

**Faculty Member Contact Information**

Name: **Richard Brugam**  
Department: **Biological Sciences**  
E-mail Address: **rbrugam@siue.edu**

**Description of the URCA Assistant Position(s)**

Number of students requested: **1**  
Number of students to receive funding: **1**  
Will it be possible for your student(s) to earn course credit? Yes **X** No      If yes, in which course? **Biol 493**  
Location of research/creative activities: **Science Lab Building**

Brief description of the nature of the research/creative activity:

**We will study the isotopic and heavy metal composition of fish bones from Native American and early colonial middens. These analyses can be used to reconstruct the past environments of the animals. We will need to compare the results of archaeological samples with modern specimens of the same species. We will mostly be concentrating on fish because they will be most sensitive indicators of changes allowing us to compare the uncontaminated environments of Native Americans with colonial and modern conditions. Fish samples will also allow us to compare changes in the environments of fish since the time of Native Americans.**

Brief description of student responsibilities:

**The student will prepare the samples for submission to the Cornell Isotope lab for analysis. The student will also use the results as the basis for a Senior Assignment project.**

URCA assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

**The student will learn simple preparative chemistry techniques. More important, the student will learn how to design a research project and carry it through to completion.**

**Requirements of Students**

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours), please indicate all required days and times:

**The time can be arranged**

If the location of the research/creative activities is off campus, must students provide their own transportation?

Yes      No **X**

Must students have taken any prerequisite classes? Please list classes and preferred grades:

**I prefer that the students have completed Biol 365 - Ecology**

Other requirements:

**None**

Notes to applicants (i.e., any other information you'd like applicants to know about you or the position before applying):

**None**