PH.D. PROGRAM IN BIOMEDICAL NEUROSCIENCE
Department of Neuroscience, Temple University School of Medicine
www.temple.edu/medicine/biomedical_neuroscience
biomedns@temple.edu

PROGRAM OVERVIEW

ABOUT THE PROGRAM:

The Department of Neuroscience at Temple University School of Medicine is committed to fostering the critical inquiry of our students into areas of medicine and science. The curriculum supports an interdisciplinary approach to research training, providing new pathways for learning and discovery. Under this program, students have the opportunity to work on cutting-edge research projects directed toward the treatment and/or cure of HIV/AIDS, as well as neurological disorders and neurodegenerative diseases, including Parkinson's disease, Alzheimer's disease, multiple sclerosis, and brain tumors. World-renowned scientists supervise this academic program.

The Ph.D. program is intended to educate premier investigators who will be tomorrow's leaders in Biomedical Neuroscience and emphasizes training in neurological/neurodegenerative disease research that is translational, with the goal of developing improvements in patient care through interdisciplinary interactions involving clinical and basic scientists.

The program encourages interdisciplinary coursework and research among faculty and students with interest in Neuroscience, Microbiology, Immunology, Molecular Biology, Genetics, Cancer Biology, Psychology, and Engineering. Interaction with clinical divisions within the School of Medicine is also encouraged to foster translational research and bench-to-bedside discoveries and advances. Each student is mentored on a one-to-one basis by a Graduate Faculty member. Faculty co-mentors also are assigned to foster an expanded interdisciplinary experience and to bolster mentoring by junior faculty members. Additional mentors include more senior graduate students and postdoctoral trainees. This multi-level mentoring approach is designed to provide a supportive network to maximally benefit each student. In addition, our students have the opportunity to train with renowned scientists from around the world, as well as many supporting faculty representing a wide array of other fields in the School of Medicine.

Location: We are located on the Health Sciences Campus at Temple University in the newly constructed Medical Education and Research Building (MERB). The Department of Neuroscience occupies the 7th Floor and encompass over 23,000 square feet of state-of-the-art research space. Learn more about our new home at:
http://www.temple.edu/medicine/newbuilding/index.htm

STRUCTURE OF THE PROGRAM:

Required Courses:

The Biomedical Neuroscience graduate program is integrated into the Temple University School of Medicine's "Interdisciplinary Program in Biomedical Sciences," as described at
http://www.temple.edu/medicine/education/grad_programs.htm

The number of credits required beyond the baccalaureate is 44-46, not inclusive of variable research credits (3-6 s.h.), preliminary examination credits (1 s.h.), and post-candidacy dissertation credits (6 s.h.) The program requires students in all programs to take a combination of foundation courses (IFC) and integrated bioscience courses, and courses in Scientific Communication, Scientific Integrity, and Bioethics and Statistics. The remainder of the courses are required in discipline electives and in Dissertation Proposal, Research, and post-candidacy writing. Graduate credit that is comparable to coursework at Temple University may be transferred from other graduate or professional programs (e.g., M.D., V.M.D.) The maximum number of credits that can be transferred and applied to the Ph.D. is 26.

Other activities:

Graduate students are also required to participate in the Department of Neuroscience's Journal Club, Invited Lecture Series, Grand Rounds, and Departmental Research Seminar Series. In addition, students will attend an annual outstanding lecture in neuroscience and bi-annual, one-day workshops in specific areas of neuroscience. Students are encouraged to participate in the joint NIH supported Temple/Drexel NeuroAIDS Training Program which includes research seminars, journal clubs, and workshops.

Years 1 and 2:

Students will generally complete all coursework needed to meet the requirements of the Interdisciplinary Program in Biomedical Sciences during the first two years of the program. Students will also participate in the Department of Neuroscience's Journal Club, Departmental Research Seminar Series, Grand Rounds, and other departmental activities.

