GeorgiaInstitute **of Tech**nology®

Handbook for Neuroscience Majors

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Introduction

The mission for the BS Program in Neuroscience is to be at the forefront of education and research with a faculty that leads in defining the future of the field of neuroscience and producing high-quality graduates who are sought by leading graduate programs, industries, and other universities.

The BS Program of Neuroscience has approximately 300 undergraduate majors, making it the second largest program in the College of Sciences. The Neuroscience faculty members, however, work hard to treat every student as an individual. Faculty and students together constitute a mutually supportive intellectual community. The BS Program of Neuroscience is an interdisciplinary program which draws faculty from many School within the College of Sciences and from other Colleges within the Institute. The names, academic interests, and phone numbers of faculty members can be found at the Neuroscience at Georgia Tech website www.neuro.gatech.edu. All neuroscience majors are encouraged to know and to become known by their professors.

This handbook is intended for the use of undergraduate Neuroscience majors. Its purpose is to provide information supplementary to that contained in the 'General Catalog' (www.catalog.gatech.edu) and the 'Rules and Regulations' (catalog.gatech.edu/rules/) in the matters that pertain specifically to the BS Program in Neuroscience. The Program's website (neuroscience.gatech.edu) provides additional resources with information for registering for classes, advisor contact information, FAQs, and more. This handbook and the BS Program in Neuroscience are not intended to supersede the 'General Catalog' or the 'Rules and Regulations.' In the cases of any conflicts, these latter documents will prevail.

About the Department

Department Organization

1. **Director:** Dr. Tim Cope
   The Director of the BS Program in Neuroscience is responsible for the overall operation of the Program.
2. **Chair of Curriculum Committee:** Dr. Mary Holder
   The Chair of the Curriculum Committee works directly with the Program Director and the Academic Office to ensure coordination of the Undergraduate Program.
3. **Academic Office:**
   The main functions of the Academic Office are to organize academic activities in the program; act as a liaison to other schools and units on campus on matters relating to the undergraduate education, coordinate an active and responsive academic advising program; and provide advice and direction to students about academic programs and careers.
   a. **Academic Advisors:** Dr. Mary Holder (333 Clough Commons), Dr. Alonzo Whyte (331 Clough Commons)
   b. **Academic Program Coordinator:** Ms. Aisha Webb (Clough Commons)

Long-Term Departmental Goals

The long-terms goals of the BS Program in Neuroscience are:

- To prepare students to be at the forefront of neuroscience and related disciplines through instilling an ethic for life-long learning
- To provide a multi-disciplinary breadth of knowledge that fosters understanding, skill, and research applications within neuroscience and related fields
- To produce graduates who will obtain employment appropriate to their background, interest, and education and will advance in the field of neuroscience.

Learning Outcomes

1. Students will demonstrate knowledge of key terminology, concepts, and theories that inform the field of neuroscience.
2. Students will be able to analyze, interpret, and visualize neuroscientific concepts and data
3. Students will communicate neuroscientific knowledge with clarity and precision in both oral and written formats
4. Students will be able to apply knowledge of research methods and techniques to design and implement research-based experiments in neuroscience
5. Students will be able to evaluate neuroscientific evidence to become critical consumers of information and life-long learners.

Skills and Career Objectives

1. **Analytics**
   a. Statistical analysis from lab and statistics coursework
   b. Experimental design to enhance validity and increase reliability
   c. Data analysis and manipulation with computer coding and programming
2. **Technical Communications**

    a. Presenting scientific information to non-expert audiences (NEUR 3010) → can make a strong sales pitch or present ideas to a client

    b. Conducting literature reviews to organize and synthesize information (NEUR 3010, thesis writing, etc.)

    c. Writing about data and explaining rationale about results

3. **Business Mindset**

    a. Understanding network structures (BIOS 4400) → understanding how small changes influence a corporate structure

    b. Understanding human motivations and decision-making → help with marketing or human factors, for example

4. **Essential Skills**

    a. Project management experience through collaborative lab courses (NEUR 2001, NEUR 4001)

    b. Teamwork on various projects (NEUR 3010, NEUR 2001, etc.)

    c. Integrating materials to find core themes (NEUR 2001) → seeking patterns in complex information

5. **Technical/Wet Lab Skills**

    a. EEG (data analysis and design included)

    b. Electrophysiology

    c. Working with animals (invertebrates in NEUR 2001)

    d. MATLAB work (or other coding language)

BS Degree Requirements

A Bachelor of Science in Neuroscience requires a minimum of 122 credit hours. All courses must be taken for a letter grade, except for Free Electives, which can include pass/fail courses. All letter grades of D and higher are accepted in the Neuroscience degree.

Georgia Tech Core Curriculum

Georgia Tech's Core Curriculum represents the set of courses that all students are to take in order to gain a set of common competencies during their time as an undergraduate student. The Core Curriculum is split into 7 subsections: Wellness, Core A – Essential Skills, Core B – Institutional Options (CS Requirement), Core C – Humanities, Core D – Science, Math, & Technology, Core E – Social Sciences, and Core F – Courses Related to Major.

Wellness Core

All undergraduate students attending Georgia Tech must satisfactorily complete a wellness requirement by taking either APPH 1040 or APPH 1050. APPH 1040 is a lecture-based health and wellness course and does not include a physical activity component; APPH 1050 is a combined lecture and physical activity course. The type of physical activity focused on in each section of APPH 1050 varies.

Course Code	Course Name	Credits
APPH 1040	Scientific Foundations of Health	2
or APPH 1050	The Science of Physical Activity and Health	

Core A – Essential Skills

Core A totals 10 credits and covers general English and Integral Calculus requirements.

Course Code	Course Name	Credits
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
MATH 1552	Integral Calculus	4
or MATH 1555	Calculus for Life Sciences	

Core B – Institutional Options

Core B totals 3 credits and covers general Computer Science requirements.

Course Code	Course Name	Credits
CS 1301	Introduction to Computing	3
or CS 1315	Introduction to Media Computation	
or CS 1371	Computing for Engineers	

Core C – Humanities

Core C totals 6 credits and covers general Humanities requirements. Broadly, courses focused on foreign languages, foreign culture, philosophy, ethics, advanced literature/communication/media, fine art, and music are classified as Humanities. For a full list of approved Humanities courses, visit the appropriate page on the Georgia Tech course catalog.

Course Code	Course Name	Credits
Any HUM	Varies, see approved list above	6

Core D – Science, Math, & Technology

Core D totals 12 credits and covers general Physics and Math requirements.

Course Code	Course Name	Credits
PHYS 2211	Introductory Physics I	4
PHYS 2212	Introductory Physics II	4
MATH 1551 or MATH 1550	Differential Calculus Introduction to Differential Calculus	2
MATH 1553 or MATH 1554 or MATH 1564	Introduction to Linear Algebra Linear Algebra Linear Algebra with Abstract Vector Spaces	2

Core E – Social Sciences

Core E totals 12 credits and covers general state US History/Government and Social Science requirements. Broadly, courses focused on history, economics, international policy, global affairs, psychology, urban development, and sociology are classified as Social Sciences. For a full list of approved Social Sciences courses, visit the appropriate page on the Georgia Tech course catalog.

