

NC STATE UNIVERSITY

MSc Assistantship in Brook Trout Conservation Genomics

Background: The Mamoozadeh Lab at North Carolina State University (NC State) is accepting applications for an MSc student to begin January 2026 (spring semester). The Mamoozadeh Lab leverages genomics and bioinformatics to explore questions related to the applied conservation and management of fish species. This research is conducted in close collaboration with state and federal fisheries management agencies. Students work in lab and field environments, and build transferable skills in creativity, leadership, and communication, as well as highly marketable skills in field biology, genetics/genomics, and bioinformatics. The Mamoozadeh Lab is housed within the [Department of Applied Ecology](#) at NC State, which also houses the [USGS Southeast Climate Adaptation Science Center](#) and the [USGS North Carolina Cooperative Fish and Wildlife Research Unit](#), offering abundant opportunities for integrative and applied research in fisheries contexts. The selected applicant will work directly with Dr. Nadya Mamoozadeh on the NC State campus located in Raleigh, North Carolina.

Project Description: The successful applicant will complete the MSc degree program requirements while leading genomics research aimed at characterizing outcomes of targeted restoration activities for brook trout in the southern Appalachians (eastern Tennessee and Great Smoky Mountains National Park). This will involve tasks in:

- Coordinating the collection and curation of brook trout samples and corresponding metadata
- Isolation and quantitation of DNA from tissues
- Preparation of reduced representation libraries for high-throughput sequencing
- Analysis of sequence data to produce genotypes and assess population genetic relationships
- Writing of thesis chapters and associated manuscripts for peer-reviewed publication
- Sharing research findings with funders and other relevant stakeholders

Qualifications: Applicants should have a BSc degree in the field of biology, ecology, fisheries, natural resources, genetics/genomics, bioinformatics, or a related field. Preference will be given to candidates with prior molecular lab experience (especially library preparation for high-throughput sequencing) and with quantitative skills that include analyzing genomic datasets (such as in R and related bioinformatic pipelines). Competitive candidates will also have strong communication and leadership skills, as well as the ability to work independently. We are a very interactive lab and are looking for an

enthusiastic scientist who cares about fisheries conservation and management. We are also a lab that celebrates diversity and inclusivity, and we warmly invite lab members to contribute to this culture.

Support: Students in the Mamoozadeh Lab receive a stipend, tuition, and health insurance, as well as support for professional travel. This support may come through a mix of teaching assistantships, research assistantships, and other sources.

How to Apply: Interested students should email the following to Dr. Nadya Mamoozadeh (nrmamooz@ncsu.edu) as a single PDF and using the subject line “Brook Trout Genomics Student”:

- 1) Brief cover letter describing research interests, related skills, career goals, and how working in the Mamoozadeh Lab will help you achieve these goals
- 2) Resume/CV
- 3) Unofficial transcripts
- 4) Writing sample (e.g., published paper, manuscript in preparation, undergraduate thesis, or research paper or essay from a relevant course)
- 5) Names and email addresses for three professional references

Applications should be received before 30 September 2025 to receive full consideration. Top candidates will be invited to discuss their qualifications and interests in a virtual interview. This informal selection process will be completed before submitting an official application to The Graduate School at NC State.