

Graduate Student Handbook

Institute of Biosciences and Technology
Texas A&M University System Health Science Center
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Graduate students at the Institute of Biosciences and Technology (IBT) within the [Texas Medical Center, Houston, Texas](#), enroll in the Graduate School of Biomedical Sciences, Texas A&M University System Health Science Center (GSBS TAMUS-HSC).

A description of the philosophy of graduate education at IBT, research interests in the IBT Centers, admission policies, and the course of doctoral study are all found in the IBT Graduate Student Handbook. Applications are considered at any time, although most applications are received and reviewed between January-March for admission to the following fall semester. Once accepted, students may begin their course work, rotations, or thesis research immediately within an IBT laboratory.

Individual IBT faculty also affiliate with the following graduate programs. Students who have been accepted to these programs who wish to perform their thesis work in the IBT should communicate directly with individual members of the IBT faculty.

[Biochemistry and Biophysics](#), College of Agriculture, Texas A&M University, College Station, TX

[Intercollegiate Program in Genetics](#), Texas A&M University, College Station, TX

[Intercollegiate Faculty of Nutrition](#), Texas A&M University, College Station, TX

[Graduate School of Biomedical Sciences](#), University of Texas-Houston, Texas Medical Center, Houston, TX

I. INTRODUCTION

The mission of IBT is to perform advanced and innovative molecular research in bioscience and medicine and to encourage transfer of new discoveries from the laboratory to the marketplace. A unique administrative organization allows IBT scientists with diverse expertise to tackle major scientific questions in a collaborative manner. Currently, IBT centers apply cutting-edge technologies and facilities to critical questions in such diverse areas as cell and cancer biology, molecular mechanisms of human genetic disease, developmental biology, stem cell biology, the development of bone and cartilage, gene expression, enzymatic modification of nucleic acids and microbial pathogenesis.

Philosophy of Graduate Studies

Incoming students will learn the guiding principles of how to conduct biomedical research. An individually tailored curriculum will be designed to assure that the student acquires the necessary theoretical background and appropriate knowledge and skills. Through frequent interaction with fellow students, postdoctoral fellows, and faculty, the students will share in the excitement of making scientific discoveries and learn to design and develop successful research programs. The development of the student will be closely monitored during the course of the program. We expect the student/mentor relationship to evolve into that of colleagues.

II. DESCRIPTIONS OF CENTERS IN THE IBT

Center for Cancer Biology and Nutrition (CCBN)

A major goal of the Center for Cancer Biology is to generate and study genetically modified mice (GM-mice). GM-mice are the most sophisticated tools available in functional genomics. Groups within the center generate both classical and conditional knock-outs, knock-ins and transgenics. The center also performs detailed phenotypic analysis of GM-mice as a means to understand gene function. The studies utilizing GM-mice are relevant to the investigation of cancer, developmental genetics and signal transduction.

Established in November 1993, the Center for Cancer Biology serves as a bridge between rigorous basic research in cell and molecular biology and applied research in understanding cancer and developing strategies for its diagnosis and treatment. The center links the basic and applied cancer studies within Texas A&M University to both the basic and clinical cancer-related activities of the numerous institutions within the Texas Medical Center. The Center for Cancer Biology is composed of several research groups in IBT-Houston and in College Station.

Another current focus of the center is centered upon the structure-function relationships and mechanism of action of polypeptides (cytokines and growth factors) and their receptors, which regulate cell growth and differentiation.

Dysfunction in normal cell growth and differentiation (specialized function) is a hallmark of cancer. Research programs in the center study these mechanisms, which are commonly referred to as signal transduction, at the cell membrane, intracellular and nuclear levels. Research groups combine modern methods in protein biochemistry, molecular biology and genetics in a variety of model biological systems from single cells to small animals. The knowledge is used to design strategies to prevent abnormal cell growth and restore a normal pattern of cell differentiation.

Center for Extracellular Matrix Biology (CEMB)

The center is formed by independent but strongly integrated and collaborative research teams interested in diverse aspects of the biology of the extracellular matrix. Research programs include: developmental morphogenetic pathways, molecular interactions between components of connective tissue with themselves and with infectious agents, and function of extracellular matrix components. Investigators within the center use a variety of technical approaches to develop these projects, including genetic (transgenic and gene knockout mice), biochemical (recombinant protein production), biophysical and structural (NMR and X-ray crystallography), and cell biological and morphological techniques. The information gained has already led to the design of new strategies to prevent and treat disease.

