GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

Brief History

The Graduate School of Biomedical Sciences (GSBS) was established in 1972 and currently hosts doctoral programs in Biomedical Engineering, Integrated Biomedical Sciences (IBMS), Nursing Science, Radiological Sciences and Translational Science. A Doctorate in Medical Physics and Master's degrees in Cellular and Structural Biology, Clinical Investigation, Dental Science, Immunology and Infection and Medical Health Physics are offered. Certificates in Cancer Prevention (CCP) and Translational Science (CTS) are also offered. These programmatic vehicles enable the Graduate School of Biomedical Sciences to assert its primary objective of educating students committed to the advancement of knowledge in contemporary areas of the biomedical sciences. A compelling aspect of graduate education in a health science center environment is the opportunity for graduate students to interface with health professionals with diverse technological and conceptual capabilities and perspectives in the biomedical sciences. The proof of accomplishment or enduring value of any educational process must be accounted in the demonstrated productivity and academic achievement of the graduates of the program. Without question, the doctoral and masters programs of the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) have, during the past four decades, achieved outstanding success in their educational mission of preparing professional scientists who function well in academic, industrial, and government sectors.

Our educational and research faculty are drawn from all five schools of the Health Science Center (http://www.uthscsa.edu). Those faculty members are training approximately 300 students in our combined graduate programs. There is a diversity of talent, but a unity of purpose in teaching and mentoring students in an exciting array of interdisciplinary and discipline-based fields of study and research. The academic programs offered by the GSBS are designed to provide a fundamental foundation of knowledge and scientific inquiry for our graduate students to ultimately become independent scientists and thinkers.

Mission Statement

The Graduate School of Biomedical Sciences provides an individualized, diverse and multidisciplinary learning environment for students to develop the knowledge, skills and creativity necessary to succeed in evolving biomedical disciplines.

Programs

The University of Texas Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) at San Antonio offers graduate programs in the biomedical sciences leading to the Doctor of Philosophy degree in Biomedical Engineering, Integrated Biomedical Sciences, Nursing Science, Radiological Sciences and Translational Science and to a Doctorate in Medical Physics. Master of Science degrees in Clinical Investigation, Dental Science, Immunology and Infection and Medical Health Physics are also offered. The graduate program leading to the Doctor of Philosophy degree in Nursing Science is conducted by the faculty of the Health Science Center's School of Nursing and administered through the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). A Master of Science and Doctoral Program in Biomedical Engineering is jointly offered by the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) at the Health Science Center and the Graduate School at The University of Texas at San Antonio (UTSA) (http://graduateschool.utsa.edu). The Translational Science Ph.D. (TS Ph.D.) program is a unique interdisciplinary joint doctoral degree program involving four Texas Institutions. The joint degree institutions include the Health Science Center, The University of Texas at San Antonio and The University of Texas at Austin. The University of Texas School of Public Health, San Antonio Regional Campus, serves as a collaborating institution for the TS Ph.D. program. A Master's program in Clinical Investigation is designed for interested selected graduate students and health care professionals in the design and conduct of clinical studies. Certificates in Cancer Prevention and in Translational Science are administered through the Master's program in Clinical Investigation. A Master's degree program in Dental Science is offered under the joint auspices of the university's School of Dentistry and the Graduate School of Biomedical Sciences.

These programs provide opportunities for graduate students to become competent in a specialized field, to attain excellence in the conduct of research, and to gain an understanding of the interdisciplinary nature of biomedical sciences. One very special advantage of our graduate programs is that we operate in a prominent academic health science university where scientific inquiry can synergize with the healing professions to guide our science in seeking solutions to even the most vexing biomedical issues plaguing mankind. Detailed information about these graduate programs is provided in this Catalog.

Dual Degree Programs

Dual degree programs of study provide a mechanism for students to obtain a Ph.D. degree in addition to an M.D. or D.D.S. degree at the Health Science Center. The purpose of these programs is to offer students the opportunity to pursue a course of study to become clinician-scientists who have not only depth of knowledge in clinical medicine or dentistry and in a basic science discipline, but also experience in research planning and execution. Students who take advantage of these programs have the opportunity to become scientists who are exceptionally qualified to apply specialized research competence to the resolution of clinical problems.

Those wishing to obtain both a professional degree and a graduate degree must satisfy the entrance requirements of both the School of Medicine (http://som.uthscsa.edu) or School of Dentistry (http://www.uthscsa.edu/academics/dental) and the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). At this time, admission to each school is accomplished separately. MCAT (https://www.aamc.org/students/applying/mcat) or DAT (http://www.ada.org/en/education-careers/dental-admission-test) scores may be used in lieu of GRE (https://www.ets.org/gre) scores for admission into these programs.

Through the interdigitation of the academic curricula in the professional school and the graduate school and of laboratory research for the dissertation, requirements for the dual degrees can be accomplished in a timely manner. In every instance, a specific graduate program or schedule shall be planned between the student, the appropriate Committee on Graduate Studies of the Graduate School, and the director of the respective dual degree program, who in turn will coordinate curricular issues with the deans' offices of the participating schools.

A combined M.D. Residency/Ph.D. program is offered through Radiological Sciences. Physicians may complete their residency in radiology, psychiatry, or radiation oncology concomitant with completing requirements for a Ph.D. degree in Radiological Sciences that includes a training track in Human Imaging. Students in this program study and perform research within dedicated groups of medical physicists, biomedical imaging specialists, and biomedical researchers from

specialties using imaging as a research tool. For more information, visit the Web site: http://radsci.uthscsa.edu/index.php/Human_Imaging.

M.D./Ph.D. Program

The M.D./Ph.D. program expects students who are pursuing the dual degrees to maintain standards of academic excellence, to progress in a timely fashion toward both the M.D. and Ph.D. degrees, and to maintain professionalism. The M.D./Ph.D. Steering Committee therefore stipulates the academic requirements listed below. Failure to meet these requirements will result in dismissal from the dual degree program and termination of financial support from the M.D./Ph.D. program. The student's standing with respect to either the School of Medicine (http://som.uthscsa.edu) or the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) is a separate matter to be pursued through the appropriate dean's office.

1. While enrolled for the M.D. degree, students are required to maintain a minimum yearly grade point average of 3.00 and successfully complete two research rotations. In addition, dual degree students are required to pass the USMLE step 1 exam on the first attempt.
2. While enrolled as Ph.D. students, dual degree students are required to maintain a GPA of 3.25 for each semester, they are enrolled in graduate school. M.D./Ph.D. students must have a cumulative GPA of 3.25 to be eligible to take the advancement to candidacy examination, prior to establishing the formal dissertation supervising committee.
3. Attendance at the monthly Bench-to-Bedside series and the annual retreat is required of all students throughout both the M.D. and Ph.D. components of the program.

During the graduate phase of their training, M.D./Ph.D. students are required to demonstrate satisfactory progress toward completion of their dissertation research projects. This documentation must be confirmed every six months, in the form of positive written evaluations by their dissertation research supervising committees, as well as any other positive written evaluative material that the respective track and program COGS may wish to provide.

1. The M.D./Ph.D. Steering Committee provides a mechanism for review of student progress and enforcement of these policies. The M.D./Ph.D. Steering Committee is empowered to review academic and research performance in accordance with the minimum requirements stipulated above and to make recommendations regarding M.D./Ph.D. program retention or dismissal of students based upon its evaluation of their academic progress and status.
2. M.D./Ph.D. students shall have the right to appeal a decision of dismissal from the program. The M.D./Ph.D. Steering Committee will hear the appeal. The student may further appeal to the President of the Health Science Center, but only on issues of procedural irregularity.

Additional information about dual degree programs is available from the Graduate Dean's Office.

Non-Degree Program

An individual who wishes to enroll in courses in the Graduate School of Biomedical Sciences without entering a formal degree program must apply for admission as a non-degree student. The basic requirements for such admission are the same as those for degree-seeking students except letters of recommendation and the GRE are not required. Non-degree applicants are also required to provide authorization for a security background and sanction check to be performed at the time of application.

A non-degree student must receive approval of registration each semester by the Dean of the Graduate School and by the instructor of each course and maintain a grade point average of at least a B (3.0 in 4.0 system) in courses taken as a non-degree student. Non-degree students can register for a maximum course load of twelve semester hours in the fall or spring semesters. In general, students may not register as a non-degree student for more than four consecutive semesters.

