Institute for Neuroscience Graduate Program Handbook

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Institute for Neuroscience
GRADUATE POLICIES

Texas A&M's Interdisciplinary Program (IDP) in Neuroscience is administered by the Institute for Neuroscience (TAMIN). The program is dedicated to providing multidisciplinary training for future neuroscientists wishing to pursue careers in higher education, government, medicine or private industry. The Office of Graduate and Professional Studies (OGAPS) establishes the minimal University guidelines for all graduate degrees. TAMIN has established additional requirements that all students must satisfy. **It is the responsibility of the graduate student to ensure that all departmental and university requirements for the degree are met.** Please note that graduate students must fulfill the requirements of the catalog that is current during the semester they complete their degree requirements. This is the case for both University and TAMIN requirements. It is the student's responsibility to keep up with changes in requirements

This handbook provides the TAMIN requirements and a summary of University requirements; a complete description of the university requirements can be found in the Graduate Catalog (https://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/). This handbook and a copy of the Graduate Catalog should be reviewed throughout the progress of the degree. Additional information can be obtained from the Office of Graduate and Professional Studies and the TAMIN Graduate Advising Office, located in ILSB Room 3148.

DEADLINES for GRADUATE DEGREE REQUIREMENTS

TAMIN has established the following deadlines for students enrolled in the Neuroscience IDP.

TAMIN DEADLINES	
Ph.D. Degree	
Choice of Thesis Advisor	By the end of the 2nd Semester
Establish Advisory Committee	By the end of fall semester of 2nd Year
Degree Plan Filed with OGAPS and TAMIN	By the end of fall semester of 2nd Year
Preliminary Exam	By the end of fall semester of 3rd Year
Proposal Filed with OGAPS and TAMIN	By the end of fall semester of 3rd Year
Final Examination	Within three years of advancement to candidacy
Note that the number of semesters does NOT include summer sessions.	

SUBMITTING REQUIRED PAPERWORK: It is also requested that students submit copies of all completed paperwork (with signatures) to the TAMIN Graduate Advising Office. The Graduate Advising Office is available to review and provide assistance in filling out documents, obtain

signatures from the Program Chair or Graduate Advisor, log in the paperwork, make copies for your departmental file, and as necessary serve as a liaison between the student and OGAPS. TAMIN-specific forms, such as the TAMIN annual committee meeting evaluation form should only be submitted directly to the TAMIN advising office.

IT IS THE STUDENT'S RESPONSIBILITY TO OBTAIN ANY NECESSARY SIGNATURES AND ENSURE THAT OGAPS RECIEVES COPIES OF ALL PAPERWORK. THE THESIS ADVISOR IS RESPONSIBLE FOR ENSURING DELIVERY OF FINAL EXAM REPORT.

The GRADUATE ADVISOR is the person currently serving as chair of the TAMIN Graduate Program Committee. During the student's first year, the Graduate Advisor serves in an advisory capacity for all entering students in helping them identify and choose electives most likely to be relevant to their area of interest, identify and initiate discussions with potential faculty advisors, identify and coordinate suitable rotation opportunities, and otherwise address any questions or issues that might arise before the student has chosen a thesis advisor (page 7). After the first year, the Graduate Advisor continues to serve in an advisory capacity to both students and graduate faculty as needed. Petitions to exempt coursework or any other requests to modify program requirements are submitted to through the graduate advisor to the graduate program committee, which evaluates each request.

The GRADUATE PROGRAM COMMITTEE (GPC) is a group of faculty members elected by the TAMIN graduate faculty members to review and update guidelines for the NRSC graduate program. The GPC is assigned the role of ensuring that NRSC requirements are consistent with all University requirements and that the training program continues to meet the evolving needs of TAMIN faculty and students. The GPC reviews and approves which courses may serve as approved electives towards the NRSC graduate degree. The GPC evaluates all requests or petitions for deviations from prescribed program requirements and also monitors at the programmatic level how students are progressing towards degree completion. If students encounter problems or concerns in their relationship with their thesis advisor or thesis committee, they are encouraged to bring those concerns to the attention of the Graduate Advisor and/or GPC for advice on how to resolve the problems. Students bringing concerns or complaints to the Graduate Advisor or GPC may do so with assurance of confidentiality.

PROGRESS TOWARDS THE DEGREE

All graduate students must adhere to the requirements set forth by the program in order to remain in good standing. This includes adhering to all major milestones, holding annual committee meetings, submitting annual reports and regular attendance at courses and seminars. If a student has not met the required TAMIN or University deadlines as specified in this handbook or the Graduate Catalog, they will no longer be in good standing with the department and may be blocked from registration the following semester and become ineligible for financial support. The block will not be lifted until the requirement is met. Requests for exemptions will be considered by the Graduate Advisor in consultation with the Graduate Programs Committee on a case-by-case basis.

GETTING STARTED

1. RESEARCH ROTATIONS

TAMIN requires all incoming students to complete two seven-week (half-semester) laboratory rotations during their first semester. Rotations acquaint new students with research programs in their areas of interest, broaden the student's perspective on approaches and procedures used in modern neuroscience, provide hands-on experience with state-of-the-art technology, and can serve as the foundation for useful contacts in other labs. At the conclusion of rotations, a thesis advisor is chosen by the mutual consent of the graduate faculty member and the student. To receive academic credit for rotations students should enroll in NRSC 685 for two credits in the fall. Students entering the PhD program with a Master's degree or other advanced degree (PhD, MD, DO, DVM, etc) may waive the rotations requirement if they have already identified a thesis advisor and *the advisor requests the exemption in writing to the Graduate Advisor*. An email providing justification for the exemption is normally sufficient but all requests will be reviewed by the Graduate Program Committee. Students must submit the TAMIN Student Rotation Sign-Up Sheet to the TAMIN Graduate Advising office by the end of the second week of the semester identifying where they will do their rotations and including the signatures of the faculty mentors. Students may register for a third rotation in the spring semester if needed (1 credit of NRSC 685). After each rotation, the student (along with the rotating-lab PI) will submit the TAMIN Student Rotation Evaluation Form to the TAMIN Graduate Program Advisor. Both forms can be downloaded from the TAMIN website: https://tamin.sites.tamu.edu/graduate/student-resources/

2. REQUIRED COURSE WORK FOR 1st-YEAR STUDENTS

All TAMIN graduate students are required to enroll in the following graduate courses during their first year.

a) Principles of Neuroscience I. NRSC 601/BIOL 627 is a foundation course covering fundamental details in cellular, molecular and developmental neuroscience. Topics include membrane potentials, action potentials and the mechanisms of synaptic transmission. The course also requires participation in an affiliated weekly journal club (NRSC 681-602, Seminar: Principles in NRSC) that teaches students how to evaluate and critique recent advances in the neuroscience literature.

b) Principles of Neuroscience II. NRSC 602/BIOL 628 is a fully integrated overview of nervous system functional organization and systems-level neurobiology. Topics include sensory systems, motor systems, neuromuscular control, central pattern generators, locomotion, homeostatic regulation, circadian rhythms, motivation, emotions, learning and memory, and cognition. The course also requires participation in an affiliated weekly journal club that teaches students how to evaluate and critique recent advances in the neuroscience literature.

c) NRSC 685, Directed Studies (Rotations), in order to receive credit hours for their participation in faculty-supervised laboratory rotations. Satisfactory/Unsatisfactory grades will be assigned by the Graduate Advisor based on faculty evaluation of a student's performance in each rotation.

d) NRSC 681, Departmental Colloquium each semester. This is TAMIN's weekly neuroscience seminar series featuring guest experts in the field presenting and discussing recent research. Students must sign the attendance sheet before the beginning of the seminar to receive credit for attendance. If a student misses more than three seminars during the semester they will receive an unsatisfactory (U) grade and may be ineligible for travel funds or other forms of support for the succeeding semester/year. For excused absences, limited opportunities for make-up credit are available through the TAMIN advising office at the discretion of the Graduate Advisor.

