

GSBS Background Information for Faculty Candidates

Mission

To create a collaborative and innovative academic environment that inspires and lays the foundation for new generations of biomedical scientists to realize their potential, commit to success and make discoveries that have major impact on treatment of diseases worldwide.

We achieve this mission by offering the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. The M.S. and Ph.D. degrees are intended to prepare scholars to conduct research in the biomedical sciences and/or use research-related skills in academic, government, private business, or other settings. The emphasis of the Ph.D., which is our major program, is to prepare scholars with the training and expertise to make independent intellectual contributions to their field. It requires that students obtain a broadly-based understanding of the underlying principles and fundamental concepts of an area of biomedical science and conduct independent research culminating in a Ph.D. dissertation. GSBS does not offer professional or practice-based doctoral degrees.

Activities of GSBS Faculty Members

Members of the Faculty participate in a broad range of activities, including:

- Courses, seminars, laboratory tutorials (and special projects for M.S. students) and other offerings ranging from broad overviews of a field to highly specialized offerings
- Tutorials and special projects in which students conduct projects to learn research design, methods, and skills while becoming familiar with a faculty member's laboratory
- Service on student committees, including
 - Advisory Committees that assist the student (and supervisory professor) by guiding the student's preparation for the candidacy exam and subsequent independent research, monitoring his/her progress toward completion of the doctoral research and writing of the dissertation (or thesis for the M.S.), and overseeing the final oral defense
 - Examining Committees that administer the candidacy examination and recommend whether the student should be promoted to candidacy
- Governance, service, and supporting activities of GSBS
 - Organizing and directing Programs, courses, training grants, or other activities
 - Standing and ad hoc committees of the Faculty or Programs
 - Student recruiting and visitation activities
 - Career development, advising, mentoring, or other activities that support students or the Graduate School
- Serving as the major supervisory professor (i.e., the chairperson of M.S. or Ph.D. Advisory Committees) who provides guidance and financial support for the student's M.S. or Ph.D. research.

Considerations, Responsibilities, and Expectations for Regular and Associate GSBS Faculty Appointments

All applicants for Faculty membership must have advanced knowledge of the biomedical sciences as demonstrated by their education, experience, and research contributions, and should hold a full-time academic position with a significant research expectation. Basic requirements for Faculty membership are:

- A terminal doctorate in one of the biomedical sciences or a related field, although exceptions may be considered in cases where the master's is the terminal degree in an area in which GSBS offers training or in cases where an individual without a doctorate has made major, sustained research contributions to the biomedical sciences
- A regular faculty appointment that has an expectation of significant research involvement and productivity at one of our parent institutions.
- Support of the department chair/supervisor for the applicant's proposed participation in GSBS
- The ability to contribute to one or more of the educational activities of the GSBS Faculty as evidenced by
 - Education and training
 - Prior teaching, research, and academic experience
 - Peer-reviewed publications in the biomedical sciences and related areas
- An interest in **actively** participating in GSBS activities in support of our basic mission of training biomedical research scientists
- An explicit statement of plans to participate in GSBS activities

Requirements for Regular Faculty Appointments (Eligibility to Chair Ph.D. Advisory Committees)

In order to effectively guide our students' dissertation research, it is necessary that individuals with Regular appointments be actively involved to a significant degree with research in an area(s) of the basic biomedical sciences for which GSBS is approved to offer doctoral training. Applicants conducting clinical, behavioral, public health or related studies are welcome to apply, but all applications for Regular membership should indicate that candidates are involved in basic biomedical research.

Serving as the major research advisor for a Ph.D. student also requires a thorough, in-depth understanding of the nature of Ph.D. training in the biomedical sciences; the experience, ability, and resources to lead an independent research team; the resources, environment, time, and support required to guide students' completion of the dissertation research, and the willingness to provide mentoring and professional guidance to doctoral students.

An Understanding of Ph.D. Training Programs

While completion of a meritorious piece of independent, creative research is the *sine qua non* for the Ph.D., doctoral training involves other important elements. Faculty members serving as major advisors should thus have a thorough understanding of the overall process. Completion of a Ph.D. degree in the biomedical sciences or a related field is considered sufficient evidence of an in-depth understanding of Ph.D. training. For applicants with terminal doctoral degrees other than the Ph.D., it is important to indicate clearly that they are familiar with the overall process; other indicators may include previous experience as an Associate GSBS member, appointments at other institutions including serving as the primary mentor for previous graduate

students, previous service on graduate student committees, lecturing in graduate-level courses, or other involvement in graduate education.

Leadership of an Independent Research Team

The ultimate aim of doctoral training is to produce graduates capable of conducting independent research, which is thus a key requisite for dissertation supervisors. A number of factors are considered as evidence of the ability and experience to lead an independent research team. These include

- First-author and senior-author publications
- Consistency of publication record
- Major independent, peer-reviewed research support
- Length of time and research accomplishments in previous academic and non-academic professional positions
- Independent laboratory/research space and facilities

Independence also signifies an anticipated continuity of appointment and support that are important for uninterrupted guidance of a student's dissertation research, which may be a lengthy process.