Center for Genome Research (CGR)

The goal of the Center for Genome Research is to develop and maintain active research programs related to the structure and expression of the genome. DNA contains the genetic information needed to direct all life processes. Understanding the structure of DNA in living cells and viruses and its role in the development and developmental expression of genetic information is essential to finding the causes and cures for cancer and many human genetic diseases. A clear link exists between DNA structure, specifically alternate conformations of DNA, and mutations that lead to genetic diseases.

Members of the center have considerable research expertise in the areas of DNA structure and protein-nucleic acid interactions. This expertise is used to understand the molecular basis for human genetic disease, specifically diseases caused by triplet repeat expansion. Their research also involves understanding how information is processed from DNA into functional messenger ribonucleic acid (RNA) for expression into proteins. In addition, research within CGR is attempting to understand how the genome is cleaved, how expressed mRNAs are enzymatically modified and how expressed proteins splice.

Center for Environmental and Genetic Medicine (CEGM)

The goals of the Center for Environmental and Genetic Medicine are to:

- Understand how environmental compounds such as estrogen disrupters impact cellular communication and lead to prostate and breast cancer.
- Discover how micronutrients can impact normal embryogenesis and mitigate the risk of common human birth defects.
- Understand how environmental factors compromise genetic regulation of complex systems leading to disease and congenital deformity.
- Develop novel technologies and therapeutic approaches to prevent and eliminate environmentally induced human disease and defects.

Specific research programs are exploring the role of transcription regulators in the initiation of breast and prostate cancer and how environmental factors interact with these cellular functions. Additionally, studies are ongoing to learn more about the role of micronutrients on protecting developing infants from selected congenital malformations.

III. TO GRADUATE DEGREE PROGRAMS

The Institute of Biosciences and Technology offers a Ph.D. in Biosciences and Technology

A. Application

1. Process.

For an application contact:

Graduate School of Biomedical Sciences
 John B. Connally Building
 301 Tarrow Street, 7th Floor
 College Station, TX 77840-7896
 Phone: (979)458-7200
 Fax: (979_458-7202)

OR

Graduate Program Director
 Institute of Biosciences and Technology
 The Texas A&M University System Health Science Center
 2121 West Holcombe Boulevard
 Houston, Texas 77030-3303

- Arrange for three personal references (using personal reference forms) to be sent to the IBT Director of Graduate Programs.
- Have a copy of all official transcripts sent to the IBT.
- The application should be mailed directly to the IBT.

After preliminary screening of all applications, selected applicants will be scheduled for a personal interview. This interview may be conducted in person or, if circumstances dictate, may be conducted by telephone or even via e-mail. The preferred, personal interview serves as an opportunity for the applicant to meet the faculty, staff, and the graduate students and to view the IBT's research facilities. The interview also gives the members of the IBT the opportunity to personally meet and interview the prospective student. Alternative evaluations of a student's academic abilities may be requested through solicitation of an essay or through e-mail correspondence with the applicant. Applications should be submitted to arrive by no later than March 1 for admission in the Fall semester of the same year. Typically the selection process begins February 1st. A decision on acceptance into the IBT graduate program is made by the IBT faculty in accordance with the standards of Texas A&M University. Acceptance decisions also reflect the ability of the IBT to financially support graduate students. Graduate Assistantships are generally only available in the fall.

2. *IBT Requirements*

Students applying to the IBT should have a strong undergraduate background in biology, biochemistry, chemistry, mathematics, and/or molecular biology. Strong letters of recommendation indicating academic excellence, personal maturity, and exceptional motivation and interest in the experimental sciences are an important part of the application. The IBT requires that all applicants take the general aptitude test of the Graduate Record Exam (GRE). The GRE is administered by the Educational Testing Service, Princeton, New Jersey 08540. Test results should be available by February of the admission year. Students whose native language is not English must demonstrate English proficiency by a score of at least 600 on the Test of English as a Foreign Language (TOEFL) exam.

3. *Admission with "Advanced Status"*

Students accepted for the Ph.D. program with previous graduate training and who come to the IBT specifically to work for one faculty member, will be notified in writing at the time of the acceptance decision if they qualify for "advanced status". With "advanced status," students may, with approval of the Graduate Program Committee, void requirements for rotations. For advanced students previously admitted to candidacy and transferring with a faculty member, retaking the qualifying exam will be considered on a case-by-case basis. It is unlikely that a 2nd qualifying exam will be necessary, but each student will be considered on a case-by-case basis.

4. *Foreign Student Admission*

All foreign students must fulfill U.S. Immigration Service requirements and register with the TAMU International Student Office, Human Resources Department, TAMU.