3. ADDITIONAL COURSE REQUIREMENTS

a) Ethics and Responsible Conduct of Research. This should be a one-credit course that meets weekly to engage in discussions of how to recognize, and avoid committing, fraud in science. Topics should include scientific ethics, negotiation techniques, plagiarism, record keeping, data management, peer review, conflict management, and the regulations covering animal and human experiments. **There are several acceptable options available through different participating departments on campus, including but not limited to BIOL 696, MSCI 609, VMID 686, or BIMS 5126.** Contact the Graduate Advisor to determine if a new or related course meets this requirement. This requirement is intended to ensure students are eligible to receive federal support for training and research, and therefore courses must meet requirements as set forth by the NIH (https://oir.nih.gov/sourcebook/ethical-conduct/responsible-conduct-research-training). It is in the best interest of the student to complete this requirement as soon as possible, pending course availability, but must be completed prior to graduating.

b) Statistics and Experimental Design. Several approved options are available in participating departments that meet this requirement. Check with your home department and advisor to identify the course that best complements to research plan. This requirement may be waived for students entering the PhD program with an advanced degree that included formal training in statistics. To be exempted the student's thesis advisory committee must review the students prior training and experience and approve the exemption. **STAT 651, NRSC 671 and MSCI 611** are accepted options. Other courses may apply if recommended by the student's thesis committee and approved by the TAMIN graduate program committee.

c) Four additional elective courses totaling at least 12 credit hours. The list of approved Neuroscience elective courses is on page 12. The purpose of this requirement is to ensure that students are broadly trained within their particular discipline. Courses selected to fulfill these requirements must appear on the degree plan.

d) NRSC 691 research credit hours. Once the core course requirements are met students should enroll in the appropriate number of NRSC 691 research credit hours under the section affiliated with their thesis advisor to achieve the required minimum number of credit hours per semester (9 cr for fall and spring, 6 for summer). If the thesis advisor does not have a section listed under NRSC 691, the advisor must contact the TAMIN advising office to create one.

4. REQUIRED TEACHING

There is no teaching requirement for any degree offered through TAMIN.

5. CHOICE OF GRADUATE COMMITTEE CHAIR (THESIS ADVISOR)

All students must identify a Graduate Committee Chair (known as the Thesis Advisor) by the end of their First year. The Thesis Advisor is the professor within whose laboratory the student will conduct their thesis research, and whom will provide guidance and oversight in choosing a thesis committee, developing a degree plan, ensuring the student maintains satisfactory academic progress throughout their academic tenure, and in the development and execution of a research project. The thesis advisor must be a member of the TAMIN Graduate Faculty. Students must inform the TAMIN Graduate Advisor of their choice of professor to serve as thesis advisor, and request that the professor notify the Graduate Advisor of their agreement. A sample memo is included in Appendix I. Since TAMIN is an interdisciplinary program, when students join a lab they will also become affiliated with their thesis advisor's home department. Faculty members are required to inform their home department's head and graduate advising office when they invite a TAMIN student to join their lab. Office space, building access (keys or door codes), phone service and internet access are obtained through the advisor's home department. The home department may have additional requirements or guidelines regarding participation in departmental functions.

6. REQUIREMENTS FOR A CO-CHAIRED COMMITTEE

Occasionally, a student can best complete his/her graduate program by working under the direction of two faculty members. Under these circumstances, a student may elect to be co-chaired by two Texas A&M faculty members. In general, students should request a co-chaired committee only if it is absolutely necessary for their graduate training. One of the co-chairs must be a member of the TAMIN graduate faculty. Both co-chairs should both provide ongoing intellectual contributions and be active mentors to the student. The co-chairs must be willing to act as a conduit to maintain lines of communication between the TAMIN graduate program, the advisory committee, and the student.

One of the co-chairs **must** be a member of the TAMIN Graduate Faculty. The other co-chair may be a member of any department on campus. Students with co-chaired committees must satisfy all requirements for degrees and **must take at least 50% of their 691 research credit hours as NRSC hours.**

Guidelines for Requesting a Co-Chaired Advisory Committee

Requests for a co-chaired committee must be reviewed and approved by the TAMIN Graduate Program Committee (GPC) before the Graduate Advisor will approve a student's Degree Plan.

Requests for a co-chaired committee should be submitted to the Graduate Advising Office and must contain the following:

(1) Student Statement of Purpose:

This letter, from the requesting student, should outline the reasons for requesting the co-chaired committee and the reasons for designating the specific faculty member as their choice of co-chair. The student should outline the role(s) each co-chair will take in guiding the students academic and research progress.

(2) Letters from Faculty Co-Chairs:

A letter is required from each co-chair outlining his or her contribution to the student's academic endeavors and/or research projects and confirming their approval of the shared duties as co-chairs

of the student's advisory committee. The faculty co-chairs may be requested to meet with the GPC to discuss their contributions prior to approval of the request by the GPC.

7. ADVISORY COMMITTEE

An Advisory Committee supervises a student's course work and research, examines a student's progress, and approves all documents required for progress toward a degree. The Advisory Committee will approve the degree plan, read and critique the proposal and thesis or dissertation, and administer the oral exams. The Advisory Committee, chaired by the thesis advisor, is a primary source of direction and intellectual support for a student's research.

In order to provide the student with maximum input on course choices and research direction, the Advisory Committee should be constituted soon after the choice of thesis advisor. Since the Advisory Committee plays an important role in helping the student choose their courses, and most of the student's major coursework should be completed by the end of the second year, it is imperative that students meet with their Advisory Committee before the end of their First year.

The University requires that a graduate student's Advisory Committee must include at least three (for M.S. students) or four (for Ph.D. students) members of the TAMU graduate faculty. In addition to the University requirements, an NRSC graduate student's Advisory Committee must include at least two (for M.S. students) or three (for Ph.D. students) tenured or tenure-track TAMIN graduate faculty. The University requires that one member of the Advisory Committee be from a department other than the student's home department. The TAMIN graduate program accommodates this University requirement by specifying only that all of the committee members cannot be from the same department.

8. REQUIRED COMMITTEE MEETINGS

All graduate students are required to have at least one committee meeting each academic year, beginning in the second year. An Advisory Committee Meeting Report form must be submitted to the Graduate Advising Office no later than the end of summer term of each academic year. Failure to do so may result in a registration block for the Fall semester. The first committee meeting has a unique set of forms to be completed by the Advisory Committee, and subsequent meetings all use the Annual Advisory Committee Meeting Report. These can be obtained from the TAMIN Graduate Advising Office or downloaded from the TAMIN Graduate Program web site; copies are included in the appendix of this manual.

9. FILING THE DEGREE PLAN

The Degree Plan lists the course work and research hours to be completed by a student during graduate study. The department or university cannot change the requirements for graduation once the Degree Plan is filed, and the student can only change the Degree Plan by filing a petition with OGAPS. The student, in consultation with the Thesis Advisor and Advisory Committee, decides upon the courses included on the degree plan that are in addition to the departmentally required courses. The list of approved courses starts on page 31; in addition, a certain number of seminars, lab rotations and other required courses are listed on pages 5-6. The minimum total number of hours required on a Ph.D. degree plan is 96 hours, however for students entering with a M.S. degree awarded in the U.S. (or its equivalent as determined by the Office of International Admissions) the minimum number of hours is 64. A minimum of 32 semester hours is required for the thesis M.S. degree and 36 semester hours for the non-thesis M.S. degree.

