

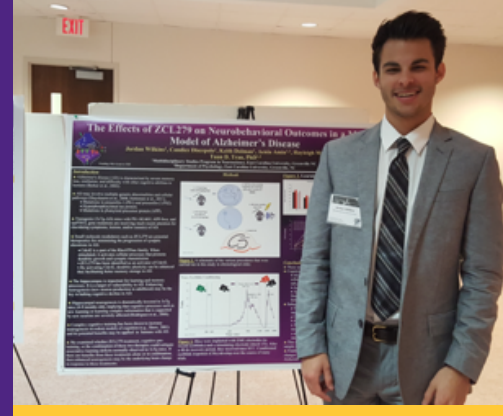
Neuroscience

MAJOR MAP

How to use the map

This map is designed to give you information about your chosen major that will help keep you on track for graduation within 4 years. The introductory sections will help orient you to the “big picture” ideas like the topics and areas of interest inside your major, the kinds of courses you will take, university policies including admissions, and other general topics. The chart on the second page will help you to develop a productive plan to make the most of your 4 years at East Carolina University and prepare yourself for the job market after graduation.

Remember, it is important that you diversify your experiences, both for success in your degree program and for success outside of school. While coursework is critically important, it should not be your only focus. The chart below will show you how to incorporate other kinds of experiences that will expand your knowledge of your chosen field and make you a more desirable job candidate. The map is only a guideline. Remember to speak with your advisor often to learn about new opportunities, clarify concerns, and develop a plan that is right for you.



Where to Turn For Help

East Carolina University offers an array of support to help you grow and learn from your first day of orientation until your graduation. New Student Orientation, Pirate to Pirate Mentoring, the University Writing Center, and the Career Center are only a few of the services and centers available to assist you throughout your time on campus.

THOMAS HARRIOT COLLEGE OF ARTS AND SCIENCES

Neuroscience



ABOUT THE MAJOR

Neuroscience is a branch of science that examines the nervous system (brain, spinal cord, and peripheral nervous system) and how it relates to behavior and mental processes. It can be considered a sub-discipline within the broader framework of biomedical health and STEM. Neuroscience, as the name suggests, is a science-focused discipline. It is not simply a convenient stepping-stone for popular careers such as medicine. As such, students acquire scientific research skills that can enable them to become productive contributors to knowledge for its own sake.

Neuroscience is a discipline that is making innovative contributions to human health in the 21st century. It provides better understanding of brain function through cutting-edge research and clinical practice. Numerous inquiries

about how the brain works date back to the dawn of civilization. However, this academic discipline is still in its infancy. The concentration is designed to provide students with knowledge and research skills that will help prepare them for a career in diverse neuroscience areas (psychopharmacology, neuropsychology, neurophysiology, neurotoxicology, neuropathology, and many more!) and a wide variety of related fields such as medicine, dentistry, and other health-related professions.

The curriculum includes a strong core of biology, chemistry, physics, and psychology courses, mentored-research experience in scientific laboratories, a two-semester senior thesis, a two-semester senior capstone sequence, and diverse electives (spanning those disciplines).

DEGREE OPTIONS

The Neuroscience concentration is within the Multidisciplinary Studies major and offers both a Bachelor of Science and Bachelor of Arts degree. This program is housed in the Department of Psychology and is an interdisciplinary program within Thomas Harriott College of Arts and Sciences. Students must complete a minimum of

30 semester hours and meet with the Neuroscience Program Director prior to officially declaring their concentration in Neuroscience. The department also offers a minor in Neuroscience for undergraduate students.



ADMISSIONS INFO

You can apply to the Thomas Harriot College of Arts and Sciences through the Office of Undergraduate Admissions website at www.ecu.edu/admissions. To be considered for admission, freshmen applicants will submit their high school transcript and standardized test scores. Transfer applicants will submit official transcripts from all previously attended institutions. Application deadlines and specific admissions requirements for freshmen and transfer applicants are listed on the website.