5. *Admissions and Financial Aid Decisions*

a. Admission Decision

Decisions on admission are the responsibility of a Graduate Committee, appointed by the IBT director, including the Director of Graduate Programs, the committee chair. Typically, acceptances are made by March 15 and students are expected to respond to an official letter of acceptance by April 15. Students are expected to arrive before the beginning of the fall semester.

b. Financial Aid Decisions

Students are expected to devote full-time (12 months per year) to their academic and research training. Any form of outside employment is strictly forbidden. The IBT does not require teaching or laboratory assistantships. Graduate students are expected to learn to be independent scientific investigators. Graduate education for all IBT students is supported by the IBT, TAMUS-HSC, individual professor's research grants, or outside awards. The 12 month stipend for entering graduate students is \$22,000 for up to 5 years. After the first year, students are encouraged to compete at the National level for independent funds to support their education. Out-of-State Tuition and Fees are paid by the IBT. Texas A&M provides the same health and accident insurance benefits for graduate students as it does for its professors.

B. Pre registration Requirements

1. Transfer of Credit

Normally no more than 12 semester hours of transfer credit may be included in a degree plan. Courses for which transfer credit are sought must have been completed with a grade of B or greater and must be approved by the Director of the Graduate Program. Except for officially approved joint degree programs with other Texas A&M University System institutions, credit for thesis or dissertation research or the equivalent is not transferable. Course work in which no formal grades are given, or in which grades other than letter grades (A, B, C, etc.) are given (for example: DR, P, S, U, H, etc.) are not accepted for transfer credit. Courses completed at institutions other than Texas A&M University or members of the A&M System HSC are normally not included in computing the GPR, **BUT WILL BE CONSIDERED ON A CASE-BY-CASE BASIS**. An official transcript from the university at which transfer courses are taken must be sent directly to the Office of Admissions and Records.

2. Languages

All students are required to possess a competent command of English. The Institute of Biosciences and Technology does not require knowledge of a foreign language.

IV. DOCTORAL DEGREE PROGRAMS

A. Course of Study and Identification of Research Advisor

1. General Introduction

With the aim of maintaining a strong focus on research, the IBT graduate program *has no formal course requirements*. Rather, students focus on research excellence. However, formal courses may be specified on a student-by-student basis, in order to challenge and expand the knowledge base of their chosen research area, and to strengthen, as needed, their intellectual **background in biochemistry, molecular genetics, cell biology, or other disciplines**. In addition to courses taught by IBT and other TAMU faculty, student may take courses in the Texas Medical Center, which includes Baylor College of Medicine and the University of Texas Health Sciences Center.

2. "Entrance" Exams:

Because no formal course work is required, entrance exams are administered to ascertain each student's level of understanding in three basic areas: biochemistry, molecular genetics, cell biology. Alternatively, students, in consultation with their Graduate Steering Committee, may choose to take graduate level courses in one or more of these basic areas. A comprehensive exam will be given in each area by a faculty committee. It is important that persons receiving a Ph.D. from the IBT have a sophisticated level of understanding in these three basic science areas. Graduate students demonstrating a sufficient level of understanding in particular areas will not be required to take

additional course work in these areas. Courses will only be recommended where it will be to a students advantage to strengthen his/her knowledge in a particular area.

3. Graduate Steering Committee

Entering students will be assigned a Graduate Steering Committee consisting of three faculty. The Chair will serve as the students Graduate Advisor for the first year.

Purpose of the Graduate Steering Committee:

The purpose of the Graduate Steering Committee is to:

- Advise the student as to his/her schedule of first year activities, including any courses that may need to be taken.
- Discuss the student's plans for rotations.
- Administer the three Rotation Exams.
- Generally advise and assist the student in his/her first year of graduate studies.
- Administer the Qualifying Examination

4. Course of Study: Year 1

The actual course of study will be arranged on an individual basis with the student's advisor and his/her Graduate Steering Committee. Programs will be reviewed by the Director of Graduate Studies. Each student's doctoral program should include a reasonable depth and breadth of study, while focusing on expertise in the student's chosen field of research.

Summary of the IBT Program of Study Year 1:

- *Research Rotations*

Students normally enter for the Fall Semester and initiate a series of three rotations. These are normally scheduled for: 1) September – November, 2) December – February, 3) March – May.

