Graduate Student Handbook

Stony Brook University

Department of Biomedical Engineering

M.S. and Ph.D.

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http://www.stonybrook.edu/bme/

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Welcome Letter

Dear BME Graduate Student:

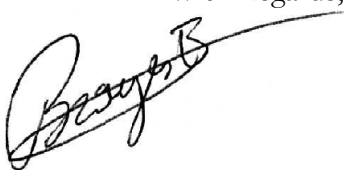
Welcome to the Stony Brook University Graduate Program in Biomedical Engineering (BME). You have joined an elite, diverse, and highly enthusiastic group of faculty, staff, and students. The Department of BME and its program faculty are world-renowned scholars from numerous countries. Each faculty member has different expertise and scientific interests, and they are eager to support your journey towards a post-baccalaureate degree. We are excited about helping you achieve your scientific potential. Your scholarly works and educational activities will propel our department and graduate program to new levels of excellence. We have also revised the program with more career-oriented concentrations to prepare students for specific career opportunities.

This manual intends to guide you through your graduate degree. The information contained within this manual should provide you with a brief overview of the requirements that must be satisfied to obtain a graduate degree. For reference, there are requirements from the Program of BME, the Graduate School of Stony Brook University, Stony Brook University, and the State SUNY system. Please also be mindful that these requirements can and may change during your degree progression. We will update you on these changes to meet the updated requirements accordingly. Most times, these updates will be posted on various Stony Brook University websites. As we become aware of new requirements that may affect your study plan, we will contact you via email with the update(s) and suggestions (as necessary) to satisfy those new requirements. The University and BME Program will primarily contact you using your official local contact information, your official permanent address and/or your official Stony Brook email (*e.g.*, firstname.lastname@stonybrook.edu). Thus, it is imperative that you 1) keep this information up-to-date and 2) check these delivery sites often.

The Graduate Program in Biomedical Engineering will assist you in many areas of your Graduate studies. We represent your first point of contact for questions regarding degree progression, degree requirements, payroll. However, you are ultimately responsible for knowing and satisfying all BME, Graduate School, University, and other (*e.g.,* immigration) requirements.

We look forward to working with you and helping you to attain your degree.

With Regards,



Eric Brouzes, Ph.D.
Associate Professor and Director, Graduate Program in Biomedical Engineering
Department of Biomedical Engineering
Stony Brook University

Admission Process

To qualify for admission to the Graduate Program in Biomedical Engineering, you must possess an undergraduate or graduate degree from a recognized college or University, typically in an engineering or physical sciences field relevant to your field of study at Stony Brook University. You must rank in the upper fifteen percent of your class or have a cumulative "B" average in courses for your major. There are three typical ways you can be admitted into the BME Graduate Program:

1) The 5-year Accelerated Master's Program, for current BME undergraduate students at Stony Brook University; a 3.5 GPA is required. Students completing this Program can go directly into an industry position or continue their education with a Ph.D. program (at Stony Brook University or another University), among other options.
2) Master's Program, for students who anticipate completing a Master's degree. It is required to have an undergraduate degree in the relevant field of study. Students completing this Program can go directly into an industry position or continue their education with a Ph.D. program (at Stony Brook University or another University), among other options.
3) Doctoral Program, for students who anticipate completing a Ph.D. degree. It is required that students have either an undergraduate degree and/or a Master's degree in the relevant field of study. Students with an undergraduate degree can earn a Master's degree while completing their Ph.D. work. Students with a Master's degree are expected to have an advisor before admission into the BME graduate program. Applications will be circulated among relevant BME faculty in the area(s) of interest; however, contacting and making arrangements with a faculty member prior to admission is more efficient. Students with a Ph.D. can go directly into an industry position or continue in an academic position.

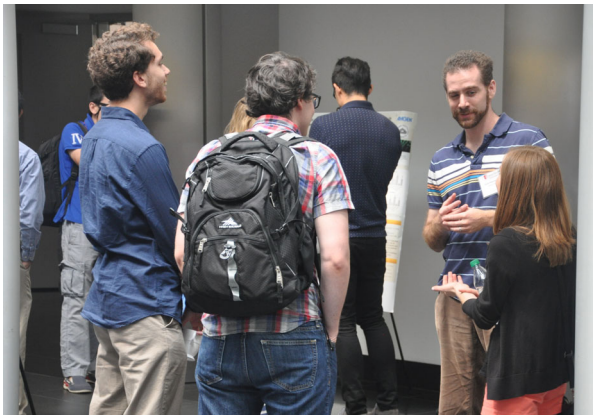
All applicants to the BME Graduate Program must apply through Stony Brook University's online application site. Please visit https://www.grad.stonybrook.edu/ for more information. You must create an account, and you are responsible for submitting all of the required documents and ensuring that references are also submitted on time. Incomplete applications will not be given full consideration during the application review process. The application fee and the following documents must be submitted by January 1st of the current year to receive full consideration for Fall Admission or October 15th for Spring Admission (for Master's program only):

- Standardized tests are not required and will not be considered during the application review
- Completed Online Application (not required for the 5-year Accelerated Master's Students)
- Original Transcript from each College/University Previously Attended (translated/verified in English) (Stony Brook University transcripts are not required) – Final Degree Verifications are Also Required (if your degree has been awarded prior to January 1st)
- Professional Resume
- Personal Statement that indicates your area of interest within the BME Department, why this area interests you, and a minimum of three faculty members that you envision working with (not required for the 5-year Accelerated Master's Students)
- Three Letters of Recommendation (typed on official letterhead) (not required for the 5-year Accelerated Master's Students)

Upon acceptance, you will automatically be considered for teaching and/or research assistantships, with preference going first to doctoral candidates followed by master's candidates. *Please do not correspond with our department regarding the possibility of obtaining these financial aid opportunities.* Some opportunities for financial aid external to our Graduate Program exist. They are either internal to the University (*e.g.*, the Graduate Council Fellowship) or external to the University. If selected as a nominee for one of the internal awards, the BME Graduate Program will facilitate your application. In many cases, the applicant is only required to apply for graduate studies in BME. However, for those opportunities external to the University, it is the responsibility of the applicant to apply, and the Graduate Program can help as needed, provided sufficient notice is given.

Upon acceptance, we will immediately email the PDF of an official offer letter. This letter will describe any financial aid that the Graduate Program will provide and the criteria for continued eligibility for this aid. If awards are granted external to the Graduate Program, those awarding departments/units will contact the student directly, and typically these offers are made after the admissions offer from BME. To be considered for a research assistantship, the applicant must directly contact either core BME faculty or program BME faculty. In general, master's students will not be offered a research assistantship until they demonstrate motivation, hard work, and proficiency in both their research projects and coursework. Doctoral students are sometimes offered a research assistantship upon admission. Those students must identify a lab and faculty member that will support them during their studies. Admitted students must read their offer letters very carefully before accepting. These offers will describe both financial liabilities and financial assistantships that may impact studies. Please be sure to understand these offers and the attached expectations fully.

If your application is incomplete, it will not receive full consideration from the Graduate Program in BME. Applicants must ensure that transcripts and reference letters are submitted with the application. The Graduate Program Coordinator may contact you directly if we find any missing items, but there is no guarantee. Please do not correspond with the BME Program regarding admission status – we cannot provide admission decisions prior to the admission review process.



