SESSION 1
APPLICATION WRITING WORKSHOP:
NSF EPSCOR UNDERGRADUATE RESEARCH OPPORTUNITY PROGRAM

Nevada System of Higher Education
Sponsored Programs Office & EPSCoR
• 5 years (2013-2018)
• $20M federal and $4M in state matching
• Research on solar energy generation technology, its environmental impacts and associated water issues, accelerated by cyberinfrastructure

• NOTE: This project is what funds the UROP!!
“The Solar-Energy-Water-Environment Nexus in Nevada”

Academic Year 2015-16

Undergraduate Research Opportunity Program (UROP) Request for Proposals

Sponsored by: National Science Foundation
Experimental Programs to Stimulate Competitive Research
Award #IIA-1301726.

For details about the NSF EPSCoR Solar Energy-Water-Environment Nexus in Nevada program, visit http://nvsolarnexus.org/
Academic Year 2015-16 Undergraduate Research Opportunity Program (UROP)

To promote undergraduate research in all NSHE institutions.

Applicants must be:

- U.S. citizens, permanent residents of the United States, or non-U.S. citizen students with a valid visa;
- Full-time (12 or more credit hours) students at any NSHE institution during both the Fall 2015 and Spring 2016 semesters;
- GPA of at least 3.0 on most recent transcript;
- Supervised by a NSHE faculty mentor; and
- Maintain undergraduate status throughout the entire program.

Students having received a UROP scholarship under the current NSF EPSCoR Track 1 (Nexus) award are NOT eligible to apply.
Academic Year 2015-16 Undergraduate Research Opportunity Program (UROP)

Research areas:

• Students working in any area of science, technology, engineering or math (STEM).

• Students who are working outside of STEM disciplines (e.g. economics, education, journalism, policy) are welcome to apply but should propose projects that support the advancement of STEM-related research and education.

• Fields related to solar energy, water and/or environmental research are of special interest.
Academic Year 2015-16 Undergraduate Research Opportunity Program (UROP)

• **Deadline:** Friday, October 9, 2015

• **Award Period:** December 1, 2015 through May 31, 2016

• **Scholarship amount:**
  • $4,000 for students
  • $750 (project expenses) for faculty mentors

**Past recipients of UROP Nexus scholarship ineligible**
Academic Year 2015-16 Undergraduate Research Opportunity Program (UROP)

Download the application at:

• UNR Office of Undergraduate Research
  http://environment.unr.edu/undergraduateresearch/

Click on Opportunities, NSF EPSCoR
Lower and Upper Division Students

• **Lower Division (59 or fewer semester credits completed)**
  • Cover Page (Form B in Appendices)
  • Applicant’s Statement
  • “Unofficial” pdf transcripts
  • Biographical Sketch or CV (Form D in Appendices)
  • Endorsement Letter(s)

• **Upper Division (60 or more semester credits completed)**
  • Cover Page (Form B in Appendices)
  • Project Description
  • References/citations (Form C in Appendices)
  • “Unofficial” pdf transcripts
  • Biographical Sketch or CV (Form D in Appendices)
  • Endorsement letter(s)
LD - Applicant’s Statement (59 credits or less)

- 2 page maximum statement that answers the following questions:
  - What are your education goals? What are your career goals?
  - How will your participation in this program assist you in achieving your career goals?
  - What relevant courses have you completed?
  - Do you have any prior research or applicable work experience?
  - What research are you interested in conducting with your mentor? Be specific about the research and methodologies you propose to use to conduct your work, to include a research timeline.
UD - Project Description (60 credits or more)

- 2 page maximum research proposal including clear hypotheses to be tested or questions to be asked
  
  - a.) Abstract
  - b.) Introduction
  - c.) Objectives
  - d.) Research hypothesis and questions
  - e.) Plans for research and/or creative work
  - f.) Timetable
  - g.) Plans for dissemination of results

- Must be written in a way that is understandable to reviewers whose background may be outside the applicant’s specific field of research
Evaluation Criteria

• Clear articulation and detailed “Applicant’s Statement” (lower division student) or “Project Description” (upper division student)

• Demonstrated level of academic preparation and excellence (GPA, appropriate coursework and/or other measures)

• Recommendation letters that show support for participation in the program and specific reference to his/her potential for success in the program
Evaluation Criteria

• Relevant background experience and/or extracurricular activities which would help predict success in a research experience.

• Is the proposed research related to the solar energy-water-environment nexus theme?
  -only 50% of funded projects must be tied back to the theme.
  -research applications from all disciplines as long as it ties back to STEM research.
Recommendation Letters

The best letters will come from those who know you best.

