

**ANNOUNCEMENT: Hourly Graduate Student Position available for Spring 2020.**

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Dr. Chelsie Romulo in the Department of Geography, GIS, and Sustainability is seeking a graduate student for an hourly paid position Spring 2020. Graduate students in the Sociology, Biology Education, Geology Education, or related programs are encouraged to apply.

**Position Description**

*Hours:* 10/week (not to exceed 130 hours during Spring Semester)

*Start Date:* 13 Jan 2020 (can be a bit flexible)

*Tasking:* The primary tasking for this GA will be research related to an IUSE grant proposal designed to inform the development of the ENST undergraduate program here at UNC. The GA will analyze course related data and contribute to a manuscript for publication as co-author. Students with interest in STEM education or curriculum development contexts or interview, survey, or content analysis methods would be a good fit for this position. Potential funding after the first year is contingent on the grant award.

**Research Description:**

To better inform those who teach, make curricular decisions, and manage college-level environmental programs (EPs), we seek to develop a tool for assessing environmental students' foundational knowledge and their ability to grasp complex systems-level concepts. Specifically, we propose applying an established machine learning method to create a Next Generation Concept Inventory (NGCI). This new approach to concept inventory construction combines discipline-specific multiple-choice questions from existing concept tests with a new set of constructed-response items and associated automated scoring models focused on the complex systems typically addressed in EPs. This proposal represents a partnership between universities for design and development of an assessment tool that can be used to evaluate and improve student learning. This work focuses on Food-Energy-Water Nexus systems as an initial pilot for NGCI development and involves thorough validity and reliability checks to provide an instrument of value for both research and to aid environmental educators and program administrators. This work informs and advances the development of curricula and student learning outcomes for environmental programs.

**Required Qualifications**

Student must be enrolled in a qualifying MS/MA/PhD program such as Sociology, ASRM, Biology, or EAS (other programs may be considered).

**To Apply**

Please send a copy of your resume/cv and a short description of your interests to Chelsie Romulo at [chelsie.romulo@unco.com](mailto:chelsie.romulo@unco.com) by 20 December 2020. Please feel free to contact Dr. Romulo with any questions as well.