It is important that students review the limitations on the use of undergraduate courses, seminar hours, research hours, and transfer courses (detailed in the Graduate Catalog) prior to submitting a degree plan. The degree plan must be filed electronically http://ogaps.tamu.edu/Buttons/Resources-for-Degree-Completion and https://ogsdpss.tamu.edu/. Instructions can be found at the Office of Graduate and Professional Studies web site, http://ogaps.tamu.edu/.

GENERAL INFORMATION

Petitions

During the course of a student's career it may be necessary to make requests for changes to the Office of Graduate and Professional Studies. These petitions (for changes of committee, program, courses, etc.) must be submitted to the TAMIN Graduate Advising Office on the appropriate OGAPS form (forms can be downloaded from the OGAPS web site) and with sufficient time to accommodate approval decisions. Please note that it can take OGAPS up to 3 months to process some requests.

Ombudsperson for Graduate Education

The Ombudsperson for Graduate Education assists graduate students, faculty, staff, and administrators to solve conflicts informally. The ombudsperson serves as a neutral listener, information resource, advisor, intermediary, and mediator. The ombudsperson advocates for the processes of graduate education by being equally open and accessible to all parties.

Ombudsperson contact information:
Ombudsperson for Graduate Education
1113 TAMU
College Station, TX 77842-1113 (979) 845-3631
ombuds@tamu.edu

Minimum Credit Hour Requirements

All students must remain in continuous enrollment throughout their graduate careers regardless of their source of support. Graduate students must enroll for at least one credit hour during every regular semester (Fall and Spring) while working towards their degrees. Enrollment for a minimum of one credit hour also is required in the Summer semester for all students using university facilities.

There are higher enrollment requirements for students receiving a graduate research or teaching assistantship. All graduate students receiving a graduate teaching or graduate research assistantship must register for a minimum of 9 semester credit hours during the Fall and Spring semester. In the Summer, students receiving a graduate assistantship must register for a minimum of 3 semester credit hours during the summer session in which they are employed or any combination of 6 semester credit hours during the entire Summer if they are employed for the entire summer. For example, 3 hours in SSI and 3 hours in SSII (total 6 hours) or 6 hours in the 10-week summer session.

Minimum Grade Point Ratio (GPR) Requirements

A student's Graduate GPR is expected to remain at or above 3.0 cumulative GPR (on a 4.0 scale) during his or her graduate career on both **overall GPR** and **all courses listed on the degree plan**. Only grades of A, B, C, and Satisfactory (S) are acceptable for graduate credit. Grades of D, F, or Unsatisfactory (U) for courses on the degree plan must be absolved by repeating the courses at Texas A&M University and achieving grades of C or above or S.

Scholastic Deficiency: If a graduate student's cumulative GPR falls below 3.0, he or she will be on scholastic probation and notified of this in writing by the Graduate Advisor. A copy of the memo will be sent to the student's thesis advisor. The student will meet with his or her thesis advisor and advisory committee to develop a plan to overcome the scholastic deficiency. The

plan should include the course(s) to be taken and the grade(s) the student must receive to return to good standing with the department. A copy of the plan signed by the student and the advisory committee will be given to the Graduate Advising Office for the student's file. If the student has not yet chosen a thesis advisor, he or she will meet with the Graduate Advisor to develop such a plan, a copy of which will be put in the student's file. The student will be given one semester (excluding summer terms) to raise his or her GPR above 3.0. If after one semester the student remains scholastically deficient, he or she will be informed of this in writing by the Graduate Advisor. The student may request the Graduate Program Committee (GPC) for a second semester of academic probation. If the request is denied or if after two full semesters the student remains on scholastic probation, he or she will no longer be considered to be in good standing and may be asked to leave the graduate program: at the discretion of the GPC, the Graduate Advisor will submit a request to the Office of Graduate and Professional Studies that the student be dismissed from the University for scholastic deficiency.

Financial Support

Graduate students in the TAMIN graduate program are eligible to be supported by graduate teaching assistantships (GAT), graduate non-teaching assistantships (GANT), graduate research assistantships (GAR), or fellowships. GAR support is usually provided by individual faculty and is funded by research grants. Fellowship support may be provided by the University, Federal grants, or other sources and is awarded on a competitive basis.

In order to be eligible for support, students must be registered as full-time graduate students. In the Fall and Spring semesters, a minimum of 9 credit hours is required. For summer support, required registration is a minimum of 6 credit hours for the 10-week session or 3 credit hours per five-week summer session.

A&M Policy on the on maximum Doctoral (G8) Hours

A full-time doctoral student will be allowed to pursue his/her program for seven calendar years before a charge of out-of-state tuition is initiated. If a student is pursuing a doctoral degree on a part-time basis, he/she would have up to 99 semester hours before the university would begin to charge out-of-state tuition if they pass the seven year mark. Students who exceed these time limits will be charged out-of-state tuition to compensate for this lack of state support.

Graduate Students at affiliated TAMU campuses

Students undertaking research at affiliated campuses toward a Neuroscience Degree are required to adhere to all requirements, deadlines, etc. of the TAMIN Interdisciplinary Graduate Program. Residence on affiliated US campuses will satisfy the residency requirement for graduate students.

Participation in Programmatic Committees

Graduate students are encouraged to participate in program Committees. Regular elections are held to select graduate student representatives to the Graduate Programs, Graduate Recruiting and Admissions, and Outreach and Executive committees. These elections are held under the auspices of the Neuroscience Graduate Student Association (Building Researchers and Innovators in Neuroscience and Society, B.R.A.I.N.S.). Students are encouraged to join and become active in BRAINS, as it provides an organized means of communicating student concerns to the faculty and administration. BRAINS officer elections are held at the beginning of the Fall semester.

Travel and Support

The Texas A&M Institute for Neuroscience Travel Award is a scholarship supported by the Texas A&M Institute for Neuroscience with funds provided by Texas A&M University. The purpose of the program is to support graduate student travel to make presentations by reimbursing students for some of the eligible expenses incurred. **Funds for these programs are provided at the budgetary discretion of TAMU and may vary annually, and therefore may not be available every year or for all students that apply.** TAMIN will advise students of any unanticipated changes in the availability of travel funds so they may plan accordingly. All graduate students enrolled or affiliated with TAMIN may request funds to travel to scientific meetings to make presentations. To be eligible for these awards students in their 2nd through 5th years must have all of their paperwork up to date and be identified as first/presenting author on the meeting abstract. Travel grants are limited to a maximum of $500 per trip.

Eligibility

1. The applicant must be in good academic standing (3.0 GPR) and registered as a full-time graduate student at TAMU - College Station campus at the time of application and at the time of receiving reimbursement.
2. Proposed presentations should relate directly to the student's degree program.
3. Students must be the presenting author of a poster or oral presentation.
4. Student's PI and research must be accomplished under the supervision of a member of the Faculty of Neuroscience who is in good standing.
5. Applicant must have completed one year of graduate study.
6. Student is allowed one TAMIN Travel Award per Fiscal Year.
7. All application materials must be submitted prior to traveling (abstract).
8. Award recipients are expected to acknowledge the Texas A&M Institute for Neuroscience in their presentation.

Guidelines and Requirements

1. The applicant should clearly type (<10 point type will not be accepted) on the TAMIN Travel Award Application Form (http://tamin.tamu.edu/graduate/student-resources/) the nature and specific objectives of the proposed activities, with emphasis on how the requested funds will be used. Attach a copy of the conference program, invitation, or acceptance of abstract if presenting a paper and/or poster. Abstract acceptance is not mandatory at time of application if it has not been received by the time of your application, but it must be submitted before traveling.
2. The budget should be brief, but must list the specific items (including breakdown of proposed expenses for travel, lodging, and expenses, etc.) for which support is requested, giving evidence that the requested amount is realistic and the result of thoughtful planning. Give a clear justification if international travel is required. The applicant should not simply list a convenient figure or an overestimate; such budgets do not enhance the chances for favorable consideration and can cause an application to be disqualified. The maximum awards given for the various categories will be:

Presentation Award (travel within	$400
(international travel)	$500
TAMIN Students	Based on Award

Requesting Permission for Business Travel

Regardless of source of funding, or even if you pay your own costs, every graduate student making a professional trip to attend a meeting or conduct research must complete TAMU's "Request for Business Travel" form per SAP 21.01.01.M0.02. These forms are essential to ensure that you will be appropriately covered by university insurance and your trip will be designated as professional business. The form can be obtained online (https://travel.tamu.edu/Forms) through the TAMIN Advising office or in your home department's business office.