Independent, peer-reviewed research support appropriate for a faculty member's discipline is required for Regular appointments. The ability to obtain such support is an important measure of peer recognition of a faculty member's research and also indicates the likelihood that he/she will be able to generate the resources needed to support graduate students. The Membership Committee and the Deans may consider exceptions to this requirement in certain situations if the applicant's chair/supervisor certifies that funds will be available to support graduate student stipends and research expenses for the length of time needed to complete any dissertation research supervised by the faculty member. Examples of such circumstances may include but are not limited to the following situations:

- This requirement may be waived for the *initial* appointment of beginning assistant professors. In such cases *reappointment* to the Faculty will require major, independent peer-reviewed support.
- This requirement may be waived for the *initial* GSBS faculty appointment of more senior faculty members recently recruited to one of our parent institutions who may be without major extramural support at the time of application but who have established a consistent record of prior support and/or those who are unable to transfer their grants (e.g., international scientists whose grants cannot be transferred). In these cases, reappointment to the Faculty will require major, independent peer-reviewed support.
- [Note: This requirement may be waived for the *reappointments* of GSBS faculty members with an established record of extramural support, but who are experiencing a *temporary* interruption of funding. However, appointments as a Regular GSBS faculty member will not be continued for faculty members who experience prolonged periods without significant, peer-reviewed funding.]

Research Environment and Facilities

Excellent research training requires not only a capable, dedicated mentor but a research environment and facilities appropriate for high quality, contemporary research training in the biomedical sciences. Important considerations for Regular appointments to the GSBS Faculty thus include the following:

- A training environment with a critical mass of graduate students, faculty members and other trainees to provide the knowledge base and intellectual environment for Ph.D. training in the biomedical sciences
- Regular, ongoing seminars, journal clubs, and research meetings to provide a broad and in-depth exposure to contemporary research in the biomedical sciences
- Availability of adequate library and computer facilities to support leading edge research
- The availability of laboratory and other equipment and facilities needed to conduct the student's proposed doctoral research
- Availability of career development activities and opportunities, e.g., scientific communication skills, grant and manuscript preparation, computer skills, information about both academic and non-academic career options for biomedical scientists, etc.

Completion of the Ph.D. dissertation is a lengthy process and it is difficult to predict in advance how long it will take to complete. The research environment and resources should thus be such that a student making good academic progress could reasonably expect to complete his/her dissertation research without having to change supervisors or sites.

There may be circumstances in which the nature of the faculty member's research requires a site with specialized facilities, ability to collect specialized data (e.g., environmental samples), availability of a patient population restricted to a certain geographic region or location, etc., and such locations may not fit the above criteria the way a more traditional setting of an academic department does. Even in these cases, however, a faculty member seeking a Regular appointment should be able to provide reasonable assurance that the training environment is stable and provides solid support and an intellectual atmosphere for Ph.D. training in the particular area of biomedical science.

Mentoring and Support of Career Development

Faculty members must accept a commitment to provide mentoring and support the career development of students for whom they serve as major supervisors. This involves a wide range of skills, guiding the professional socialization of the student (e.g., supporting travel to professional meetings, introducing the student to colleagues when appropriate, explaining and modeling professional behavior, etc.), and helping them to become a member of the community of scholars during and after the dissertation research. Applicants for Regular membership should review the appended *Core Tenets of Graduate Training* which outlines the commitment expected for GSBS Regular faculty appointments.

Department and Institutional Support

The successful completion of the doctoral dissertation requires substantial resources and is demanding, expensive, and time-consuming for students, faculty members, and the university. Graduate schools thus have the responsibility to insure that students making good progress will be able to complete the degree and that supervisory professors will be able to guide a student's dissertation until its successful completion. This requires that the faculty member's department and institution support the significant effort required. While graduate education is normally considered an important mission of basic science departments and other units heavily involved in basic biomedical research, departments with heavy clinical and service responsibilities may have different expectations and levels of commitment.

Applicants for Regular appointments should thus thoroughly discuss the expectations and responsibilities of GSBS Faculty membership, including those for guidance of dissertation research, with their department chairs/supervisors and obtain their endorsement and willingness to support the applicants' involvement. Applicants for Associate membership are also strongly encouraged to share this document with their chairs/supervisors. Chairs and supervisors should feel free to contact the Deans if they would like to discuss the expectations and commitments of the Graduate School for its faculty members.

Faculty Reappointment Reviews

Faculty Participation Review

The administration's goal is for GSBS students to receive outstanding training from the best faculty at our parent institutions who are also actively engaged in GSBS educational activities. Thus, GSBS faculty who have been members for three years or more are reviewed annually to determine how active they have been at GSBS. Those who have been minimally involved will be asked to either increase their participation in the coming year or resign their GSBS faculty appointments. Such individuals may still serve on student committees or lecture in courses, but they will not be considered members of the GSBS Faculty.

Five-Year Reappointment Review

Every five years faculty members are reviewed by the Membership Committee based primarily on their level of participation in GSBS activities. Regular members are also expected to have independent, peer-reviewed research support or an established history of such support. Possible outcomes of the review are as follows:

- Reappointment for five years
- Reappointment for five years with commendation or highest commendation
- Reappointment for three years with encouragement to increase participation
- Downgrade to Associate status (for Regular members)
- Termination due to lack of participation