Course Code	Course Name	Credits
HIST 2111 or HIST 2112 or INTA 1200 or POL 1101 or PUBP 3000	The United States to 1877 The United States since 1877 American Government in Comparative Perspective Government of the United States American Constitutional Issues	3
PSYC 1101	General Psychology	3
Any SS	Varies, see approved list above	6

Core F – Courses Related to Major

Core F totals 18 credits and covers general Chemistry and Biology requirements that are of great importance to the Neuroscience major. NEUR 2001, the first core Neuroscience course, is also listed under Core F.

Course Code	Course Name	Credits
CHEM 1310 or CHEM 1211	General Chemistry Chemical Principles I	4
CHEM 1315 or CHEM 1212	Survey of Organic Chemistry Chemical Principles II	3
BIOS 1107	Biological Principles	4
CHEM 3511	Survey of Biochemistry	3
NEUR 2001	Principles in Neuroscience	4

Note that CHEM 2311 is an approved substitution for CHEM 1315 to fulfil Area F only for students who complete a full year of organic chemistry (i.e., both CHEM 2311 and CHEM 2312 or CHEM 2313 must be completed). Also note that CHEM 4511 is an approved substitution for CHEM 3511 to fulfil Area F only for students who complete a full year of biochemistry (i.e., both CHEM 4511 and CHEM 4512 must be completed.

Neuroscience Core Courses

There are five core Neuroscience courses that, together, constitute 16 credits. 4 credits come from NEUR 2001—Principles of Neuroscience—and are applied to Core Area F (see above). Accordingly, 12 unique credits are contributed to the major by this section.

Course Code	Course Name	Credits
NEUR 2001	Principles of Neuroscience (credits applied to Area F) *co-requisite courses: PSYC 1101 & BIOS 1107*	4
NEUR 3001	Cell and Molecular Neuroscience *pre-requisite course: NEUR 2001*	3
NEUR 3003	Neuroscience of Behavior *pre-requisite courses: PSYC 1101 & NEUR 2001*	3
NEUR 3010	Methods in Neuroscience *pre-requisite courses: NEUR 3001 & PHYS 2212 & CS 1301/1315/1371*	3
BIOS 4400	Functional Neuroanatomy *pre-requisite courses: none*	3

Below is a flowchart diagramming the five core Neuroscience courses and their respective pre/co-requisite courses. While NEUR 4001 (Neuroscience Research Project) is discussed in detail below and is categorized under Neuroscience Depth Electives, it is listed in the flowchart for planning purposes, as it is the last Neuroscience course that is taken and requires every other core Neuroscience course to be completed prior to its start.

In the flowchart below, dashed lines represent co-requisite courses, solid lines represent pre-requisite courses, and blue courses represent core Neuroscience courses.
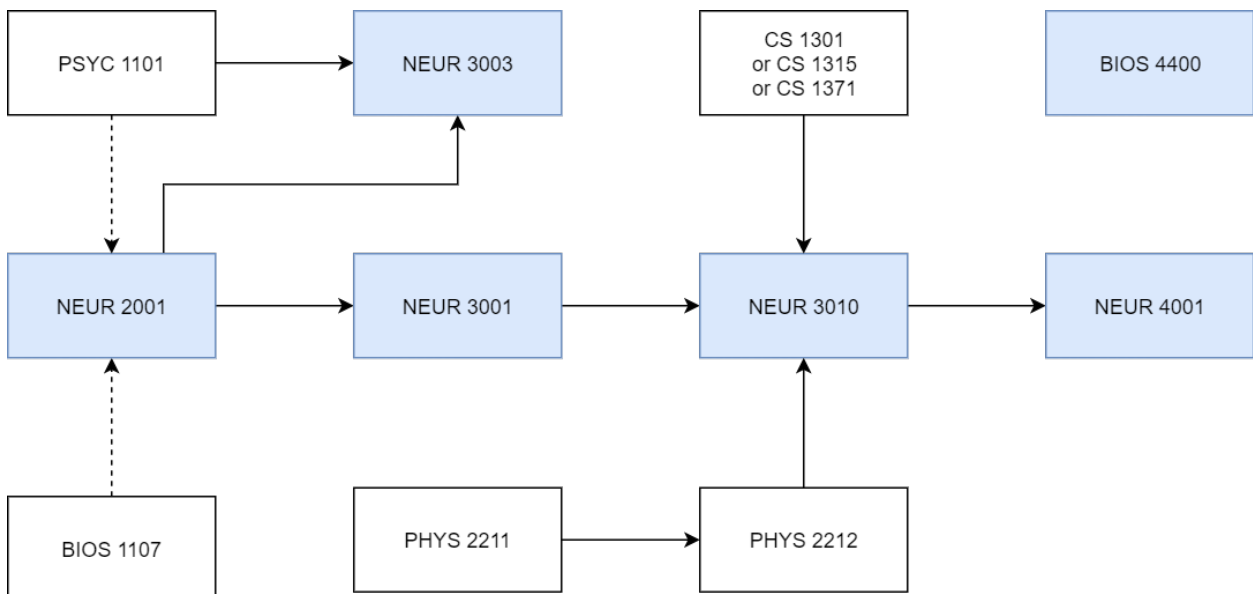
Neuroscience Depth Electives

As a unit, the Neuroscience Depth Electives constitute 18 credits of the major and are subdivided into four principal sections: research-based electives, interest-based electives, quantitative statistics electives, and additional Neuroscience electives.

Research-Based Elective

Every Neuroscience student will perform research before they graduate. There are two different research opportunities that students can partake in: a one-course, four-credit-hour research capstone project or a three-course, eleven-credit-hour research thesis option (Georgia Tech's "Research Option," as run through the UROP, the Undergraduate Research Opportunities Program). A quick comparison of the two options is provided below:

NEUR 4001: Research Project Lab	NEUR 4699: Research Thesis Option
- Structured more like a regular "lab" course in which you will ultimately produce a paper on your findings and present your findings - Class of 10-16 students - Taught by a NEUR faculty member - Pre-req: NEUR 3010, statistics elective - Graded by course instructor - Shorter, less of a commitment - No designator on diploma	- Independently organized, structured as a true undergraduate research opportunity in which you will ultimately produce a published thesis statement - With approval of a faculty mentor - Taught by a NEUR faculty member - Pre-req: 3 hours prior research experience, permit only, must complete the Research Option, must write proposal during LMC 4701 and thesis during LMC 4702 during concurrent semester - Graded by faculty mentor and second reviewer - Longer, greater commitment - Receive a Research Option designator on diploma

More information about the Research Option can be found later in this document under the heading "Research Option – Thesis Process."

Quantitative Statistics Elective

One of the following courses must be taken to satisfy the Quantitative Statistics elective. Other advanced quantitative courses may be appropriate depending on your interests and strengths. If you wish to enroll in a course other than those listed below to fulfill your quantitative requirements, you must discuss with your advisor to petition for approval from the Neuroscience Undergraduate Curriculum Committee.