GRADUATE DEGREE REQUIREMENTS
Interdisciplinary Program in Neuroscience DOCTOR OF PHILOSOPHY

To earn a Doctor of Philosophy degree a student must meet the requirements of both the University and TAMIN. The TAMIN Graduate Program requirements are outlined below, along with a summary of the University requirements. Please refer to the Graduate Catalog for a complete description of University requirements and policies.

Please note that graduate students must fulfill the requirements of the catalog that is current during the semester they complete their degree requirements. This is the case for both University and TAMIN requirements. It is the student's responsibility to keep up with changes in requirements.

REQUIREMENTS

A. Residence

Students who enter the doctoral degree program with a bachelor's degree must spend two academic years in resident study at College Station or affiliated campus (Galveston, Temple, ect). If a Master's degree has been awarded, one academic year is required. One academic year may include two adjacent regular semesters or one regular semester and one adjacent 10-week summer semester. See the Graduate Catalog for additional information on residence requirements.

B. Identify a Thesis Advisor

All NRSC graduate students must identify a professor by the end of their 2nd semester (excluding summer terms). Sponsorship by the Chair or Co-chair must be submitted in writing to the Graduate Advisor by the end of the 2nd semester.

The committee chair or one of the co-chairs must be a member of the TAMIN graduate faculty. Requests for a co-chair from outside of TAMIN must be approved by the Graduate Program Committee (see requirements on page 7).

C. Establish an Advisory Committee

The advisory committee, chaired by the thesis advisor, is a primary source of direction and intellectual support for a student's research. The advisory committee should be constituted soon after the choice of thesis advisor in order to provide the student with maximum input on course choices and research direction. The advisory committee will approve the degree plan, read, critique, and approve the proposal and dissertation, and administer the preliminary exam and the final defense.

The University requires that a doctoral student's advisory committee be composed of no fewer than 4 members of the graduate faculty who are representative of the student's field of study and research. The chair or one of the co-chairs of the advisory committee must be from the student's major department, and at least one of the members must be from a department other than the student's home department.

D. Degree Plan

The degree plan should be developed in consultation with the student's advisory committee and submitted to the TAMIN Graduate Advising Office **prior to registering for the 4th semester** (excluding summer terms). This deadline was established to ensure that students consult with their advisory committees about course work before beginning the second year of study.

For Ph.D. students, a minimum of 96 credit hours beyond the baccalaureate degree or 64 credit hours beyond the Master's degree is required. Some Master's degrees awarded in countries other than the U.S. are not equivalent to a Master's degree awarded in the U.S. In these instances, the student will be required to have 96 hours on their degree plan.

The degree plan should include the course work required by TAMIN. These requirements are described in the following section. For limitations regarding the use of certain graduate courses and transfer credit see the TAMU Graduate Catalog. All doctoral degree plans must carry a reasonable amount of 691 (Research) hours.

The TAMIN Graduate Program Guide for the student's particular degree must be submitted along with the degree plan (see section E, item 5).

E. Neuroscience Course Requirements

1) All Ph.D. students are required to complete the two core courses, Principles of Neuroscience 1 (fall) and 2 (spring) (NRSC 601 and 602), receiving a letter grade of at least a B. Each course is 3 credit hours.
2) All Ph.D. students are required to take a minimum of 4 approved elective courses. Each elective course is 3 or 4 credit hours. The graduate program committee considers exemptions of one or more electives if the student's thesis committee considers the exemption justified based on previous coursework (for example if a student enters the program with an MS in a related field).
3) All first-year Ph.D. students are required to take NRSC 685 Neuroscience Rotations during the fall semester. Two half-semester rotations in the fall are required, but additional rotations in the spring semester are allowable as needed. Students receive 1 credit hour per rotation: students should enroll in 685 for a total of 2 credit hours in the fall.
4) All Ph.D. students are required to complete an approved course in Statistics and Experimental Design. Most options are 3 credit hour courses.
5) All Ph.D. students are required to complete an approved course in the Responsible Conduct of Research. 1 credit hour.
6) All Ph.D. students are required to be continuously enrolled in NRSC 681 Neuroscience Seminar. 1 credit hour per semester.
7) All student fill out the rest of their degree plan with research credit hours (NRSC 691). Students in their 3rd through 5th year typically take 6-8 research credit hours per semester, plus 1 credit hour each for a journal club and the weekly neuroscience seminar series. Students with co-chairs from outside of TAMIN must satisfy all TAMIN course requirements and must take at least 50% of their 691 research credit hours as NRSC hours.

F. Teaching requirement

There are no teaching requirements for the NRSC degrees.

G. Foreign Language

No foreign language is required.

H. Preliminary Examination

The purpose of the preliminary examination is for the student's advisory committee to determine whether the student has a mastery of the subject matter of all fields in the program, an adequate knowledge of the literature in these fields, and the ability to carry out bibliographical research. The preliminary examination is **required**. See the TAMU graduate catalog for additional details about University requirements at https://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/degree-requirements/#Prelim and http://ogaps.tamu.edu/New-Current-Students/Getting-a-Degree/Preliminary-Exam-Requirements

Eligibility requirements for the preliminary examination.

- The student must be registered for at least 1 hour for the semester or 5-week summer term during which any portion of the preliminary exam may fall. If the entire exam falls between semesters, the student must be registered for the term immediately preceding the exam.
- An approved degree plan was on file with OGAPS at least 90 days prior to the first written examination.
- The student's official GPR at the time of the examination must be at least 3.0.
- All English language proficiency requirements must have been satisfied.
- All committee members must have scheduled or waived the written portion and agree to attend the oral portion of the exam or have found a substitute. Only one substitution is allowed and it cannot be for the committee chair.
- At the end of the semester in which the exam is given, there are no more than 6 hours of formal course work remaining on the degree plan (except 681, 684, 690, 691, and 692). The TAMIN chair or head of the student's department has the authority to approve a waiver of this criterion.
- The time span from the first written examination to the oral is no more than three weeks. (In cases of department-wide written examinations, this criterion is not applicable.) The head of the student's department has the authority to approve a waiver of this criterion.

The preliminary examination includes both a written and an oral component in which the student's Advisory Committee tests a Ph.D. student's mastery of his or her field of specialization. The preliminary examination will be administered during the 5th semester (excluding Summer), by the student's advisory committee. University guidelines state that the Ph.D. preliminary examination consist of a written and an oral component "unless otherwise recommended by the student's advisory committee and approved by the Office of Graduate and Professional Studies". **Both written and oral components of the preliminary examination must be completed by the last day of classes in the fall semester of the 3rd year (the end of 5th semester)**.

Preliminary examinations cannot be taken until all the core course requirements of the NRSC IDP have been completed and less than six hours of formal course work remain to be completed on the degree plan.

During this exam, students are expected to demonstrate that they: 1) have mastered fundamental concepts; 2) have gained detailed knowledge of scientific literature in their research area and the ability to critically evaluate it; 3) are able to formulate specific, plausible and testable hypotheses; 4) are able to design controlled experiments that distinguish among competing

hypotheses; 5) can communicate effectively both in writing and in the oral presentation. Details of the exam format and requirements are as follows.