BME Core Graduate Faculty

Name	Education	Area(s) of Interest
Arbab, M. H. Assistant Professor	Ph.D., University of Washington M.S., University of Washington B.S., Shahid Beheshti University	Biomedical Imaging, Terahertz Spectroscopy, Ultrafast Photonics
Balazsi, G. Henry Laufer Professor	Ph.D., University of Missouri M.Sc., University of Missouri/ Babes-Bolyai University B.Sc., Babes-Bolyai University	Synthetic Gene Circuits Evolution, Development and Cancer
Bluestein, D. Professor	Ph.D., Tel Aviv University M.Sc., Tel Aviv University B.Sc., Technion	Computation Fluid Dynamics Fluid Structure Interaction Multiscale Modeling Cardiovascular Pathologies
Brouzes, E. Associate Professor	Ph.D., Universite Denis Diderot M.Sc., Universite Denis Diderot	Tissue Heterogeneity Droplet Microfluidics Single-Cell Analysis
Chan, M.L. Assistant Professor	Ph.D., Columbia University M.S., Columbia University B.S., Hong Kong Polytechnic	Bone Adaptation Mechanotransduction Osteoimmunology
Clark, R.A.F. Professor	M.D., University of Rochester M.S. University of Rochester S.B. Massachusetts Institute of Technology	Cutaneous Wounds Tissue Engineering Smart Gels
DeLorenzo, C. Associate Professor	Ph.D., Yale University M.S., Dartmouth College B.A., Dartmouth College	Biomarkers of Major Depressive Disorder Antidepressant Treatment Response Prediction Multimodal Brain Imaging PET Radioligands
Du, C. Professor	Ph.D., University of Luebeck M.S., University of Pittsburgh B.S., Huazhong University of Science and Technology	Optical Instrumentation Drug-Induced Abnormalities of Brain Function
Frame, M.D. Professor	Ph.D., University of Missouri A.B., University of Missouri	Signal Transduction Microcirculation Blood Flow Vasoactive Mechanisms
Judex, S. Professor	Ph.D., University of Calgary M.Sc., Technical University Munich B.Sc., Technical University Munich	Musculo-Skeletal Regulation Biomechanics Gene Regulation
Lin, W. Associate Professor	Ph.D., Stony Brook University	Embedded Systems High Performance Computing Medical Devices

Mujica-Parodi, L. Professor	Ph.D., Columbia University B.A., Georgetown University	Non-Invasive Neural Signals Dynamic System Analysis Functional MRI
Pan, Y.T. Professor	Ph.D., National Laser Technology Laboratory, China M.S./B.E., Huazhong University of Science and Technology	Optical Coherence Tomography Cancer Diagnosis Brain Imaging
Qin, Y.X. Professor and Chair	Ph.D., Stony Brook University	Ultrasound Technologies Diagnosis of Metabolic Bone Diseases
Rubenstein, D.A. Associate Professor Graduate Program Director (GPD)	Ph.D., Stony Brook University M.S., Stony Brook University B.E., Stony Brook University	Microvascular Tissue Engineering Cardiovascular Diseases
Rubin, C.T. Distinguished Professor	Ph.D., University of Bristol B.A., Harvard University	Biomechanical Stimuli Osteopenia Fate Selection of Stem Cells
Strey, H. Associate Professor	Ph.D., Technical University Munich Diploma in Physics, Technical University Munich	Self-Assembly Biosensors Micro/Nanofluidics
Vaska, P. Professor	Ph.D., Stony Brook University M.S., Stony Brook University B.S., Clarkson University	Medical Imaging Bioinstrumentation
Wang, J. Assistant Professor	Ph.D., Purdue University M.S., Zhejiang University B.S., Zhejiang University of Tech	Single-cell Proteomics Single-cell Systems Biology
Yin, W. Associate Professor Undergraduate Program Director (UPD)	Ph.D., Stony Brook University M.S., University of Akron B.E., Tianjin University	Computational Fluid Dynamics Disturbed Blood Flow Cardiovascular Diseases
Zhu, Donghui (Don) SUNY Empire Innovation Associate Professor	Ph.D., University of Missouri M.S., Washington University B.E., Florida State University	Biomaterials Nanotechnology Medical Implants Neuroscience

For More Information about each Professor and their Research Interests, go to: http://www.stonybrook.edu/commcms/bme/people/core.php

A listing of Program Faculty can be found at: http://www.stonybrook.edu/commcms/bme/people/program

5 Year Accelerated Master's Degree – Sequence

The following is a sequence of requirements compiled from the Graduate Program of Biomedical Engineering and the Graduate School of Stony Brook University. Failure to comply with these requirements may result in enrollment holds, payroll delay (as applicable) and/or a delay in graduation.

Spring semester prior to the "Senior" fall semester

1. Attend the informal information session hosted by the BME Graduate Program (typically held in February).
2. Send an email to the graduate program indicating your application to the program.
3. Complete the Application Form for BME Students in the Accelerated Program (this will be emailed to your SBU account during the Spring semester).
4. If admitted, submit all paperwork to the GPC/GPD on time. Matriculation must occur before the end of the Spring semester. The first round of offers will be made in March, and subsequent offers will be made in late April or early May.

First semester including graduate coursework ("Senior" Fall semester)

1. Enroll in BME 501 and/or BME 520 (or speak with the GPD for alternative courses)
2. If the student does not plan on completing a thesis, the student may need to enroll in an appropriate technical elective.
3. Complete paperwork to enroll in graduate courses during the "Senior" Spring semester

Second semester including graduate coursework ("Senior" Spring Semester)

1. Enroll in BME 502 and/or BME 521 (or speak with the GPD for alternative courses)
2. If the student does not plan on completing a thesis, the student may need to enroll in an appropriate technical elective.
3. Complete paperwork to matriculate into Graduate School

Third semester including graduate coursework (Fall Semester of 5th Year)

1. Enroll in BME 505 and BME 509 (or equivalent).
2. Enroll in 3 Graduate Technical Electives.
3. Enroll in Research Credit Hours as Needed.

Fourth semester including graduate coursework (Spring Semester of 5th Year)

1. Enroll in 3 Graduate Technical Electives.
2. Enroll in Research Credit Hours as Needed.
3. Apply for graduation through the Graduate School website (check the applicable academic calendar for the deadlines).
4. If applicable, set a thesis defense time/date.

All Semesters of Full-Time Graduate Enrollment

1. All students must enroll in BME 590 (zero credits) for all semesters of full-time enrollment.

Notes

1. Students are required to complete Graduate School Orientation.
2. Students are required to attend BME Student Orientation/Research Day.
3. Students are subject to Graduate School Requirements, including:
    a. Paying Graduate Tuition and Fees (students are expected to be self-funded).
    b. Students are no longer eligible for Undergraduate Financial Aid.
    c. If applicable, students can no longer live in undergraduate student housing and would be required to move to graduate student housing.
4. You may need to consult the UPD and GPD to have courses count for your undergraduate degree/graduate degree – please consult with them prior to making final decisions
5. Many policies are associated with undergraduate students enrolling in graduate courses; please understand these rules via consultation with the UPD and GPD.
6. Some of the course sequences outlined above may change based on the concentration that the student chooses (*e.g.,* the Bioentrepreneurship concentration does not require BME 505)
7. Students can matriculate "early" into their graduate careers. The Graduate School sets the policies that govern early matriculation. Please consult with the GPD/GPC if you believe to be eligible for early matriculation.
8. Students that would like to complete the medical physics accreditation in parallel to the 5-year accelerated program, must speak with the director of the Medical Physics Program and determine if they are eligible and capable of completing all of the degree requirements.

