

**Attention Undergraduate Students!!
Paid Research Opportunity**

EPSCoR

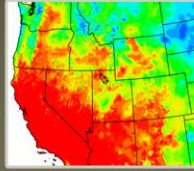
**Nevada Infrastructure for
Climate Change Science, Education, and Outreach**



Policy,
Decision Making,
Outreach



Cyberinfrastructure



Climate Modeling



Education



Ecological Change



Water Resources

***National Science Foundation's
Experimental Program to Stimulate
Competitive Research (NSF EPSCoR)
Research Infrastructure Improvement (RII)
Award EPS-0814372***

***“Nevada Infrastructure for Climate Change Science, Education,
and Outreach”***

**Undergraduate Research Opportunity Program
SUMMER SCHOLARSHIP 2012
Submission Deadline: Thursday, March 1, 2012**



Announcement for:

University of Nevada, Las Vegas; University of Nevada, Reno; Nevada State College;
College of Southern Nevada; Great Basin College; Truckee Meadow Community
College; Western Nevada College and Sierra Nevada College

Attention Undergraduate Students!! Paid Research Opportunity

Who is eligible? Any full-time undergraduate student in any institution of higher education in Nevada. Must be a U.S. citizen or permanent resident.

Research areas: Any area of science, technology, engineering or mathematics (STEM). Any field related to climate change research is of special interest. These include (but are not limited to) Biology, Civil Engineering, Climatology, Computer Science, Ecology, Education, Environmental Studies, Geography, Hydrology, Journalism, Natural Resources, and Political Science.

Deadline: Thursday, March 1, 2012

Scholarship amount: \$4500 for students; \$1000 for faculty mentors

Award Period: June 4 – August 10, 2012

Sponsored by: NSF EPSCoR program, Award # EPS-0814372.

For details, see below or go to (www.nvclimatechange.org).

I. INTRODUCTION

The Nevada System of Higher Education (NSHE) received a Research Infrastructure Improvement (RII) Award from the National Science Foundation's Experimental Program to Stimulate Competitive Research (NSF EPSCoR) for Climate Change Research in Nevada. This award creates a statewide interdisciplinary program focused on understanding the effects of regional climate change on ecosystems, improving communication between researchers and policy makers, and better educating the public on climate change in Nevada.

The program has six areas of interest listed below. The project encompasses a wide range of disciplines, including (but not limited to) Biology, Civil Engineering, Climatology, Computer Science, Ecology, Education, Environmental Studies, Geography, Hydrology, Journalism, Natural Resources, and Political Science. When formulating a research project, consider that the overarching goal of this NSF EPSCoR award is to build capacity in climate change research to measure environmental changes, develop climate models, translate climate-change science for decision makers, create computer systems to make climate data more accessible, and develop new ways to teach about climate change.

NSF EPSCoR Climate Change Program Components: 6 areas of interest:

Climate Modeling: Develop the capability to model climate change at a regional and sub-regional scale and assess its effects on ecosystems and resources to evaluate the effects of different future climate scenarios and adaptation strategies. *Component Lead: Dr. Darko Koracin, 775-674-7091, darko.koracin@dri.edu*

Ecological Change Component: Develop data collection, modeling, and visualization infrastructure to determine and analyze effects of climate change on ecosystems and disturbance regimes. *Component Lead: Dr. Franco Biondi, 775-784-6921, fbiondi@unr.nevada.edu*

Water Resources Component: Develop data collection, modeling, and visualization infrastructure to better quantify and model changes in water balance and supply under climate change. *Component Lead: Dr. Lynn Fenstermaker, 702-862-5412, Lynn.Fenstermaker@dri.edu*

Policy, Decision Making, and Outreach Component: Develop data collection and modeling infrastructure to assess climate change effects on human systems and responses to better understand institutional and societal aspects of climate change and to enhance policy making and outreach to communities and stakeholders. *Component Lead: Dr. Helen Neill, 702-895-4892, Helen.neill@unlv.edu*

Cyberinfrastructure Component: Develop a Data Portal and software frameworks that will support interdisciplinary climate change research via integration of data from observational networks and modeling. *Component Lead: Dr. Sergiu Dascalu, 775-784-4613, dascalus@cse.unr.edu*

Education Component: Develop educational infrastructure to train students at all levels and provide public outreach on climate change issues. *Component Lead: Dr. Michael Nussbaum, 702-895-2665, nussbaum@unlv.nevada.edu*