Course Code	Course Name	Credits
BIOS 4401	Experimental Design & Statistical Methods	3
BME 2400	Statistical Methods in Biomedical Engineering	3
PSYC 2020	Psychology Statistics	4
MATH 3125	Introduction to Probability and Statistics	3
MATH 3225	Honors Probability and Statistics	3
MATH 3670	Probability and Statistics with Applications	3
ISYE/ECE 3770	Statistics and Applications	3

Interest Elective

Students are required to complete 3 – 4 credits of an interest elective focused on cell/molecular neuroscience, systems neuroscience, or cognitive neuroscience:

Course Code	Course Name	Credits
BIOS 3450/1	Cell & Molecular Biology, with Lab	4
BIOS 3755/6	Human Physiology, with Lab	4
PSYC 4090	Cognitive Neuroscience	3

Note that the Systems Neuroscience depth elective (BIOS 3755/6, Human Physiology, with Lab) requires BIOS 3753 (Human Anatomy) as a pre-requisite. Similarly, the Cognitive Neuroscience depth elective (PSYC 4090) requires PSYC 3012 or PSYC 4011 as a pre-requisite. These additional pre-requisite courses may be applied to your Neuroscience Breadth Electives, Additional Neuroscience Electives, or Free Electives, depending on the structure of your customized major.

Additional Neuroscience Electives

Students are required to complete 6 – 8 credits of additional Neuroscience electives from those listed below. The number of Neuroscience Elective courses required will vary depending on the Quantitative Statistics and Interest Elective courses chosen. Combined, the three sections (Quantitative Statistics, Interest, and Additional Neuroscience electives) must total a minimum of 18 credits. If students are interested in taking a course not listed, they should talk to their academic advisor.

Course Code	Course Name	Credits
BIOS 4697	Neuroscience Undergraduate Teaching Assistant	3
NEUR 2/4699	Neuroscience Research	1+
NEUR 4803	Special Topics	3
BIOS 2600	Genetics	3
BIOS 3753	Human Anatomy	3
BIOS 3754	Anatomy Lab	1
BIIOS 3755	Human Physiology	3
BIOS 3756	Physiology Lab	1
BIOS 4238	Ion Channels	3
BIOS 4446	Animal Physiology	3
BIOS 4464	Developmental Biology	3
BIOS 4200	Kinesiology	3
BIOS 4471	Behavior Biology	3
BIOS 4480	Evolutionary Developmental Biology	3
BIOS 4746	Signaling Molecules	3
CHEM 4511	Biochemistry I	3
CHEM 4512	Biochemistry II	3
PHYS 4803	Physical Principles of Living Systems	3
PYSC 2015	Research Methods	3
PSYC 2103	Human Development	3
PSYC 2230	Abnormal Psychology	3
PSYC 3012	Cognitive Psychology	3
PSYC 3040	Sensation & Perception	3
PSYC 4011	Cognitive Psychology & Lab	4
PSYC 4041	Human Sensation & Perception	3
PSYC 4100	Behavioral Pharmacology	3
PSYC 4090	Cognitive Neuroscience	3

PSYC 4803	Bioethics	3

Historically, Special Topics courses have covered material on neuroendocrinology, ion channels, neurodevelopment, advanced neuroscience methods, neural systems, and more. The specific Special Topics courses offered each semester vary, along with the faculty teaching them.

Neuroscience Breadth Electives

Students are required to complete 15 credits of Breadth electives by specializing in one of the following areas: Biology; Chemistry/Biochemistry; Computer Science; Health and Medical Sciences (HMED); Health, Medicine, and Society (HMS); Law, Science, and Technology (LST); Mathematics; Physics; Physiology; Psychology; Biomedical Engineering; or Electrical Engineering. Except for the engineering specializations, the requirements listed under all other breadth specializations will qualify for a minor in the relevant specialization area. Some specializations may require additional hours, past the required 15, to complete; these additional hours may be applied to free electives. Students interested in pursuing a breadth specialization not listed should contact their Neuroscience advisor.

Biology Breadth Specialization

Students must complete the current biology minor requirements, which are listed here.

Course Code	Course Name	Credits
Any BIOS	Any BIOS listed above; 9 credits must be 3000 or 4000 level courses	15

Chemistry & Biochemistry Breadth Specialization

Students must complete the current chemistry and biochemistry minor requirements, which are listed here.

Course Code	Course Name	Credits
CHEM 2312 or CHEM 2313	Organic Chemistry II Bio-organic Chemistry	3
CHEM 4512	Biochemistry II	3
In addition to the above required courses, NEUR majors typically take 9 credits from the following list of courses:		
CHEM 4311	Advanced Organic Chemistry	3
CHEM 4765	Drug Design, Development, and Delivery	3
CHEM 4341	Applied Spectroscopy	3
CHEM 4760	Biocatalysis and Metabolic Engineering	3
CHEM 4803	Special Topics	3

Both CHEM 2312/13 and CHEM 4512 are approved substitutions for courses in Core F. As stated above, "CHEM 2311 is an approved substitution for CHEM 1315 to fulfil Area F only for students who complete a full year of organic chemistry (i.e., both CHEM 2311 and CHEM 2312 or CHEM 2313 must be completed). Also note that CHEM 4511 is an approved substitution for CHEM 3511 to fulfil Area F only for students who complete a full year of biochemistry (i.e., both CHEM 4511 and CHEM 4512 must be completed)."

Computer Science Breadth Specialization

Students must complete the current computer science minor requirements, which are listed here.

Course Code	Course Name	Credits
CS 1331	Introduction to Object-Oriented Programming	3
Any CS	Any CS course listed above; 9 credits must be 3000 or 4000 level courses	15

Note that, to be accepted into this minor programs, students must complete CS 1331 with an A or B and have a minimum of 48 credit hours remaining in their Neuroscience degree program.

Health and Medical Sciences (HMED) Breadth Specialization

Students must complete the current health and medical sciences (HMED) minor requirements, which are listed here.

Course Code	Course Name	Credits
Any HMED	Any course listed above; 9 credits must be 3000 or 4000 level courses	15
Of those courses listed as options for the HMED minor, NEUR majors typically take the following courses:		
CHEM 1212K	Chemical Principles II	4
CHEM 2380	Synthesis Lab	2
BIOS 3753	Human Anatomy	3
BIOS 3000	Survey of Medicine	3
BIOS 4500	Drug Discovery	3

Health, Medicine, and Society (HMS) Breadth Specialization

Students must complete the current health, medicine, and society (HMS) minor requirements, which are listed here.

Course Code	Course Name	Credits
Any HMS	Any course listed above; 9 credits must be 3000 or 4000 level courses	15
Of those courses listed as options for the HMS minor, NEUR majors typically take the following courses:		
ECON 4510	Health Economics	3
HTS 2080	Intro History of Disease & Medicine	3
HTS 3087	History of Medicine	3
HTS 3088	Race, Medicine, and Science	3
PUBP 3244	Stem Cell Science, Ethics, and Policy	3

Law, Science, & Technology (LST) Breadth Specialization

Students must complete the current law, science, & technology (LST) minor requirements, which are listed here.