2 Year Master's Degree – Sequence

The following is a sequence of requirements complied from both the Graduate Program of Biomedical Engineering and the Graduate School of Stony Brook University. Failure to comply with these requirements in a timely manner may results in enrollments holds, payroll delay (as applicable) and/or a delay in graduation.

Week of Arrival

1. All students must report to the Biomedical Engineering department and meet with the Graduate Program Coordinator (GPC) to obtain a new student information packet and to schedule a meeting with either the BME Graduate Program Director or your pre-approved faculty advisor to make enrollment selections for the upcoming semester.
    a. It is important, at this time, to decide whether you will attempt to complete a M.S. thesis or M.S. project and which concentration you intended to complete. This will partially dictate the courses that you must take to complete the degree. Note that these choices can be changed during the plan of study.
    b. BME Graduate Program Orientation may be able to serve in lieu of a formal meeting.
2. Activate your Stony Brook University email account and make sure to check in with your housing provider and visa and immigration services (as applicable).
3. If you were offered an assistantship, you will need to obtain and complete payroll forms (*e.g.,* i9 forms). Your pay may be delayed if these forms are not completed and processed in a timely manner.
4. Attend all University, Graduate School and Biomedical Engineering Graduate Program orientations, including the BME Graduate Student Research Day.

First Semester of Coursework

1. Enroll in courses (with advice from the Graduate Program Director, the Graduate Program Coordinator and/or your pre-approved advisor) that will help you decide what track you would like to focus on and finalize your decision to complete a M.S. thesis or not.
2. Faculty advisors can be chosen from either core faculty members or program faculty members.
3. Typically students will enroll in BME 501, BME 505, BME 520 and one or two technical electives; this is somewhat dependent on the intended concentration.

All Semesters of Full-Time Enrollment

1. It is required that students enroll in BME 590 (zero credits) for all semesters of full-time enrollment.

Prior to Semester of Graduation

1. Meet with the Graduate Program Coordinator to see if you have met all requirements on the M.S. Student Graduation Checklist.

    a. This checklist is posted on the BME website and the students can track their progress at any time through their academic career.
2. Apply for Graduation (through Solar/Graduate School Website).
3. If you are completing a thesis, make sure to schedule your final defense with sufficient time to allow for corrections and additional work requested by your faculty committee.
    a. Note that the faculty committee must contain at least three faculty members, with a majority from the core BME faculty or Program faculty.
    b. Committees must be approved by the Graduate Program Director prior to the defense. We use the Graduate School's *Request for Defense Committee Appointment* Form to formalize the request. Note that the Graduate School does not need to approve this form for M.S. thesis defenses.
4. If you are completing the project, please consult with the GPD about your project topic and enroll in BME 595 if applicable.
5. Make sure that all graduation paperwork is completed and submitted in a timely manner. This includes all thesis documents, signature pages, etc.
6. Complete and submit your BME Exit/Clearance Form. This form will be emailed to the students at the beginning of the Graduate Clearance Process.

Master's Degree – Requirements
Applicable for Both the 5 Year Accelerated and 2 Year Program

The minimal University requirements for the M.S. degree in Biomedical Engineering are determined by the Graduate School and can be found in the University Bulletin, which can be accessed at: http://sb.cc.stonybrook.edu/gradbulletin/current/. We in BME, have additional requirements in several areas. You have two options for the completion of your M.S. degree.

M.S. Thesis Option – Capstone with a Defended Thesis Required
A minimum of 39 graduate credits, which includes a total of **33 graduate credit hours of formal coursework** and **6 graduate credit hours of BME 599.** Please refer to the table below for more information.

M.S. Project Option – Capstone Project Required
A minimum of **33 graduate credits, all of which is gained by formal coursework**. Please refer to the table below for more information.

All students that will obtain a M.S. degree from BME at Stony Brook University must choose one of our three approved concentrations. Each concentration can lead to either a thesis or a project as the terminal cap-stone component of the degree. The three approved concentrations are:

a) Biomedical Engineering Principles – intended for students that anticipate an academic career
b) Biomedical Engineering Design – intended for students that anticipate an industry career
c) Biomedical Engineering Entrepreneurship – intended for students that anticipate a biotechnology or entrepreneurial career

Each of these concentrations have their own specific degree requirements outlined below.

Table 1: Typical Plan of Study for M.S. Students

	Required Core Courses[4, 5]	**Business Management[1,2]**	**Technical Electives[3]**	**Research**
Biomedical Engineering Principles - Thesis	BME 501 BME 502 BME 505 BME 520 (1) BME 521 (2) BME 698 (2 F/Sp) BME 590 (0)	BME 509	6 Graduate Level Courses	6 Hours of BME 599
Biomedical Engineering Principles - Project	BME 501 BME 502 BME 505 BME 520 (1) BME 521 (2) BME 698 (2 F/Sp) BME 590 (0)	BME 509	6 Graduate Level Courses	None

Biomedical Engineering Design – Thesis	BME 501 BME 502 BME 505 BME 520 or 521 (2) BME 581 (or equivalent) BME 590 (0)	BME 509	6 Graduate Level Courses	6 Hours of BME 599
Biomedical Engineering Design – Project	BME 501 BME 502 BME 505 BME 520 or 521 (2) BME 581 (or equivalent) BME 590 (0)	BME 509	6 Graduate Level Courses	None
Biomedical Engineering Entrepreneurship – Thesis	BME 501 BME 502 EMP 521 COM 565 (or equivalent) BME 590 (0)	BME 509	6 Graduate Level Courses	6 Hours of BME 599
Biomedical Engineering Entrepreneurship – Project	BME 501 BME 502 EMP 521 COM 565 (or equivalent) BME 590 (0)	BME 509	6 Graduate Level Courses	None

[1.] There is a separate application process through the Center for Biotechnologies (contact: Mrs. Kate Hutchinson, kate.hutchinson@stonybrook.edu).

[2] or petition for equivalent course to satisfy this requirement.

[3.] 4 technical electives must be BME courses. The remaining two courses (if not BME courses) need to be approved by the Graduate Program Director prior to the start of the semester of enrollment. For the Entrepreneurship Track, 3 technical electives must be BME courses, and the 3 remaining must be evaluated for management content. Current acceptable management technical electives are EST 534, EST 580, EMP 517, EMP 521, MBA 511, MBA 512, MBA 584, MBA 568, MBA 570.

[4.] The number of credits associated with each variable credit course is shown in parenthesis.

[5.] **An overall grade point average of 3.0 must be maintained in the BME core courses (BME 501, 502, and 505 for the Engineering Principles and Engineering Design tracks; BME 501, 502 and 509 (or equivalent) for the entrepreneurship track) and in all formal coursework to be awarded an M.S. degree in BME.**

[6.] Undergraduate courses (*e.g.*, 100-499) cannot be used to satisfy your graduate degree requirements. If an undergraduate course is needed to supplement your understanding of a particular field, you will still be required to take the appropriate number of graduate courses shown in Table 1.

[7.] Technical electives should be selected with your principal advisor (or the graduate program director). Students who enroll in non-BME courses without the appropriate prior approvals WILL NOT be approved retroactively.