Each rotation will conclude with submission of a written report, in manuscript format, which will summarize the research accomplished during the course of the rotation project. The following sections should be included:

- Abstract
- Introduction
- Results
- Discussion
- Materials and Methods
- References

The written report should be formally presented and defended within 2 weeks of submission. The student's Graduate Steering Committee will administer the Rotation Exam. During this exam, the student will make an oral presentation of the report to the Graduate Steering Committee. This will be followed by an oral examination to critically evaluate the student's understanding of the basics of biochemistry, molecular biology, and cell biology and to evaluate the student's grasp of his/her research area. The Graduate Steering Committee will serve as the examining committee for all three rotations. The evaluation of student's progress will be divided between: A. Laboratory competence, technical skills, and creativity (50%), and, B. Basic knowledge of related field and basic areas in Biochemistry, Cell Biology, and Molecular Genetics (50%).

A form attesting to successful completion will be filled out, signed by all faculty, and returned to the IBT Graduate Office.

For University grading and credit hour purposes, rotations will be considered as two 3 hour courses; Introduction to Independent Laboratory Research (3 hr), and Basics in Biochemistry, Cell Biology and Molecular Genetics (3 hr).

Students who are accepted directly into an investigator's laboratory will also be assigned a formal Steering Committee who will likely become the student's advisory committee. These students WILL NOT rotate through three separate labs. Rather, they are accepted directly into a given lab, where they will perform their dissertation research. These students will be required to make two formal presentations of their research progress and to prepare two written reports, which will contribute to a formal grade. These examinations will usually take place towards the end of the first and the second semesters of the student's first academic year.

- *Journal Club ("Understanding, Evaluating, and Presenting Current Literature", "Critical Evaluation of Current Literature", "Understanding Scientific Literature")*

Students will be enrolled in a formal "Journal Club" course in their first three years. This graduate level module will provide students an opportunity to present their research work in a seminar format. The course is targeted to first, second and third year IBT graduate students where the presenters will be second and third year students. Students will learn how to present their data, how to organize a seminar, the importance of appropriate introductions, slide making, and discussions. Students will be required to provide a one-page abstract of their seminar the week prior to the class.

5. Evaluation at the end of the first year:

At the end of the first year, an evaluation of the student's ability to successfully complete the Ph.D. program at the IBT will be made by **the Graduate Program Committee and the entire faculty**. The evaluation will be based on grades in the Journal Club course (other courses) and in the Rotations. A B-average (3.0 GPA) is required for continuation into the second year. By the end of the first year, students should have demonstrated sufficient motivation; intellectual creativity; intellectual command of the basics of biochemistry, molecular biology, and cell biology; as well as technical research competence to successfully complete the Ph.D. A recommendation may be made that the student takes formal course work to strengthen any areas of weakness.

Admission into the second year requires a positive evaluation that, at this point in time, the student has demonstrated sufficient potential that he/she is likely to successfully complete the second year. This is the first of two formal decisions (the second coming at the end of the second year) on the potential or capability of the student to successfully complete the Ph.D. program and become a competent independent investigator.

6. Selection of a Graduate Advisor

By the end of the spring semester, the student is expected to have identified a dissertation research area and a faculty research advisor. This advisor must be a member of the Graduate faculty and a member of

the IBT in Houston or College Station. The size of each faculty member's program depends upon several factors and not every laboratory will add students during a given year. **Selection of a faculty advisor requires the approval of the Graduate Program Committee.**

7. Selection of a Student Advisory Committee

The student's Advisory Committee should be formed in consultation with the research advisor as soon as possible after the student has selected their advisor. The committee will consist of the student's research advisor and three other faculty, one of whom must be an IBT faculty member, with at least one member being from outside the IBT. Students are encouraged to avail themselves of the exceptional expertise available in other institutions within the Texas Medical Center and on the Texas A&M College Station campus for selection of committee members

The specific responsibilities of the student's Advisory Committee are:

- a. Meet with the student at least twice a year to evaluate their educational background and area of proposed thesis research, and to make recommendations for the student's course of study. The Student's Advisory Committee may require that the student take formal courses to supplement areas in which the student has not had formal or informal training. The committee is to develop and approve the student's degree plan.
- b. The student's Advisory Committee will administer the students qualifying examination for admission to candidacy.
- c. After the student has been admitted to candidacy the student's Advisory Committee is required to meet *twice* per year to evaluate the student's progress.

