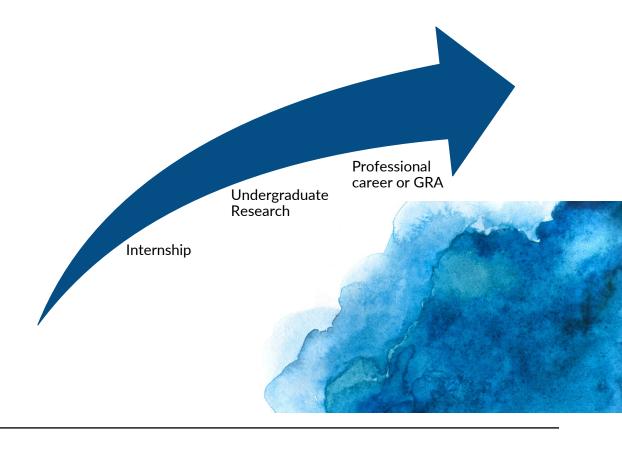


INTERNSHIPS ARE A STEPPING-STONE





The big picture

Short-term outcomes

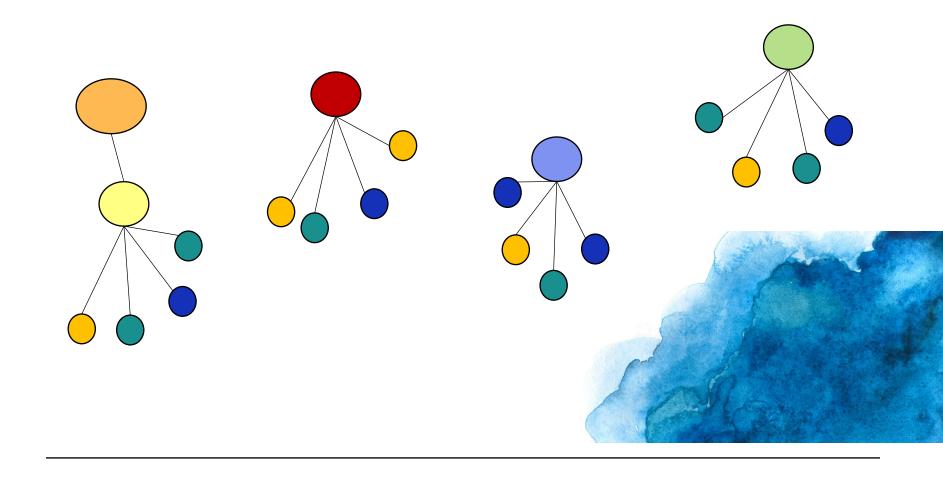
Increase STEM and professional skills among student participants

Grow the culture of mentorship among scientists

Long-term impact

Advance innovation and broaden participation in Nevada's STEM ecosystem

TEAM-BASED APPROACH



SKILLS DEVELOPMENT FOR INTERNS

Three phases of the semester-long program:	Duration
Training : Train students on any skill needed to contribute to the project.	Weeks 1-4
Implementation: The majority of the work will take place in this phase. Weekly check-ins and frequent communication will help ensure students stay on track.	Weeks 5-15
Research Showcase: In the final week, students will share their work as part of a showcase of intern project presentations.	Week 16



HOW IS THE PROGRAM STUDENT-CENTERED?

- No prerequisites; no requirement for major
- 4-week training period: All skills needed to implement the research are provided
- 8 hour/week time-commitment
- Mentorship is a central focus in the internship projects (mentor training and support).

EXAMPLE PROJECTS

- Plastics on Lake Tahoe's Beaches
- Data Analysis for Seismology
- Ancient landscapes: Paleoclimate of the Sierra Nevada
- Did ice shape the surface of Mars?
- Geospatial data analysis to track movement of wildfires



Impact on career trajectory

Describe the most impactful aspect of this program had for you professionally.

- "Professionally, this program made me feel like a scientist."
- "Professionally it really showed me the importance of networking and asking questions. In addition, I learned to not be afraid of being in a new working environment."
- "The most impactful aspect of this program was developing a professional contact with the supervisor as a resume reference."
- "The most impactful aspect of this program was learning how to use certain aspects of ArcMap [software]."



TIPS FROM PREVIOUS MENTORS

"I found that having a dedicated internship day (Fridays) worked really well—it was great being able to work all together as a group on a consistent schedule, even when we weren't doing fieldwork and even if they were working independently in the same space. I think that really helped us create a cohesive team."