Final Project (Applicable for Students on the M.S. Project Track Only)

The M.S. project intends to illustrate mastery over a particular concept related to your study plan. As such, a wide range of projects can satisfy the project requirement. Projects can be undertaken at any time prior to completing the degree. The final project must be submitted by the last day of the academic semester, in which the student plans to graduate. There is no extension of this deadline, and you must confirm the exact deadline with the graduate program directors.

You should start the project only after consultation with the graduate program director. After an agreement, specific project requirements will be emailed to all involved parties. Strict adherence to these requirements is expected. A formal defense is not necessarily required for a project but may be a specific project component.

The Graduate Program in Biomedical Engineering is willing to consider any formal projects to satisfy this degree requirement. Some suggestions include:

a. A formal research paper (can be laboratory research or informational research)
b. An extended term paper (on a topic relevant to your plan of study)
c. A compendium/manuscript/treaty (on a relevant topic)
d. Book chapters
e. Petition the Graduate Program to Consider Similar Projects

Summing up the project requirements: it should be your OWN WORK and your OWN WORDS.

Final Thesis Defense (Applicable for Students on the M.S. Thesis Track Only)

An oral and written examination is required for all M.S. students that are pursuing the thesis track. This written document and the oral defense of the written document must meet all acceptable practices associated with the reported work (e.g. must follow IACUC protocols if working with animals) and must reflect the students work and understanding of this work. It is not acceptable for the major advisor to write and/or defend the written document for the student.

Examining Committee

The M.S. examining committee will consist of at least 3 graduate faculty members, 3 of which (or a majority) must be BME Core Faculty or BME Program Faculty members. The examining committee is formed in conjunction with your major advisor and must be approved by the Graduate Program Director, prior to the oral defense. Please send a list of committee members, with their roles (e.g. committee chair, major advisor, regular member or outside member) via email to the Graduate Program Director for approval, using the Graduate School's *Request for Defense Committee Appointment*. The chair of your committee can not be your advisor, but it is expected that your advisor is a full voting member of your committee.

Form of Examination

You must prepare a written report of your research/scholarly activities that typically includes a background section, a methods section, a results section and a discussion section. Other sections (e.g. future work, aims, and limitations) can be included at the discretion of the student and the examining committee. There is no set page limit for this document, but the committee will evaluate the quality of the report and the quality of the work presented and NOT the quantity of pages prepared. There are many formats that are typically acceptable for a final thesis, please consult with your mentor for standards that they expect. This report should be submitted to your approved examining committee a minimum of fourteen (14) days prior to the defense. Submission of your written report within 14 days of your examination may delay your defense at the discretion of the examining committee. On your defense date, you will be expected to make a twenty- to thirty-minute presentation of your work, immediately followed by questions and answers from the audience. Following this, the examining committee will ask questions during a closed session. These questions can evaluate your understanding of the presented work but at the same time the committee can evaluate your understanding/competency in general BME coursework and coursework related to your chosen field of study. Typically, the examination does not exceed 2 hours. Note that it is the role of the committee chair to coordinate the public and closed question/answer sessions and report the decision to the GPD.

Results of the Examination

After all question/answer sessions your examining committee will deliberate in a closed session, whether you have shown sufficient expertise/understanding of your chosen field and BME in general. They may announce their recommendation immediately following a closed majority vote. The recommendation will be one of the following: 1) pass, 2) conditional pass, with minor changes before final approval will be granted, 3) undergo a major rewrite or include additional experiments that requires a second examination or 4) fail. Note that the fail recommendation will not be given until the student has had the opportunity to retake the examination once. Only under extenuating circumstances will the student be allowed to petition to the Graduate Program Director for re-consideration after a resulting fail.

Report of M.S. Final Thesis Defense

The examining committee chair will be responsible for summarizing the results of the M.S. thesis defense, including the results of the examination to the student, the main thesis advisor of the student, all members of the committee, the Graduate Program Coordinator and the Graduate Program Director. An email summary of the results should be sent to the highlighted people within 24 hours of the final defense. Once the final decision is a "pass" the Graduate Program Coordinator and the Graduate Program Director will be responsible for clearing the student for graduation.

Procedures of Administration

- The SBU Graduate School specifies the correct format for the final thesis. Go the Graduate School website for the current specifics regarding the format of this document
- You are responsible for meeting all thesis submission deadlines set by the Graduate School. Missing these deadlines may delay your graduation.

- You are responsible for obtaining all signatures required on the signature page of your thesis. Original signatures are required by the Graduate School. It is a good idea to make at least one photocopy of the original signed signature page for your records. The Graduate Program Coordinator must also retain a copy of the original signature page.
- If you so desire, you are responsible for setting-up an appointment(s) with the Graduate School to ensure that your thesis is correctly formatted.
- You must notify the Graduate Program Coordinator and the Graduate Program Director, via email, of your thesis date, time and location at least 48 hours prior to your defense. This will provide the BME Graduate Program with sufficient time to announce your defense to the other students and BME faculty. All defenses must be open to the public.
- The Graduate Program Coordinator can help you reserve a BME conference room for your final defense.
- You are responsible for submitting your final thesis electronically to the Graduate School. More information regarding the submission process can be found on the Graduate School website.
- Make sure to obtain and complete the BME Exit/Clearance Form; this is typically emailed to the student once they have completed all degree requirements.

Doctoral Degree – Sequence

The following is a sequence of requirements complied from both the Graduate Program of Biomedical Engineering and the Graduate School of Stony Brook University. Failure to comply with these requirements in a timely manner may results in enrollments holds, payroll delay (as applicable) and/or a delay in graduation. Note that there may be some differences depending on your graduate level at the time of matriculation (e.g. G3 vs. G4 students).

Week of Arrival

1. All students must report to the Biomedical Engineering department and meet with the Graduate Program Coordinator to obtain a new student information packet and to schedule a meeting with either the BME Graduate Program Director or your pre-approved faculty advisor to make enrollment selections for the upcoming semester.
2. Activate your Stony Brook University email account and make sure to check in with your housing provider and international student services (as applicable).
3. If you were offered an assistantship, you will need to obtain and complete payroll forms (e.g. i9 forms).
4. Attend all University, Graduate School and Biomedical Engineering Graduate Program orientations, including the BME Graduate Student Research Day.

First Year of Coursework

1. Enroll in courses (with advice from the Graduate Program Director, the Graduate Program Coordinator and/or your pre-approved faculty advisor) that will help you decide what concentration you would like to focus on and which advisor/field of study you would like to pursue.
    a. All students, regardless of their graduate level, should enroll in BME 501, BME 502 and BME 505. If you want to petition out of these courses, you are responsible for contacting the instructor of record and obtaining their approval. The Graduate Program Director and Graduate Program Coordinator must be included within all correspondences between the instructor of record and the student requesting an exemption from these courses.
2. For students that matriculate as G3 students, enroll in BME 520 and/or BME 521. The goal of these courses is to give the student an opportunity to learn about the research being conducted in the lab and the manner in which the faculty administer their lab.
3. For students that matriculate as G4 students, enroll in BME 520 and/or BME 521 (if you do not have a pre-approved advisor) or BME 599 (if you have a pre-approved advisor).
4. Faculty advisors can be chosen from either core faculty members or program faculty members.
5. Note that there may be subtle differences, based on the concentration chosen, if the student is obtaining a M.S. degree from SBU.
6. As applicable, students can enroll in BME 698, if they are serving as a teaching assistant.