All grades received as a non-degree student will be included in the graduate student's transcript and in computation of the cumulative GPA if the student is admitted subsequently to a graduate program. Under special circumstances, such as the computation of the GPA to determine academic probation, the Dean may grant exceptions to this policy. The grading policy for non-degree students are the same as those for degree-seeking students.

Non-degree student status will not be granted to premedical students for the purpose of taking School of Medicine courses. International students currently residing abroad should consult with the Office of International Services. Only degree-seeking applicants are eligible to apply for a student visa status.

Committees on Graduate Studies (COGS)

Each program is supervised by a **Committee on Graduate Studies (COGS)** composed of members of the graduate faculty of that program. The COGS is responsible for establishing admission requirements specific to the program, recommending approval or denial of admission of applicants to the program, overseeing academic curricula, monitoring its students' academic progress in didactic and research activities, attesting eligibility for admission to candidacy for a degree, and verifying to the **Graduate Faculty Council** that the student has fulfilled all requirements for the awarding of the degree. The COGS Chair is the administrative head of each program. The COGS Chair is the voting representative of the program on the Graduate Faculty Council and serves as the liaison officer between the COGS and the Graduate School Dean's Office on all matters pertaining to applicant and student affairs. In several of the programs, one graduate faculty member serves as both Graduate Advisor and COGS Chair. The advisor serves as a counselor on academic matters and monitors the student's progress in (a) successfully completing contingencies of admission and course requirements of the program, and (b) selecting an area of research specialization.

The Graduate Faculty Council has the responsibility to establish and maintain policies and regulations on matters of graduate education common to all programs administered by the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). These include such matters as general academic requirements for admission to graduate study and to candidacy, for continuation of studies, and awarding of a degree; standards of student professional conduct; grading systems; graduate program review; and criteria for thesis and dissertation research, its supervision, and its defense. Each COGS is responsible to the Graduate Faculty Council and submits recommendations on various graduate program matters, including the granting of a degree, to the Council for review and action.

The Dean of the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) is the administrative head of the graduate programs and serves as the Chair of the Graduate Faculty Council. Ex-officio nonvoting members of the Council include the Dean, the Associate Dean(s) of the Graduate School, the Assistant Dean(s) of the Graduate

School, the Director of Doctoral Studies in the School of Nursing, the Associate Dean of Student Affairs for the School of Health Professions and the School of Dentistry, and the Registrar. The voting members of the Council consist of the COGS chairs of each graduate program. A student representative can be elected from each of the following graduate student constituencies to serve as non-voting members of the Council: Graduate Student Association, dentistry, nursing, and health professions. Please see your department for an updated list of chairs and advisors.

Policies and Regulations

Requirements and Regulations

A student enrolled in the Graduate School of Biomedical Sciences is subject to all established requirements and regulations of the Health Science Center, the Graduate School, and the respective graduate programs. Exceptions to these rules and issues not covered by previously determined guidelines will be decided by the Graduate Faculty Council.

Attendance

Attendance requirements for regularly scheduled classes, laboratories, and clinic periods are the option and prerogative of the course instructor for that particular portion of the curriculum. The policy regarding attendance for each course is announced by the instructor at the first meeting.

Unexcused absences in courses in which attendance is required may be considered sufficient cause for failure. Excused absences may be granted by the course director in such cases as illness or personal emergency. Such leaves are considered on an individual basis, and verification of the reason for the absence may be required. It is the responsibility of the student to take the initiative in arranging with the faculty to make up work that is missed.

For student employees, refer to policy 4.3.5 in the *Handbook of Operating Procedures* (http://uthscsa.edu/hop2000/4-toc.aspx).

Course Syllabus Policy

All course instructors must provide a course syllabus to students and comply with the following:

1. All course syllabi must be posted online, either in the course's learning management system, e.g.CANVAS, or on a GSBS web page. This policy is mandated by State law (HB 2504).
2. Course syllabi must be made available to students online on the day web registration begins, but no later than the first class meeting of the semester. After the first class no changes can be made to syllabus except for changes to logistical information. If the logistical information is changed, the updated syllabus must posted within 48 hours so that it remains current.
3. The academic content of a course syllabus remains within the province of each individual instructor to determine, subject to the program's curricular needs. However, at a minimum, the following elements must be included in each course syllabus:

    - the course number and name
    - the instructor's name and contact information (including email address)
    - the instructor's official office hours and location
    - the course's learning objectives and
    - the course prerequisites, if any
    - a detailed grading scheme, including types of exams/ assignments and their weight in determining the final grade
    - a schedule of assignments and exams
    - the textbook, reading assignments and/or reading list
    - the course policies the instructor wishes to impose, such as attendance policies, classparticipation expectations, late assignment policies, etc.
    - the following Health Science Center policy statements:

        REQUESTS FOR ACCOMMODATIONS FOR DISABILITIES
        In accordance with policy 4.2.3, Request for Accommodation Under the ADA and the ADA Amendments Act of 2008 (ADAAA), any student requesting accommodation must submit the appropriate request for accommodation under the American with Disabilities Act (ADA, form 100) to his/ her appropriate Associate Dean of their School and a copy to the ADA Coordinator. Additional information may be obtained at http://uthscsa.edu/eeo/form100-Faculty-student-resident.pdf.

        ACADEMIC INTEGRITY AND PROFESSIONALISM
        Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT System Rules and Regulations of the Board of Regents. Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, signing attendance sheets for another student, and any act designed to give unfair advantage to a student or the attempt to commit such an act. Additional information may be obtained at http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/academicdishonestypolicy/

Residence Required for Graduation

Each doctoral student must spend a minimum of two full semesters, or the equivalent, as a full-time student in residence at the Health Science Center Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). A candidate for the M.S. degree must be registered in the thesis course for at least one term; a candidate for the Ph.D. degree must be registered in the dissertation course for at least two terms. The residence requirement is based on the premise that the scholarship and proficiency necessary for achievement of a graduate degree in the biomedical sciences are best acquired through endeavors devoted wholly to study and research in the university environment.

Time Limits

The median time for completion of the M.S. degree and the Ph.D. degree is 3 years and 6 years, respectively, in the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). The time to degree for the Doctorate in Medical Physics (DMP) program is 4 years.

Ph.D. Degree: Each program has a written policy on time-to- degree (Plan of Study) that will guide the student. Coursework or major examinations taken more than six years prior to the end of the candidate's final semester may not be accepted for credit and, if necessary for the degree, must be repeated or specifically approved by the Committee on Graduate Studies.

M.S. Degree: Each program has a written policy on time-to- degree (Plan of Study) that will guide the student.

Credit Hour Requirements

The majority of the total semester credit hours taken for an M.S. or Ph.D. degree must be earned at the Health Science Center (http://www.uthscsa.edu). Students are admitted to an M.S., Ph.D., M.D./Ph.D., DMP, D.D.S./Ph.D., or M.D. residency/Ph.D. degree program. A minimum of 30* semester credit hours is required for an M.S. degree, and a minimum of 72* semester credit hours is required for a Ph.D. degree. A minimum of 72* semester credit hours is required for the Ph.D. component of the dual degree programs. A minimum of 100 semester credit hours is required for the DMP degree. Specific curriculum requirements vary depending on individual programs.

Ph.D. Degree: The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The specific curriculum requirements of each graduate program are defined in the individual programs. The curriculum of each student is supervised by the appropriate Committee on Graduate Studies.

M.S. Degree: A minimum of 30* semester credit hours is required for the M.S. degree. The student must successfully complete at least 12 semester credit hours of coursework in addition to credit hours awarded in Research, Thesis, and Seminar. With the exception of dual degree programs, all work for the M.S. degree is ordinarily done at the Health Science Center's Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu).

A maximum of six semester hours of graduate course work from another institution may be applied for credit toward the Master's degree, but only with the approval of the Committee on Graduate Studies in the student's program. In cases where such credit is approved, the student must still meet the residence requirement for two full semesters. For students participating in a dual degree program, usually six semester hours in the medical or dental curriculum may be credited toward the M.S. degree. As a rule, these semester hours will come from survey courses in the student's major area. Students in the doctoral Nursing Program should consult the Transfer of Credit policies under the Program Policies (http://catalog.uthscsa.edu/schoolofnursing/phd/#programpoliciestext) for the Doctor of Philosophy in Nursing Program (http://catalog.uthscsa.edu/schoolofnursing/phd).

**Some programs may require additional hours*

Waiver of Courses: With the approval of the Committee on Graduate Studies, graduate credit hours from other universities may be accepted in lieu of required courses. In addition, the Committee may waive certain required courses, based on the student's previous graduate course work. These hours will be accepted in the form of credit for the course material rather than by application of credit hours directly to the student's transcript.

