Part-Time Graduate Research Assistant Position
Deconstructing STEM Curriculum Project
Spring 2024 (February 5-May 3, 2024)

University of
Northern Colorado

GRA POSITION DESCRIPTION

I. POSITION IDENTIFICATION

University Title: Doctoral Graduate Assistant-- Deconstructing STEM Curriculum

Department/College: Mathematical Sciences /Natural and Health Sciences

Position: Part-time (10 hours/week for 13 weeks) Resident GA; $3,801

Position Reports to: Dr. Jodie Novak

Position inquiries: Dr. Jodie Novak, Co-Director of the HHMI STEM Inclusive Excellence Grant, jodie.novak@unco.edu 970-351-2463

Title: Deconstructing STEM Curriculum GRA

Expected Start Date: February 1, 2024 – May 3, 2024

II. POSITION SUMMARY

This position will support Dr. Jodie Novak as she leads a year-long learning community of STEM faculty interested in integrating content into their course that draws attention to

- Local and global social justice issues
- Reading and writing the world with STEM, which is shorthand for using STEM to investigate and critique injustices, and to challenge, in words and actions, oppressive structures and acts in the world (Gutstein, 2006, pg 4)
- Deconstructing and decolonizing the STEM curriculum
- Incorporating students' knowledge of the world and their cultural and lived experiences into the undergraduate curriculum

The Graduate Assistant will identify relevant literature (articles, practices, and books) to support this curriculum change project, aid in a research project by coordinating and securely managing the collection, analysis, experiences of the researchers as they plan the professional development for faculty, attend four on-hour workshops, and develop a CANVAS shell to support the project. This position reports directly to Dr. Jodie Novak.

III DUTIES & RESPONSIBILITIES

1. **Literature Exploration**. Perform literature searches to support participants to find data and prep materials. Specifically, relevant
    a. Articles about impact of culturally responsive (deconstructed, decolonized) curriculum on undergraduate STEM students
    b. Practice articles/books of activities/lesson ideas for deconstructing the STEM curriculum with a focus on math, statistics, computer science, biology (and all its subdisciplines), chemistry and biochemistry, physics, earth and atmospheric science
2. **Aid in a Research Project**. A qualitative/narrative project focused on the experiences of the researchers as they plan the professional development for faculty.
    a. Write an IRB to cover recording meetings, interviewing participants, surveys
    b. Collect, manage, and begin analyzing data
3. **Attend four meetings of Deconstructing STEM Curriculum at UNC**
    a. Dates and times to be Determined
4. **Developing a Canvas shell** to support the project
5. **Meet weekly** with Dr. Jodie Novak to support your work and the project.

IV. POSITION SPECIFICATIONS

1. **Education**

    This position requires a minimum of bachelor's degree; continuous enrollment as a student in good standing in a UNC doctoral program.

2. **Abilities**

- Be detail oriented
- Possess leadership skills
- Be able to work independently
- Have excellent interpersonal communication skills
- Be able to problem-solve, think creatively and maximize available resources
- Be able to use qualitative approaches to analyze data

3. **Specific Skills required**

- Knowledge and skills related to general computer software applications
- Foundational knowledge of quantitative and qualitative research design and methodology
- Effective written and verbal communication skills
- Excellent organizational skills

LEARNING OUTCOMES

Student will:

- Develop organizational skills.

- Develop leadership skills.
- Gain knowledge of research logistics and processes.
- Develop methods and processes for project communication and resource management.
- Develop research design and analysis skills using both qualitative and quantitative methods.