1) The student and committee chair will complete the Preliminary Exam Checklist. The committee chair will bring the Preliminary Exam Checklist to the TAMIN Graduate Advising Office, which will then submit the form to the Office of Graduate and Professional Studies. **This MUST be submitted and the Exam scheduled 2 weeks prior to taking the Preliminary Exam.**

2) **The written component** must include a research proposal narrative ***developed by the student on their own without any assistance*** from the thesis advisor or others. The thesis advisor will specify the format and topic of the research proposal. The thesis advisor can only provide input in terms of forming the specific aims, which should be distinct from aims that are either currently funded or under consideration for funding through a different mechanism.
   - The suggested research proposal narrative contents should include (but not limited to) the following: introduction or specific aims, hypotheses or statement of problems, literature review (background and context), research design and methods, and references cited. Section headings and page limits should follow the guidelines for the type of research proposal being written.
   - The advisory committee members have the option to require additional written responses to essay questions related to neuroscience and the student's field of study, or require the student to write a major area review paper as part of the written component. If the student has already received substantial guidance on the writing of a research proposal prior to the preliminary exam (e.g., the student submitted a research proposal to an extramural funding agency under the guidance of their thesis advisor, or the student received feedback on the research proposal from other faculty as part of a course), the thesis advisor will have the option to require the student to take the written component in a different format at the committee's discretion.
   - The written component will be submitted to the advisory committee. If the advisory committee requires written responses to questions, the student will arrange a time to take the written questions from the advisory committee members. The written component will be evaluated and returned to the committee chair, who will then forward the written component to the student. Students will have the opportunity to discuss any deficiencies in their written components with advisory committee members within two weeks after taking the written components.

3) **The oral component** will be taken **two weeks after** the written component. Students are responsible for scheduling a mutually agreeable two-hour block of time for the committee to give the oral exam. **The nature and content of the oral exams is at the full discretion of the Advisory Committee**. In general, students are expected to prepare a 20-40 minute presentation on their proposal and will be examined on their proposal as well as their general knowledge of neuroscience. The committee will meet at the end of the exam and evaluate student performance. The student passes the preliminary exam if there is no more than one dissenting vote among advisory committee members. The committee will also discuss and complete the Annual Committee Meeting Evaluation form, which must be submitted to the TAMIN office.

4) In the event of a failure, the advisory committee has the option to allow a retake of the preliminary exam. The written and oral components of the exam, administered as described above, must be completed prior to Spring break. In the event of a second failure, no further retakes will be allowed. The student's status in the NRSC graduate program will then be determined by the student and the advisory committee.

The results of the examinations should be reported on the Report of the Preliminary Exam form. The chair will bring the completed Report form to the TAMIN Graduate Advising Office, which will submit the form to the Office of Graduate and Professional Studies. Failure to submit the form to OGAPS within 10 working days of the exam will result in the preliminary exam being recorded as a failure. Copies of the official forms can be downloaded from the Office of Graduate and Professional Studies web site: http://ogaps.tamu.edu/Buttons/Forms-Information.

After passing the preliminary examination, all degree requirements must be completed within four calendar years. Otherwise, the student will be required to repeat the preliminary exam.

I. Research (Dissertation) Proposal

The Ph.D. student must prepare a research proposal for approval by his or her Advisory Committee. The Proposal describes the research that a student intends to undertake. The proposal is not a contract to perform the described research and significant research progress need not be completed at the time of proposal submission. The proposal is a mechanism to assist students in clarifying research goals early in their graduate program, to encourage students to become familiar with the primary literature in their field, to provide experience in scientific writing, and to facilitate research interactions between students and members of their Advisory Committee. In the proposal, the student describes the rationale for the research project, the objectives of the research to be performed, and outlines the methodologies to be used.

Students will prepare a proposal describing their planned research. The proposal format will be determined by the student's advisory committee during their first committee meeting and may vary depending on the student's home department. Suggested formats include:

NIH R01 applications (http://grants.nih.gov/grants/funding/phs398/phs398.html)
NSF research proposals (http://www.nsf.gov/pubs/gpg/nsf04_23)
NIH postdoctoral fellowships (http://grants1.nih.gov/grants/funding/416/phs416.htm)

A draft of the research proposal should be submitted to the student's advisor by the end of the 5th semester (excluding Summer), which is the fall semester of the 3rd year. The student may build upon the proposal written in the preliminary examination with feedbacks from the advisor and the advisory committee after the preliminary examination. The proposal must be approved by the student's advisor, then submitted to the entire advisory committee. The advisory committee will evaluate the proposal and request any changes, and the student will complete any changes and gain approval by the committee by the end of fall semester of the 3rd year.

After revisions and approval by the advisory committee, the finalized proposal should be submitted along with the signed official cover sheet to the TAMIN Graduate Advising Office. The official cover page is available on the OGAPS website (Research Proposal Form) http://ogaps.tamu.edu/Buttons/Forms-Information and http://ogaps.tamu.edu/OGAPS/media/media-library/New%20Forms%20and%20Information/Research-Proposal-Form.pdf?ext=.pdf

Students performing research involving human subjects, infectious biohazards, and/or recombinant DNA must attach a copy of the appropriate research compliance approval form to the proposal when proposal is submitted. Proposals that include research with vertebrate animals (including antibody generation in rabbits or mice) must include a copy of an approved Animal Use Protocol cover page. Information on Animal Use Protocols can be found at https://rcb.tamu.edu/animals.

J. Admission to Candidacy

For admission to candidacy for a doctoral degree, the student must have: (1) completed all formal course work on the degree plan with the exception of any remaining 681, 684, 690, and 691, (2) a 3.0 graduate GPR and a Degree Plan GPR of at least 3.0 with no grade lower than C in any course on the degree plan, (3) passed the written and oral portions of the preliminary exam, (4) submitted an approved research (dissertation) proposal, and (5) met the residence requirements. The final examination will not be authorized for any doctoral student who has not been admitted to candidacy.

K. Continuous Registration

Once all course work on the degree plan other than 691 (Research) is completed, a doctoral student must be in continuous registration until all further requirements for the degree have been completed. See the Graduate Catalog for additional information on the continuous registration requirement.

L. Pre-Defense Publication of Dissertation Material. Students should be aware of the agreement that is signed when a journal (hard copy or electronic) accepts an article for publication. At that time, the student assigns rights to the journal as publisher. The student must obtain written permission from the copyright holder to include the material in the thesis, dissertation, or record of study. Some journals and publishers have previously granted TAMU such rights, these can be found on the thesis office website.

M. Dissertation

The ability to perform independent research must be demonstrated by the dissertation, which must be the original work of the candidate. The dissertation describes the research performed by a student during graduate study and the unique contribution the student has made to advance the frontiers of knowledge. The student, in consultation with his or her Advisory Committee, determines the content of the dissertation. The dissertation must be approved by the student's Advisory Committee. The dissertation should be submitted to the members of a student's Advisory Committee **at least two weeks prior to the Final Examination.**

The dissertation must be original work, grammatically correct in a format consistent with that used in scholarly journals in the candidate's field. The Office of Graduate and Professional Studies controls the format of the dissertation. Students must follow it exactly, or risk having it rejected by the Thesis Clerk. Instructions and the Thesis Manual is available on-line at OGAPS's Thesis and Dissertation Services website: http://ogaps.tamu.edu/New-Current-Students/Thesis-and-Dissertation-Services.

The student must submit an original copy of the dissertation in a form approved by the student's Advisory Committee to the Graduate Advising Office in order to obtain the Program Chair's approval and signature **a minimum of two weeks prior** to the Office of Graduate Studies deadline for submitting the dissertation to the Thesis Office. If the program chair deems the dissertation unsatisfactory, it will be given to the Graduate Program Committee for review. The Graduate Program Committee will make a recommendation of action to the program chair, student, and the members of the student's Advisory Committee.

