% of any new charges.
 - The Installment Pay Plan is not available for Winter Mini session students who are not enrolled in the Spring term.
 - The Installment Pay Plan is not available to students whose financial aid covers 100% of their total term balance.
- **Emergency Deferment Plan:** This plan defers the payment of all the current semester's tuition and mandatory fees. (non-housing students)
 - Is only available to students who **do not** live in university housing.
 - Does not cover prior unpaid balances.
 - The deferment covers only tuition and required/mandatory fees for the current term.
 - The plan defers payment until the 90th day for the fall/spring term or the 45th day of the regular session for the Summer term.
 - The deferment has a 5% annual percentage rate.
 - A late fee charge of \$25.00 will apply if outstanding debt is not paid in full by due date.
 - Requires that any credits to the account (financial aid, etc) must first be applied to the unpaid balance of the deferment.

- The plan must be paid during the term for which it was entered.
- **Short-Term Tuition Deferment Plan:** This plan defers the payment of all the current semester's tuition and fees. (housing students only)
 - Is only available to students who live in university housing.
 - Does not cover prior unpaid balances.
 - Is for the entire balance of current term tuition, fees, housing, board
 - The deferment accrues interest at a 12% annual percentage rate.
 - The deferment has a \$5.00 origination fee.
 - A late fee charge of \$25.00 will apply if outstanding debt is not paid in full by due date.
 - The deferment is due and payable no later than the 45th calendar of the term in a regular fall/spring term; and
 - The deferment is due and payable no later than the 30th calendar day of a short term such as the summer or other special terms; or the last day of the session, whichever occurs earlier.
 - Requires that any credits to the account (financial aid, etc) must first be applied to the unpaid balance of the deferment.

Bill Payment Deadlines

- It is very important for students to pay attention to the payment deadlines! Should bills be not paid, students can be dropped from their courses.
- Follow this link to check payment deadlines: <http://www.uh.edu/financial/payment/billing-due-dates/>

HEALTH INSURANCE

Domestic Students

- Domestic students are not required by the University to obtain health insurance through the University of Houston. However, it is highly encouraged for all students to have some form of health insurance.
- To enroll in health insurance through the University of Houston, you have 3 options:
- Option 1: Direct Pay by mailing enrollment card to Macori Administration – see enrollment card and benefit book for requirements and deadlines.
- Option 2: Direct Pay by enrolling online at www.studentinsurance.com/Schools/TX/UH/ - see online enrollment information for requirements and deadlines.
- Option 3: Sign up through *myUH* (PeopleSoft) to have your premium charged to your student account (Fall and Spring Semesters only – Use Option 1 or 2 to enroll for Summer only coverage). See benefit book or online enrollment information for requirements.
 - **ENROLLMENT DEADLINE: Official Reporting Day as posted in the Academic Calendar.**
 - ENROLLED IN ERROR: Come to the Health Center to request a credit to your student account during the posted insurance waiver period. Requests for credit will not be accepted after the Official Reporting Day as posted in the Academic Calendar.
- *NOTE: A copy of the University of Houston endorsed Health Insurance Plan brochure and identification card for the current Academic year may be obtained at www.studentinsurance.com/Schools/TX/UH/ or the University Health Center. You should read and understand the policy's coverage, limitations, claim processing and your responsibilities. The brochure also provides information about medical emergencies, vision care discounts, 24/7 nurse line, optional dental insurance and medical evacuation/repatriation. You should carry the identification card with you at all times. The card contains your policy number and contact information for the insurance company and provider network for the current Academic Year.*

International Students

- Non-immigrant International students, who are carrying hours, will be **automatically enrolled** and charged for health insurance each semester to satisfy the University policy regarding maintaining acceptable health insurance coverage. The amount during Fall 2016 was approximately \$750.
- A waiver of the health insurance fee may be requested online with proof of acceptable alternate insurance. The insurance plan and University's criteria are reviewed periodically and may be subject to change.

Insurance Resources

- UH Health Center, Student Health Insurance Office Website: <http://www.uh.edu/healthcenter/insurance/>
- UH Health Center, Student Health Insurance Office Phone: 713-743-5151
- UH Health Center, Student Health Insurance Office Email: UH@studentinsurance.com

INTERNATIONAL STUDENTS

Arriving On Campus

- All international students attending the University of Houston must contact the International Student and Scholars Services Office (ISSSO) upon campus arrival. In addition, International students are required to attend an orientation program. For more information contact ISSSO at:

302 Student Service Center I
Houston, TX 77204-3024 USA
Phone: (713) 743-5065
Fax: (713) 743-5079
<http://www.issso.uh.edu>

Maintaining F-1 Status

- Students must be enrolled full-time (9 hours for graduate students).
- Students are not allowed to work, unless they have CURRENT permission from an International Student Counselor or the Department of Homeland Security (Pg. 3 on the I-20 or an Employment Authorization Card)
- Students must carry current documentation (i.e. passport, I-20)
- Keep the ISSSO up to date on address/contact information/ major life changes.