Waiver of Fitness Fee: Graduate students enrolled at the Health Science Center are required to pay a fitness fee. Only students enrolled in distance education programs are exempt. Students enrolled in a joint degree program (e.g. Translational Science, Biomedical Engineering) whose home institution is not the Health Science Center may request the fitness fee to be waived. Waiver requests must be submitted by the student in writing to the Senior Associate Dean of the Graduate School no later than 10 days prior to the beginning of classes. Students enrolled in final hours may also request the fitness fee to be waived. All waiver requests are forwarded by the Senior Associate Dean for review by the Vice President for Academic, Faculty and Student Affairs, and require the approval of both the Vice President for Academic, Faculty and Student Affairs and the Vice President and Chief Financial Officer.

If the waiver is approved, the GSBS will forward the waiver to the Bursar's Office with a copy sent to the Office of Veteran Services & Financial Aid. Waivers are valid for one year after which the student must re-apply.

Foreign Language Requirement

Demonstration of proficiency in a foreign language is not required for either the M.S. or Ph.D. degree.

Ethics Course Requirement

All doctoral students must take the course INTD 5082 Responsible Conduct of Research or its equivalent, as a requirement for graduation. Master of Science students are strongly encouraged to take the INTD 5082, but it is not a requirement for graduation.

Supervised Teaching

Each graduate program will decide if supervised teaching is required for a doctoral degree in its respective program. If supervised teaching is required, the student must enroll in a program-designated teaching course for a minimum of one semester credit and receive a grade of S (Satisfactory) or H (Honors).

Student Employment

Full-time students are strongly counseled against accepting any outside employment. Before seeking outside employment, graduate students are urged to discuss their plans with their faculty advisor.

Full-time graduate students may be awarded stipends as teaching or graduate research assistants when funds are available. Student stipends funded from federal sources are governed by federal regulations. Full-time students are discouraged from taking employment; stipends serve as scholarships to meet financial need.

There may be circumstances under which part-time graduate student's desire gainful employment within the Health Science Center (http://www.uthscsa.edu) (or full-time employees desire to pursue part-time graduate studies), and the following guidelines should apply:

Within funds available, part-time graduate students who are gainfully employed part-time within the Health Science Center in addition to pursuing graduate studies may be paid prorated rates within salary scales of job classification for which they are qualified and/or to which they are assigned. This procedure is permitted primarily to allow gainful part-time employment in an area unrelated to the student's formal academic program. The Committee on Graduate Studies should be consulted in advance when a part-time student desires part-time employment within the student's own supervising department, or when the student is employed in a work situation that exists whereby the employment will be of direct benefit in meeting the graduate degree requirements. The committee should then recommend an appropriate part-time rate of pay consistent with the objectives of the graduate program in general with due consideration to the pay rates of other graduate students. Departments requesting employment of a part-time graduate student outside the supervising department (and in an area unrelated to the student's academic program) should determine the number of hours for which the student is registered prior to contacting the Office of Human Resources regarding appointment of such students. This will enable the Office of Human Resources (http://uthscsa.edu/hr) to provide proper salary rate information.

The present policy permits an employee to enroll in a 3-semester credit hour course without reduction in pay.

Records

Registration

The Office of the University Registrar (http://students.uthscsa.edu/registrar) will announce and provide the registration process to all students, Committee on Graduate Studies (COGS) Chairs, and their assistants prior to the start of each semester. For individual registration concerns, confer with your program's Committee on Graduate Studies (COGS) Chair.

A student must register each semester and summer session that he or she is enrolled in a course. This includes courses in Research, Thesis, and Dissertation. No student can receive credit for a course for which he or she has not registered.

Consequences for Non-Payment of Tuition and Fees

In graduate programs where students are responsible for paying their own tuition and fees, payment must be made by the census date of each semester (which is always the 12th class day). The fall semester has two official start dates for new students, and thus, two census dates are listed on the school's official Academic Calendar. Students should refer to the Academic Calendar to determine their census date based on their start date. Consequences of non-payment of tuition and fees are listed below. International students must also contact the Office of International Services (http://www.uthscsa.edu/ois).

- Discontinued enrollment in the graduate program, resulting in termination with loss of pay, benefits, and privileges.
- Necessity to re-apply for admission for the following semester.
- A bar against readmission for the current semester.
- Initiation of loan repayments, if a student has loans.
- Potential loss of visa status and deportation for international students.
- Withholding of a student's official transcript.
- Withholding of a diploma to which a student would otherwise be entitled.

Full-Time Status

With the implementation of a 2-semester "Super Semester" academic calendar in the GSBS beginning January 1, 2014, the minimum number of credit hours required for Doctoral and Master's students to be considered full-time students is increased.

Doctoral students must be enrolled for a minimum of 12 semester credit hours each fall and spring semester in order to be considered full-time (equivalent to 24 semester credit hours for a full academic year). The minimum half-time course load for doctoral graduate students is 6 credit hours per semester.

Master's students must be enrolled for a minimum of 8 semester credit hours each fall and spring semester in order to be considered full-time. The minimum half-time course load for master's graduate students is 4 credit hours per semester.

Exception(s) to this policy include:

1. A student enrolled in a THECB-approved Certificate program
2. A student enrolled for Final Hours.
3. A student enrolled in the Ph.D. Nursing Science program.
4. A Health Science Center student enrolled in the **Translational Science Ph.D. program**. A minimum total of 24 credit hours per academic year for full-time status, and 12 credit hours per academic year for part-time status, is required. Credit hours earned in trailing summer semesters at other participating institutions will count toward the total required credit hours each academic year.
5. A Health Science Center student enrolled in the **Biomedical Engineering Ph.D. program**. A minimum total of 24 credit hours per academic year for full-time status, and 12 credit hours per academic year for part-time status, are required. Credit hours earned in trailing summer semesters at other participating institutions will count toward the total required credit hours each academic year.
6. A Health Science Center student enrolled in the **Biomedical Engineering M.S. program**. A minimum total of 16 credit hours per academic year for full-time status, and 8 credit hours per academic year for part-time status, are required. Credit hours earned in trailing summer semesters at other participating institutions will count toward the total required credit hours each academic year.

Students appointed in Graduate Research Assistant (GRA) and Teaching Assistant (TA) positions in the GSBS will be required to enroll in a minimum of 12 credit hours per semester, with the exception of a Health Science Center student in the Translational Science PhD program, which will require enrollment in a total of 24 credit hours over the fall, spring, and trailing summer semesters each academic year. GRAs and TAs are allowed to enroll in final hours and remain as full-time students per the Final Hours Policy (http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/finalcredithourspolicy) found in the catalog under General Academic Policies.

Students enrolling for less than half-time will be responsible for repayment of federal student loans.

Full-time students are strongly counseled against accepting any outside employment. Before seeking outside employment, graduate students are urged to discuss their plans with their faculty advisor.

Full-time graduate students may be awarded stipends as teaching or graduate research assistants when funds are available. Student stipends funded from federal sources are governed by federal regulations. Full-time students are discouraged from taking employment; stipends serve as scholarships to meet financial need.

Adding Courses

Students may add courses during official add days as designated by the Office of the University Registrar (http://students.uthscsa.edu/registrar) each semester. Students are not permitted to add classes to their schedules after the census date, which is typically the 12th class day of the spring and fall semesters.

Dropping Courses

A student who is not on academic probation may drop a course at any time during the semester provided the student is passing the course at the time and has obtained the signed approval of the course director and COGS chair.

The Registrar will record the symbol **W** if a course is dropped before the first evaluation period in that course. After that time, the course director will assign a grade of either **WP** (Withdrew Passing) or **WF** (Withdrew Failing). A student on academic probation will not be allowed to drop a course.

In case of illness and with the consent of the Dean, a student may drop a course without penalty at any time prior to the beginning of final examinations.

Transfer of Credit

Credit for coursework taken at another institution may be transferred if the student submits a Course Waiver/Substitution Request Form available in the Office of the University Registrar. The same procedure should also be used to request transfer of credit from other schools within the Health Science Center (http://www.uthscsa.edu). The transfer of credit is subject to approval by the Committee on Graduate Studies of the program in which the student is enrolled and by the Dean or the Dean's designee.

Students in M.S. programs may apply no more than 6 semester hours of transferred credit toward satisfaction of the 30 semester credit hours required for the degree. However, the request form should list all courses taken elsewhere, which are approved by the Committee on Graduate Studies to satisfy the course requirements for the M.S. degree set forth by the program in which the student is enrolled.