All Semesters of Full-Time Enrollment

1. It is required that students enroll in BME 590 (zero credits) for all semesters of full-time enrollment.

First Summer

1. Students who have matriculated with Advanced Standing (e.g. G4) should take their first qualifying exam. Under extenuating circumstances, Advanced Standing students can petition the Graduate Program Director to postpone their first qualifying exam to the following winter. If the student fails the first qualifying exam, the student will be expected to take their second qualifying exam at the earliest opportunity.

Second Year of Coursework

1. Students who have not matriculated with Advanced Standing (e.g. G3 at matriculation), should finish the M.S. requirements. In consultation with your major advisor, the student should determine if they will pursue the M.S. thesis track or the project track and which concentration the student will complete.
    a. If you are pursuing a thesis, please refer to all requirements in the M.S. thesis section of this document. All deadlines and requirements are the same for these students.
    b. If you are pursuing a project, please refer to all requirements in the M.S. project section of this document. All deadlines and requirements are the same for these students.
2. Students who have matriculated with Advanced Standing (e.g. G4) have no particular formal course requirements, per se, but it is the student's responsibility to discuss with their major advisor what courses, if any, they should take to supplement their research.

Second Summer

1. Students who have not matriculated with Advanced Standing (e.g. G3 at matriculation) should take their first qualifying exam. Under extenuating circumstances, these students can petition the Graduate Program Director to postpone their first qualifying exam to the following winter. If the student fails the first qualifying exam, the student will be expected to take their second qualifying exam at the earliest opportunity.

Within 1 Year of Passing Your Qualifying Exam

1. All students should organize with the help of their major advisor, a proposal/dissertation examining committee. The committee should consist of a committee chair, your major advisor, a faculty member external to the BME Graduate Program and a majority of members internal to the BME Graduate Program. Typical dissertation committees consist of at least 4 examiners.
2. The Committee make-up must be approved by the Graduate Program Director, prior to the defense, using the Graduate School *Request for Defense Committee Appointment* form.
3. Within 1 year of passing the qualifying examination, all students should schedule and take the proposal defense examination (but no later than 15 months). Successfully passing the proposal defense examination will advance the student to candidacy.

4. Students who have passed the 15 month window between the Qualifying Examination and Proposal Defense, will be given the lowest priority for the Program allocated Graduate Tuition Scholarship (GTS). In the case when the Program cannot support your GTS, your dissertation advisor may be able support the GTS from grant allocations. Note that by Graduate School Policy, if you do not have a GTS for one academic semester, the Graduate School *will not* cover your GTS when you advance to candidacy (G5 standing), if certain other conditions are met.

Semester of Graduation

1. In conjunction with your major advisor, work on and complete your dissertation.
2. Meet with the Graduate Program Coordinator to see if you have met all requirements on the Ph.D. student Graduation Checklist.
3. Apply for graduation (through the Graduate School website).
4. Schedule your final defense with sufficient time to allow for corrections and additional work requested by your faculty committee.
5. Make sure that all graduation paperwork is completed and submitted in a timely manner (the Graduate School requires paperwork to be submitted 4 weeks in advance of a defense).
6. Complete and submit your BME Exit/Clearance Form.

Doctoral Degree – Requirements

The minimal University requirements for the Ph.D. degree in Biomedical Engineering are determined by the Graduate School and can be found in the University Bulletin, which can be accessed at: http://sb.cc.stonybrook.edu/gradbulletin/current/. We in BME, have additional requirements in several areas.

Plan of Study

Your coursework is determined 1) in conjunction with your major advisor and is 2) dependent on whether or not you matriculate with a Master's degree in an approved major (e.g. as an Advanced Standing student). If you have an approved M.S. degree at matriculation, there are no course requirements, per se, though certain courses may be required to fill any gaps in the student's knowledge (this is typically determined in conjunction with your major advisor). For students that enter without a relevant M.S. degree, all requirements for the M.S. degree must be met (See the Master's Degree Requirements) and once the M.S. degree is earned, there are no formal course requirements per se. To earn a doctoral degree, each student must pass a qualifying examination, a proposal defense examination and the final dissertation defense. Stony Brook University also requires demonstration of teaching excellence for all PhD candidates. Stony Brook University requires at least two consecutive semesters of full-time graduate study. Note that students must be enrolled appropriately to maintain tuition waivers, etc.

Teaching Requirement

The BME teaching requirement for a doctoral degree can be satisfied in any of the three following manners.

1. Deliver 4 lectures in a BME undergraduate or graduate course and present a seminar that covers the state-of-the-art in your field of research.
2. Teach a BME course, either as the instructor of record (only for G5 students) or as the principal instructor (for G4 students).
3. Petition the Graduate Program Director for something else that is equivalent to the above.
4. Note that enrollment in BME 698 and completing all requirements for this course satisfactorily is not sufficient to meet the teaching requirement.

Qualifying Examination

The BME Qualifying Examination (QE) is offered twice a year; approximately running between January 1 and February 15 and between June 1 and July 15. Most students should take their first QE during the summer session. The winter QE is typically taken by students who do not pass their first QE and for those students who have successfully petitioned for a postponement of their first QE.

Format of the Examination

The BME QE principally consists of a grant application either based on an independent research project that you theoretically could conduct in your lab (but that you may not conduct in your lab) or based on specific research questions provided with the QE directions (the student is responsible to check which format of the exam is being offered when they take the exam). You will have one month (either January or June) to compose a grant application that addresses the specific problem. You will need to provide aims for your

application, a strong rationale and background supporting the work, methods, preliminary work (that you completed, this is not required) and an experimental design section (including appropriate statistics, limitations, alternative approaches, etc.). During the last two weeks of the exam, the student will prepare an oral defense of this grant application. The defense of this application will take place on or around February 15 (for the winter session) or July 15 (for the summer session). Prior to your defense date, you will be told the make-up of your examining committee and the date, time and location of your defense. At the defense, the examining committee will test your basic understanding of biomedical engineering and your specific understanding of your proposed work. It is typical for the oral defense to last approximately 2 hours. All details regarding specific requirements and formatting will be provided at the beginning of your examination:

Outcome of the Examination

The outcome of the examination is either 1) Pass or 2) Fail. Students will be evaluated on the following four topics, as they relate to the specific proposal.

1. Demonstration of a balanced understanding of engineering, biological and medical issues in the given field. This does not assume an even distribution between the three topics.
2. Demonstration of a rigorous understanding of the process of scientific inquiry.
3. Demonstration of command of the specific technical issues that are fundamental to the given field.
4. Demonstration of the ability to effectively communicate in a written or oral fashion, scientific and engineering information.

Each voting member of your QE committee will evaluate the candidate on each of these four topics. A failure for any one of these topics by the majority of the committee, will result in a failure for the entire QE (e.g. you must pass each of the four categories by a majority vote of the voting members of your examining committee).

Within 24 hours of the QE oral defense, the chair of the examining committee will provide the results of the examination to the student, the Graduate Program Coordinator and the Graduate Program Director. A summary of strengths and weaknesses should be provided to the student regardless of the outcome of the examination.

Any challenge to the decision of the QE Committee must be reported directly to the Graduate Program Director within 1 week of the defense date. A sub-committee appointed by the Graduate Program Director or the Graduate Program Director will review the appeal and present an appropriate response to the appeal.

Any student that fails the BME QE twice will no longer be eligible for a Doctoral Degree in Biomedical Engineering at Stony Brook University.