"In my experience, weekly meetings to check-in with the interns are certainly helpful. I was able to correct any misconceptions in their learning and address/understand issues that some interns faced, which prevented them from completing the project."

"Incorporate different kinds of tasks for the interns – those that need guidance, those that involve teamwork among the interns, and independent work."

Impact on career trajectory

Did this program affect how you approach your career goals? If so, how?

"I feel that this internship would definitely set me apart from other applicants [to veterinary school] in the sense that other applicants may have never had the opportunity to conduct the research that I did."

"Yes, I have considered looking into positions or opportunities that are closer into STEM."

"The program experience enabled me to understand my interests better, so I could decide on a planned field of study."

"Yes, it helped me realize even more that I want to target my career goals towards helping others using science."

"[This program] reinforced my already existing approach."

"Yes, it has driven me to want to learn and do more in the science industry."

"This program gave me the motivation to continue my education. I always had interest in research work, this was an opportunity to fall in love even more."

Impact on career trajectory

How do you plan to apply what you have learned or experienced in the internship to your education and your career?

"I can apply what I have learned or experienced in the internship to my education by connecting my personal experiences to what I'm learning about in class."

"I do plan on looking for similar internships."

"I want to further develop the technical skills I learned in the program by applying to more programs or opportunities that directly relate to my field of study."

"This internship has helped me realize that I want to target my career goals towards helping others."

"In the future, I also hope to utilize this experience during the process of applying to graduate school."

"I plan to use the skills i have learned to apply to any job; working with others, thinking outside the box, etc."

"I want to apply my interest of natural resource science. This was an opportunity to see what other scientists and engineers go through step by step. I wish to be involved in more related projects in the future."

STEM UG Programs at NSU 2013-Present



Aster Sigel, Ph.D. Undergraduate Research Program Director

Led by Aster Sigel & Amber Howerton







Program Overview

- Flagship Programs: INBRE Summer Undergraduate Research Fellowship (iSURF and iSURF Flex)
- Supported programs: Funded by NV INBRE UROP, FLARE, EPSCoR UROP and NASA UG programs

Foster cross-institutional collaboration and faculty-student mentorship

Program Timeline

- Fall (Sept-Dec): Applications open for iSURF, UROP, REU, and GradFit
- Spring (Jan-May): iSURF Flex students take research prep course & attend GradFit
- Summer (May-Aug): Active research programs (iSURF, Flex, FLARE, UROP, etc.)
- Fall & Spring: Poster Symposiums and continuation of mentored research (Independent Study, Volunteer Research, EPSCoR, UROP, etc.)

Main Goals

- Recruit students for summer research, emphasizing outreach to underrepresented groups.
- Provide faculty-mentored, hands-on training.
- Prepare students for graduate study and careers in biomedical and research fields.
- Support research and funding competitiveness.
- Share research impact within and beyond NSU.

Student Selection Process (for iSURF programs) & Program Support

Selection Criteria:

- Academic performance and preparation (sophomore minimum 2.0 GPA)
- Short personal essay evaluating motivation for research and career goals
- (motivation and demonstrated interest often outweigh GPA)

Compensation:

- Both students and mentors are compensated for their efforts
- Program period varies by program (iSURF 9-week, iSUR-Flex 5-week)

Pre-Program Requirements

- Before the program begins, students sign a mentor-mentee agreement
- Complete both in-person and online lab safety training





Research Lab Space





Personnel Support:

- 1 full-time Admin faculty member dedicated to program coordination,
- 1 faculty member contributing 2 months of effort annually



Amber Howerton: Professor of Chemistry & INBRE Site Coordinator
Aster Sigel: UG Research Program Director

- 2–4 student workers assisting with program operations
- Program fully funded by NV INBRE

Faculty Mentors

Department of Physical and Life Sciences





















Math, Data Science, and Psychology







This incredible program would not be possible with out the NV INBRE team, the amazing faculty mentors and NSU administrators





Goal #2: Mentored Hands-On Training through Seminars, Workshops, and Cohort Bonding Activities

- Seminars & Workshops are presented by faculty and invited guests.
- Journal clubs led by students.
- Prospectus Presentation & Progress Report
- T-shirt design, potluck, games, and field trips



LAB RESEARCH SKILLS:

- Keep a detailed lab notebook
- Evaluate scientific literature and formulate research questions
- Conduct experiments
- Troubleshoot lab and research problems
- Collect, analyze, and interpret data
- Prepare research posters
- Communicate scientific findings





Goal #3: Graduate School and Career Readiness

GradFIT program at UNR (2016–2025)

- Selects 8–14 students annually in May
- High completion rates, typically 93-100%
- Two faculty members accompany students during the week-long GradFIT program in May for guidance and support

CV-Related Preparation and Graduate School Application Support

- Faculty lead CV/resumé workshops during the summer
- Help students showcase academic, research, and community experience
- Support students in writing research proposals for EPSCoR, REU, and similar programs





Goal #4: Support for Faculty and Student Research

Research Facilities, Including BSL-2 and Microscopy Labs





Main Research Lab Equipment

- Key equipment includes NMR, real-time PCR, fluorescence microscope, HPLC, centrifuges, autoclaves, and biosafety cabinets
- Lab freezers (-80°C and -20°C) and PCR thermal cyclers support research needs
- Additional resources: 26 student laptops and essential small lab instruments

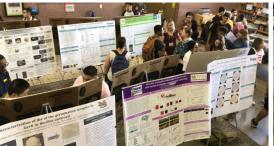
Support for CURE Courses and Faculty Research Development

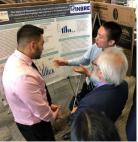
- Support for CURE courses with equipment and lab assistant help
- Faculty access to NV INBRE pilot grants
- Supports faculty tenure and research progress

Goal #5: Dissemination of Scientific Research

Publications and Presentations

- Faculty and students have published in various scientific journals.
- Research presented at multiple regional and national conferences, including:
 - INBRE Poster Symposium at NSU (Sept.)
 - NSU Undergraduate Research and Creative Works Conference (April)
 - Presentations at National Scientific Conferences (ex: NV INBRE regional and Statewide meetings, ACS, American Society for Nutrition, etc.)









Impacts of the UG Program and NSU Students (2013-Present)

- Many NSU alumni have advanced to PhD, MD, PharmD, and STEM graduate programs at institutions like UNLV, UNR, Emory, Touro, and Notre Dame
- Some NSU alumni are employed by USFWS, NDOW, SNHD
- Several are now scientists and medical doctors; some return as keynote speakers to mentor and inspire current students at annual symposiums

What are three words that you would use to describe your experience in the program?



From NSU to PhDs & MDs: Alumni Keynote Speakers





October 2025

September 2022

Anonymous student feedback from 2024 post survey

"This was everything I hoped it would be and more. Aside from the research itself, activities like journal club and the role-playing game gave me more experience and **insight into the career path I want to follow** and what it will be like down the road. **I appreciate it more than I can express**."

"The workshops helped immensely in **socializing with different mentors** and acquiring new skills to have a successful research project."





UNLV Research Mentoring Program Highlights

NSHE Mentoring Institute 2025

Building Research & Mentorship Pathways

Dr. Joanna Jezierska, Director of Graduate Research Pathways UNLV Graduate College

UNLV's long history and legacy of developing STEM research talent pathways with built-in innovative mentoring frameworks

Highlights

Multicultural Program for STEM and Health Sciences 1989-2025
National Summer Transportation Institute (NSTI) 2014-2029-federal grant sponsored by DOT, FHWA & NDOT; Jezierska (PI) Mutual agreement with Fort Valley State University (FVSU) 1992-Present Scholarship fund

Impact

Steady flow of students to STEM programs - K-12 students in their transition to college & transfer students from HBCUs to UG & GR programs **Diversification of academia and workforce**

Strong career guidance and support by workforce partners - proactive approach & quick responsiveness to changes in workforce needs and demands **Individual work with students** - peer mentors and industry experts

Resources - internships, scholarships, fellowship, employment opportunities

Collaborative environment

Support to faculty members with their classroom instructions and academic initiatives

Support to affinity student organizations (NSBE, SHPE, SASE, SWE, AISES, Scientista Foundation, Create for Kids)

Educational outreach to families and community members

STEM summer camps for high school students funded by federal grants

"We are enriched when we are together, yet represent our uniqueness as individuals"

Multicultural Program for STEM and Health Sciences' motto 1989-2025



Coming soon to Graduate College:

Bringing back: Rebel Research and Mentorship Program (RAMP)