8. Degree Plan

The student's advisory committee, in consultation with the student, will develop the proposed degree plan. The degree plan must be submitted on the official form provided by the graduate School, with endorsements by the advisory committee and the head of the student's department or comparable interdisciplinary program chair. The degree plan must be completed and filed with the graduate school prior to registration (or pre-registration) for a third term, excluding summer terms, and no later than 90 days prior to the date of the final oral examination or thesis defense for master's students. For a doctoral degree, the degree plan must be filed with the graduate school prior to registration (or pre-registration) for a fifth term, excluding summer terms, and NO LATER THAN 90 DAYS PRIOR TO THE DATE OF THE QUALIFYING EXAMINATION.

9. Course of Study – Years 2-5.

By the second year, students should have identified a laboratory and an advisor for their Ph.D. research. The following are the requirements for progress in years 2-5:

- Students should be working full time in that laboratory. Graduate students receiving fellowships at TAMU must be registered for 9 credit hours during the fall and spring semesters and 6 semester credit hours during a 10- week summer semester.
- Students will be registered for any courses suggested by the Graduate Steering and/or Advisory Committee.
- Students will be registered for research credit.
- In the second and third year, students will take the Journal Club Course (2 or more hours credit).

- Students in years 4-5 are encouraged to attend one of the Informal Journal Clubs (Current Literature Review Groups) and/or the IBT Center Research Group meetings.
- Students are required to have *two* committee meetings per year. *Students cannot register in the Fall until this requirement has been satisfied.*
- Students are expected to present one research seminar per year in the IBT Seminar Series.
- Any courses requested by the Graduate Program Committee and/or the student's Advisory Committee should be completed, preferably during the second year.

10. Evaluation at the end of the second year.

Evaluation of graduate students by the IBT faculty is based on progress in research, performance in courses taken up to this time, the qualifying proposal examination, and annual seminar presentations. Based on satisfactory progress, a student will be encouraged to proceed. In some instances, the student may be encouraged to write an M.S. thesis to complete his/her program.

11. Evaluations in years 3-5:

Following admission to candidacy, formal evaluation of research progress and maturity as a scientist will be made at least twice a year. This evaluation will be made by the student's Advisory Committee.

12. Time Limit

All requirements for the Master of Science degrees must be completed within a period of seven consecutive calendar years for the degree to be granted. A course will be considered valid until 10 years after the end of the semester in which it is taken. Credit for course work more than seven calendar years old at the time of the final oral examination may not be used to satisfy degree requirements.

All requirements for the doctoral degrees must be completed within a period of 10 consecutive calendar years for the degree to be granted. A course will be considered valid until 10 years after the end of the semester in which it is taken. Graduate credit for course work more than 10 calendar years old at the time of the final oral examination may not be used to satisfy degree requirements.

Final copies of the dissertation or thesis must be approved and accepted no later than one year after the final examination or within the 10-year time limit for the doctoral degree or seven years for the master of science degree, whichever occurs first. Failure to do so will result in the degree not being awarded.

IV. DOCTORAL DEGREE PROGRAMS

B. Candidacy (Qualifying) Examinations

IBT and TAMUSHSC require that the doctoral student pass an examination for admission to candidacy. This is a general examination to demonstrate intellectual competence in his/her field of study. At the IBT, this examination consists of an NIH-style written research proposal, oral presentation, and oral defense. It is normally given at the end of the second year or beginning of the third year. At the IBT, the written document constitutes the "written" exam required by the TAMUSHSC GSBS (see below).

By the beginning of spring quarter of the 2nd year the student will submit to his/her student's Steering Committee the Specific Aims section and an Abstract (on form A, page 3). This proposal should strive for originality in concept, approach, and interpretation. The proposal should be related to the student's proposed research. Four weeks from the time of approval, the completed, final proposal is due. The oral examination, covering the proposal, will be scheduled as soon as possible but no sooner than one week after the proposal has been approved in its final form.

Examination Regulations of the TAMUS HSC GSBS:

Doctor of Philosophy: The student's major department, interdisciplinary program and/or advisory committee may require qualifying, cumulative or other types of examinations at any time deemed desirable. These examinations are entirely at the discretion of the department and the student's advisory committee.

The qualifying examination is required. It may not be administered unless the student's GPR is at least 3.000 cumulative and on the degree plan. The exam may be given no earlier than a date at which the student is within approximately six credit hours of completion of the formal course work on the degree plan (i.e., excluding research courses seminars and similar courses). The examination shall be both written and oral, unless otherwise recommended by the student's advisory committee and approved by the dean of the graduate school. The research proposal will constitute the written part of the examination. Each member of the advisory committee is responsible for examining the research proposal and reporting it to be satisfactory to the chair of the advisory committee before the oral portion of the examination may be held. In case any written examination is reported unsatisfactory, the advisory committee must agree (1) to proceed with the oral portion of the qualifying examination, or (2) to adopt another course of action regarding the unsatisfactory written examination. Either procedure is subject to approval by the dean of the graduate school. After passing the required qualifying oral and written examinations for the doctoral degree, the student must complete all remaining requirements for the degree within four calendar years. Otherwise, the student will be required to repeat the qualifying examination.