Students in the Ph.D. programs are required to fulfill a minimum of 72 semester credit hours of coursework. Transfer of credit for Ph.D. students may be requested to provide evidence on the student's transcript of the completion of courses taken elsewhere which are approved by the Committee on Graduate Studies (1) to satisfy the course requirements for the Ph.D. degree or (2) to be appropriate to the specific course of study of the individual graduate student.

Registration for Thesis

Students in M.S. programs may register for the Thesis course XXXX 6098 where XXXX represents one of the following: BIME, BIOC, CLSC, CSBL, DENH, INTD, MEDI, MICR, MMED, NURS, PHAR, PHYL, or RADI. Registration for Thesis is only permitted after the following three actions have been taken:

1. Approval of admission to candidacy for the M.S. degree by the Dean;
2. Approval of the thesis research proposal by the Committee on Graduate Studies of the program and the Dean;
3. Appointment of a Supervising Committee for the thesis research by the Committee on Graduate Studies of the program and the Dean.

A candidate for the M.S. degree must register for the thesis course for at least one term, unless they participate in a graduate program with a non-thesis option.

Registration for Dissertation

Students in Ph.D. programs may register for the Dissertation course XXXX 7099 where XXXX represents one of the following: BIME, BIOC, CSBL, IBMS, MEDI, MICR, MMED, NURS, PHAR, PHYL, or RADI. Registration for Dissertation is only permitted after the following three actions have been taken:

1. Approval of admission to candidacy for the Ph.D. degree by the Dean;
2. Approval of the dissertation research proposal by the Committee on Graduate Studies of the program and the Dean;
3. Approval of the membership of the candidate's Supervising Committee by the Committee on Graduate Studies of the program and the Dean.

A candidate for the Ph.D. degree must register for the Dissertation course for at least two terms.

Registration for Final Term

It is a requirement that a student be registered for the semester in which he or she graduates.

Final Credit Hours

A student in his/her final semester registering only for thesis or dissertation may register for "final hours". A Ph.D. student must register for a minimum of 3 semester credit hours; a M.S. student must register for a minimum of 1 semester credit hour. When a student declares "final hours" for a semester, the student shall be considered enrolled in a full-time course load for that semester. The student pays tuition based upon the number of credit hour for which he/she registers.

Because of requirements dictated by certain types of visas, international students must consult with their COGS Chair prior to registering for final hours.

A student may register for final credit hours only once during his/her degree program. The "Request for Designation of Final Hours" form is available in the Office of the University Registrar or on their website (http://students.uthscsa.edu/registrar/2013/03/forms/) and it requires the signature approval of the program COGS Chair.

Registration for Audit

Permission to audit one or more courses is sometimes granted. Auditing conveys only the privilege of observing and excludes handing in papers or taking part in a class discussion, laboratory exercises, or fieldwork. An **AU** grade is given and no credit is reported. Graduate students must obtain permission to register to audit a course from the course director and the COGS chair of the program in which they are enrolled. Others who wish to register to audit a graduate course must apply to the Associate Dean of the Graduate School for admission as a Non-Degree Student.

Grading System

Credit hours are earned in the graduate programs only for the grades **A**, **B**, **C**, and **S**. All letter grades except **H** and **S** are included in the computation of the grade point average. Grade points are assigned as follows:

A = 4 (above average graduate work)
B = 3 (average graduate work)
C = 2 (below average graduate work)
D = 1 (failing graduate work)
F = 0 (failing graduate work)

Grades of **D** and **F** are not acceptable for graduate credit. If a course is repeated, the last grade earned is used in computing the cumulative grade point average.

A grade of **S** (satisfactory), **U** (unsatisfactory), or **H** (honors) is not included in the computation of the grade point average. These grades are given in the following courses in all programs: Supervised Teaching, Research, Thesis, and Dissertation. **S/U** and/or **H** (Honors) may also be given in specific courses in specific programs.

Other symbols used in reporting the standing of students in their classes are: **WP** and **WF** (see "Withdrawal"), **W** (course dropped while receiving a passing grade with no penalty), and **I** (incomplete). The course director will record the symbol **W** if a course is dropped before the first evaluation period in that course. After that time, the course director will assign a grade of either **WP** (withdrew passing) or **WF** (withdrew failing).

An **I** is used only to report cases in which the student has not completed all of the assignments and/or examinations before the conclusion of

the course. Unless the student has been granted a leave of absence, all work must be completed within one year, at which time the grade of **I** (incomplete) will be changed to the appropriate letter grade.

The grading system described above applies to courses in the medical and dental curricula in which graduate students may be enrolled as well as to courses in the graduate programs. Grades for courses taken to satisfy a contingency or condition of admission or those transferred for credit are not included in computation of the grade point average.

Student Academic Grievance Process

An **Academic Grievance** is a complaint regarding an academic decision or action that affects a student's academic record. For the definition of terms see: **http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/grievances/.**

As required by the University of Texas System and the policies of the University of Texas Health Science Center, a formal grievance procedure is a process to allow students the opportunity to report any perceived act, omission, or issue of an academic nature which may adversely affect the student. The student grievance may include grade disputes or other academically related issues. All efforts should be made by the student and the faculty member involved to resolve the issue before proceeding through the grievance process. If the issue cannot be resolved to the student's satisfaction, the student is encouraged to submit their grievance through the grievance process. The sequence of procedures involved in the grievance process is outlined below.

Grievance Process:

1. The student has up to 10 business days from the date he/she was issued the grade or evaluation in question to file a formal complaint.
2. A formal complaint is filed by submitting the Student Complaint Form (http://gsbs.uthscsa.edu/current_students/forms) to the COGS Chair of the Program with a copy going to the GSBS Dean's office.
3. A committee consisting of the COGS Chair, the Program Director and the GSBS Associate Dean (Academic Affairs) *, will have up to 30 business days to investigate the grievance. The COGS Chair will chair the committee. If the Program Director serves as COGS Chair, the Program Director will appoint a senior graduate faculty member of the Program to serve on the committee. Documentation from the student and faculty will be collected as well as face-to-face meetings scheduled by the COGS Chair.
4. A written and signed summary of the decision rendered will be provided to the student by the COGS Chair and a copy of the signed summary will be sent by the COGS Chair to the GSBS Dean's Office.
5. If the student is not satisfied with the final decision reached by the COGS Chair, Program Director, and Associate Dean (Academic Affairs), the student may appeal the decision to the Dean of the GSBS within 10 business days of receiving the written summary (described below).
6. All documents (emails/memos/letters/written summaries) will be maintained by the GSBS.

*If the formal academic grievance is filed against the COGS Chair or Program Director then the Associate Dean (Academic Affairs) or designee will serve as the chair of the grievance committee and will identify a senior faculty member as the third member to serve on the committee. If the Associate Dean is named in the complaint, then the Associate Dean for Student Affairs or his/her designee will represent the GSGS on this committee.

Appeal Process

The student has up to 10 business days of receiving the written summary of the formal grievance process to file an appeal.

An appeal is filed by submitting to the Dean of the GSBS a letter signed by the student outlining the arguments for the appeal together with the Student Complaint Form and the written summary from the grievance process.

The Dean will have up to 30 business days following the formal grievance process to render a decision. The Dean's decision will be considered final and provided to the student in writing.

Texas Higher Education Coordinating Board

If a student exhausts all grievance processes in the Graduate School of Biomedical Sciences and the Health Science Center, then the student may file a complaint to the Texas Higher Education Coordinating Board. For the types of complaints it investigates, processes and complaint form search their website http://www.thecb.state.tx.us/index.cfm?objectid=E9397451-F3BE-CFBF-0DD4E422B3D9CD13#3

Continuation, Probation, and Dismissal

Continuation in the graduate programs is dependent upon three requirements:

1. Satisfactory progress in removing any conditions imposed at the time of admission;
2. Maintenance of a minimum cumulative B (3.0) average for all courses taken while enrolled in the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). A student whose cumulative grade point average falls below 3.0 will be placed on probation and warned by the Dean of the Graduate School that continuation in the graduate program is in jeopardy. A student will remain on probation as long as her or his cumulative GPA is below 3.0. While on probation, a student must maintain a B average in those courses for which he or she is registered or be considered for dismissal by the Committee on Graduate Studies. Except in the case of illness, permission to drop courses will not be given while the student is on probation. A student on probation may not be admitted to candidacy or awarded a degree. Grades achieved during enrollment as a non-degree student are not used to determine academic probation.
3. A satisfactory rate of progress toward the degree as determined by the Committee on Graduate Studies is required throughout the student's enrollment. The Committee, with the Dean's consent, may terminate a student's enrollment for lack of satisfactory progress. Any graduate student who receives two unsatisfactory (U) grades in consecutive semesters will be considered for dismissal by the program Committee on Graduate Studies. Any recommendation for dismissal requires final approval by the Dean of the Graduate School.