COURSE HIGHLIGHTS

PSYC 3310: Introduction to Neuroscience

PSYC 3311: Neuropsychology

PSYC 4250: Advanced Topics Seminar

PSYC 4340: Neuropsychopharmacology

NEUR 4901: Behavioral and Integrative Neuroscience

NEUR 2201: Neuroscience Research

RESEARCH DEVELOPMENT

Developing scientific research skills is a key part of the concentration in Neuroscience. By the time you graduate, you will have cultivated substantial experience with research practices. In particular, prior to graduation you will complete a Senior thesis course which requires you to draw on research experiences gained early in the program to produce a thesis of high scholarly value. This thesis can take a variety of forms (traditional paper/thesis defense, grant submission, peer-reviewed manuscript for publication, oral presentations at conferences, or other creative ideas are common) but it must demonstrate your acumen for science and knowledge creation.

WORKPLACE SUCCESS

What employers want

As a Multidisciplinary Studies major specializing in Neuroscience, you will pursue a career that requires specific skills and experiences. These often include:

1. The ability to analyze data using statistical procedures;
2. An understanding of the basic scientific method that applies across all the life and biomedical sciences;
3. The ability to craft coherent arguments supported by data and scholarly research and present those arguments as research papers or presentations;
4. The ability to extrapolate and synthesize new information fluidly.

As a college student, you are now expected to take ownership of your skill development. Take the time to think about the unique skills and experiences you have or would like to gain at East Carolina University. Seek out opportunities to expand your learning outside the classroom and challenge yourself to grow as a student and as an emerging professional.

WHAT CAN I LEARN?

As a Multidisciplinary Studies major focusing in Neuroscience, you will focus on developing a practically applicable understanding of your field that will help you as you prepare for graduate school or your chosen career path. You will learn key information about a variety of topics specific to the study of Neuroscience while developing specific skills important to the discipline including:

- Scientific research skills that enable students to become productive contributors to scientific knowledge for knowledge's sake;
- The ability to understand data, interpret the results, and develop conclusions that can be applied to the larger framework of a given phenomenon;
- Understanding various Neuroscience methods of measuring behavioral functions and their operation under different circumstances;
- Understand how Neuroscience may be able to guide the development and implementation of novel approaches to the treatment of human neurological and neurodegenerative diseases (e.g. CTE, Alzheimer's, Depression);
- Understand the function(s) of neuroscience in relation to health disciplines (medicine, nursing, occupational health), including health psychology.



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Neuroscience MAJOR MAP

DEGREE INFORMATION



FIRST YEAR >>>

SECOND YEAR >>>

THIRD YEAR >>>

FOURTH YEAR >>>

POST-GRAD OPTIONS

THE COURSES YOU NEED

Work on fulfilling general education requirements throughout your first year. Register for PSYC 1000: Introduction to Psychology, and a research-mentored course like NEUR 2201, PSYC 4312, and/or PSYC 4315 if possible.

Continue working on general education requirements. Also, register for PSYC/NEUR 3310: Introduction to Neuroscience, and a Statistics course such as PSYC 2101, MATH 2228, MATH 2283, or BIOS 1500. Enroll in NEUR 2201, PSYC 4312, and/or PSYC 4315 if possible.

Focus on finishing any remaining general education requirements. Also register for PSYC 2210: Research Methods in Psychology, and NEUR 2201, PSYC 4312, and/or PSYC 4315 if possible.

Make sure to take NEUR 4950: Neuroscience Thesis I, Neur 4951: Neuroscience Thesis II, PSYC 4250: Advanced Topics Seminar: Neurobiology of Learning and Memory, and NEUR 4901: Behavioral and Integrative Neuroscience. Ensure that you have completed all other requirements for graduation.