Upon unanimous approval of the student's advisory committee and approval by the dean of the graduate school, a student who has failed the qualifying examination may be given one re-examination, when adequate time has been given to permit the student to address the inadequacies emerging from the first examination (normally six months). The student and the advisory committee should jointly negotiate a mutually acceptable date for this purpose.

The candidate for a doctoral degree must pass a final examination/dissertation defense by the deadline date announced by the graduate school each semester or summer session. To be eligible to take the final examination, a student's official GPR must be at least 3.000 or better and be admitted to candidacy. There must be no unabsolved grades of D, F or U for any course listed on the degree plan. To absolve a deficient grade, the student must have repeated the course and achieved a grade of C or better. An approved thesis proposal must be on file in the graduate school. Whereas the final examination may cover the broad field of the candidate's training, it is presumed that the major portion will be devoted to the dissertation and closely allied topics.

C. Admission to Candidacy

To be admitted to candidacy for a doctoral degree, a student must have: 1) satisfied the residency requirements, 2) passed the qualifying examination, 3) completed all formal course work, and 4) filed with the Office of Graduate Studies the approved dissertation proposal. The student must be admitted to candidacy well in advance of the date when the degree is to be granted. The final examination will not be authorized for any doctoral student who has not been admitted to candidacy.

D. Final Examination/Defense of Dissertation

The student's final defense of his/her dissertation will be open to the public and all members of the academic community.

No student may be given a final examination unless his or her current official GPR is 3.00 or better and he or she has been admitted to candidacy. There must be no unabsolved grades of D, F, or U for any course listed on the degree plan. The announcement of the final examination should be submitted to the Office of Graduate Studies at least 10 working days in advance of the scheduled date. The student's advisory committee, as finally constituted, will conduct this examination. The final examination is not to be administered until such time that the dissertation or record of study is available in substantially final form

to the student's advisory committee and the GCR and all concerned have had adequate time to review the document. While the final examination may cover the broad field of the candidate's training, it is presumed that the major portion of the time will be devoted to the dissertation and closely allied topics. Persons other than members of the graduate faculty may, with mutual consent of the candidate and the major professor, be invited to attend final examinations for advanced degrees. Upon completion of the questioning of the candidate, all visitors must excuse themselves from the proceedings. The advisory committee will submit its recommendations on the appropriate form to the Office of Graduate Studies regarding acceptability of the candidate for the doctoral degree. A 3/4 vote is required for passing the final examination and acceptance of the Dissertation. Students must be registered in the University in the semester or summer session in which the final examination is taken.

Under the standard procedure, the candidate will answer pertinent questions put by members of the committee following an oral presentation of the dissertation. After the committee has completed its questioning, other persons present will have an opportunity to submit questions or comments. At the conclusion of the defense, the committee will withdraw, make a decision forthwith with regard to the acceptability of the dissertation and its defense, and report to the candidate. If the decision is favorable, the approval form will be signed by the committee members and transmitted to the appropriate office of the Graduate Division.

V. APPENDIX: IMPORTANT ITEMS

TAMU Rules and Policies regarding students can be found on the TAMU WEB-SITE [<http://student-rules.tamu.edu>]

Academic rules are under <http://student-rules.tamu.edu/part 1.htm>

Student life rules, <http://student-rules.tamu.edu/part 2.htm>

Student Grievance Procedures, <http://student-rules.tamu.edu/part 3.htm>

Under the Appendix section of the rules pages you will find the Family Educational Rights and Privacy Act of 1974, among other things [<http://student-rules.tamu.edu/append.htm>]

Below are listed a few important issues:

Item 1. Non-Discrimination Policy (See Rules, Part III: Student Grievance Procedures)

Texas A&M University reaffirms its policy that discrimination on the basis of race, color, religion, national origin, sex, sex orientation, handicap or age will not be practiced in any of its activities. Complaints involving the abridgement of this policy should be addressed to Human Resources.

Item 2. Academic Honesty (Rules Part III)

Academic dishonesty in any form is a serious offense and cannot be tolerated in an academic community. Dishonesty in any form, including cheating, plagiarism, deception of effort, or unauthorized assistance, may result in a failing grade in a course and/or suspension or dismissal from the Graduate Program. Falsification of data can be grounds for immediate dismissal.