Optical Practical Training (OPT)

- Optional Practical Training is not permitted for students during their first semester at the University of Houston or for students with a GPA below 3.0.
- **Post-Completion OPT** is allowed for students who have completed their degrees, including submission of their thesis/dissertation for binding for MS and PhD degrees.
- **Pre-completion Part-time OPT** is allowed for unsupported F-1 students during any semester but is limited to 20 hours per week. Time used is deducted from the one year eligibility at half the rate. Students must meet all applicable INS regulations regarding their status as a student.
- **Pre-Completion Full-time Summer OPT** is allowed but students can work full-time during the summer only. Time used is deducted from one year of eligibility. Students cannot hold a full-time OPT and be a supported student simultaneously.
- **Pre-completion full-time OPT** with only thesis or dissertation remaining is allowed for non-supported students, with approval of thesis/dissertation advisor. All coursework, along with department requirements, like screening exams, qualifying exams, and thesis/dissertation proposals must be completed for students to be eligible.

- For students wanting to participate in OPT, they will need to:
 - Submit a copy of their EAD card to ISSSO.
 - Actively search for employment (Visit UCS for resources and information).
 - Update ISSSO and UH PeopleSoft "SEVIS" address type of their new address when they move.
 - Using the OPT Self Report, submit the employer's information including name, address, and the duration of employment to ISSSO.
 - Create a folder for the student's records only to maintain their "Personal Portfolio". In this folder, keep evidence of OPT employment that is:
 - Directly related to major
 - A minimum 20 hours/week
 - Paid or unpaid
- According to the federal regulations [8 CFR 214.(f)], F-1 students are responsible for reporting the address, employer's name and address, and any periods of employment and unemployment while on OPT. ISSSO is responsible for updating the student's SEVIS record to reflect these changes. This reporting responsibility is an on-going requirement.

Curricular Practical Training (CPT)

- CPT as practicum/internship or COOP will not be allowed. CPT as Dissertation or Thesis Research will be allowed, but to be eligible, a student must provide a letter from the employer verifying that the corporation is involved in the research and that the offer of employment is predicated on the need for access to their facility for purposes of data collection. The letter must be countersigned by the student's advisor to show approval of the CPT.

MISCELLANEOUS ITEMS

Student Travel

- **Domestic Travel**
 - Students planning to travel for the department to conferences or events, must submit the following to the Graduate Advisor ATLEAST 2 (two) week before the travel date:
 - TRAVEL REQUEST CHECKLIST
 - TRAVEL REQUEST
 - Supporting documents
- **International Travel**
 - Students planning to travel for the department to conferences or events, must submit the following to the Graduate Advisor ATLEAST 1 (one) month before the travel date:
 - TRAVEL REQUEST CHECKLIST
 - TRAVEL REQUEST
 - EXPORT CONTROLS AND EMBARGO FORM
 - Supporting documents
- Should these deadlines not be followed, there is a chance travel will not be approved.
- Students should be aware of the University policies related to Travel. They can be reviewed here:
 - <http://www.uh.edu/af/universityservices/policies/mapp/04/040204.pdf>

Travel Reimbursements

- Students returning from travel and needing reimbursements must submit the TRAVEL REIMBURSEMENT CHECKLIST and supporting documents to the Program Coordinator. Please, allow up to one month for processing.

Purchase Reimbursements

- Students needing reimbursements for purchases they made for their lab must submit the **REIMBURSEMENT FORM** and all receipts.
 - Please, allow up to one month for processing.

Mileage Reimbursements

- Students using their own vehicles and asking for mile reimbursement must fill out the **MILEAGE REPORT FORM**
 - Please, allow up to one month for processing.

Space Reservations

- Students can reserve space within the 2nd floor SERC for presentations, studying and academic milestones. Please, speak with the Graduate Advisor to check space availability.

Resources

Department or Service	Website	Phone	Location
A.D. Bruce Religion Center	http://www.uh.edu/adbruce/	713-743-5050	3801 Cullen Boulevard
Athletics	http://www.uh.edu/athletics/		
Bookstore	http://uh.bncollege.com	713-748-0923	UC, Calhoun Lofts, and Stadium Garage Retail
Center for Students with DisABILITIES (CSD)	www.uh.edu/csd	713-743-5400	106 Student Service Center 1
Counseling and Psychological Services	http://www.uh.edu/caps/	713-743-5454	Student Service Center 1- 226
Engineering Career Center	http://career.egr.uh.edu/	713-743-4230	Engineering Bldg. 1- 302
International Student and Scholar Services Office (ISSSO)	www.issso.uh.edu	713-743-5065	302 Student Service Center 1
Learning Support Services (LSS)	www.las.uh.edu/lss	713-743-5411	321 Graduate College of Social Work Building
Library	http://info.lib.uh.edu/	713-743-1050	M.D. Anderson Library
Parking and Transportation Services	www.uh.edu/parking	832-842-1097	112 Welcome Center Parking Garage
UH Police Department	www.uh.edu/police	Emergency Line: 713-743-3333 Non-Emergency Line: 713-743-0600	
University of Houston	www.uh.edu	Main Line: 713-743-2255	Campus Map: http://www.uh.edu/maps/