Students are required to submit an electronic thesis/dissertation (ETD) as a pdf file to the Thesis Office instead of using the traditional blue-line paper. Paper copies of these ETDs will not be sent to the library or to the departments. All electronically submitted manuscripts can be accessed from the Internet via https://etd.tamu.edu/ or through the library website, https://library.tamu.edu/ . Information on how to submit an electronic thesis/dissertation is

available on the Thesis and Dissertation Services website: http://ogaps.tamu.edu/New-Current-Students/Thesis-and-Dissertation-Services .

In addition, TAMIN requires students to submit a copy of their dissertation printed on acid-free cotton bond paper to the Graduate Advising Office. Acid-free cotton bond paper can be obtained from the TAMIN Graduate Advising Office. TAMIN will have this document bound for the departmental archives.

Deadlines for submission of manuscripts to the Office of Graduate and Professional Studies are published each semester in the Office of Graduate and Professional Studies calendar. A copy of this calendar can be found at: http://ogaps.tamu.edu/Buttons/Calendars .

N. Time Limit

All graduate work must be completed within 10 consecutive calendar years. If within this time period a student does not complete all requirements for the degree sought, he or she cannot receive graduate credit for any course work that is more than 10 calendar years old at the time of the final examination.

O. Application for Degree

Graduate students who expect to complete their work at the end of a given semester must apply for graduation by submitting the electronic application for degree to the Office of the Registrar and by paying the required graduation fee at the Fiscal Department no late than the Friday of the second week of the fall or spring semester or the Friday of the first week of the first summer term. The electronic application for degree can be accessed via the website degreeapp.tamu.edu. Graduate students in interdisciplinary programs should attend the ceremony of their home academic department.

The TAMIN Graduate Advising Office should be notified when you apply to graduate so your file can be reviewed with time to identify and address any problems.

P. Final Examination (Dissertation Defense)

In order to graduate at the end of a given semester the final exam for a doctoral degree must be passed by deadlines announced in the Office of Graduate and Professional Studies calendar. Students must be registered for at least one hour for the semester during the semester or summer term in which the final examination is held.

To be eligible to take the final examination, a student must be advanced to candidacy. The preliminary examination results and research proposal must have been submitted to the Office of Graduate and Professional Studies at least 14 weeks prior to the date of the defense. However the Final Examination must be held within three years after advancement to candidacy.

Request for permission to hold and announce the final oral examination must be submitted to the Office of Graduate and Professional Studies at least 10 working days before the requested exam date. This request must be approved by the student's advisory committee, the TAMIN Graduate Advisor (or Department Head), and OGAPS. This announcement must be made on the official form, which can be downloaded from the OGAPS website (Forms and Information).
https://ogaps.tamu.edu/OGAPS/media/media-library/New%20Forms%20and%20Information/Request-and-Announcement-of-the-Final-Examination.pdf?ext=.pdf

The student's advisory committee will conduct the final examination/dissertation defense. The final examination is not to be administered until the candidate's dissertation in substantially final form is provided to the Advisory Committee, and all concerned have had adequate time to review

the document. TAMIN requires **that the dissertation in substantially final form be submitted to the members of a student's Advisory Committee at least two weeks prior to the Final Examination. In order to allow sufficient time for revisions and for Department Head approval, the Final Exam should be scheduled no later than 4 weeks prior to the OGAPS deadline for submission of the Dissertation.**

All Ph.D. students receiving degrees through TAMIN's NRSC Graduate Program will be required to present a seminar covering their dissertation research within the last year preceding their graduation. The student's thesis committee may at their discretion require a private presentation and examination as part of the thesis defense, which satisfies TAMIN requirements. Ideally the student's thesis presentation should be a public seminar, which must be announced two weeks prior to the scheduled date and time (indicating that the student is a doctoral candidate), and be advertised by TAMIN and be open to all interested parties. Presentation of this seminar is to be followed by an open question period. This public presentation may be coincident with but does not replace nor should it conflict with the student's thesis defense, which will be conducted at the discretion of the student's Advisory Committee. The Advisory Committee will conduct the Final Examination.

Whereas the final examination may cover the broad field of the candidate's training, it is presumed that the major portion of the time will be devoted to the dissertation and closely allied topics. Persons other than members of the graduate faculty may, with mutual consent of the candidate and the thesis advisor, be invited to attend a final examination for an advanced degree. Upon completion of the questioning of the candidate, all visitors must excuse themselves from the proceedings when the Advisory Committee begins its deliberation on the results of the examination.

A positive vote by all members of the graduate committee with at most one dissension is required to pass a student on his or her exam.

Timeline Summary for Graduate Studies in Doctor of Philosophy
For the Interdisciplinary Program in Neuroscience

Year 1:

- Complete required courses, and seminars (including NRSC 601, 602, 681)
- Complete rotations (NRSC 685)
- Choose thesis advisor, no later than the end of 1st year
- Develop tentative degree plan with advisor
  - Submit Annual Committee Meeting Progress Report after meeting with advisor to TAMIN office

Year 2:

- Attend weekly seminars and attend symposia
- Complete remaining coursework (electives, ethics, statistics requirements)
- Research credit hours (NRSC 691)
- Establish an advisory committee and hold first committee meeting before the end of fall semester
  - Outline research project
  - Obtain committee approval for degree plan
  - Discuss plans for preliminary exam
  - Submit Annual Committee Meeting Progress Report to TAMIN office
- Submit degree plan to the Office of Graduate and Professional Studies (OGAPS) before the end of the fall semester

Year 3:

- Attend weekly seminars and attend symposia
- Research credit hours (NRSC 691)
- Complete preliminary exam before the end of fall semester
  - Submit Preliminary Exam Checklist two weeks before preliminary exam commences
  - Complete written component of prelim exam two weeks prior to oral component
  - Complete oral component of prelim exam before the last day of classes in the fall semester
  - Submit Report of Prelim Exam to OGAPS
  - Submit Annual Committee Meeting Progress Report to TAMIN office
- Submit research proposal to advisory committee (deadline: by the end of fall semester of 3rd year)
- Submit finalized research proposal to OGAPS
- Submit admission to candidacy (need to fulfill all requirements)

Year 4 and beyond:

- Attend weekly seminars and attend symposia
- Research credit hours (NRSC 691)
- Hold committee meetings each year and submit Annual Committee Meeting Progress Reports to TAMIN office

Final Examination:

- Permission to defend dissertation
  - Obtain permission to defend from advisory committee

- Submit completed Permission to Defend Thesis form to the OGAPS two weeks before defense

➢ Dissertation defense
- Distribute written dissertation to advisory committee at least two weeks before scheduled oral defense
- Present and defend dissertation to advisory committee
- Obtain committee approval for written dissertation
- Submit Report of Final Examination and finalized dissertation to the OGAPS

GRADUATE DEGREE REQUIREMENTS
Interdisciplinary Program in Neuroscience MASTER OF SCIENCE
Thesis Option

TAMIN does not recruit or accept applications from students into the NRSC graduate program solely interested in pursuing a Master's degree in Neuroscience. However, current students in the midst of pursuing a PhD may choose to exit the program with a MS degree. To earn a Master of Science (thesis option) degree a student must meet the requirements of *both* the University *and* TAMIN. The TAMIN requirements are outlined below, along with a summary of the University requirements. Please refer to the TAMU Graduate Catalog for a complete description of University requirements and policies.

Please note that graduate students must fulfill the requirements of the catalog that is current during the semester they complete their degree requirements. This is the case for both University and TAMIN requirements. It is the student's responsibility to keep up with changes in requirements.