Item 3. Ownership of Data

When a student enters a laboratory to work on a project, it is understood that any data produced remains under ownership of the University through the individual faculty member. NIH guidelines require that data and notebooks remain with the Principal Investigator and with the University. Final decisions on publication and on co-authorship of papers rests with the Principal Investigator (Faculty Advisor).

Item 4. Family Educational Right and Privacy Act of 1974 (*Rules Appendix*)

Students, once enrolled, have the right to review their educational records, except for those excluded by law, such as records maintained by a physician or psychiatrist, or parents' financial statement.

Local policy explains in detail procedures to be used by the University for compliance with the provisions of the Act. The Office of the Registrar has copies of this policy.

(Also listed under See Appendix B of the Texas A&M University Graduate Catalog.)

Item 5. Grievance Procedures are outlined under Student-rules Part III (*See above*)

Item 6. Qualifying Exam Guidelines

Introduction and Ground Rules:

Submission

The Research Plan should be conceived of and written by the candidate with only consulting and advising being provided by the candidate's faculty mentor. Use English only and avoid jargon and unusual abbreviations. Type the application, single-spaced and use no smaller than 0.5 inch margins. Use standard size black type (Arial 11 or Times 12 is the limit here) that can be photocopied; do not use photoreduction. Draw all graphs, diagrams, tables, and charts in black ink. Do not submit an incomplete application. An application shall be considered incomplete and returned if it is illegible, if it fails to follow the instructions, or if the material presented is insufficient to permit an adequate review.

SPECIFIC INSTRUCTIONS*

Research Plan. Organize Section A-C of the research Plan to answer these questions.

- (A)** What do you intend to do?
- (B)** What has already been done? Why is the work important?
- (C)** How are you going to do the work?

The minimum length expected for Sections A-C is 10 pages. Do not exceed 15 pages for Sections A-C. You may use any page distribution within this overall limitation; however, the Faculty recommend the following format and distribution:

- A. Specific Aims.** State the broad, long-term objectives and describe concisely and realistically what the specific research described in this application is intended to accomplish and hypotheses to be tested. One page is recommended.
- B. Background and Significance.** Briefly sketch the background to the present proposal, critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill. State concisely the importance of the research described in this application by relating the specific aims to the broad, long-term objectives. Two to three pages are recommended.
- C. Experimental Design and Methods.** Outline the experimental design and the procedures to be used to accomplish the specific aims of the project. Include the means by which the data will be collected, analyzed, and interpreted. Describe any new methodology and its advantage over existing methodologies. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. Provide a tentative sequence or timetable for the investigation. Point out any

procedures, situations, or materials that may be hazardous to personnel and the precautions to be exercised. Although no specific number of pages is recommended for this section of the application, the total for Sections A-C may not exceed 15 pages.

D. Literature Cited. Do not scatter literature citations throughout the text. List them at the end of the Research Plan. Each literature citation must include the names of all authors, titles, the name of the book or journal, volume number, page numbers, and year of publication. Make every attempt to be judicious in compiling a relevant and current list of literature citations; it need not be exhaustive. Use references as documentation or to support concepts or statements. Students are expected to have read and understood all, or the pertinent parts, of all references listed. References may be organized in any fashion consistent with a favorite journal. For example, list in order and number consecutively in text. Alternatively, give authors in text and list alphabetically. Do not exceed four pages.

* Specific Instructions have been modeled very closely after NIH Grant Guidelines.

ABSTRACT

DESCRIPTION: State the applications broad, long-term objectives and specific aims, making reference to the health relatedness of the project. Describe concisely the experimental design and methods for achieving these goals. Avoid summaries of past accomplishments and the use of the first person. This abstract is meant to serve as a succinct and accurate description of the proposed work when separated from the application. **DO NOT EXCEED THE SPACE PROVIDED.**

**Texas A&M University System Health Sciences Center
Institute of Biosciences and Technology
Graduate School of Biomedical Sciences**

Report of Graduate Steering/Advisory Committee Meeting

The Advisory Committee should meet with the student at least once every six months. Within one week of the meeting the student's thesis advisor should return this completed form to the IBT Graduate Program Director. A copy of this form will be sent to each member of the advisory committee and to the student.

Name of student: _____ Faculty Advisor or
Chair: _____

Date of meeting: _____

Signature

Committee members in attendance:

PROGRESS

Satisfactory

Marginal

Unsatisfactory

(Please be prepared to justify a marginal or unsatisfactory rating to the Graduate Director.)