Undergraduate students and graduate students work on projects together with faculty member oversight

New Initiative: GRAD Research Immersion Summer Experience (RISE)

A week-long discipline focused research, academic and career enhancement opportunity (structured pathway) for undergraduate students from partnering universities interested in pursuing PhD programs at UNLV funded by the Alfred Sloan Foundation's Centers for Systemic Change

GRAD RISE is based on:

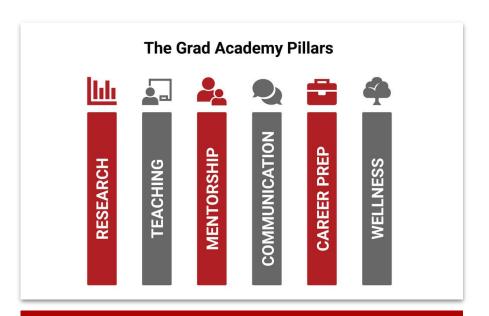
- **research driven recruiting strategy** to attract academically talented students from partnering universities with passion for research and desire to pursue doctoral studies
- **intensive academic program framework** with student success formula in mind (network, support, growth)
- **unique mentoring programs** that address critical demands and needs of the academia, workforce, research and technology advancement led by faculty members, assisted by experienced graduate students, supported by industry partners, and the UNLV Graduate College team and their mentoring programs.



Grad Rebel Advantage

Alissa Gardner, Director, Leadership & Professional Development Academy UNLV Graduate College

The Grad Academy



unlv.edu/graduatecollege/academy

The Grad Academy is the central hub for professional and career development programming for graduate students.

- Career and Academic Readiness: Equip students with targeted workshops, programs, and events to strengthen professional and academic skills.
- Leadership Skills: Cultivate leadership growth applicable to academic, professional, and community contexts.
- Opportunities to Give Back: Prepare students to apply their education toward meaningful contributions during and after graduation.





Co-Curricular Certifications

- Teaching Certification
- Research Certification
- Mentoring Skills Certification

Programs

- Grad Rebel Ambassadors
- Grad Rebel Advantage
- Grad Rebel Writing Boot Camp Programs
- Nature Masterclasses On-Demand

Events

Opportunities for graduate students to showcase their research, scholarly, and creative activities

- Rebel Grad Slam
- Inspiration, Innovation, Impact: A Celebration of Graduate Student Accomplishments



Grad Rebel Advantage Program

The yearlong Grad Rebel Advantage program helps UNLV undergraduates explore whether graduate school is right for them, strengthen their applications, and prepare for success in graduate study.

Student Benefits:

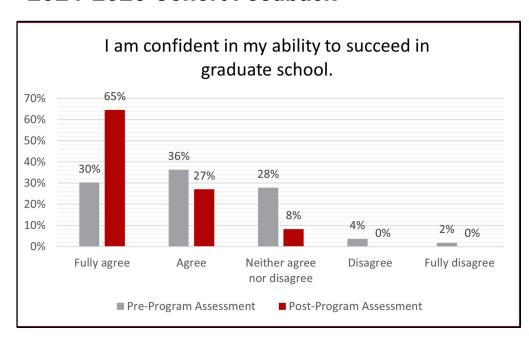
- Access to special workshops, events, and activities designed to support future graduate study
- Personalized cohort mentorship throughout the year
- Option to participate in the Graduate College Research Certification
- Recognition with a completion certificate and honor cord for commencement
- A Grad Rebel Advantage T-shirt
- Opening and closing events with meals provided





Grad Rebel Advantage Program

2024-2025 Cohort Feedback



Prior to starting the Grad Rebel Advantage program, 30% of participants fully agreed with the statement "I am confident in my ability to succeed in graduate school." After completing the program, 65% of participants fully agreed with the same statement.





Grad Rebel Advantage Program

Mentorship Pods:

- 1–2 graduate student mentors with 6–10 undergraduate students
- Groups based on academic interests, shared experiences, or identities
- Mentors lead cohort meetings to share experiences, guide applications, support graduate school planning and research involvement

Collaborative Partnerships:

- Program led by the Graduate College in collaboration with campus co-sponsors and partners
- Partnership with Office of Undergraduate Research:
 - Supports research skill development and demystifies graduate research, helping ease the transition from undergrad to grad
 - Offers professional and academic development workshops for aspiring researchers





Office of Undergraduate Research

Nicole Thomas, Program Manager UNLV Office of Undergraduate Research



Office of Undergraduate Research Programming

We inspire, support, and nurture undergraduates in their efforts to discover, innovate, create, and experience research at UNLV. We help undergraduate students get research ready and connect them with faculty for successful and transformative research experiences.