Research Rotations:

In the Fall of the first year, students will meet with potential research advisors to begin research rotations in selected laboratories. Three rotations are recommended for Ph.D. students, although a student may opt out of additional rotations once an arrangement for thesis work is established. After completion of a rotation, a student may request to remain in the laboratory to perform thesis-directed research. In most cases, students complete their rotations and select a laboratory in which to carry out their thesis work by the beginning of their second year. Most students are supported by Research Assistantships and Fellowships. The decision for a student to remain in a laboratory will require evidence of available support from the principal investigator and/or fellowship support from the department.

Year 3 and beyond:

Students will begin to prepare for their preliminary exams during the spring of their second year and will take the exam at the beginning of their third year then spend the majority of their time engaged in research toward the doctoral thesis. Students will also take some upper level graduate courses and will continue to participate in journal clubs and seminar series. Senior students will also be given opportunities to travel to national and international meetings to present their findings. Students typically complete the program within a total of 5 years. Temple University's time limit for degree completion is seven years.

Research Proposal and Preliminary Exam:

By the end of the second year, students should have sufficient research experience to begin writing a research proposal for the Ph.D. degree. Two proposals are required. One proposal is related to the student's research while the other is in the field of neuroscience but unrelated to the student's research. The proposals are mentored and approved by a faculty member who serves as the thesis advisor at the time of submission of the proposal and by the graduate committee. An examining committee of three Department of Neuroscience Graduate Faculty will review the written proposal and, if satisfactory, conduct an oral examination on the proposal and the scientific context of the proposal. Once the student passes the oral examination, he or she is elevated to candidacy for the Ph.D.

Doctoral Thesis:

A Thesis Advisory Committee will be constituted including the student's research advisor and at least three additional Neuroscience Graduate Faculty members. An additional "Outside Examiner" will be selected who is an expert in an area relevant to the thesis project and a full-time faculty member at an institution other than Temple University. The Chair of this committee will be selected from among the Temple University Neuroscience Graduate Faculty serving on the committee exclusive of the thesis advisor. Formal annual reviews of research progress are carried out and documented by reports from the committee. The student and the advisory committee will develop an explicit plan to complete the research and writing of the thesis. When the thesis is revised and completed according to the satisfaction of the Thesis Advisory Committee, a defense of the thesis will be held.

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QUICK FACTS and FAQs FOR APPLICANTS

APPLICATION DEADLINES:

Fall: April 15 (U.S.) / December 15 (international)

The Department of Neuroscience has a rolling admissions policy, which means that completed applications are reviewed throughout the year. Since seats in the program are limited, applicants are advised to apply early.

APPLICATION REQUIREMENTS:

Application. Note that an application fee of $60 will be required at the time of submission. You can apply online by following the links from the following website:
http://www.temple.edu/grad/admissions/howtoapply.htm

Three letters of reference. Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic and research competence. Envelopes containing letters of reference should be received by the Temple University School of Medicine Graduate Program Office in signed and sealed envelopes, see address below under "Mailing Address".

Bachelor's degree with a foundation in the Biological Sciences. Coursework in Biochemistry, Cell Biology, Genetics, and Neurobiology is considered relevant. Psychology coursework is helpful but not required for admission. Applicants with a Master's Degree in Discipline/Related Discipline or an M.D. are also eligible. Official transcripts should be obtained from all colleges and universities attended. Envelopes containing official academic transcripts should be sent to the Graduate Office in signed and sealed envelopes. **To speed the application process, submit unofficial copies of your transcripts directly to the Department of Neuroscience by fax or email.** Note: Official academic transcripts must be received by the Graduate Office before a final decision can be made and must be received by the application deadline.

Statement of goals. The Statement of Goals should be approximately 500-1,000 words in length and should include your interest in the Biomedical Neuroscience program, your research goals, your future career goals, and your academic and research achievements.