—

Academic Preparation: Additional Coursework Recommended by the Committee:

—

Research Accomplishments Since the Last Meeting:

—

Committee Recommendations for Future Research?

—

Requirements Needed to Complete Degree, along with Estimated Timetable?

EVALUATION

1. Evaluation of research performance and intellectual development within the last six months.

2. Current strengths and weaknesses as an independent scientific investigator.

3. If there are any weaknesses or deficiencies, how will they be remedied?

4. Comment on the student's oral and written communication skills.

5. Is there anything about the student's performance, interactions with the advisor, or prospects for the completion of the degree that should be brought to the attention of the Graduate Director or Dean of the TAMUSHSC GSBS Program?

GUIDELINES FOR 689 SPECIAL TOPICS COURSES

Journal Clubs and special classes such as group reading and discussions of an scientific textbook, can be submitted to the Graduate School of Biomedical Sciences to receive approval for credit hours for students who participate.

A form entitled, "**Department Request for a 689 Special Topics inCourse**" is to be completed by the faculty member(s) who will be instructing the class (see attached form), to be signed by Department Head (IBT Director) and submitted with a Syllabus for Proposed Course and sent to John Quarles, Interim Dean, Graduate School of Biomedical Sciences, Office of Graduate Studies prior to the proposed semester registrations.

The course syllabus shall consist of the following:

- A. Title: Special Topics in _____(i.e. Biochemistry, Cell Biology, Microbiology, Genomics, etc.).
- B. Proposed semester (i.e. Fall 2002)
- C. Location of classroom (IBT, room number), Day of the week for classes and start and ending times (10:00 - 11:00)
- D. Instructors:
- E. (If textbook class, list book title, editors, ISBN number and publisher, and year printed)
- F. Course Perspective: (focus of the proposed book, publications and emphasis to students)
- G. Courses Format: (round table discussions and lectures of research articles and book chapters. Indicate expectations of students, whether reading certain chapters for discussions, or selecting publications and lead discussions. Show instructors role either as discussion monitor or providing written assignments.
- H. Grading. Indicate percentage of grade derived from student's class participate and written assignments.
- I. Tentative or participating topics. List chapter titles (if textbook) or subject topics on publications)

As a reminder, UT-GSBS students who will be enrolling in the class, should get form "Request for Approval of a Special Project: Course (GS000610)" to be completed by student and signed by instructor, which is to be approved by the Dean at UT. A course syllabus should also be attached to this form when submitted to UT-GSBS.

Department Request For a 689 Special Topics in.....

Submit An **Original Only** With a **Course Syllabus Attached**

To: **Graduate School of Biomedical Sciences - Office of Graduate Studies**

Rm 009 Medical Sciences Library

TAMUS Health Science Center

College Station, TX 77843-1114

I request approval of the following 689 course for the Semester for the

Department of

PREFIX MSCI 689

TITLE: Special Topics In

Give suggested 21-character abbreviation (including spaces)

Numer of hours a week: Theory Laboratory Credit

DESCRIPTION OF COURSE(50 words or less)

Prerequisites

Proposed Instructor

SS# _____

Has this course been taught as a 689? How many times? Semester(s) /

Enrollment /

If a similar course is offered at the HSC, identify it by course number

If this 689 has been approved as a new course, please give prefix and course number

Attach a Syllabus of sufficient detail to permit an accurate evaluation of the course content. If appropriate, indicate the lecture and laboratory periods, in hourly increments, that will be required to present the proposed subject matter. A list of books (indicate authors), titles of scientific journals, or other resource materials to be utilized in teaching the course are to be included in the syllabus. Also indicate How the Student Will Be Evaluated.

department head date

Chair, College Review Committee date

Dean, college of Medicine date

Interim Dean, GSBS Office of graduate studies date

An approved copy has been sent to the Department Date

**Office of Graduate Studies – Graduate School of Biomedical Sciences
Texas A&M University System Health Science Center
Texas A&M University System Health Science Center
Revised 09/25/01**

Application Process.

For an application contact:

Graduate School of Biomedical Sciences
John B. Connally Building
301 Tarrow Street, 7th Floor
College Station, TX 77840-7896
Phone: (979) 458-7200
Fax: (979) 458-7202

OR

Graduate Program Director
Institute of Biosciences and Technology
The Texas A&M University System Health Science Center
2121 West Holcombe Boulevard
Houston, Texas 77030-3303