Withdrawal

Permission for withdrawal from a graduate program may be granted by the Dean upon concurrence by the Committee on Graduate Studies of the program. The student who wishes to withdraw must complete and sign the **Student Clearance Form** (available from the Office of the University Registrar, Room 317L MED), submit the form for signature to the COGS Chair and the Graduate School dean, and then obtain authorized signature clearance from each area listed on the lower portion of the form.

In the case of withdrawal before the end of the semester or summer session (and thus the dropping of all courses), the grading symbol **WP** or **WF** will be recorded for each course not completed, depending on the student's standing on the last day of enrollment. In the case of withdrawal at the end of a semester, the appropriate grading symbol will be recorded for each completed course.

An application for readmission by a student who has previously withdrawn is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants.

Leave of Absence

Permission for a leave of absence from a graduate program for a maximum period of one year may be granted by the Dean subject to prior approval by the Committee on Graduate Studies of the program. Such permission will be granted only for extenuating circumstances and indicates that the student will be allowed to return to the program within the one-year time limit. There is no guarantee that a stipend will be reinstated upon return.

The student should make a written request for a leave of absence to the Chair of the Committee on Graduate Studies for her/his program, including the reasons for the request and the expected time of return. If the request for leave of absence is approved, the student is so notified by a letter from the Dean and provided by the Graduate School Dean's Office. The student must then complete a **Student Clearance Form** available from the Office of the University Registrar (317L MED). The student should then complete and sign the upper portion of this Form, obtain the signatures of the COGS Chair and the Graduate School Dean, and obtain authorized signature clearance from each area listed on the form. The student should also drop any courses for which they are currently enrolled.

***In Absentia* (INTD 1000)**

Students must be registered for the semester in which they graduate and all fees and tuition apply. A special arrangement is made for students who defend the dissertation or thesis after the last Graduate Faculty Council (GFC) meeting of the semester and before the first class day of the following semester.

The student who expects to defend the dissertation or thesis in this interval should register for one credit hour for the next semester. Following the successful defense of the dissertation, the student may drop the one credit hour and register *In Absentia* for the coming semester. This must be accomplished before the first class day of the new semester. Registration *In Absentia* should be designated as zero credit hours and the student will be charged a $25 fee.

Non-registration

A student who fails to register for two or more consecutive semesters and does not elect to take a leave of absence or to enroll *In Absentia* will be considered for dismissal from the program. The Registrar will notify the Committee on Graduate Studies and the Dean of the student's failure to register.

If dismissed, the student may reapply for admission. Such application is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants.

Transfer between Graduate Programs

Any student who wishes to change the course of study from one graduate program to another must submit an application to that program, and the application is subject to the same requirements, procedures, and acceptance considerations that apply to other applicants to the program. Students who are considering such a transfer must have an interview with the Associate Dean. A Change of Program form must be obtained from the Office of the University Registrar and submitted in order to complete the process.

Graduation

The degree of Doctor of Philosophy is awarded by the Board of Regents (http://www.utsystem.edu/board-of-regents) upon the satisfactory completion of a minimum of 72* semester credit hours, the satisfactory completion of a prescribed program of study as documented by the Committee on Graduate Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and President to the Board of Regents.

The degree of Master of Science is awarded upon the satisfactory completion of a minimum of 30* semester hours, the requirements particular to each graduate program as documented by the Committee on Graduate Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and President to the Board of Regents (http://www.utsystem.edu/board-of-regents).

The degree of Doctorate in Medical Physics is awarded upon the satisfactory completion of a minimum of 100 semester credit hours, the requirements documented by the Committee on Graduates Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and President to the Board of Regents.

**Some programs may require additional hours*

Commencement

Graduation exercises are held each year in May.

The Graduate School Dean will be present to address the students and participate in the presentation of diplomas. Candidates for graduation in the Nursing Science Ph.D. program, the Pharm.D. program and the Master's in Dental Science program also participate in the Graduate School (http://gsbs.uthscsa.edu) Commencement.

Sequential Procedures

Doctor of Philosophy degree

Phase I - From matriculation through admission to candidacy

1. **Assignment of faculty advisor**: The Committee on Graduate Studies assigns a member of the graduate faculty as advisor to each student entering a program. The advisor serves as counselor on academic matters and monitors the student's progress in (a) successfully completing contingencies of admission and course requirements of the program and (b) selecting an area of research specialization.
2. **Approval of research advisor**: When the student selects the area of research specialization and the faculty member to serve as research preceptor, the Committee on Graduate Studies reviews the proposed selections. If the selections are approved, the faculty member is designated by the Committee on Graduate Studies as the student's research advisor in concert with, or in replacement of, the original faculty advisor. The faculty advisor may, of course, be selected as the research advisor. During this period, the student's potential for productive and independent investigation is assessed by the research advisor.
3. **Qualifying examination**: The Qualifying Examination is comprehensive in nature and may be written, oral, or both. The

Committee on Graduate Studies determines the format of the examination and the composition of the Qualifying Examination Committee, with the proviso that one member must not be one of the graduate faculty of the student's program. The Qualifying Examination Committee administers the examination(s), evaluates the student's performance, and reports its judgment on whether the student passed or failed to the Committee on Graduate Studies.

4. **Admission to candidacy**: Recommendation by the Committee on Graduate Studies that the student be admitted to candidacy for the Doctor of Philosophy degree requires the following:
   a. Satisfactory completion of all required courses; in exceptional cases, permission to proceed to Phase II without having completed all required courses can be granted by the Dean of the Graduate School.
   b. Cumulative grade point average of at least 3.0 in all coursework undertaken since matriculation in the program.
   c. Report by the Qualifying Examination Committee that the student has passed the examination.
   d. Report by the student's research advisor and other graduate faculty members, as appropriate, that the student has clearly evidenced the potential for productive and independent investigation.

If, in its overall evaluation of the eligibility of the student for admission to candidacy, the Committee on Graduate Studies is in favor of admission, it shall submit a Petition of Admission to Candidacy Form (GSBS Form 32) to the Dean for approval with documentation of satisfaction of the requirements listed above. Each research advisor is required to sign the form to certify her/his view of the student's potential for productive and independent investigation. The Dean may approve or disapprove the recommendation or request further documentation. When the Dean has approved admission of the student to candidacy, the candidate enters Phase II of the program.

Phase II - From admission to candidacy through granting of the degree

1. **Selection of the supervising professor**: No later than three months after the student's admission to candidacy, the member of the graduate faculty of the program who will serve as the supervising professor of the dissertation research shall be decided upon by mutual agreement among the candidate, the faculty member, and the Committee on Graduate Studies. Normally, the research advisor who guided the student's preliminary research activities continues as supervising professor, but this arrangement is not obligatory.
2. **Draft of dissertation research proposal**: The candidate shall identify a research question that will serve as a focus for the dissertation research. The candidate shall prepare a draft of a research proposal that specifies the research to be undertaken, its significance in the scientific field, and the general methods and techniques to be utilized. The proposal shall be submitted to the supervising professor for review and modification. Subsequent drafts of the proposal should then be submitted for review and modification to other faculty members who have knowledge and expertise in the area of the research proposal and who have been selected by mutual agreement among the candidate, the supervising professor, and the Committee on Graduate Studies. The final draft of the dissertation research proposal is subject to review and approval by the Committee on Graduate Studies, which may specifically designate a group of faculty members to review the proposal draft(s).
3. **Composition of the dissertation supervising committee**:
   After approval of the proposal by the Committee on Graduate Studies, the supervising professor and the candidate shall make recommendations to the Committee on Graduate Studies regarding the composition of the Supervising Committee for the dissertation research. The Supervising Committee must consist of at least five persons, as follows:
   a. The supervising professor, also a member of the program's graduate faculty, designated as Supervising Professor and Chair of the Supervising Committee;
   b. One member must be from outside the Health Science Center and must be an expert in the field of the proposed dissertation;
   c. Two members must be members of the graduate faculty of the program;
   d. One member must be a faculty member of the Health Science Center in a supporting area outside the program but need not necessarily be a member of the graduate faculty.