• Understands you are seeking a strong reference
• know you long enough to write with authority
• know your work and can describe your work positively
• have a high opinion of you
• know where you are applying
• know your educational and career goals
• be able to favorably compare you with your peers
• be able to write a good letter

Sources: University of Tennessee Knoxville Office of National Scholarships and Fellowships, University Affairs, About Education
Abstract. Previous studies have shown that the topographically complex Great Basin desert harbors higher species richness (=number of species) than topographically less complex regions, such as the Great Plains. I predict that high species richness in the Great Basin will also translate into high levels of intraspecific genetic diversity (=genetic uniqueness of populations within a species) in the region. I will compare the levels of intraspecific genetic diversity in species from the Great Basin ecoregion with similar species in the Great Plains. In addition, I will evaluate how the proposed solar energy development in the Great Basin would affect this diversity.
I was drawn to Dr. _ research group because the research being performed can have a direct influential impact for the hospitals locally as well as elsewhere. We’re testing the antibiotic resistance of bacteria carried by cockroaches and while all along we’ve known that cockroaches carry bacteria, there have not been much research done how this may be affecting the spread of antibiotic resistant bacteria in hospitals or residential areas.

My participation in this research will have nothing but a direct beneficiary effect on my future and my goals. Research is the field I would like to go into and participating in undergraduate research allows for me to gain the skills and techniques of how to operate within a lab properly. It allows me to have an insight into what my future will be like, and emphasis why research is so important.
• Natural and human-caused disturbances like development, pollution, and fires affect both plant and animal populations and I wish to learn more about how research on such influences can aid conservation. I am intrigued to see how a web of interaction amongst biotic and abiotic factors will unfold before me as I gain familiarity with the vegetation of Peavine Mountain.

• With this fellowship opportunity I will learn material that will contribute to my education achievement and strongly identify me from the pool of other graduates in the workforce, since I already will have been involved with tasks that an employment agency might be searching for.
Submission Instructions

• Each proposal, including all documentation, must be submitted as a single pdf document with all required documentation and signatures.

• For detailed instructions and to download the application material, go to http://nvsolarnexus.org/wp-content/uploads/2015/08/UROP-solicitation_Academic_15-16_FINAL.pdf

• or

• http://environment.unr.edu/undergraduateresearch/ (opportunities)

• Please make sure to verify receipt of submitted proposal from Michele Casella (Michele_casella@nshe.nevada.edu) and/or Robin Gonzales (robin_gonzales@nshe.nevada.edu)
How to find a mentor?

• Contact:
  • Michele Casella
  • michele_casella@nshe.nevada.edu
  • (702) 522-7076

  • Robin Gonzales
  • robin_gonzales@nshe.nevada.edu
  • (702) 522-7083

• NV Stem Mentor Network
  • www.nvstemmentor.org
  • nvstemmentor@nshe.nevada.edu
• The **Nevada STEM Mentor Network** is a one-stop online resource that provides access to Nevada’s finest mentors and premier research projects in the STEM fields.

• To foster successful research training and collaboration, the Nevada STEM Mentor Network offers:
  
  • An extensive searchable database of STEM mentors;
  • Valuable resources and tools for mentors and mentees;
  • Access to research opportunities and partnerships (past, present and future) in STEM; and
  • Profiles of THE BEST and BRIGHTEST in Nevada STEM research

[www.nvstemmentor.org](http://www.nvstemmentor.org)
Session 2: What to expect & how to prepare?

• Don’t wait for session 2 to begin drafting your concept and/or application. If you can start now, DO!

• Session 2 will be used to go over, in detail, each of the application sections to help you further draft your application.

• Students return with concept paper and/or draft application

• Ideally you will have secured a mentor by Session 2. If you are having trouble, contact our office.
Writing Center Contact Information

- http://www.unr.edu/writing-center

- Location: Mackay Science Room 108 (daytime hours) & The Knowledge Nook (evenings)

- To make an appointment or for any questions;
  - Maureen McBride, Director
    or
  - Bill Macauley, UROP workshops & CCID Director

- Writing Center Ph. (775) 784-6030
Additional Resources

- *STEM Student Research Handbook*
  

- UNR Office of Undergraduate Research
  
  http://environment.unr.edu/undergraduateresearch/
Contact Us!

- **Student Outreach**
  - Robin Gonzales (South)
  - robin_gonzales@nshe.nevada.edu, (702) 522-7083
  - Mike Sady (North)
  - mike_sady@nshe.nevada.edu

- **Administration**
  - Michele Casella
  - Michele_casella@nshe.nevada.edu, (702) 522-7076

- **UROP Leadership**
  - UNR - Dr. Scott Mensing (smensing@unr.edu)
  - UNLV - Dr. Kurt Regner (kurt.regner@unlv.edu)