Current Programs:

- Biannual Research Symposia
- SPECTRA Undergraduate Research Journal
- Research Skills Workshops (~15/semester)
- Research Advising/ Research Consultations
- NSF Pipe-Up Program, REU Sites, and Research Mentorship Pipeline
- Summer Undergraduate Research Fellowship (SURF) funding
- Partnering with Graduate College for Research and Mentorship Program (RAMP)

We frequently collaborate with units across campus and are always open to further collaborations to enhance the undergraduate research experience.



OUR Contact Information

University of Nevada, Las Vegas

Office Location: Central Desert Complex, Building 1

Phone: 702-895-4771

Email: our@unlv.edu

Website: unlv.edu/our

Dr. Rafael Oganesyan, Director (<u>rafael.oganesyan@unlv.edu</u>)

Nicole Thomas, Program Manager (<u>nicole.thomas1@unlv.edu</u>)







Michele Casella

NSHE Mentoring Institute: Creating a Culture of Support for Research & Learning through Mentorship, Collaboration and Communities of Practice

October 8, 2025

NEVADA STEM MENTOR NETWORK

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. We are committed to helping connect students and faculty to research

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.

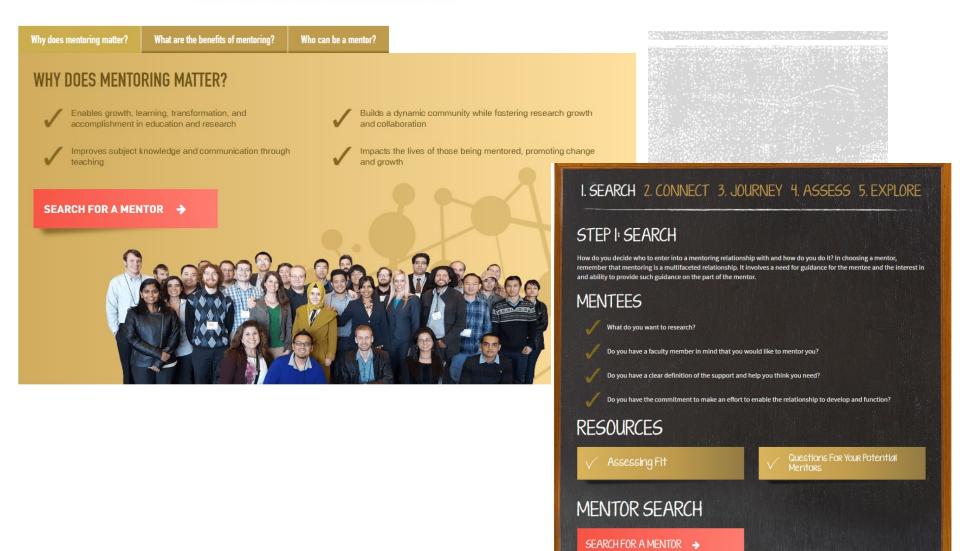


https://stemmentor.epscorspo.nevada.edu/





WHY DOES MENTORING MATTER?



ADVANCED MENTOR SEARCH

Enter your search criteria in the form Alternatively, you can use the quick filter search for less targeted results.

Mentor Name

First Name Last Name

Locations / Counties

Please Select

Institutions

Please Select

Funding Agencies

Please Select

Disciplines

Please Select

Keyword

SEARCH MENTORS →

Q ADVANCED MENTOR SEARCH

TO BEGIN, SELECT YOUR SEARCH CRITERIA THEN CLICK ON THE SUBMIT BUTTON

MENTOR SEARCH

NOTIFY ME OF NEW MENTORS



+

INSTITUTIONS

DISCIPLINES +

LOCATIONS

FUNDING AGENCY

SWITCH TO THE ADVANCED MENTOR SEARCH





Thomas Herring

Featured 🖈



















← DR. EL HACHEMI BOUALI (NEVADA STATE UNIVERSITY)