Objectives of the Qualifying Examination

1. Redirect candidates with poor prospects of success in the Ph.D. program before the students have made large investments of time and resources.
2. Provide a focal point for the student's major advisor to evaluate the student's potential and consider courses that may be required to supplement the student's research project.

3. Demonstrate the student's familiarity with literature, ability to organize a research proposal, competence in written and oral communications and understanding of biomedical engineering fundamentals and areas of research specific to the students research focus.

Dissertation Proposal Examination

After successful completion of the qualifying examination, the student officially selects a major dissertation advisor and writes a proposal for dissertation research. The proposal is orally defended before a dissertation examination committee. The dissertation committee make-up is described elsewhere, but is formed in conjunction with the major advisor and is approved by the Graduate Program Director, prior to your defense. Briefly, a minimum of four members are required (3 internal to the Program in Biomedical Engineering and 1 external to the Program in Biomedical Engineering).

Examining Committee

The Ph.D. examining committee will consist of at least 4 members, 3 of which (or a majority) must be BME Core Faculty or BME Program Faculty members. 1 member of the committee must be external to the BME Program. The examining committee is formed in conjunction with your major advisor and must be approved by the Graduate Program Director, prior to the oral defense. Please send a list of committee members, with their roles (e.g. committee chair, major advisor, regular member or outside member) via email to the Graduate Program Director for approval, using the Graduate School's *Request for Defense Committee Appointment* Form. The chair of your committee can not be your major advisor, but it is expected that your major advisor is a full voting member of your committee. The graduate school *Request for Defense Committee Appointment* is required. Note that it is not required for the proposal examining committee to be the same as the final dissertation examining committee.

It is a requirement that examining committee contains the necessary expertise to evaluate your work and can do this without bias. If there are not enough independent committee members or if the committee members do not contain the necessary expertise, the graduate program reserves the right to reject the committee and request the formation of a more appropriate committee to evaluate the work. It is to the advantage of the student's future career to have a committee that can independently evaluate the dissertation work, so that questions cannot arise about inappropriate external review of the dissertation work. Furthermore, committee members should only be chosen based on their expertise and not on traits that the student wishes to emulate. It is expected that the chair of the proposal examining committee is a core BME faculty member, although under special circumstances (e.g. when the expertise is not housed within the BME core faculty) a program faculty member can serve as the chair of the proposal examining committee.

Format of the Examination

This examination consists of a written dissertation proposal and an oral defense of that proposal. The written proposal should be prepared in conjunction with your major advisor and typically consists of a discussion of the specific aims of your proposed dissertation, the background that sets the foundation for your proposal, preliminary work that you have completed in relation to your proposed dissertation and an experimental design/research strategy section that describes the work that you will undertake to complete your

dissertation. While there are no specific requirements for the written portion of the examination, it is best that you follow the current dissertation requirements established by the Stony Brook Graduate School (since some of the pieces of this proposal may be used in your final dissertation).

The oral defense of your proposal will consist of a portion open to the public and a closed portion. You should present your proposal in approximately 30-40 minutes and describe in sufficient detail the background, preliminary work and proposed studies. This will immediately be followed by a question and answer session from the public. Typically, after the open portion, the student will be asked to leave briefly, while the examining committee discusses the proposal. The student will then be asked questions relative to the proposal and their basic understanding of the biomedical engineering concepts that set the foundation for this proposal.

Note that the Biomedical Engineering Graduate Program suggests that the proposal examination takes place within one year from passing the qualifying examination (but no later than 15 months) and a minimum of two (2) full semesters prior to the anticipated graduation semester. Those students who exceed the 15 month window will be given lowest priority for the Program allocated Graduate Tuition Scholarship (GTS).

Outcome of the Examination

The chair of the proposal examination committee will summarize the discussion of the committee and will provide a written document (by email is acceptable) to the student, the major advisor of the student, the Graduate Program Coordinator and the Graduate Program Director. This document should provide the outcome of the examination, which can be one of the following:

1) Pass
2) Conditional Pass with Minor Corrections (e.g. re-write or re-focus on the proposed experiments) – this may require a second defense as determined by the examining committee
3) Fail – which may require an additional defense of the proposal or result in your termination from the doctoral Program

The document from the committee chair will also detail, what work needs to be included within the final dissertation to satisfy committee requirements at this time. Note that it may be possible that some of these requirements change based on the findings of the research, among other intangibles. It is best to periodically update your committee between your proposal defense and your final defense, however, there is no formal requirement. The Graduate Program in Biomedical Engineering, suggests committee update meetings be scheduled if the aims of the work change significantly from what was discussed and approved during the Proposal Examination Defense.

Any challenge to the decision of the Proposal Committee must be reported directly to the Graduate Program Director within 1 week of the defense date. A sub-committee appointed by the Graduate Program Director or the Graduate Program Director will review the appeal and present an appropriate response to the appeal.

Objectives of the Proposal Examination

1. Redirect candidates proposed dissertation work to more appropriate/realistic research avenues before the students have made large investments of time and resources.
2. Provide a focal point for the student's major advisor to evaluate the student's potential and consider courses that may be required to supplement the student's research project.
3. Demonstrate the student's familiarity with literature, ability to organize a research proposal, competence in written and oral communications and understanding of biomedical engineering fundamentals and areas of research specific to the students research focus.

Advancement to Candidacy

After successful completion of all required and elective courses, the qualifying examination, and the dissertation proposal examination, the student will be recommended to the Graduate School for advancement to candidacy. The Graduate Program Coordinator will prepare and submit the appropriate paperwork for advancement to candidacy.

Final Dissertation Defense

The research for the Ph.D. dissertation is conducted under the supervision of the dissertation committee. The dissertation must represent a significant contribution to the scientific and/or engineering literature. Upon approval of the completed dissertation by the dissertation committee (which typically is the same committee that was established for the proposal defense, but can be different), a formal public oral defense of the dissertation is scheduled at which time the student presents their findings and is questioned by members of the examining committee and by other members of the audience. On acceptance of the dissertation by the examining committee, all requirements for the degree will have been satisfied. Note that the format of this defense is very similar to the proposal defense format, except that all of the work that was proposed should be completed at this point. Additionally, note that the Graduate School sets all formatting requirements and it is the student's responsibility to ensure that their dissertation meets all Graduate School requirements and is submitted by the Graduate School deadlines.

While it is not required that the dissertation examining committee is the same as the proposal examining committee, it is a good idea to have significant overlap between the two committees. Under extraordinary circumstances, when significant overlap cannot exist, it is recommended that the student has at least one "update" meeting between the proposal and the dissertation defense to make the new committee members aware of the dissertation work, the extent of work and what has been proposed to complete the work. The new committee may request changes in addition to the original proposal examination committee. It is required that the chair of the dissertation examining committee has the necessary independent scientific expertise to evaluate the dissertation work and that the examining committee is organized based on contained expertise of the members and not other intangible traits. The BME Graduate Program reserves the right to requests changes to the dissertation examination committee.

It is also important to note that the written document and the oral defense of the written document must meet all acceptable practices associated with the reported work (e.g. must follow IACUC protocols if working with animals) and must reflect the students work and understanding of this work. It is not acceptable for the major advisor to write and/or defend the written document for the student.