Course Code	Course Name	Credits
Any LTS	Any course listed above; 9 credits must be 3000 or 4000 level courses	15
Of those courses listed as options for the LTS minor, NEUR majors typically pick from the following courses:		
PUBP 3016	Judicial Process	3
HTS 3085	Law, Technology, & Politics	3
PHIL 3113	Logic & Critical Thinking	3
PUBP 3610	Pre-Law Seminar	3
PUBP 4440	Science, Technology, & Regulatory Policy	3
PUBP 4725	Information Security Policy, Technology, Law	3

Mathematics Breadth Specialization

Students must complete the current mathematics minor requirements, which are listed here.

Course Code	Course Name	Credits
Any MATH	MATH 2106, or any MATH course at the 3000 level or higher	15

Physics Breadth Specialization

Students must complete the current physics minor requirements, which are listed here.

Course Code	Course Name	Credits
PHYS 2213	Introduction to Modern Physics	3
PHYS 3143	Quantum Mechanics I	3
PHYS 3201 or PHYS 3122 or PHYS 3151	Classical Mechanics I Electrostatics and Magnetostatics Thermodynamics	3
Any PHYS	Select two more elective PHYS courses at the 3000 or 4000 level	6

Physiology Breadth Specialization

Students must complete the current physiology minor requirements, which are listed here.

Course Code	Course Name	Credits
BIOS 3753	Human Anatomy	3
BIOS 3755	Human Physiology	3
Any BIOS	Select another 9 credits from the approved list above	9

Note that a few non-BIOS electives may be used to satisfy the last 9 credits of the Physiology minor. A complete list of approved courses is listed in the link above; only a maximum of 3 credits may be taken from non-BIOS electives.

Psychology Breadth Specialization

Students must complete the current psychology minor requirements, which are listed here.

Course Code	Course Name	Credits
Any PSYC	Any PSYC course, 9 credits of which must be from 3000 or 4000 courses	15

Biomedical Engineering Breadth Specialization

As stated above, completion of the following specialization does not qualify for a minor in Biomedical Engineering.

Course Code	Course Name	Credits
MATH 2552	Differential Equations	3
COE 2001	Statics	3
COE 3001	Solid Mechanics	3
In addition to the courses listed above, select a minimum of 7 additional credits from the below courses:		
BMED 2210	Conservation Principles in BME	4
BMED 3400	Biomechanics	4
BMED 4751	Intro to Biomaterials	3
BMED 4758	Biosolid Mechanics	3

| MSE 2001 | Principles & Application of Engineering Materials | 3 |

Electrical Engineering Breadth Specialization

As stated above, completion of the following specialization does not qualify for a minor in Electrical Engineering.

Course Code	Course Name	Credits
MATH 2552	Differential Equations	3
In addition to the course listed above, select a minimum of 12 additional credits from the below courses:		
ECE 2020	Fundamentals of Digital Design	3
ECE 2026	Introduction to Signal Processing	3
ECE 2036	Engineering Software Design	3
ECE 3710	Circuits & Electronics	4
ECE 3741	Instrumentation & Electronics Lab	1
ECE 3084	Signals & Systems	3
BMED 4783	Intro-Medical Imaging Processing	3
ECE 4270	Fundamentals of Digital and Signal Processing	3
ECE 2040	Circuit Analysis	3

Free Electives

The remaining credits beyond those listed above will be counted as free electives, which may be taken for letter grade or pass/fail. Enough Free Electives courses must be taken to ensure a total of 122 credit hours by graduation.

Timing of Certain Courses

Students must complete a MATH course and ENGL 1101 and 1102 courses within their first 30 credit hours as part of the state's required Communication and Quantitative Outcomes. After reaching 30 credit hours, a student must enroll in the next course necessary to make progress toward completing this requirement in every semester in which they take courses. In addition, the First Year Chemistry programs are limited to First and Second years.

Additional Opportunities

Undergraduate Teaching in Neuroscience

The BS Program in Neuroscience offers positions for part-time work as laboratory or lecture teaching assistants in the fall and spring semesters. These positions have several requirements and are competitive. Applicants should have already taken at Georgia Tech the course they will teach and received an A or B, they must be at ease in front of a class, and they must submit an application for the position. A student will enroll in two teaching preparatory courses, BIOL 4697 and CETL 2000 BIO, in their first semester as a teaching assistant. BIOL 4697 counts as a neuroscience elective. An experienced undergraduate TA can apply for paid teaching assistant positions (BIOL 4696) when they are available. Students may use a maximum of 3 credits of BIOL 4697 towards their neuroscience electives. Applications are solicited during Phase I registration for the subsequent semester assignment. To apply, contact Dr. Mary Holder (mary.holder@psych.gatech.edu).

Undergraduate Research in Neuroscience

Research opportunities available to undergraduate neuroscience majors are provided by a wide variety of laboratories working in one or more of three general areas of neuroscience: cell and molecular; systems; behavioral and cognitive. Go to the Neuroscience Faculty webpage (https://cos.gatech.edu/neuroscience/people) to learn more about the topics being researched and the experimental methodologies used for a specific professor.

Research is the most fulfilling scientific experience for many undergraduates and will increase career options after graduation. Working independently on your own research project teaches you the true nature of scientific investigation. You will learn scientific approaches, fundamental techniques, and how to work effectively in a research environment. Undergraduate research also provides you with experiences that make your résumé stand out. See https://cos.gatech.edu/neuroscience/research and the information below for details.

Research for Credit

Research for credit: To receive course credit for conducting research, you must be involved in a neuroscience-related, research project and not simply providing services that are only distantly related to research goals (e.g., washing glassware or preparing media). Freshmen and sophomores register for NEUR 2699, which can count as free elective hours.

Juniors and seniors pursuing the Neuro Research Option with thesis (https://cos.gatech.edu/neuroscience/research) register for NEUR 4699. Up to four (4) credit hours of NEUR 2699/4699 research credit can count toward the research course requirement and a maximum of three (3) credit hours can be applied as NEUR elective credits. The remaining three (3) of the nine (9) credit hours required for a thesis designation will be applied as free electives. Your faculty mentor must provide permission for you to register for any of the research classes by emailing Aisha Webb include student name and GT ID#). Each credit hour registered represents approximately 3 hours per week of research effort for a semester.

It is recommended that each student meet with the PI of the lab and the daily mentor (if different from the PI) to fill out an undergraduate research contract to outline the interests, projects, and goals for the

research experience. This contract can be found on the BS Program in Neuroscience website: https://cos.gatech.edu/neuroscience/research

Research for Pay

Research for pay: In some cases, you can be paid to conduct research-related activities. As with research for credit, you must be involved in a neuroscience-related research project, and not simply providing services that are only distantly related to research goals.

Current pay rates are ~$10-12/hr depending on experience. After you and your faculty member agree to the terms, you must visit the finance office for the home school of your professor to complete appropriate paperwork to get paid. You will then be responsible for completing bi-weekly timesheets that your faculty mentor signs. You should register for NEUR 2698 if a freshman or sophomore, or 4698 if a junior or senior. Although these are audit-only, no-credit courses that do not count towards your program of study, they allow you to document your paid research experience on your transcript. Your faculty mentor must provide permission for you to register by emailing Aisha Webb (include student name and GT ID#)

Research Outside of Georgia Tech

Research for credit or pay outside of Georgia Tech: You can conduct research in institutions outside of Georgia Tech, and obtain credit for NEUR 2698, NEUR 2699, NEUR 4690, NEUR 4698, or NEUR 4699. In this case, you have to have an official co-supervisor within Neuroscience at Georgia Tech who will serve as the instructor of record (and second reader for the thesis). Note that a co-supervisor is not needed if your faculty mentor has a minor or courtesy appointment at the outside institute.

