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Home Institution: Southern University A&M College

Target Course: Ecology

Target Course Number: 404B

Anticipated Enrollment: 15

When and how frequently is this course offered? Fall and Spring as needed

Science Gateways Resource Needs/Questions:

- *What practices should be built into the course-based undergraduate research experience, or CURE, to ensure that student workflows are accessible, reproducible, reusable, and sustainable beyond the Faculty Hackathon?*
- *How can Science Gateways help students move through the full ecological research process, including asking research questions, accessing data, analyzing patterns, visualizing results, and interpreting findings connected to real-world Louisiana ecosystems?*
- What scaffolding, tutorials, or support materials are needed to help biology majors who are new to computational tools feel confident using Science Gateways for ecological inquiry and data analysis?

Project Goals:

- Use **Jetstream2** through **ACCESS** as the primary Science Gateway resource for Ecology students to explore Louisiana ecological, environmental, and climate-related datasets.
- Build a scaffolded CURE workflow using **Jetstream2**, **Jupyter notebooks**, and **ecological datasets** to guide students through research questions, data analysis, visualization, and interpretation.
- Create an accessible implementation plan using **Cornell Virtual Workshop** and **HPC Carpentry** tutorials to support student onboarding, reproducibility, and low-bandwidth backup options.