	Institution:	Nevada State University		
*	Departments:	physical and life sciences		
Δ	Research Fields:	Geology, Geophysics, Geomorphology, Soils, Springs Hydrology, Remote Sensing, Aquatic Microbiology		
≣	Disciplines:	Aquatic Biology/Limnology, Biological and Biomedical Sciences, Environmental Biology, Geological and Earth Sciences/Geosciences, Geophysics and Seismology, Hydrology and Water Resources Science, Physical Sciences		
•	Location:	Clark County		
0	Funding:	EPSCOR - Experimental Program to Stimulate Competitive Research, INBRE - IdeA Network for Biomedical Research Excellence, NASA - National Aeronautics and Space Administration, NSF - National Science Foundation, Space Grant - National Space Grant College and Fellowship Program		



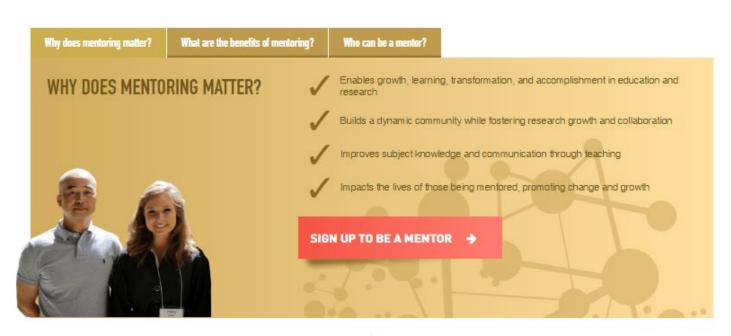


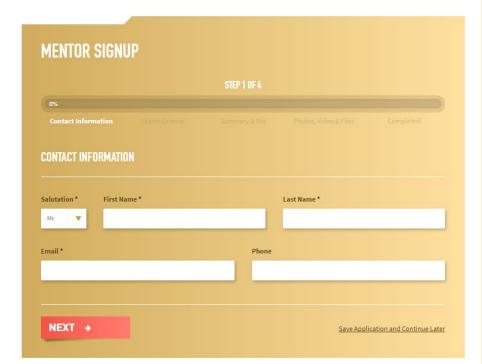
(702) 992-2745



elhachemi.bouali@nsc.edu

WHY DOES MENTORING MATTER?

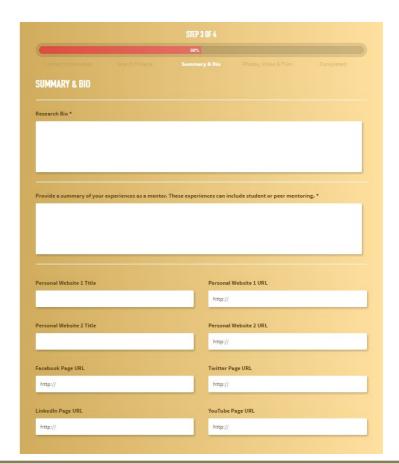




- Step by step instructions
- Clickable fields for ease
- Save and continue later feature







- Open text fields for research/mentoring experience
- Option to add additional websites, photos, videos and files





FIND A MENTOR DECOME A MENTOR RESOURCES TRAILBLAZERS OPPORTUNITIES ABOUT US





The goal of the Opportunities Page of the Nevada STEM Mentor Network is me networking and communication challenges that come when working on a multi-faceted, multi-partner project.

SUBMIT AN OPPORTUNITY

VIEW CURRENT OPPORTUNITIES





STEM graduate assistant and undergraduate



Research scholarship and fellowship



Current grant-funded research looking for



Solicitations/announcements for new research



Seed funding for statewide research projects & collaborations



Other STEM-related education/research related

Platform for sharing opportunities, building collaborations and leveraging resources in STEM research

UPPURTUNITY PRUGRAM - ACADEMIC YEAR 25-26

CALL FOR APPLICATIONS UNDERGRADUATE RESEARCH OPPORTUNITY PROGRAM (UROP) RESEARCH SCHOLARSHIF APPLICATION FOR ACADEMIC YEAR 2025-2026 UNDERGRADUATE STUDENTS [...]

EXPERIENCE FOR UNDERGRADUATES (REU PROGRAM.

SEEKING EQUITABLE PATHWAYS TO COMMUNITY DISASTER RESILIENCE IN THIS PROGRAM, STUDENTS WILL SPEND TH SUMMER IN [...]