To obtain approval for conducting research outside Georgia Tech, you will need to complete three steps:

1. Identify and get approval from the primary research faculty mentor at the outside institute (e.g. Emory University). Your research mentor needs to be a PhD or MD level scientist, preferably in a group leader-like role (not a postdoc, etc).
2. Identify a Georgia Tech Neuroscience faculty member willing to serve as co-supervisor of your research project and provide the co-supervisor with a description of the research you will be doing, the name of the primary research mentor, and the department or institution of the research mentor.
3. Obtain approval from the Undergraduate Neuroscience Curriculum Committee.

Research Option – Thesis Process

The Research Option Thesis Process: With faculty guidance, you write a brief proposal, perform independent and original research, and write a senior thesis about your work. This plan requires that you conduct 9 credit hours of supervised research over multiple semesters. The first 6 credit hours are taken by any combination of NEUR 2698, NEUR 2699, NEUR 4698, or NEUR 4699.

In addition, you must take two one credit- hour writing courses, LMC 4701 and LMC 4702. These writing courses can be counted as free electives. You should take LMC 4701 and LMC 4702 in the semester prior to and during the semester you are enrolled in NEUR 4699, respectively. For example, you might take 3 credits of NEUR 4699 in the spring, 3 credits of NEUR 4698 and LMC 4701 in the fall, and then NEUR 4699 and LMC 4702 in the next spring.

Completing the Research Option gives you a "Research Option" designation on your transcripts. You must fill out the Research Intent Form with the UROP office to pursue the Research Option. See the Undergraduate Neuroscience webpage (https://cos.gatech.edu/neuroscience/research) and the UROP Research Option website for more information (http://undergradresearch.gatech.edu/research- option)

Summary of Neuroscience Research Courses

- **NEUR 2698** – Research Assistantship: Independent research conducted under the guidance of a faculty member. 1-12 credit hours. Audit-only class, does not incur tuition charges.
- **NEUR 2699** – Undergraduate Research: Independent research conducted under the guidance of a faculty member. 1-12 credit hours. Grade given directly by faculty mentor.
- **NEUR 4001** – Neuroscience Research Project Laboratory: Experience in designing, implementing, and communicating a biology research project, and practical training in modern approaches for biological research. 3 credit hours. Prerequisites: NEUR 3010. Grade given directly by faculty teaching the class.
- **NEUR 4698** – Research Assistantship: Independent research conducted under the guidance of a faculty member. 1-12 credit hours. Audit-only course, does not incur tuition charges.
- **NEUR 4699**– Undergraduate Research: Independent research conducted under the guidance of a faculty member. 1-12 credit hours. Grade given directly by research advisor.

President's Undergraduate Research Awards (PURA)

President's Undergraduate Research Awards (PURA): The Undergraduate Research Opportunities Program funds undergraduate research. The awards can be made for student salaries ($1500 max), travel expenses ($1000 max), or supplies. You must also be registered for NEUR 2698, NEUR 2699, NEUR 4698, NEUR 4699, or NEUR 4690 when you have a PURA. More details about applying for a PURA award can be found here: http://urop.gatech.edu/content/presidents-undergraduate-research-awards

General Research Suggestions

Earn good grades and make yourself known to your professors. Undergraduate research is competitive, and you are more likely to be accepted with the faculty member of your choice if you have a strong record of academic excellence.

Choose an area of neuroscience that you find interesting and corresponds to one of the areas of faculty expertise here at Georgia Tech. One of the best ways to determine the areas of neuroscience in which you are most interested is to reflect upon the courses you have taken, identifying those that you most enjoyed. Then think about how these courses fit in with your career goals - for example, are you seeking a career in medicine, the pharmaceutical industry or in computational neuroscience? Within these or other areas, it is best to identify the faculty member whose research program most closely fits your interests. You can find out more about faculty research interests and ongoing projects at http://www.neuro.gatech.edu/people/faculty.

Recent publications of most neuroscience faculty are listed on faculty members' web pages.

After identifying faculty members, tell them about your interest in research and ask to meet with them to discuss their current research projects and your potential participation beginning in a specific semester. At this point it is important to emphasize why you think that an undergraduate research project would be a valuable experience for you and why you would be a good choice for the faculty member. Undergraduate research is a learning opportunity for students AND enables student to make

unique contributions to science. So don't forget that you need to think about how your work will benefit other scientists and our understanding of neuroscience in general, not just how you will benefit.

Do not be discouraged if the first professor tells you no. There are many reasons why faculty may not want to take on more undergraduate researchers. The most common is that their lab is full and space and equipment are limited, or they may be over-committed with committee assignments or teaching duties. Your chances of being invited to join a research group are better if you get to know a professor. Take their classes and show an interest in their work. If you are courteously persistent and demonstrate success in your coursework, an opportunity is likely to come your way.

Students who have conducted research in faculty labs feel that it has enhanced their degree and often redirected their career plans. In their own words:

Student Clubs and Organizations
Neuroscience undergraduates typically engage in several common extracurricular clubs and activities.

Neuro-Specific Organizations

Neuroscience Club	
Description	
Additional Info	
Website	
Contact Info	

Neuroscience Student Advisory Committee	
Description	
Additional Info	
Website	
Contact Info	

Nu Rho Psi	
Description	
Additional Info	
Website	
Contact Info	

Other Organizations

American Medical Student Association (AMSA)	
Description	AMSA is a student-governed organization committed to the concerns of students who hope to become physicians. AMSA has a national membership of about 28,000, composed of premedical and medical students, interns and medical residents. The Georgia Tech chapter of AMSA every two to three weeks throughout the school year. Guest speakers include campus premedical advisors, regional medical school admissions officers, and representatives of MCAT preparation firms. Students from the GT AMSA chapter attend regional and national AMSA meetings.
Additional Info	Dues are $20 annually
Website	gtamsa.org
Contact Info	Dr. Mirjana Brockett (mirjana.brockett@biology.gatech.edu)

American Red Cross Club (AARC)

Description	AARC helps students gain leadership experience through service to the university community and the community-at-large. The GT AARC chapter plans all the blood drives on campus, organizes a GT-led national blood drive project on 9/11 of each year, hosts monthly CPR/First Aid classes for GT students, and plans numerous service events on and off campus.
Additional Info	
Website	http://www.redcross.gtorg.gatech.edu/)
Contact Info	Dr. Shana Kerr (shana.kerr@biology.gatech.edu)