TAMIN DEADLINES	
M.S. Degree	
Choice of Thesis Advisor	By the end of the 2nd Semester
Degree Plan Filed with OGAPS and TAMIN	Before registering for first semester of 2nd Year
Proposal Filed with OGAPS and TAMIN	During the 3rd Semester (see page 28)
Final Examination	Conclusion of Research / Thesis written
Note that the number of semesters does NOT include summer sessions.	

REQUIREMENTS

A. Residence

In partial fulfillment of the residence requirement for the degree of Master of Science, the student must complete 9 residence credit hours during one regular semester or one 10-week summer semester. Upon recommendation of the student's advisory committee and with approval of the Office of Graduate and Professional Studies, a student may be granted exemption from this requirement. However, such a petition must be approved prior to the student's registration for the final 9 credit hours of required course work.

B. Identify a Thesis Advisor

All NRSC graduate students are required to identify a thesis advisor by the end of the second full semester (excluding summer terms). M.S. candidates are encouraged to identify a thesis advisor by the end of the first full semester. Sponsorship by the Chair or Co-chair must be submitted in writing to the Graduate Advisor by the end of the second semester.

The committee chair or one of the co-chairs must be a member of TAMIN graduate faculty. Requests for a co-chair from outside TAMIN must be approved by the TAMIN Graduate Program Committee (see requirements on page 7).

C. Establish an Advisory Committee

The advisory committee, chaired by the thesis advisor, is a primary source of direction and intellectual support for a student's research. The advisory committee should be constituted soon after the choice of thesis advisor in order to provide the student with maximum input on course choices and research direction. The advisory committee will approve the degree plan, read and critique the proposal and thesis, and administer the final exam.

The University requires that a M.S. student's advisory committee be composed of no fewer than 3 members of the graduate faculty who are representative of the student's field of study and research. The chair or one of the co-chairs of the advisory committee must be from the student's major department, and at least one of the members must be from a department other than the student's department. The NRSC IDP has established the following additional requirements. The advisory committee must contain at least two tenured or tenure-track member of the TAMIN graduate faculty.

D. Degree Plan

The degree plan should be developed in consultation with the student's advisory committee and submitted to the TAMIN Graduate Advisor **prior to registering for the 3rd semester** (excluding summer terms). This deadline was established to ensure that students consult with their advisory committees about course work before beginning the second year of study.

For M.S. Thesis students, the degree plan must contain a minimum 32 semester hours of approved courses and research hours. TAMIN course requirements are described in the following section. There are limitations regarding the use of certain graduate courses including 681, 685, 689, 690, 691, 694, and 695 courses, certain transfer course work, extension courses, advanced undergraduate courses, and certain courses offered by the College of Medicine. The student is referred to the Graduate Catalog for the details of these limitations.

The TAMIN Graduate Program Guide for the student's particular degree must be submitted along with the degree plan (see section E, item 5).

E. Course Requirements

1) All M.S. students are required to register for NRSC 681 and attend the weekly seminar series.
2) All M.S. students must register for at least one credit in a Neuroscience-related journal club. This may be the journal club accompanying the Principles of Neuroscience 1 and 2 or a journal club of their choice in the home department.
3) Graduate students are required to take the two core courses, Principles of Neuroscience 1 and 2, plus a minimum of 4 elective courses. Exemptions will be considered by the GPC. These courses are listed on page 31 at the beginning of this section.
4) M.S. students with a co-chair from outside of TAMIN must take at least 50% of their 691 research credit hours as NRSC credit hours.

F. Teaching Requirement

No teaching is required.

G. Foreign Language

No foreign language is required.

H. Research Proposal

The M.S. student must prepare a research proposal for approval by his or her Advisory Committee. The Proposal describes the research that a student intends to undertake. The proposal is not a contract to perform the described research and significant research progress need not be completed at the time of proposal submission. The proposal is a mechanism to assist students in clarifying research goals early in their graduate program, to encourage students to become familiar with the primary literature in their field, to provide experience in scientific writing, and to facilitate research interactions between students and members of their Advisory Committee. In the proposal, the student describes the rationale for the research project, the objectives of the research to be performed, and outlines the methodologies to be used.

Students will prepare a proposal describing their planned research. The proposal format will be determined by the student's advisory committee during their first committee meeting. Suggested formats include:

NIH R01 applications (http://grants.nih.gov/grants/funding/phs398/phs398.html)
NSF research proposals (http://www.nsf.gov/pubs/gpg/nsf04_23)
NIH postdoctoral fellowships (http://grants1.nih.gov/grants/funding/416/phs416.htm)

The proposal must first be approved the student's advisor, then submitted to the advisory committee by the end of their 3rd semester (excluding summer). After revisions and approval by the advisory committee, the proposal should be submitted along with the signed official cover sheet to the TAMIN Graduate Advising Office. The official cover page is available on the OGAPS website. http://ogaps.tamu.edu/Buttons/Forms-Information.

Students performing research involving human subjects, infectious biohazards, and/or recombinant DNA must attach a copy of the appropriate research compliance approval form to the proposal when proposal is submitted. **Proposals that include research with vertebrate animals (including antibody generation in rabbits or mice) must include a copy of an approved Animal Use Protocol cover page.** Information on Animal Use Protocols can be found at http://animal.tamu.edu/approval.html.

I. Pre-Defense Publication of Thesis Material.

Students should be aware of the agreement that is signed when a journal (hard copy or electronic) accepts an article for publication. At that time, the student assigns rights to the journal as publisher. The student must obtain written permission from the copyright holder to include the material in the thesis, dissertation, or record of study. Some journals and publishers have previously granted TAMU such rights, these can be found on the thesis office website.

J. Thesis

The thesis describes the research performed by a student during graduate study and the unique contribution the student has made to advance the frontiers of knowledge. The student, in consultation with the Advisory Committee, determines the content of the thesis. The thesis must be approved by the student's Advisory Committee. The thesis should be submitted to the members of a student's Advisory Committee **at least two weeks prior to the Final Examination.**

The thesis must be original work, grammatically correct in a format consistent with that used in scholarly journals in the candidate's field. The Office of Graduate and Professional Studies controls the format of the thesis. Students must follow it exactly, or risk having it rejected by the Thesis Clerk. Instructions and the Thesis Manual is available on-line at http://thesis.tamu.edu/.

After approval by the Advisory Committee an original of the thesis must be submitted to the TAMIN Graduate Advising Office in order to obtain the Department Head's approval and signature **a minimum of two weeks prior** to the Office Graduate Studies deadline for submitting the thesis to the Thesis Office. If the Department Head deems the thesis unsatisfactory, it will be given to the Graduate Program Committee for review. The Graduate Program Committee will make a recommendation of action to the Department Head, student, and the members of the student's Advisory Committee.

Students are required to submit an electronic thesis/dissertation (ETD) as a pdf file to the Thesis Office instead of using the traditional blue-line paper. Paper copies of these ETDs will not be sent to the library or to the departments. All electronically submitted manuscripts can be accessed from the Internet via http://etd.tamu.edu or through the library website, http://library.tamu.edu. Information on how to submit an electronic thesis/dissertation is available on the Thesis Office website: http://thesis.tamu.edu.

In addition, TAMIN requires students to submit a copy of their thesis printed on acid-free cotton bond paper to the Graduate Advising Office. TAMIN will have this document bound for the departmental archives. Acid-free cotton bond paper is available in the Graduate Advising Office.

Deadlines for submission of manuscripts to the Office of Graduate and Professional Studies are published each semester in the Office of Graduate and Professional Studies calendar. A copy of this calendar can be found at http://ogaps.tamu.edu/Buttons/Calendars.

K. Time Limit

All requirements must be completed within seven consecutive calendar years. If a student does not complete all requirements for the degree sought by seven years, no course work will be applicable to the degree program that is more than seven calendar years old at the time of the final examination.