For more information on Nevada's NSF EPSCoR Climate Change Program and involved faculty researchers, visit www.nvclimatechange.org. **You must identify one or more faculty members with whom you would be interested in conducting research.**

For suggested Climate Change mentors and project topics, please contact:

Lynn Fenstermaker (DRI) – Lynn.Fenstermaker@dri.edu,
Tom Piechota (UNLV) – Thomas.Piechota@unlv.edu, or
Scott Mensing (UNR) – smensing@unr.edu

For other science areas, a list of possible mentors can be found at <http://www.nevada.edu/epscor/nsf-mentorship.html>

II. PROGRAM DESCRIPTION AND INSTRUCTIONS

A. Program Solicitation

The NSHE announces the 2012 Summer Scholarship program to promote undergraduate research in all NSHE institutions. The program is supported by funding from Nevada's NSF EPSCoR Climate Change Program and the State of Nevada. Students in any major are eligible, but at least 50% of the proposals will be funded for research focused on climate change areas listed above.

The proposals must be original and written by the scholarship applicant. The research must be conducted during Summer 2012, under the guidance of a NSHE faculty mentor. Community College students must have a co-mentor at DRI, UNLV, or UNR in addition to a mentor from the Community College. Scholarships will provide \$4500 per student awardee and \$1000 to the faculty mentor overseeing the project to cover research expenses.

B. Eligibility

1. Applicants must be:
 - U.S. citizens, permanent residents of the United States, or non-U.S. citizen students with a valid visa;
 - Full time students in a degree program with a GPA of 3.0 studying at one of the NSHE institutions: UNLV, UNR, NSC, CSN, GBC, TMCC, WNC, or Sierra Nevada College;
 - Supervised by a NSHE faculty mentor (or co-mentors if applicable); and
 - Maintaining their undergraduate status throughout the entire program.
2. All participants will be responsible for enrolling, through their academic department, for at least one to three units of **research credit** under the guidance of their mentor in the first Summer 2012 session.
3. Past recipients of the NSF-EPSCoR undergraduate research awards are not eligible.

C. Award Information

- *The NSHE does not provide tax advice. If you have questions about possible tax liabilities, you may refer to the IRS web sites: <http://www.irs.ustreas.gov>.*
- *Since acceptance of this award may impact a student's income level to a degree that could affect eligibility for other scholarships, fellowships, and student loans; it is the student's duty to consult with campus financial aid advisors.*
- *This is a full 10-week commitment during the summer of 2011. Because all recipients will be immersed in time-intensive research, participants are generally not allowed to engage in other research programs or have other work or employment. Special permission to have outside employment is only allowed if granted by the Lead for Undergraduate Research, Dr. Michael Collopy. Requests should be made through Michele Casella at michele_casella@nshe.nevada.edu.*

D. Program Guidelines

1. Research must be conducted under the direction of a NSHE faculty mentor who has agreed to supervise the research project.
2. Students in any major are eligible. Proposals are requested in areas related to climate change, including, but not limited to, climate modeling, ecological change, water resources, cyberinfrastructure, and policy and decision making. Proposals on the education or communication of climate change are also encouraged. Funding may also be available to projects not related to climate change; however, they must be in one of the STEM disciplines (science, technology, engineering or math). It is acceptable for proposals from two or more students to be part of a larger research project; however, each proposal must be a unique effort by the student and will be reviewed on its own merit.
3. The research is to be completed by August 10, 2012.
4. Awardees must be present during the entire program period.
5. Each awardee will submit a signed obligation form, a digital photograph of themselves and an abstract of their proposed research to Michele Casella at the time they accept the scholarship.

6. Successful applicants must agree to attend a safety class as necessary depending on the nature of their research.
7. Successful candidates are required to provide programmatic feedback for an NSF Evaluation in the way of surveys and questionnaires.
8. Each student **must** prepare and present a poster at the Undergraduate Summer Research Poster Conference, held each August at both UNR and UNLV. Exact dates will be provided to participants. The poster should represent the research done over the course of the funded project period. Each awardee will submit a pdf of their poster presentation to Michele Casella at the end of their summer research program, with copies to both Dr. Michael Collopy, UNR and Dr. John Farley, UNLV, by August 10, 2012.