American Society for Microbiology (ASM) – Georgia Tech Chapter

Description	The GA Tech ASM chapter is a student group promoting the field of microbiology as both a study and a career. The group fosters interaction between students and faculty interested in microbiology, awareness of career opportunities in microbiology, and intellectual curiosity related to the field. Sponsored Meetings and events occur monthly. Past events include visits by guest microbiologists from Georgia Tech, the CDC, and Emory; screening of movie related to microbiology; "Microbiology Jeopardy" night; and outreach opportunities at local K-12 institutions. Students also have opportunities to attend regional and national ASM meetings.
Additional Info	
Website	http://www.asm.gtorg.gatech.edu/
Contact Info	Dr. Brian Hammer (brian.hammer@biology.gatech.edu)

GT Junior Stem

Description	Junior STEM is an organization that aims to encourage and facilitate student involvement in Science, Technology, Engineering, and Math (STEM) initiatives to promote and increase the retention of underrepresented and underserved minorities in STEM careers. Through local outreach to K-12 students, Junior STEM seeks to garner greater interest in the STEM field through promotion and establishment of Science Olympiad teams (and other STEM-focused organizations) as well as hosting presentations and demonstrations to enhance scientific learning among students where the general interest in science has fallen significantly.
Additional Info	
Website	http://jacketpages.gatech.edu/organizations/view/44746
Contact Info	sbd.gatech@gmail.com, Dr. Keith Oden (keith.oden@cos.gatech.edu)

Relay for Life

Description	The American Cancer Society Relay for Life movement is the world's largest fundraising event aimed at ending cancer. Georgia Tech Relay for Life is part of this global movement, serving as a year-long fundraising event that benefits individuals that have cancer and their caretakers. All proceeds directly benefit the American Cancer Society (ACS) and individuals in our community, allowing us to continue doing research to find a cure and enabling us to fund programs such as Hope Lodge, Road to Recovery, and the ACS Hotline.
Additional Info	
Website	
Contact Info	Dr. Teresa Snow (teresa.snow@biosci.gatech.edu)

Student Hospital Connections

Description	Student Hospital Connections is a student-run organization at Georgia Tech, streamlines volunteer opportunities at local hospitals. SHC accepts new members who are interested in volunteering at Grady Memorial Hospital and Atlanta Medical Center (AMC) at the start of each semester and provides weekly volunteer shuttles to Grady and AMC and carpooling.

	SHC also hosts social events that not only allow students to meet medical professionals, but also provide the opportunity to become acquainted with other students in the pre-health community at Georgia Tech.
Additional Info	
Website	
Contact Info	Dr. Shana Kerr (shana.kerr@biology.gatech.edu)

Internships

The Center for Career Discovery and Development coordinates Georgia Tech's Internship Program (career.gatech.edu/internships). The program provides practical work experience in a professional setting, on-campus or off-campus, related to the student's field of study. Internships are a partnership among students, employers, and the Georgia Institute of Technology. Internships are single-semester, paid, major-related work experiences designed to help students understand the "real world" applications of their academic studies. Opportunities are available during summer, fall, and spring semesters and require a commitment of full-time employment for a minimum of 18 weeks during the spring and fall semesters or 12 weeks during the summer semester.

Co-Ops (Cooperative Education)

Cooperative Education, or "Co-op," is a unique partnership among employers, students and the university whereby students work in paid, planned and supervised work experiences in business, industry, education, and government while earning academic credit. Georgia Tech's Cooperative Education Program (coop.gatech.edu/) is a five-year academic program in which students alternate semesters as a full-time student with semesters of full-time work. In addition to providing experiences outside of academia, the Co-op program can provide the student with full-time research work within a Georgia Tech faculty member's lab if the faculty member is agreeable. Neuroscience majors participating in the Co-op program must plan course schedules very carefully, since courses required for a degree in Neuroscience may not always be offered during the at-school semester. This will be more of a problem when the at-school semester occurs during the summer semester.

Academic Advising

Advisors

Upon your arrival at Georgia Tech or when you declare Neuroscience as your major, you will be assigned an academic advisor. Advisor assignment are by last name as follows:

- Last Names A – L: Dr. Alonzo Whyte
- Last Names M – Z: Dr. Mary Holder

Your advisor is here to help you whenever you seek advice and to provide guidance about Georgia Tech regulations, undergraduate programs, and career opportunities. You are strongly urged to consult your advisor to plan and execute your program of study, to discuss career options, and to design an optimal map for achieving your goals. We recommend you schedule a meeting with your advisors using the web-based appointment scheduling system at gatech.gradesfirst.com but may directly email your regular advisor if no appointments are available with the scheduling system.

Annual Advising Meeting

The BS Program in Neuroscience recognizes that providing advising support for our undergraduates helps students succeed in effective course selection and career planning, which includes finding on-campus and off-campus research/internship opportunities, establishing a timeline for career planning, and exploring the range of options you have with a B.S. in Neuroscience. Therefore, Neuroscience majors are required to attend an annual 20 minute advising meeting. The Annual Advising appointment is an opportunity to work one-on-one with your advisor to create a strong plan to achieve your academic and career goals. Neuroscience majors will receive an email invitation according to academic class standing: first/second-year students in the Spring and third-year and higher students in the Fall. The email will give the scheduling deadline and detail what you need to bring to your advising appointment. Seniors will review their graduation status and discuss the Online Application for Graduation at this advising session. The online application for graduation deadline occurs at the end of the drop/add period in the student's final semester. Failure to schedule and attend your annual advising meeting may result in a registration hold being placed on your account.

Midterm Progress Reports

At midterm, you may also be contacted by your advisor to check in regarding your academic progress. Depending upon your Midterm Progress Report grades (provided for all 1000-2000 level courses), you may be invited to communicate by email or in person with your advisor to make an academic plan for the remainder of the semester. These meetings are to be taken seriously, and failure to respond may result in a registration hold being placed on your account.

DegreeWorks

Students are able to and expected to monitor progress towards their degree requirements using DegreeWorks (degreeworks.gatech.edu). Please take responsibility to monitor your progress and bring any discrepancies to the attention of your Academic Advisor. Discrepancies include missing transfer credits, courses listed in the incorrect category, or courses double-counted toward your degree. Advisors can work with Degree Certification to ensure that your courses are correctly attributed toward your degree. Should you wish to consider an alternative to a Neuroscience major or a second major, the

"What If" tool can be used to explore how progress towards degree completion is affected should you change or add majors.

Petitioning

Students are permitted to work with their advisor to submit a petition to the BS Program in Neuroscience Undergraduate Curriculum Committee regarding internal curricular matters such as a substitution of a course toward the major, inclusion of a new course or special topic on a certificate list, and about additional breadth elective specializations.

Readmission

A student who has been academically dismissed once for unsatisfactory grades must remain out of school for at least two terms before readmission into the BS Program in Neuroscience. Please note that students who are academically dismissed twice from Georgia Tech will not be readmitted. Data from CoB and CoE indicate a significantly higher graduation rate for students who have waited at least two terms before readmission into Georgia Tech. This means that if a student is dismissed at the end of the fall semester, the student is not eligible for readmission until the following fall term, after sitting out of Georgia Tech for spring and summer.

Students should use their time constructively during this wait period. It is highly recommended that students take relevant courses at another accredited institution as this is a good indication of the student's commitment to return and earn a degree.