   The Committee on Graduate Studies may nominate additional members in categories (b), (c), and (d) if necessary. Nomination is contingent upon the willingness of the designated person to serve on the Supervising Committee. The composition of the Supervising Committee should, in principle, provide a group of research scientists who constitute an important resource to the candidate and her or his dissertation research. Their functions are, with the Supervising Professor, to guide the candidate through the dissertation research and to certify to the Committee on Graduate Studies that the candidate has, in fact, carried out a meritorious research investigation of the caliber appropriate for a Ph.D. dissertation and, in their opinion, defended it satisfactorily. Upon selection of the supervising committee, the chair of the Committee on Graduate Studies (COGS) will submit to the Graduate School Dean's Office a completed GSBS Form 30 Recommendation for Approval of Dissertation Research Proposal and Supervising Committee. The student must provide the Graduate School Dean's Office an electronic copy of their dissertation proposal to accompany GSBS Form 30.
4. **Approval of the dissertation proposal and supervising committee**: The Graduate Faculty Council and the Dean will review the recommendation of COGS on the proposal and supervising committee. After approval by the Dean of both the proposal and the Supervising Committee, the candidate may register for their respective program's Dissertation course. Any subsequent change in the Composition of the Supervising Committee must be approved by the COGS and approved by the Dean, who will then report the change at a regularly scheduled GFC meeting.
5. **Supervision of the dissertation research**: Within one month after formal approval of the Supervising Committee, the Supervising Professor shall convene the Supervising Committee to discuss with the candidate the progress of the dissertation research and the projected future work. At appropriate intervals thereafter (at least every six months), the Supervising Committee shall meet with the candidate for presentation of progress reports (written and/or oral), so that current status of the research may be evaluated and direction of future work planned. If the external Committee member is unable to attend these meetings, it is the responsibility of the candidate and the Supervising Professor to provide this member with progress reports for review and recommendations. It is essential that the Supervising Committee be fully informed of the research progress and be able to provide continued supervision throughout and that the Committee on Graduate Studies receive reports of the research progress from the Supervising Committee after each of its meetings with the candidate. The Supervising Committee and/or the

Committee on Graduate Studies may approve or direct alterations in the research plans within the general context of the dissertation proposal. Major changes in the candidate's research status (such as selection of a new Supervising Professor, new Supervising Committee members, or a new research question) must be reported to the Graduate Faculty Council and the Dean for consideration.

6. **Submission of the dissertation**: After agreement by the members of the Supervising Committee that the research has progressed sufficiently for submission of the dissertation, a draft of the dissertation shall be submitted to the Supervising Professor and then to all other members of the Supervising Committee for review and recommendations for modification of content. An electronic copy will also be submitted via ProQuest to the Graduate School Dean's Office for review of formatting. It is the responsibility of the candidate to follow the guidelines of preparation of the dissertation provided by the Graduate School Dean's Office in Dissertation/Thesis Workshops and in the *Instructions for Preparation and Submission of Electronic Theses, Dissertations and Dissertation Abstracts*. If the alternative chapter format is preferred, the candidate must obtain approval for such format from the Supervising Committee and the Committee on Graduate Studies. The candidate also has the responsibility to ensure adequate time for review and modification of the dissertation in accordance with the schedule of deadlines provided each term by the Graduate School Dean's Office.
7. **Final oral examination**: When the Supervising Committee judges the dissertation to be suitable for defense, the Supervising Professor shall be responsible for submitting a signed *Request for Final Oral Examination Form* (GSBS Form 40) through the Committee on Graduate Studies to the Dean and request scheduling of the Final Oral Examination. Three copies of the Abstract and Vitae (stapled together) should accompany the *Request for Final Oral Examination Form* at the time it is submitted to the Graduate School Dean's Office. Public announcement of the Final Oral Examination is made by the Graduate School Dean's Office. This examination is conducted by the Supervising Committee with the Supervising Professor as chair. Interested persons may attend the public defense and have the right to question the candidate. After the public defense, the Final Oral Examination continues with an intensive oral examination by the Supervising Committee that is not customarily open to the public. The Supervising Committee members vote on the candidate's success or failure on the Final Oral Examination; more than one vote for failure signifies failure on the examination. The Supervising Committee submits the *Report on Final Oral Examination Form* (GSBS Form 43) to the Committee on Graduate Studies. In the event of a failing performance by the candidate, the Supervising Committee shall also submit to the Committee on Graduate Studies a recommendation regarding remedial action; in such case, the Committee on Graduate Studies shall decide on the recommendation or other action to be taken. In the event of a successful performance by the candidate, the Committee on Graduate Studies shall vote on whether to approve the recommendation by the Supervising Committee for granting of the degree.
8. **Recommendation for granting of the degree**: If the Committee on Graduate Studies approves the favorable recommendation by the Supervising Committee, the Chair of the Committee on Graduate Studies shall so indicate by signature on the *Report on Final Oral Examination* and submit the Report to the Graduate Faculty Council for consideration. The candidate shall submit to the Graduate School Dean's Office the final electronic version of the dissertation via ProQuest. The dissertation Approval Page signed by the Supervising Professor and Committee members must also be submitted to the Graduate School Dean's Office. When the Report, the Approval Page and the electronic dissertation approved in ProQuest have been received in the Graduate School Dean's Office, the Graduate Faculty Council will consider the recommendation for granting of the degree. If the Council does not approve the recommendation, it will refer the matter to the Committee on Graduate Studies with a recommendation for remedial action. If the Council does approve the recommendation, the Dean of the Graduate School of Biomedical Sciences will notify the Office of the University Registrar that the candidate has fulfilled all requirements of the Graduate School of Biomedical Sciences for the degree of Doctor of Philosophy. Upon the candidate's certification by the President, the degree is conferred by the Board of Regents of The University of Texas System. (See "Registration for Dissertation," "Registration for Final Term," and "Graduation" previously discussed in this section.)

Master of Science Degree (Biomedical Sciences Programs)

The Graduate School of Biomedical Sciences offers Master of Science degrees with either a thesis or a non-thesis option. The Sequential Procedure for thesis-option Master of Science degree is listed below and currently only applies to the Master of Science degree in Medical Health Physics.

The Graduate School of Biomedical Sciences does not require a comprehensive Qualifying Examination for the Masters of Science Degree. The thesis-option Master of Science degree in Cellular and Structural Biology, Immunology and Infection, Biomedical Engineering, Toxicology and Dental Science as well as the non-thesis option Master of Science degree in Clinical Investigation, Cellular and Structural Biology do not use a qualifying exam nor do they require the advancement to candidacy. The Sequential Procedures for these programs are modified to correlate with the curricula of these programs and submission of GSBS Form 31 is not required. A copy of the appropriate Sequential Procedures may be obtained from the Graduate Advisor of those programs.

Phase I - From matriculation to admission to candidacy

1. **Assignment of faculty advisor:** The Committee on Graduate Studies assigns a member of the graduate faculty as advisor to each student entering a program. The advisor serves as counselor on academic matters and monitors the student's progress in
   a. successfully completing contingencies of admission and course requirements of the program and
   b. selecting an area of research specialization.
2. **Approval of research advisor:** When the student selects the area of research specialization and the faculty member to serve as research preceptor, the Committee on Graduate Studies reviews and documents the proposed selections. If the selections are approved, the faculty member is designated by the Committee on Graduate Studies as the student's research advisor in concert with, or in replacement of, the original faculty advisor. The faculty advisor may, of course, be selected as the research advisor. During this period, the student's potential for productive and independent investigation is assessed by the research advisor.
3. **Qualifying examination:** The Graduate School of Biomedical Sciences **does not** require a comprehensive Qualifying Examination for the M.S. degree. However, the Committee on Graduate Studies may require the student to pass a written and/or oral Qualifying Examination prior to consideration for admission to candidacy, or it may waive such examination.

4. **Admission to candidacy:** Recommendation by the Committee on Graduate Studies that the student be admitted to candidacy for the Master of Science degree requires the following:
   a. Satisfactory completion of all required courses;
   b. Cumulative grade point average of at least 3.0 in all coursework undertaken since matriculation in the program;
   c. Report by the Qualifying Examination Committee that the students passed the examination or that the examination has been waived;
   d. Report by the student's research advisor and other graduate faculty members, as appropriate, that the student has clearly evidenced the potential for productive and independent investigation. GSBS Form 31 should be submitted to the Graduate School Dean's Office for approval.