E. Proposal Preparation Instructions

Each proposal must be submitted as a **single pdf document with the subject line: LAST NAME_FIRST NAME_UROP12**. Incomplete applications will not be accepted. Applications submitted in multiple documents will not be accepted. All applicants will be notified upon receipt of application. If the applicant does not receive notification of receipt, he/she should contact Michele Casella (michele_casella@nshe.nevada.edu) to verify receipt of proposal by the NSHE Sponsored Programs Office.

1. **Cover Page (form in Appendix): MUST BE TYPE-WRITTEN.** Applicants will need to get required signatures as indicated on the form.
2. **Project Description (limit two pages including any and all graphs or pictures):** The formulation of the research project may be a result of a collaborative effort by the applicant and mentor; however, the project description **must be written solely by the undergraduate applicant**. It should be a concise statement including clear hypotheses to be tested or questions to be asked. The project description must be written in a way that is understandable to reviewers whose background may be outside the applicant's specific field of research. The two page project description should be single-spaced with 1" margins, in 12-pt. Times New Roman font and must include the following sections:
 1. Abstract (50-100 words)
 2. Introduction
 3. Objectives
 4. Research hypotheses or questions
 5. Plans for research and/or creative work
 6. Timetable
 7. Plans for dissemination of results
3. **Scanned Official Transcripts or downloaded "unofficial" pdf. transcripts from the University website:** Transcripts of all courses completed, including a list of courses currently enrolled in for Spring 2011.
4. **Endorsement letter(s):** Letters are to be written by supervising faculty mentor(s) indicating their approval of the proposal and describing their level of involvement in the project. All proposed mentors should affirm that the proposal is the original work of the student and that only guidance in editing and formatting the document were provided to the student applicant. Each proposed mentor must "sign-off" on the proposal noting approval and affirming that they

have read the student's proposal and pledge to mentor the student throughout the project period.

5. **References/citations (See Appendix for details):** Not included in the two page limit for the project description.
6. **Biographical Sketch or CV (See Appendix for Student Curriculum Vitae Builder):** One each from student applicant and mentor, limited to two pages per person.

F. Projects Involving Human Subjects or Vertebrate Animals

Prior approval by the Internal Review Board (IRB) for human subjects and/or the Institutional Animal Care and Use Committee (IACUC) for animal subjects is not required for proposal submission. However, students chosen to receive a scholarship under this program who anticipate the use of human or animal subjects in their research must receive approval of their research protocols by the appropriate review board prior to the beginning of research and release of funds.

1. **Human Subjects:** If this proposed project involves the collection of information from human beings through interaction or observation, include an attachment (not included in the two-page limit) that provides sufficient information to enable reviewers to evaluate potential risks to subjects. Include information concerning the subject population, type(s) of information to be gathered, and measures to be taken to protect privacy and reduce risks.
2. **Vertebrate Subjects:** If this proposed project involves living vertebrate animals in any way, include an attachment (not included in the two page limit) that provides sufficient information to enable reviewers to evaluate the choice of species, number of animals to be used, and any exposure of animals to discomfort, pain, or injury.

III. PROPOSAL REVIEW PROCESS AND EVALUATION CRITERIA

Proposals will be selected based on a statewide merit-based review. The screening and selection process will include a review committee that will focus on these review criteria:

- 1) Has the applicant demonstrated a level of academic preparation and excellence in the form of GPA, appropriate coursework and/or other measures that would predict success in a research experience?
- 2) Does the applicant have other background experience and/or extracurricular activities which would help predict success in a research experience?
- 3) Has the applicant clearly articulated his/her Project Description, including each of the required sections above?
- 4) Are the applicant's letters of reference supportive of his/her participation in the program - are there specific references to potential and high promise for success?

IV. PROPOSAL SUBMISSION, AWARD NOTIFICATION AND TIMELINE

A. Submission of Proposals

All required documentation *listed in this announcement under “E. Proposal Preparation”* should be scanned into the complete proposal and converted into **one pdf. file** for submission. Mentors have the option of submitting pdf ‘letters of support’ as attachments to e-mails directly to Michele Casella but it is not preferred.

It is the responsibility of the applicants to obtain and submit all required documentation for their proposal via e-mail to Michele Casella at: michele_casella@nshe.nevada.edu.

The subject line should be specific to each applicant and read:
Last Name_First Name_UROP12
Example: (Jones_Tom_UROP12)

NOTE: Application deadline: Thursday, March 1, 2012, 5:00 p.m.

B. Notification

Letters of award as well as letters of regret will be sent to all applicants after a statewide review has been held, which can take up to one month after the submission deadline.