Before being readmitted into Georgia Tech, you must receive the approval of the School or Program that houses the major. That means in order to be readmitted as a Neuroscience student, you must get the approval of one of the Academic Advisors or the Director of the Program.

Problems with a Professor

There may come a time when you get upset with a professor. When this happens, you should understand two things: 1) conflicts may occur when people work closely together, and 2) there is usually a satisfactory way to resolve the conflict.

As a student you will develop a working relationship with the faculty of Georgia Tech. This relationship is not symmetrical, because faculty members evaluate your performance and decide about your grades. That system is not likely to change, probably for very good reasons. After all, professors have already demonstrated their advanced academic qualifications, and you came to Tech to learn some of the things that they know.

Any relationship that is emotionally and intellectually close, especially an asymmetrical one, may generate stresses. Therefore, we need to anticipate those stresses and find a way to deal with them. The solution you find will almost certainly be imperfect, but there is no reason that it need be unsatisfactory. The more unrealistic your initial expectations are, the more imperfect the solution will be to you. So, start out with this dose of reality; most problems can be solved, but you may have to compromise. Talk to your professor about the problem. If you are not satisfied with the result, talk to your advisor and if you still need help, consult the Director of the BS Program in Neuroscience.

If you wish to pursue a formal grievance procedure, you should consult the Georgia Tech Registrar's website at http://www.catalog.gatech.edu/rules/20/

Letters of Recommendation

To apply for graduate school, professional school, and jobs in your chosen field you will need letters of recommendation from the faculty. A letter of recommendation can point out features of your record, habits, or personality that are important in hiring and admission decisions. Letters can help you get a job or admission to graduate or professional program when your grades are not as high as those of other candidates.

Faculty members are more willing to write recommendation letters and can write stronger letters if they know you well. The most common way to get to know faculty is to do research in their lab or to take an interactive, small course with them. You will likely need at least three letters of reference, so start developing relationships with faculty as soon as possible.

Content of Strong Letters

To be valuable, the letter must contain information that is not available elsewhere in your written record. The writer should be able to comment on your work ethic, ability to solve problems, creativity, reliability, accuracy, receptiveness to coaching, ability to work independently, and ability to work cooperatively with colleagues.

Medical School Letter of Evaluation (LOE) guidelines request the writer to explain the unique contributions of the student as well as provide an assessment and evidence of the following competencies:

1. Thinking & Reasoning, including Critical Thinking, Quantitative Reasoning, Scientific Inquiry, and Written Communication
2. Science, including Living Systems and Human Behavior
3. Interpersonal, including Service Orientation, Social Skills, Cultural Competence, Teamwork, and Oral Communication
4. Intrapersonal, including Ethical Responsibility to Self and Others, Reliability and Dependability, Resilience and Adaptability, Capacity for Improvement

The letter also should contain details to justify the recommendation. A simple statement that you are a good or smart person is almost meaningless unless it is accompanied by factual information to back up that claim. A lack of details suggests that the writer does not have such evidence and/or does not know much about you.

The reference letter should not be a mere recitation of your good points. No one is perfect, and any attempt to paint you that way will trigger justified doubts in the mind of the reader. It is reasonable for the letter to point out that your record has some weakness, and then to point out how you have addressed or overcome the weakness. This converts a potential negative point into a positive.

Requesting a Letter

First, you should start preparing now for the day when you will need the letter. Get to know at least three professors and encourage them to get to know you. You can do this several ways: Visit with them for at least 30 minutes each semester in office hours or through an event such as Take-a-Prof to lunch, participate at a high level in their courses (especially those with small class sizes and lots of discussion), or do research in their lab. Whatever approach you take, invest the time that is necessary. Only after the professor really gets to know you will he or she be able to write a persuasive letter for you.

Second, you should ask the letter writer if he or she is able to write a good letter. If they hedge in any way, thank them and go elsewhere.

Third, if they feel that they can write a good letter, ask them if they can meet whatever deadline you have. Preferably, you have asked at least three weeks in advance of the deadline. Again, if they hedge, go elsewhere. A good letter that remains unwritten or unsent is no letter at all.

Always check back with the letter writer a few days before the letter is due at its destination.

The Student's Role
Most importantly, try to be the kind of person about whom a good letter can easily be written.

It is your job to identify appropriate letter writers, and you should start early in your career to cultivate relationships with them. Ask professors and other students to recommend reliable people. Don't be afraid to reject the ones who do not seem promising.

When the time comes to request the letter, give the writer sufficient advance notice (at least 2- 4 weeks) and all of the materials that help them do a good job: a copy of your résumé or CV, details of the program you are applying for, a few sentences about why the program is a good fit for your career plans, and how and when to submit the letter. Since faculty members usually have many students asking for reference letters, provide all the information by email, with attached files. If the agency requires a physical letter, provide stamped, addressed envelopes for those letters. If the faculty cannot write the letter in a timely manner, take that as a message to find someone else. After a writer has written one letter for you, the time investment to write additional letters is minimal, so do not hesitate to ask your letter writers for multiple letters for different applications.

Finally, waiving your right of access to the letter is a signal that you trust the writer. If you do not trust the writer, you should not ask him or her for a letter in the first place. Most writers will require that you waive your rights to view the letter.

Registration, Policies, and Graduation

Registration

During Phase 1 and Phase 2 registration, you may begin registering for classes as soon as your time-ticket opens. Students are eligible to register for courses for which they have the prerequisite courses. Prerequisites are listed in the Catalog. To confirm how your courses fit into your degree requirements, check DegreeWorks after you register. If you have concerns about how your courses are attributed in DegreeWorks, please contact your academic advisor. The B.S. Neuroscience degree can be completed in 8 semesters if you complete approximately 15 hours in each semester. This will often include one or two lab courses per semester. Note that a maximum of 7 credit hours is recommended for Summer semesters due to the condensed nature of the term.

Waitlists and Overloads

Neurosciences uses the Waitlist feature to assist students with course registration. The waitlist allows students who want to enroll in a full course to sign up on a virtual waitlist and sequentially offers a seat when another student drops. Because of this feature, we do not allow students to overload into our courses. If a section has no available seats, students will be able to register for the waitlist. Registering on a waitlist does not guarantee that you will receive a seat in the section. If seats become available, the system will automatically issue an email notification with permission to register to the next student on the waitlist. Notifications are only valid for a short time period (usually 12 hrs); after that time, the permission to register expires and the seat will be given to the next person on the waitlist. If you require a course in a specific semester for an on-time degree completion, you should waitlist and then contact your advisor for assistance.

The waitlist notifications will start once all time tickets are open. If a section has a waitlist, the open seats are reserved for the people on top of the waitlist. Do not drop your current section unless you want to be waitlisted. The waitlists will not be purged between registration phases, i.e. students that register on the waitlist for a section in Phase I will retain their spot on the list for Phase II. Check on the registrar's website for details of waitlist timing; typically, the last round of waitlist notifications will be issued at 5pm the day before registration closes. After 5pm, the waitlist is no longer functioning and all remaining open seats are first-come, first-served.