Phase II - From Admission to candidacy through granting of the degree

1. **Selection of the supervising professor**: No later than three months after the student's admission to candidacy, the member of the graduate faculty of the program who will serve as the supervising professor of the thesis research shall be decided upon by mutual agreement among the candidate, the faculty member, and the Committee on Graduate Studies. Normally, the research advisor who guided the student's preliminary research activities continues as supervising professor, but this arrangement is not obligatory.
2. **Draft of thesis research proposal**: No later than three months after admission to candidacy, the candidate shall submit a draft of a proposal for the thesis research to the supervising professor for review and modification. Subsequent drafts of the proposal may then be submitted for review and modification to other faculty members who have knowledge and expertise in the area of the research proposal. After approval of the final proposal draft by the supervising professor, the proposal is submitted to the Committee on Graduate Studies for consideration of approval.
3. **Appointment of the supervising committee**: After approval of the thesis proposal by the Committee on Graduate Studies, the supervising professor and the candidate shall make recommendations to the Committee on Graduate Studies regarding the composition of the Supervising Committee for the thesis research. The Supervising Committee must consist of at least four persons, as follows:
   a. The supervising professor, also a member of the program's graduate faculty, designated as Supervising Professor and Chair of the Supervising Committee;
   b. Two members must be members of the graduate faculty of the program;
   c. One member must be a faculty member of the Health Science Center in a supporting area outside the program or a person outside the Health Science Center who is an expert in the field of the proposed thesis.

   Immediately upon selection of the Supervising Committee, the Chair of the Committee on Graduate Studies will submit to the Graduate School Dean's Office a completed GSBS Form 42, Composition of Supervising Committee-The Master of Science Degree. A copy of the proposed work in electronic form must accompany the form. Each member of the Supervising Committee is required to sign the form to certify her/his approval to serve on the committee. Any subsequent change in the Composition of the Supervising Committee must be approved by the COGS and approved by the Dean.

   The composition of the Supervising Committee should, in principle, provide a group of research scientists who constitute an important resource to the candidate and her or his thesis research. Their functions are, with the Supervising Professor, to guide the candidate through the thesis research and to certify to the Committee on Graduate Studies that the candidate has, in fact, carried out a meritorious research investigation of the caliber appropriate for an M.S. thesis and, in their opinion, defended it satisfactorily.

4. **Supervision of the thesis research**: Within one month after appointment of the Supervising Committee, the Supervising Professor shall convene the Supervising Committee to discuss with the candidate the progress of the thesis research and the projected future work. At appropriate intervals thereafter, the Supervising Committee shall meet with the candidate for progress reports (written and/or oral) so that current status of the research may be evaluated and direction of future work planned. It is essential that the Supervising Committee be fully informed of the research progress and be able to provide continued supervision throughout and that the Committee on Graduate Studies receive reports of the research progress from the Supervising Committee after each of its meetings with the candidate.
5. **Submission of the thesis**: After members of the Supervising Committee agree that the research has progressed sufficiently for submission of the thesis, a draft of the thesis shall be submitted to the Supervising Professor and then to the other members of the Supervising Committee for review and recommendations for modification of content. An electronic copy will also be submitted via ProQuest to the Graduate School Dean's Office for review of formatting and recommendations for modification. It is the responsibility of the candidate to follow the guidelines for preparation of the thesis provided by the Graduate School Dean's Office in Dissertation/Thesis Workshops and in the *Instructions for Preparation and Submission of Electronic Theses, Dissertations and Dissertation Abstracts*. If an alternative chapter format is preferable, the candidate must obtain approval for such format from the Supervising Committee and the Committee on Graduate Studies. The candidate also has the responsibility to ensure adequate time for review and modification of the thesis.
6. **Final oral examination**: The Graduate School requires that the thesis be defended by the candidate in a Final Oral Examination conducted by the Supervising Committee; the format in which this examination is conducted (see Options 1 and 2 below) shall be decided by the Committee on Graduate Studies and it is recommended that it be uniform for all M.S. candidates in that program.
   a. **Option 1:** If the Committee on Graduate Studies does elect to require that the thesis be defended in formal Final Oral Examination scheduled through the Graduate School Dean's Office and open to all interested persons, then the procedures in number 11 (see Phase II of Doctor of Philosophy Degree) for Ph.D. candidates should be followed.
   b. **Option 2:** If the Committee on Graduate Studies chooses a less formal format, without public notification through the Graduate School Dean's Office, the following procedures apply. The *Request for Final Oral Examination Form* (GSBS Form 40), signed by the Supervising Committee members, should be submitted to the Chair of the Committee on Graduate Studies, who shall indicate

approval by signature and transmit the Request to the Graduate School Dean's Office for approval by the Dean.

c. Three copies of the Abstract and the Vita should be submitted with the request for the candidate's file in their respective department, the Office of the University Registrar, and the Graduate School Dean's Office.

d. The Supervising Committee members vote on the candidate's success or failure on the Examination; more than one vote for failure signifies failure on the Final Oral Examination. The Supervising Committee submits the *Report on Final Oral Examination* (GSBS Form 41) to the Committee on Graduate Studies. In the event of a failing performance by the candidate, the Supervising Committee shall also submit to the Committee on Graduate Studies a recommendation regarding remedial action or further examinations; in such cases, the Committee on Graduate Studies shall decide upon the recommendation or other action to be taken. In the event of a successful performance by the candidate, the Committee on Graduate Studies shall vote on whether to approve the recommendation by the Supervising Committee for granting of the degree.

7. **Recommendation for granting of the degree**: If the Committee on Graduate Studies approves the favorable recommendation by the Supervising Committee, the Chair of the Committee on Graduate Studies shall so indicate by signature on the *Report on Final Oral Examination* and submit the Report to the Graduate Faculty Council for consideration. The candidate shall submit to the Graduate School Dean's Office the final electronic version of the thesis in ProQuest. The thesis Approval Page signed by the Supervising Professor and Committee members must also be submitted to the Graduate School Dean's Office. When the Report, the Approval Page and the electronic thesis approved in ProQuest have all been received in the Graduate School Dean's Office, the Graduate Faculty Council will consider the recommendation for granting the degree. If the Council does not approve the recommendation, it will refer the matter to the Committee on Graduate Studies with a recommendation for remedial action. If the Council does approve the recommendation, the Dean of the Graduate School of Biomedical Sciences will notify the Office of the University Registrar that the candidate has fulfilled all requirements for the degree Master of Science. Upon the candidate's certification by the President, the degree is conferred by the Board of Regents of The University of Texas System.

Sequential Procedures Forms

The following forms, required for the sequential procedures described above, are available online at: http://gsbs.uthscsa.edu/main/currentstudents/.

Form procedure

- Petition for Admission to Candidacy for M.S. Degree
- Petition for Admission to Candidacy for Ph.D. Degree
- Recommendation for Approval of Dissertation Research Proposal and Supervising Committee (Ph.D.)
- Request for Final Oral Examination (Ph.D. or M.S.)
- Report on Final Oral Examination (M.S.)
- Composition of Supervising Committee (M.S.)
- Report on Final Oral Examination (Ph.D.)
- Survey of Earned Doctorates (Ph.D.)
- Students must complete the *Graduation Application* online in the Student Center via The Portal (http://inside.uthscsa.edu).

Instructions for Preparation and Submission of Electronic Theses, Dissertations, and Dissertation Abstracts

The candidate should obtain these instructions online at http://gsbs.uthscsa.edu/current_students/graduation-information before writing the thesis or dissertation.

Courses

MICR 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

MICR 4002. Advanced Medical Microbiology. 4 Credit Hours.
This elective is available to selected fourth-year students. Responsibilities during the period would include 1) the reading of 20-25 short articles out of Morbidity & Mortality Weekly Reports (generally 5-7 pages each), so as to be prepared to 2) lead discussions as MS1 students present summaries of these articles (1 article per student in a small group setting). In addition to enriching the curriculum of the first-year class, this elective will provide the MS4 student with the opportunity to be updated on some of the most current issues of the day in areas of infectious disease.

MICR 5003. Core Concepts In Microbiology & Immunology. 4 Credit Hours.
This course will provide an integrated view of the microbial world and the mammalian immune response. Students will receive a foundation in the basic concepts and experimental approaches that are crucial for understanding core concepts in pathogenic microbiology, virology, parasitology, mycology, and immunology through directed readings and didactic instruction. A special emphasis will be placed on integrating knowledge from each discipline using specific examples to illustrate important concepts in host-pathogen interaction.