C. Obligation to the Government

Applicants for the award will be considered without regard to race, creed, color, sex, age, national origin and/or physical impairment.

D. Contacts

Potential applicants with questions regarding this program are strongly encouraged to contact a Program Leader.

University of Nevada, Reno: Dr. Michael Collopy; Email: mcollopy@unr.edu	University of Nevada, Las Vegas: Dr. John Farley; Email: farley@unlv.nevada.edu
Nevada NSF EPSCoR Climate Change:	Nevada NSF EPSCoR Program Office: www.nvclimatechange.org
Dr. Lynn Fenstermaker (DRI)	Email: Lynn.Fenstermaker@dri.edu
Dr. Tom Piechota (UNLV)	Email: Thomas.Piechota@unlv.edu
Dr. Scott Mensing (UNR)	Email: smensing@unr.edu

References Cited

Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified. Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. While there is no established page limitation for the references, this section must include bibliographic citations only and must not be used to provide parenthetical information outside of the 15-page Project Description.

STUDENT CURRICULUM VITAE (CV) BUILDER

What is a Curriculum Vitae

A Curriculum Vita ("CV" or "vita") is a comprehensive, biographical statement emphasizing your professional qualifications and activities. In general, curricula vitae are three or more pages in length. Because a CV is similar to a resume, you may find the "Resume and Cover Letter Construction" guide helpful. An advantage to the C.V. format is the significant freedom to choose the headings and categories for your information and the strength reflected in their arrangement.

When Is A Curriculum Vita Appropriate

A CV should **only** be used when specifically requested. This might occur in the following instances:

- Applications for admission to Graduate or Professional Schools
- Independent consulting in a variety of settings
- Providing information related to professional activities (e.g., applications for professional memberships and leadership positions, and presentations at professional conferences)
- Proposals for fellowships or grants
- Applications for positions in academia, including:
 - School administration, (e.g., elementary or secondary school principals, superintendents, deans of schools)
 - Institutional research and consulting
 - Higher Education positions in teaching, research, and administration

Possible Sections To Include In Your C.V.

Heading	Name, address(es), and phone number(s), including area code(s)
Education	Listing of academic degrees beginning with the degree in progress or most recently earned. Include name of institution, city and state, degree type (B.A., B.S., M.A., etc.), area of concentration, month and year degree was (will be) received. Note: You may wish to include the title (using the format appropriate to your particular academic field) of your thesis. If you are an undergraduate and your GPA is 3.5 or higher, it is appropriate to include it. You may also include "Relevant Coursework" under this heading.
Honors and Awards	Receipt of competitive scholarships, fellowships, and assistantships; names of scholastic honors; teaching or research awards.
Relevant Experience	Listing of positions (part-time, full-time, volunteer, temporary and permanent) related to the work sought. Include: department, firm, agency, or organization; complete name; city and state; job/position title; dates; also include a brief description of your activities/duties, using strong action verbs. List these in reverse chronological order.

Other Experience	Groupings of other experiences (including volunteer work and/or internships) can enhance your C.V. Your experience can also be broken into other categories such as: Teaching, Counseling, Administration, Volunteer, Community, Internship, etc. Entries within each section should be in reverse chronological order.
Professional Associations	Memberships in national, regional, state, and local professional organizations should be listed. Also list significant appointments to positions or committees in these associations. Student memberships in professional associations are appropriate.
Publications	Give bibliographic citations (using the format appropriate to your particular academic discipline) for articles, pamphlets, chapters in books, research reports, or any other publications that you have authored or co-authored. In the fine arts, this can include descriptions of recitals and art exhibits.
Presentations	Give titles of professional presentations (using the format appropriate to your particular academic discipline); name of conference or event; dates and location; if appropriate in your discipline, also include a brief description. Presentations should be listed in reverse chronological order.
Recent/Current Research	Description of research projects recently conducted or in progress. Include the type of research and a brief description of the purpose.
Community Involvement	Appropriate and relevant volunteer work, church work, community service organizations, etc.
References	Optional to end vita with statement "Available upon Request." If you are responding to an advertisement that asks for references, include those requested on a separate addendum sheet.
Qualifications or Skills	A summary of particular or relevant strengths or skills which you want to highlight. (Typically, this is not included as a separate section, but addressed in other sections. Occasionally, however, it may be appropriate to list special computing or language skills.)
Personal Information	Do not include marital status, age, ethnicity, race, religion, place of birth or citizenship