During Drop/Add week (the first week of classes), we suggest that you attend all classes that you are registered in or waitlisted for so that you do not fall behind. Important class material is covered during that first week.

Registration Errors and Permits

Permits (Override Requests): For Neuroscience courses, permits for pre-requisite or class restriction overrides should be requested from the faculty member teaching the course.

For non-Neurosciences courses, look on the department's website for their registration instructions. Some departments do permits by email, while others require that a request is submitted through the registration window in OSCAR. A full list of departmental contacts is available on the Registrar's Website (registrar.gatech.edu/registration/oprequest.php).

A prerequisite override is submitted by a student if the course instructor agrees that the student is prepared for the course without having taken the listed prerequisite courses – the instructor's

permission is required in this case. In other cases, the registration software sometimes does not recognize legitimate prerequisite courses on a student's transcript and may prevent them from registering for a course. In this case, no instructor's permission is required. For Neurosciences courses, request prerequisite override permits by following the instructions at biosci.gatech.edu/undergrad/permits-and-registration. Permit requests should NOT be made by phone. Allow 1 business day for the form to be processed.

Transfer/AP/IB Credit

Transfer credit confirmation is a two-step process to determine whether: 1) Georgia Tech has an equivalent approved course and 2) that the transfer credit was taken before the student's last 36 hours at Georgia Tech.

First, confirm that a course will transfer using the transfer equivalency table on OSCAR (oscar.gatech.edu/pls/bprod/wwsktrna.P_find_location). If the course is not listed, upload a course description and syllabus to transfercredit.gatech.edu/index.php for evaluation by the appropriate department. We suggest that you seek transfer credit approval before you take the course. In general, transfer Neuroscience courses will be allowed as Neuroscience electives if the course is a 3XXX or 4XXX level course from an accredited institution.

Second, be aware that students must complete the last 36 credit hours of their degree program in residence at Georgia Tech, the "36-hour rule." Note that Georgia Tech cross-enrollment, offcampus, and GT faculty-led study abroad programs are considered "in residence" for the 36- hour rule. Exceptions to the 36-hour rule may be granted by approval of a petition to the Institute Undergraduate Curriculum Committee; however, approval of this type of petition is rare. It is recommended to petition for an exception BEFORE violating the rule. Additionally, some medical schools only accept prerequisite courses taken at four-year institutions. While students may not receive transfer credit from a course taken at another institution when concurrently enrolled (e.g. in the same semester) at Georgia Tech, students are allowed to cross-enroll at other area schools through the ARCHE program. For additional information, refer to the ARCHE website at registrar.gatech.edu/registration/cross/index.

39-Hour Rule

A minimum of 39 hours of upper division coursework (3000-level or higher) is required for all Georgia Tech undergraduate degrees. The 39 hours of upper division coursework can fulfill any category of degree requirements, including free electives and "fall through" courses. Degreeworks has a credit counter that indicates the number of hours remaining to complete the 39-hour rule.

Online Application for Graduation (OAG)

In the semester before you intend to graduate, students submit an Online Application for Graduation by completing the steps below. Before you begin, please take note of the following instructions and deadlines.

Instructions for the Online Application for Graduation (OAG)

1. Log into degreeworks.gatech.edu and confirm that your courses are listed correctly under each Biology degree requirement. (For example, PHYS 2211 should fulfill Core Area D: Intro Physics I, not a Free Elective or a Fallthrough Course.)

2. Take careful note of the courses that you still lack to complete your degree. You must enroll in these courses in your final semester to complete your degree requirements.
3. If you see inconsistencies, email your advisor or schedule an appointment to clear up the errors. Once all errors are resolved, THEN proceed with step 2.
4. During the application window (see below), login to OSCAR and select: Student Services>Student Records>Apply to Graduate.
5. Confirm that your curriculum is listed as a B.S. in Neuroscience. If you are completing a minor or an option, that must be listed as well. If your curriculum is incorrect, stop immediately and contact Degree Certification (dc@lists.gatech.edu or 404-894-4150) for assistance.
6. Select the radio button for your program. (If you have more than one major, you'll have to select one at a time and repeat the entire process for your second major.)
7. Select the graduation term in the drop down that will appear.
8. On the next screen, request any changes to your first or middle names to appear on your diploma. Please note that all requests will be reviewed by the Office of the Registrar and are subject to approval. If you would like to change your last name or make more significant changes to your diploma name, please contact the Office of the Registrar.
9. Confirm the address you would like to use as your diploma mailing address.
10. Review the summary of your application before clicking on "Submit Request."
11. At the confirmation screen, you will be redirected to an Exit Survey sponsored by the Office of Assessment. Please continue with the Exit Survey to complete your application.
12. Once you have applied, you will be able to view your Application and Graduation status in DegreeWorks near the top of your degree audit, under the section entitled "Student View." Upon applying you will be given an Application Status of "Active" and a Graduation Status of "Received, Pending Evaluation." You can continue to check your status throughout the semester, and work with your advisor to resolve any deficiencies in a timely manner.

University Resources

There may come a time when you find yourself in need of further resources to best support yourself. We have compiled some of the available resources at Georgia Tech that can help you succeed personally and academically.

Academic Resources

- Office hours for your course instructors and/or TAs
- Peer Led Undergraduate Study (PLUS)
- Help-Desks for the "3 Cs" (Calculus, CS, & Chem) and Physics
- Office of Minority Educational Development (OMED)
- Learning Assistance Program in first-year learning centers (in specific East and West campus residence halls)
- 1-to-1 tutoring through the Center for Academic Success (supports more upper division courses)
- The CommLab can help with writing lab reports or presentations
- The Center for Academic Success offers on-demand workshops for time management, test prep, etc.
- Academic Coaching will work with you individually to discuss goals AND formulate strategies to reach them to improve academic skills, motivation, and confidence.

Non-academic Resources

- The Center for Career Discovery and Development (C2D2) can help you explore potential careers, craft resumes & cover letters, and prepare for interviews
- The pre-graduate and pre-professional advising group in C2D2 can help you learn about applying for grad or med school
- The Office of Disability Services can help you arrange accommodations for a learning disability or a service animal
- The Center for Assessment, Referral, and Education (CARE) is your primary resource for mental health support, and they can refer you to appropriate resources which can include:
  - Health Initiatives for issues regarding self-care, stress management, thriving, and resilience
  - The Counseling Center for a variety of services, including group, couples, and individual counseling, workshops, psychoeducational screens, and crisis intervention
  - Stamps Psychiatry Clinic for psychiatric evaluations and medication management
- The Stamps Health Services provides primary care, pharmacy, women's health, immunization, and allergy shots
- The Students' Temporary Assistance and Resources (STAR) can assist with food, housing, interview clothing needs, and even interest-free emergency loans
- There are a variety of resource centers for minority students on campus
  - OMED for underrepresented racial and ethnic groups on campus
  - Women's Resource Center for women on campus
  - LGBTQIA Resource Center for LGBTQIA students on campus
  - Veterans Resource Center for veterans, military, reservist, guard members, and dependents on campus

- The Dean of Students Office can connect you with specific resources if you are still unsure of where to go for help. The request assistance form is helpful for sharing documentation from Stamps with your professors among other things.