After completing your degree in Neuroscience at East Carolina University, you will have the ability to pursue careers in a variety of fields. These include:

GAIN RELEVANT EXPERIENCE

Explore your major and career options in consultation with your advisor. By the end of your first year, you should have developed plans to complete specific internships, develop the experience necessary for the kind of employment you want, or begin to identify potential graduate schools.

Volunteering is a great way to get experience in your field, build your résumé, test your interest in working with diverse populations, and meet people with similar interests.

Internships, CO-OP experiences, part-time jobs, and student leadership positions can provide important opportunities during your third year. Connect directly with faculty members with common research interests and attend career fairs to develop a post-graduation plan.

Participate in Research and Creative Achievement Week. Visit [Career Services](#) to make post-graduation plans that include employment or graduate school. Investigate job-related skills and identify gaps in your résumé so that you can address those deficiencies before graduation. Use the Occupation Outlook Handbook to identify common skills in your career of interest.

- Graduate school in Biomedical and Health Sciences
- Medical School
- Dental School
- Nursing
- Occupational Therapy
- Public Health
- Research Technician in academic, private/corporate, or government sectors

COMMUNITY CONNECTION

Consider joining clubs such as the [Neuroscience Student Association](#), [Eastern Carolina Chapter of the Society for Neuroscience at ECU](#), and the [East Carolina Association for Neuropsychology Students in Training](#). For a full list of potential organizations, see [Orgsync](#).

Emails from the department will let you know about upcoming guest lectures, internship opportunities, and special events. Conferences and career development fairs can help you to form professional networks and keep up with current research in your field of interest.

Connect with the [Center for Leadership and Civic Engagement](#) for opportunities within the local community. You can also contact community partners using the [OrgSync](#) directory. To build your professional network, join a professional organization like The Society for Neuroscience.

Submit a proposal to present a research paper at [ECU's Research and Creative Activity Week](#). Also look into any conferences that your national associations might host.

VISIT US ONLINE

For more information and an interactive map PDF, visit:

www.ecu.edu/neuroscience

or email

neuroscience@ecu.edu

THINK GLOBALLY

Consider taking foreign language classes to bolster your cultural competency. Think about participating in a [summer study abroad or semester exchange program](#). Consider joining student groups with an international or intercultural theme, including [Global Ambassadors](#), WorldWise, or the [International Student Association](#).

Work on integrating internationally-oriented classes into your electives and consider including a minor in international studies or a foreign language. Plan a semester abroad. Enroll in a Global Understanding course to work with students from foreign universities while studying right here at ECU.

Finalize your plans to spend a semester studying at an ECU partner institution abroad. Decide which summer faculty-led program you will undertake. Apply for study abroad scholarships in the early fall.

Work with the [Office of Global Affairs](#) and the [Career Center](#) to learn how to leverage your study abroad experience to improve your job placement possibilities. Complete your program by incorporating more internationally themed courses.

CAREER PREPAREDNESS

Visit [Career Services](#) to learn about their resources. Check out the [Bureau of Labor Statistics](#) and [Virtual Job Shadow](#) to explore potential careers. Log-in to [Handshake](#) to update your profile, check out career events, and begin to explore potential employers and job opportunities and any further education that may be necessary.

Meet with your [Career Counselor](#) to explore your career goals and develop your résumé. Attend a career fair and other employer-related career events to network with potential employers. Determine if graduate or other continuing education will be necessary and work on a plan to bolster your applications.

Develop your LinkedIn profile. Meet with your [Career Counselor](#) to discuss post-graduation plans. If needed, research graduate schools and program requirements. Continue to attend career fairs and other employer related career events. Begin developing graduate school application materials if necessary.

Meet with your [Career Counselor](#) to put your post-graduation plans into action. Refine your résumé, [LinkedIn](#) profile, graduate school application (if necessary), and interview preparations. Complete the Pirate Employment Survey.



APPLY FOR SCHOLARSHIPS EACH YEAR

CONSIDER AN INTERNSHIP