L. Application for Degree

Formal application for the degree must be filed in the Office of Graduate and Professional Studies not later than 90 days prior to the end of the semester (or 30 days in the summer term). Students must be registered in the semester in which the degree is conferred. If graduating at the end of the summer semester, the student must register during the first 5-week term of the summer session. There is a diploma fee that must be paid at the time formal application is submitted. The TAMIN Graduate Advising Office should be notified when the application for degree is filed so that the student's file can be reviewed with time to address any problems.

M. Final Examination for M.S. students

The student should read the Graduate Catalog for a complete description of the University requirements.

1. The student must pass their final exam by deadline dates announced in the Office of Graduate and Professional Studies Calendar.
2. The student must be registered in the semester that the exam is taken.
3. The student's GPR must be at least 3.000 for courses on the degree plan and for all courses completed at Texas A&M that are eligible to be applied to a graduate degree. There must be no un-absolved grades of D, F, or U in courses listed for credit on the degree plan. See the Graduate Catalog for information on how to absolve a deficient grade.
4. The student must have completed all course work on the degree plan with the exception of those hours for which the student is registered.
5. All English Language Proficiency requirements must be satisfied before the final examination is scheduled.
6. An approved research proposal must be on file with the Office of Graduate and Professional Studies by the published deadlines.
7. A request for permission to hold and announce the final examination must be submitted to the Office of Graduate and Professional Studies at least 10 working days in advance of the scheduled date for final examination.
8. The final examination covers the thesis and all course work on the degree plan. At the discretion of the Advisory Committee, the final examination may be written, oral, or both.
9. The final examination may not be administered until such time that the thesis is available to all members of the advisory committee in substantially final form and all members have had adequate time to review the document.
10. The final examination must be administered on campus (unless approved by the OGAPS).
11. There will be only one opportunity to retake the final examination. This must be accomplished within a time period that does not extend beyond the next regular semester (summer terms excluded).

GRADUATE DEGREE REQUIREMENTS
Interdisciplinary Program in Neuroscience MASTER OF SCIENCE
Non-Thesis Option

To earn a Master of Science (non-thesis option) degree a student must meet the requirements of *both* the University *and* TAMIN. TAMIN requirements are outlined below, along with a summary of the University requirements. Please refer to the Graduate Catalog for a complete description of University requirements and policies.

Please note that graduate students must fulfill the requirements of the catalog that is current during the semester they complete their degree requirements. This is the case for both University and TAMIN requirements. It is the student's responsibility to keep up with changes in requirements.

REQUIREMENTS

All requirements for the non-thesis option Master of Science degree other than those specified below are the same as those for the thesis option degree.

Required course work

A minimum of 36 semester hours is required. The degree plan must be approved by the student's advisory committee and department head and is subject to the Limitations on the Use of Transfer, Extension and Certain Other Courses as described in the Graduate Catalog.

Students pursuing a non-thesis M.S. degree are not allowed to enroll in 691 (Research) for any reason and no 691 hours may be used for credit on the degree plan. A maximum of 4 credit hours of 684 (Professional Internship), 8 credit hours of 685 (Directed Studies), and up to 3 credit hours of 690 (Theory of Research) or 695 (Frontiers in Research) may be used toward the non-thesis option M.S. degree. In addition, any combination of 684, 685, 690, and 695 may not exceed 25% of the total credit hour requirement shown on the student's degree plan.

TAMIN course requirements for the non-thesis option Master of Science degree are same as those for the thesis option degree.

Thesis

A thesis is not required. However, TAMIN requires non-thesis option students to either prepare and submit a library research paper as described in the following section or have already successfully completed the written exam portion of their preliminary exams (i.e. if the student has previously completed their preliminary exams and been admitted to candidacy before deciding to leave the program with a non-thesis Master's degree, their thesis committee may elect to accept the results of the written exams as having satisfied the written requirements for the non-thesis MS degree).

Library Research Paper

Students pursuing the non-thesis option Master of Science Degree are required to prepare and submit a library research paper. The purpose of this paper is to demonstrate that the student can do library research and read, understand, and integrate information from the primary literature. In

scope the paper is similar to the literature review that constitutes the first chapter of a thesis or dissertation. Typically, the paper is expected to be approximately twenty pages of double-spaced type, not including references and figures or tables. If the student has previously completed a major area paper as part of their preliminary exams and been admitted to candidacy, the thesis committee can elect to accept this paper as meeting the requirement for a library research paper.

The student's Advisory Committee must approve this effort. An approved copy of this paper will be deposited with the Chair of the student's advisory committee and a second soft-bound copy will be deposited in the departmental file of non-thesis papers located in the TAMIN Graduate Advising Office.

Final Exam

A final comprehensive examination is required for students seeking a non-thesis M.S. degree in Neuroscience. No exemptions are allowed. The requirements as to level of courses and examinations are the same as for the thesis option M.S. degree. As stated above, the student's advisory committee may elect to accept the results of the student's written preliminary exams if the student had previously completed these and been admitted to Ph.D. candidacy before deciding to leave the program with an MS degree.

NRSC GRADUATE COURSE LIST

Graduate students are required to take two Principles of Neuroscience courses and a minimum of 4 elective courses coming from the approved list below. Exemptions and alternative courses not yet evaluated will be considered on a case by case basis by the Graduate Program Committee (GPC).

NOTE: not all courses are offered every semester or every year, so students are encouraged to check with the instructor of record about future offerings.

Title	**NRSC Prefix**	**Course # Home**
Principles of Neuroscience I	NRSC 601	BIOL 627
Principles of Neuroscience II	NRSC 602	BIOL 628
Neuroanatomy	NRSC 603	VIBS 603
Biomed. Neuroendo. Endocrine Disorders	NRSC 604	VIBS 604
Neuroanatomical Systems	NRSC 605	VIBS 606
Learning	NRSC 606	PSYC 606
Physiological Psychology	NRSC 609	PSYC 609
Molecular Biol. of Differentiation & Dev.	NRSC 611	BIOL 611
Perceptual Processes	NRSC 615	PSYC 615
Advanced Developmental Neurotoxicology	NRSC 616	VIBS 616
Functional Neuroanatomy	NRSC 621	VIBS 621
Comparative Neurobiology	NRSC 634	BIOL 634
Biological Clocks	NRSC 635	BIOL 601
Signaling in Behavior and Development	NRSC 636	BIOL 615
Neurobiology	NRSC 640	VIBS 640
Principles of Neuropsychology	NRSC 641	PSYC 641
Neural Development	NRSC 644	BIOL 644
Seminar in Behavioral Neuroscience	NRSC 649	PSYC 649
Seminar in Neurobiology Journal Club	NRSC 650	BIOL 681
Experimental Design for Behav. Scientists	NRSC 671	PSYC 671
Behavior, Genes and Evolution	NRSC 698	BIOL 698
Thursday Seminar	NRSC 681	
Directed Studies/Rotations	NRSC 685	
Special Topics	NRSC 689	
Research Credits	NRSC 691	

Other approved electives available at this time:

MSCI 601 Principles of Medical Sciences * not yet crosslisted
NEXT 603 Advanced Neuropsychopharmacology
MSCI 610D Pathogenesis of Human Disease * not yet crosslisted
PSYC 689 Neurobiology of Learning and Memory
VIBS 617 Cell Signaling
BIOL 609 Tools in Molecular Biology

Special Topics courses (689's):

These courses would cover current topics of interest and may or may not become permanent courses. Typically, they would be 1-3 credit literature-based courses and would be announced at the beginning of each semester. If these courses are well subscribed for 3 consecutive academic years then they could be moved up to the major course category and given a NRSC course number.

Undergraduate background courses:

If a graduate student enters the program without the background needed for a graduate course in a particular area, the student's advisory committee may deem it necessary and appropriate for them to first take an undergraduate course. However, undergraduate (400-level) courses do not count towards the required 96/64 credit hours for completion of the degree.