Outline of the Final Dissertation Defense

1. A written document is prepared that is composed of multiple sections (e.g. specific aims, background, results, discussion) as determined by you, your dissertation advisor and the examining committee.
2. The dissertation is defended publicly and in a closed forum, at which time the student will be asked questions to evaluate their thorough understanding of their field of study.
    a. Please make sure to provide the details of the defense to the Graduate Program Coordinator and Graduate Program Director so it can be announced to members of the SBU BME community, at least 48 hours prior to the defense date.
    b. Also note that you must inform the Graduate School of your defense date at least 4 weeks prior to your defense. The form can be found on the graduate school website and a copy of the form should be provided to the Graduate Program Coordinator to forward to the Graduate School. The Graduate School is responsible for publicly announcing your final defense. The forms required are both the *Request for Defense Committee Appointment* form and the dissertation abstract form (note that this abstract is a one page lay summary of your work).
3. After the committee deliberates one of the following outcomes will be reached:
    a. Pass
    b. Conditional Pass with Minor Corrections – required corrections will be described to the student
    c. Fail – which can result in the termination of the student from the doctoral Program
4. A written outcome of the defense (email is sufficient) must be provided to the student, the major advisor of the student, the Graduate Program Coordinator and the Graduate Program Director within 24 hours of the defense date, by the chair of the examining committee. A summary of any required corrections should also be provided at this time.

The Graduate Program Coordinator and the Graduate Program Director will be responsible for clearing the student for graduation and submitting all defense related paperwork to the Graduate School (with the exception of the final signature page and the final dissertation document).

Note that if the student is unable to complete the final defense, they can always request to be awarded the M.Phil. degree in lieu of the Ph.D. degree. Please consult with the Graduate Program Director if you would like to exercise this option. Additionally, the student may request an extension to their graduation date as needed.

Procedures of Administration

- The SBU Graduate School specifies the correct format for the final dissertation. Go the Graduate School website for the current specifics regarding the format of this document.
- You are responsible for meeting all dissertation submission deadlines set by the Graduate School. Missing these deadlines may delay your graduation.
- You are responsible for obtaining all signatures required on the signature page of your dissertation. Original signatures are required by the Graduate School. It is a good idea to make at least one photocopy of the original signed signature page for your records. The

graduate program coordinator must retain a copy of the signature page. It is also your responsibility to submit the signature page by the Graduate School deadlines.

- If you so desire, you are responsible for setting-up an appointment(s) with the Graduate School to ensure that your dissertation is correctly formatted.
- You must notify the Graduate Program Coordinator and the Graduate Program Director, via email, of your dissertation date, time and location at least 48 hours prior to your defense. This will provide the BME Graduate Program with sufficient time to announce your defense to the other students and BME faculty. Note, that you also must notify the Graduate School via the *Doctoral Defense Announcement Form*. The Graduate School deadline for submission of this form may be different than the internal BME deadline and please forward the completed form to the Graduate Program Director for submission to the Graduate School.
- The Graduate Program Coordinator can help you reserve a BME conference room for your final defense.
- You are responsible for submitting your final dissertation electronically to the Graduate School. More information regarding the submission process can be found on the Graduate School website.
- Make sure to obtain and complete the BME Exit/Clearance Form.

Time Limit/Residency Requirements

All requirements for the Ph.D. degree must be completed within seven years after completing 24 credits of graduate study. The University requires at least two consecutive semesters of full-time graduate study and at least two semesters of graduate study once advanced to candidacy.

Publications

You are strongly encouraged by the BME Department to publish technical papers based on the research obtained throughout your dissertation. This is not a requirement.

Medical Physics Track Information

Deadline and Application Procedures

Application to the Medical Physics Track is made through the Biomedical Engineering Graduate Program. Students specifically applying for the Medical Physics Track will be reviewed for acceptance to Biomedical Engineering and Medical Physics. Matriculated students already accepted into Biomedical Engineering but not Medical Physics may apply to the track prior to January 1 each year. The application includes all previous Biomedical Engineering application information, copies of current graduate transcripts and a letter of support from a Medical Physics faculty member. A general condition of completion of BME 517 with a grade of "A-" or higher and the completion of the equivalent of a minor in physics is also required. Students may be accepted with some deficiencies at the discretion of the medical physics entrance committee. Classes taken to overcome deficiencies will be in addition to the standard Medical Physics curriculum.

Course Requirements

The core courses that all new BME graduate students must take are applicable for the Medical Physics Track. These course include:

- BME 501
- BME 502
- BME 505
- BME 520
- BME 521

Medical Physics Track students are also required to take the following to obtain the CAMPEP Accredited Certificate:

- BME 517
- BME 518
- BME 519
- BME 530
- BME 540
- BME 610
- BME 611
- In addition, a course in anatomy is required.

Note that students can elect to complete this option with a thesis or a project option (at the MS level). Additional coursework may be required if students elects to complete a thesis. Additional, these courses do not necessarily satisfy the BME MS degree requirements for specific concentrations. Please make sure that you are aware that while there is overlap between this track and the BME Graduate Degree; there is not complete overlap.

Course Sequence

Completion of the Medical Physics Track (in conjunction with the MS degree requirements) would lead to an M.S. in BME plus a certificate attesting that the graduate completed a CAMPEP approved Program. By virtue of this degree and certificate, graduates would be able to attend a

CAMPEP accredited residency program and eventually sit for the national board examination. Note that the degree and the certificate are independent but aligned; satisfying the requirements of one does not guarantee that the requirements of the other are satisfied.

English Proficiency Requirements

All new incoming and transfer Ph.D. students as well as supported M.S. students and any for whom the TOEFL has been waived and any for whom English is not the native or primary language, must be tested for English Proficiency. A recent TOEFL iBT Speak may be used to substitute for the SPEAK test. The Oral Academic English (OAE) Program from the Linguistics Department administers the exam and determines if English Proficiency is met. The OAE Office in the Social and Behavioral Science Building, room N-252. All students that are required to take a test of English Proficiency should enroll for the test during orientation.

English Proficiency is established by the graduate school. Under current policies the admissions requirement as dictated by the graduate school are as follows:

- IELTS: Overall score of 6.5, with no subsection recommended to be below 6
- TOEFL iBT: Overall score of 90 for doctoral applicants and 85 for master's applicants

The following information relates to teaching assistant offers and what (if any) OAE courses are needed to ensure English proficiency.

TOEFL iBT Speak	IELTS Speak	Course Requirement	Result
23-30	7 or Higher	none	Eligible to TA
21-22	6.5	OAE 594	Eligible to TA
18-20	6	OAE 592	Eligible to run recitation and lab sessions and/or grade
15-17	5-5.5	OAE 590	Not eligible to TA

The test is necessary to follow the guidelines set up by the Faculty Senate to improve the undergraduate experience here at SUNY by carefully training the international teaching assistants in pedagogical, linguistic and cultural awareness areas. More information can be found: https://www.stonybrook.edu/sb/graduatebulletin/current/admissions/requirements/english.php.

The SPEAK (Speaking Proficiency English Assessment Kit) test is used to determine proficiency. The test has a score range of 20 – 60.