Standardized test scores. The GRE is required. Scores greater than 1200 on the combined verbal/quantitative score are typical of successful applicants. In place of GRE scores, MCAT scores may be submitted for consideration. Subject tests are not required but can be useful to demonstrate discipline related academic achievement. **To speed the application process, an unofficial copy of your test scores may be submitted directly to the Department of Neuroscience.** Note: Official test scores must be submitted electronically from ETS to the Temple University Graduate Office before a final decision can be made and must be received by the application deadline.

OTHER COMMON FAQs:

Full-Time/Part-Time Status: Full-time study is required.

Length of study: Students typically complete the program within 5 years.

Selection criteria: The Biomedical Neuroscience Graduate Program is very competitive. A combination of an applicant's laboratory experience, academic achievement, statement of goals, and letters of recommendation are evaluated. For students without substantial laboratory experience or advanced coursework, GPAs of less than 3.0 are not normally considered. If you feel you may meet the general criteria, we encourage you to submit an application to the program. Due to the large number of inquiries about our program, we are not able to evaluate an individual's suitability for our program unless a completed application has been submitted.

International applicants. International applicants (non-US citizens) must meet the same requirements for admission as US students. Funding for international applicants is limited and the application process is very competitive. International applicants are strongly encouraged to apply well in advance of the December 15th deadline as it often takes two to three months to obtain the necessary certified documents. For students whose native language is not English, either TOEFL or IELTS test results must be submitted must be submitted electronically to Temple University within two years of the applicant's test administration date. The TOEFL and IELTS cannot be utilized as a substitute for the GRE standardized examination. Temple University Graduate School requires minimum TOEFL scores of 550 paper-based, 213 computer-based, or 79 internet-based and minimum IELTS academic scores of 6.5 for acceptance into the program. General training IELTS scores are not acceptable. Scores for the TOEFL should be forwarded electronically by ETS. Scores for the IELTS should be forwarded electronically by IELTS. No photocopies of score reports for a test of academic English will be accepted from applicants. Credentials should be submitted through World Education Services (WES). More information on submitting an international application can be found at the following website:
http://www.temple.edu/grad/admissions/international.htm

GRE and TOEFL codes for Temple University. For reporting purposes, the institution code for Temple University is 2906.

Master's program. We do not currently have any fellowships for Master's students.

Master's degree versus a Ph.D. The Master's program is independent from the Ph.D. program and is a terminal degree in our program. Note that a Master's degree is not required in order to enter the Ph.D. program and our Ph.D. students will not be awarded a Master's degree.

Spring enrollment. We do not have Spring enrollment. All new students begin the program in the Fall semester.

Financial support: Qualified students accepted into the Biomedical Neuroscience Ph.D. program will receive a stipend of $25,000 per year as well as full tuition support and health insurance coverage as long as they remain in good academic standing.

Mailing address:
Send any official transcripts and letters of recommendation directly to the Temple University School of Medicine Graduate Office at**:**

Temple University School of Medicine
Graduate Programs (556-00)
Medical Education and Research Building
3500 North Broad Street, 11th Floor
Philadelphia, PA 19140

Please allow two weeks after submission for material to be received and entered into the system. Current applicants should log onto the online system to check the status of their application and verify that all required material has been received by the deadline at **https://app.applyyourself.com/?id=templegrad**. Only complete applications will be reviewed by the admissions committee.

Note: You may send copies of unofficial transcripts and test scores to the Department of Neuroscience directly by email to **biomedns@temple.edu**. Please note that official transcripts and test scores must be received by the Graduate Office before a final decision can be made and must be received by the deadline.

Visiting our department. The Department of Neuroscience hosts an "Open House" for the Biomedical Neuroscience Graduate Program in mid-January and mid-March. Prospective students will have an opportunity to meet members of the graduate faculty, attend a departmental journal club or seminar, and meet current graduate students. Contact us at **biomedns@temple.edu** to receive information about upcoming events or to make an appointment to visit during the next Biomedical Neuroscience Open House.