MICR 5013. Microbiology. 4 Credit Hours.
Foundation in immunology, bacteriology, virology, and mycology for all subsequent teaching of microbial pathology and oral infectious diseases is presented. Relevant aspects of preventive medicine and public health are included. Course Fees: Lab fee: $32.

MICR 5025. Eukaryotic Pathogens. 1 Credit Hour.
The course will provide students with the opportunity to gain a basic comprehensive understanding of parasitology and mycology. The first part of this course will focus on virulence mechanisms and the host immune response with respect to a variety of parasites that cause major human diseases. The second part of this course will cover several important areas of medical mycology including molecular biology, diagnostic/epidemiology, mating/phenotypic switching, morphology, pathogenesis, and antifungal therapies.

MICR 5026. Bacterial Pathogenesis. 1 Credit Hour.
This is an introductory course in microbial pathogenesis focusing on bacterial pathogens that are important in human disease. Students will receive a foundation in the basic concepts and experimental approaches that are crucial for understanding the discipline through directed readings and didactic instruction. Specific concepts, strategies, and mechanisms used by human bacterial pathogens to cause disease will be illustrated.

MICR 5027. Immunology. 1 Credit Hour.
This course will focus on fundamental concepts in immunology with emphasis on experimental strategies for elucidating the cellular and molecular mechanisms underlying immune responses. Lecture topics will illustrate important concepts in innate immunity, cytokine signaling, antigen recognition and presentation, the genetics of immune receptors and the major histocompatibility complex, immunity to infection, and immunopathology (e.g., hypersensitivity, autoimmunity, immunodeficiency, etc.).

MICR 5028. Virology. 1 Credit Hour.
This course focuses on the molecular and cellular biology of animal viruses, and their interactions with host cells. Many of the viruses to be covered in this course are medically significant or have provided critical information that has expanded our understanding of cell biology, immunology, development, and differentiation.

MICR 5029. Building Scientific Thinking Skills. 2 Credit Hours.
The goal of this course is to provide the opportunity for graduate students to develop critical thinking skills in reading scientific literature, developing/critiquing scientific ideas and grant proposals and effectively communicating one's own scientific ideas with peers. The courses will be offered in three consecutive stages. First, each student will be assigned/encouraged to read articles focusing on a topic in the areas of Microbiology and Immunology and give a 50 minute review presentation on the topic to the class followed by questions/critiques from fellow students and faculty members. Second, each student is guided to develop a mini-proposal on a chosen topic followed by written critiques from fellow students and faculty members. Finally, each student is arranged to give an oral defense of his or her written proposal to the class followed by questions from fellow students and faculty members. Since the proposal writing and defense portions mimic the process involved in M&I track qualification examination, this course will not only have a long lasting impact on the students' scientific skill development, but also help prepare the students for the immediate qualification examination.

MICR 5030. Microbiology And Immunology Track Journal Clubs. 0.5 Credit Hours.
The MI track students, together with faculty members and other researchers, will meet once a week to discuss articles on life science with an emphasis on the Microbiology and Immunology disciplines. At each meeting, an individual will present one or several papers, or a review and related materials. The presentation will be followed by questions and discussions involving everyone present at the meeting. Each meeting is scheduled for one hour.

MICR 5031. Pathogenic Microbiology. 4 Credit Hours.
This lectures-only course integrates different disciplines (immunology, cell biology, genetics, biochemistry, molecular biology, physiology, and medical microbiology) with a central theme focused on molecular mechanisms of microbial pathogenesis in man. Prerequisite: Biochemistry and Molecular Biology.

MICR 5051. Intro To Immunology. 2 Credit Hours.
This course is a study of immune responses with emphasis on experimental strategies for elucidating cellular and molecular mechanisms. Three phases of study: (1) immunochemistry and molecular biology of antibodies, lymphocyte receptors, and products of the major histocompatibility complex; (2) cellular interactions and immuno-regulation; and (3) immunopathologies (hypersensitivity, autoimmunity, immunodeficiency, transplantation rejection, and tumor immunology). Prerequisites: consent of instructor, courses in General Biology and Genetics recommended.

MICR 5090. Acquiring Presentation Skills. 1 Credit Hour.
This course is designed to prepare the student for giving a scientific lecture or seminar. Students present at least one lecture per academic year. Each student is coached and evaluated by faculty members in terms of both effective public speaking and critically analyzing scientific data. In addition, the seminars are videotaped. Students are required to attend all seminars.

MICR 5091. Current Topics In Microbiology And Immunology. 0.5-3 Credit Hours.
Students will be given an opportunity to gain in-depth understanding of selected topics in microbiology and immunology through a combination of library research and discussion with faculty. Prerequisites: consent of instructor.

MICR 5092. Special Problems. 1-9 Credit Hours.
The course provides an opportunity for the student to engage in a special research project or to develop proficiency in the use of certain laboratory methods. Prerequisites: consent of instructor.

MICR 5095. Current Topics in Immunobiology and Host-microbe Interactions. 1 Credit Hour.
This course is designed to enhance and expand on the existing Acquiring Presentation Skills (APS) course (MICR 5090) that is required of all graduate students in the Infection, Inflammation, & Immunity discipline of the IBMS Graduate Program, and the Ph.D. students of the Microbiology & Immunology Graduate Program. Although the APS course allows students to gain experience with regard to making formal lecture presentations of their research, it is limited in that students present their work only once a year, the opportunity for full discussion is limited by the time available after presentations, and being a course in which participants are exclusively students, there are no opportunities to observe examples of how skilled seasoned investigators (i.e., faculty and postdoctoral fellows) present their work. In the currently proposed course, graduate students will not only have more frequent opportunities to present their own research and receive vital feedback and critiques, but will also hear and critique presentations by more senior investigators regarding projects performed in labs throughout the Department of Microbiology & Immunology.

MICR 6022. Advanced Microbial Physiology. 2 Credit Hours.
This course consists of readings and conferences. The course includes current concepts and experimental studies in microbial structure-function relationships and regulatory mechanisms. Prerequisites: consent of instructor.

MICR 6024. Advanced Microbial Genetics. 1-4 Credit Hours.
This course consists of lectures and conferences. This course is an in-depth study of selected areas of microbial genetics, and presentation and discussion of current literature in these areas. Prerequisites: Consent of instructor.

MICR 6026. Advanced Molecular Genetics Of Eukaryotic Pathogens. 2 Credit Hours.
This course will cover the major research methods and techniques used to study human fungal pathogens.

MICR 6043. Advanced Topics In Virology. 2 Credit Hours.
This course is an in-depth study of selected topics in animal virology at the molecular level. Prerequisites: consent of instructor.

MICR 6050. Advanced Topics In Tumor Immunology. 1 Credit Hour.
This course provides an opportunity for students to gain a solid foundation in modern tumor immunology. Topics include tumor antigens, autoimmunity, mechanisms of killing, dysregulation of inflammation, and counter measures mediated by tumor to thwart or subvert host immunity.

MICR 6052. Advanced Immunobiology. 3 Credit Hours.
This course consists of lectures only. This course is an in-depth study of the immune system and how it is regulated, including presentation and discussion of current literature in these areas. Prerequisites: MICR 5051 or consent of instructor.

MICR 6071. Supervised Teaching. 1-9 Credit Hours.
This course consists of teaching under the close supervision of instructors as laboratory assistants and as leaders in tutorial or review sessions. The more advanced students may present formal lectures in the classroom or lead discussions in the laboratory. Prerequisites: consent of chair or department.

MICR 6091. Seminars In Microbiology & Immunology. 1 Credit Hour.
Presentations and discussions of recent advances in various areas of Microbiology & Immunology. Invited speakers may be from inside or outside the HSC. Each graduate student in the M&I Track is expected to register for this course each fall and each spring semester for as long as the student is enrolled in graduate school.

MICR 6097. Research. 1-12 Credit Hours.
This course consists of independent, original research under the direction of faculty advisor. May be conducted in bacteriology, virology, mycology, parasitology, and immunology.

MICR 6098. Thesis. 1-12 Credit Hours.
Registration for at least one term is required of M.S. candidates. Admission to candidacy for the Master of Science degree is required.

MICR 7099. Dissertation. 1-12 Credit Hours.
Registration for at least two terms is required of Ph.D. candidates. In addition, Ph.D. candidates may be required to complete a course in Biostatistics. Prerequisites: Admission to candidacy for the Doctor of Philosophy degree.