Outcome of the SPEAK Examination

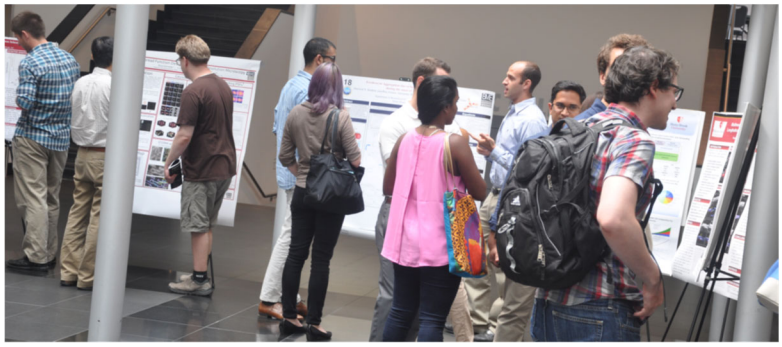
Under 39: the student needs Intensive English Center Work (Contact 631-632-7031)

40-44: the student needs OAE 590 Intermediate Oral/Aural Skills Class. The student cannot be given grading, recitation sessions or other TA responsibilities. A grade of "B" or higher in OAE 590 advances the student to OAE 592

45-49: OAE 596 High Intermediate Oral/Aural Skills Class. The student is permitted to grade or conduct recitation sessions. A grade of "B" or higher in OAE 592 advances the student to OAE 594.

50-54: OAE 594 Advanced Oral/Aural Skills Class. The student can conduct all TA responsibilities. A grade of "B" or higher in OAE 594 results in no more OAE support required for the student.

55 and higher: The student is exempt from OAE support and can be a TA.



Teaching and Research Assistantships

Teaching Assistantships (TAs)

A limited number of teaching assistantships are offered each semester. Most TA offers are made when/if the department extends an offer of admission to the Program in Biomedical Engineering. If additional TA positions are available, the department will evaluate all current students and will try to match available positions with existing student expertise. When making a decision regarding additional TA positions, we will consider a prior demonstration of hard work, motivation, and grade point average in relevant courses. TA positions generally require an average of 20 hours of work per week. Duties assigned to TAs can include: lead office hours, assist in the laboratory, grade papers, among other miscellaneous activities.

TAs must complete training in regards to ethical conduct, conflict management and other training that may be required for your specific duties (e.g. laboratory safety training). It is important to understand that TAs may be acting as lab supervisors, as such, they must report lab accidents to the instructor on record (accidents can involve students enrolled in the course and/or the TA themselves).

TA Reappointment Information

It is the policy of the BME department that only students with an overall GPA of 3.0 are eligible to be considered for a teaching assistantship. Additionally, your performance in previous TAs may be used to consider reappointment in future TAs.

Research Assistantships (RAs)

Many graduate students are hired by faculty members to work on funded research projects. These students conduct research for faculty member(s). In general, M.S. students will not be offered RAs until demonstrating at least one semester of hard work, motivation and research proficiency within the lab of the advisor. In many cases, M.S. students will not be offered RAs during their course of study. Doctoral students (either those that come in with a M.S. degree or those that do not come in with a M.S. degree) may be offered RAs after demonstrating hard work and proficiency after a lab rotation. It is highly suggested that students that would like to enter the Program with advanced standing obtain an RA prior to matriculating at the University. The duties assigned to an RA will be dependent on the specific lab and the specific major advisor.

RAs must complete appropriate environmental health and safety training that is specific for the lab that they are working in. Each lab will have different requirements and it is the students and faculty mentor's responsibility to ensure that the student is trained appropriately to conduct research in the lab. It is also important for RAs to understand reporting requirements related to lab accidents. Speak with your specific PI to find out the reporting procedures used in your specific lab.

RA Reappointment Information

Reappointment of RAs will be at the discretion of the individual faculty member. The faculty member may consider performance in formal coursework, lab performance and availability of funding.

Forms

Common Graduate School Forms

All current forms as published by the Graduate School can be found on their website: https://www.grad.stonybrook.edu/forms/. BME has instituted an online tracking system for the vast majority of these forms and all common forms that our students complete, which is found here: https://www.stonybrook.edu/commcms/bme/graduate/current_students.php

- Change of Graduate Program and/or Academic Level: This form is used to change between the M.S. and Ph.D. program in either direction.
- Change of Graduation Date: This form is used to change your graduation date due to unanticipated delays in your graduation date. This form is only for students that have applied for graduation.
- Request for Defense Committee Appointment: This form is used to 1) appoint your dissertation committee (approval by the Graduate School Dean is required) and 2) to receive authorization to schedule a dissertation defense. This form must be completed at least four to six weeks prior to your anticipated defense date to provide enough time for graduate school processing. It is suggested to submit this form as soon as your committee is formed internally. Additionally, this form is used for changes to your dissertation committee. BME also uses this form for all proposal and M.S. Thesis Committee requests.
- Doctoral Defense Abstract Form: The Graduate School is responsible for approval and announcement of each doctoral defense at Stony Brook University. This form is to make the Graduate School aware of an anticipated doctoral defense and must be submitted at least four weeks prior to the proposed doctoral defense date.
- Request for Letter of Completion: Upon completion of your dissertation, you may take a position that requires confirmation that your degree is "complete." Stony Brook University and the Graduate School, may not have the time to confer the degree prior to your start date. This form is used to provide confirmation that you have completed all requirements for your degree prior to final approvals. You can request a letter from BME or the Graduate School.
- All Accelerated Program Enrollment Forms: Forms for your enrollment during both your 4th year and your matriculation during your 5th year (or withdrawal) can be found on our website.
- Good Standing Letter: If needed for travels, immigration requirements, etc.
- Qualifying Exam Letter of Intent: To let the Program know your intention to sit for the current qualifying examination.
- External Technical Elective Request: To request the Program to consider approving an external technical elective for your degree.
- COVID Accommodation Form: If you believe that an accommodation is needed for your degree program, please use this form to request consideration from the Program.

Biomedical Engineering Forms

- BME Student Expectation Form: This form is intended to make students aware of what that they are responsible for during their degree progression (e.g. enrollment in courses).

- Graduation Checklist: This internal form should help you ensure that you have made all graduation requirements. This form is not necessary but should help you plan your coursework.
- Exit/Clearance Form: This form will help the BME department to keep in contact with you upon graduation and will help BME ensure that you have cleared all administrative requirements (e.g. turned in your lab keys).

Online Resources

Department of Biomedical Engineering: http://www.stonybrook.edu/bme/

Graduate Program Overview: http://www.stonybrook.edu/commcms/bme/graduate/

Degree Requirements: http://www.stonybrook.edu/commcms/bme/graduate/degree

Medical Physics Track: http://www.stonybrook.edu/commcms/bme/graduate/medicalphys

Core Faculty Profiles: http://www.stonybrook.edu/commcms/bme/people/core.php

Program Faculty Profiles: http://www.stonybrook.edu/commcms/bme/people/program

Stony Brook University: http://www.stonybrook.edu/

Graduate Bulletin: http://sb.cc.stonybrook.edu/gradbulletin/current/

SOLAR: http://it.stonybrook.edu/services/solar

Campus Maps: http://www.stonybrook.edu/sb/maps

Environmental Health and Safety: http://www.stonybrook.edu/ehs/

Research Compliance: http://research.stonybrook.edu/orc

Graduate School: https://www.grad.stonybrook.edu/

Office of the Registrar: http://www.stonybrook.edu/commcms/registrar/

Bursar: http://www.stonybrook.edu/bursar/

Visa and Immigration Services: http://www.stonybrook.edu/commcms/visa/

Campus Residences (On-Campus Housing): http://studentaffairs.stonybrook.edu/res/

Parent F31 NIH NRSA Award: https://grants.nih.gov/grants/guide/pa-files/PA-18-671.html

NSF Graduate Fellowship: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6201