CHOCHOUT FAMICATE ONITIONALS (FTPP) SUMMER 2025 INTERNSHIP **PROGRAMSI**

APPLICATIONS ARE CURRENTLY OPEN FOR THE NSF EPSCOR FUTURE TECHNOLOGIES & ENABLING PLASMA PROCESSES (FTPP) SUMMER I ...

HYDROLOGIST/GEOMORPHOLOGIST IN POST-FIRE WATERSHED RESTORATION

THE FOREST SERVICE PACIFIC SOUTHWEST RESEARCH STATION IS SEEKING A POSTDOCTORAL RESEARCHER FOCUSED ON TH

https://stemmentor.epscorspo.nevada.edu

FIND A MENTOR

BECOME A MENTOR

RESOURCES TO

CRS OPPORTUN







Networking and information sharing, for the sake of research proposal development and implementation, can be a challenge.

The goal of the Opportunities Page of the Nevada STEM Mentor Network is to overcome networking and communication challenges that come when working on a multi-faceted, multi-partner project.

SUBMIT AN OPPORTUNITY



VIEW CURRENT OPPORTUNITIES



Examples of qualifying opportunities include:



STEM graduate assistant and undergraduate positions



Research scholarship and fellowship opportunities



Current grant-funded research looking for leveraging partners



Solicitations/announcements for new research projects



Seed funding for statewide research projects & collaborations



Other STEM-related education/research related opportunities





OPPORTUNITY IMAGE

FIND A MENTOR BECOME A MENTOR RESOURCES TRAILBLAZERS DPPORTUNITIES ABOUT US

SUBMIT NEW OPPORTUNITY

PPORTUNITY DETAILS							
oportunity Name							
oportunity Type Undergraduate Position Fellowship Faculty Position Other	Graduate Position Internship Faculty Collaboration		Scholarship Student Collaboratio Grant Opportunity				
pportunity Description				-			
ualifications							
ter all of the qualifications for this opportunity, o ok on the + sign.	ine phinase or sentence per line. Yo	acan enter a maximum	of 6 qualifications. To display	more input boxes, simply			
wification	Qualification	Qu	alification	©			
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ompensation							
ses this opportunity have an opening ad closing date?							
) No, its ongoing O Yes							
ONTACT DETAILS							
ontact First Name		Contact Last Non	se *				
ontact Email		Contact Phone No	umber				



Catch a glimpse of those enterprising mentors blazing new trails in Nevada STEM research!

Get to know Nevada faculty and student researchers virtually through videos and with written Q&A stories. Upload your short video describing your research or mentor/mentee experience (best length 1-2 minutes) and/or answer four short questions to share your story today.

SUBMIT YOUR STORY



VIEW RECENT TRAILBLAZERS



Featured Trailblazer Video: Dr. Vaidyanathan (Ravi) Subramanian



DANIELLE NOBLES, UNLY GRADUATE



DARJUS JACKSON, UNLY UNDERGRADUATE



DR. HAROON STEPHEN, UNLY



Vaidyanathan (Ravi) Subramanian, Mentor

- If someone asked you to give them an elevator pitch on your research in 3 sentences, what would you say?



Questions & Answers

- What do you find most rewarding or gratifying about being a mentor?
- The satisfaction I see in their faces when they come to me and report some good results. Student achievement: Their recognition through awards, scholarships, and limelight. Their thank you notes, it makes my day!
- What achievements and/or successes have resulted from being a mentor that you would not have had
- Over \$30,000 in scholarship funding, several high impact papers, regional and national recognition to SOLAR lab students. Undergraduate's students at UNR are amazingly talented and have great potential. We should encourage them as much as we can. It is important to recognize Tamara Valentine of the HONORS program at UNR. She rocks!
- Share something about yourself that you won't find on your resume.
- I am a proud father of three wonderful kids!

➤ Related Video



% Full Mentor Profile

Ravi Subramanian is currently an associate professor of chemical engineering. He is on the graduate faculty of the Electrical and Biomedical Engineering Department and an adjunct in the Chemistry Department. He is also the solar [...]

VIEW RAVI'S FULL MENTOR PROFILE





FIND A MENTOR BECOME A MENTOR RESOURCES TRAILBLAZERS OPPORTUNITIES ABOUT US

Back

Hannah Mason, Mentee

- What do you find most rewarding or gratifying about being a mentor/mentee?
- The most gratifying part is getting to experience other people's passions for science and being able to share my own.



Questions & Answers

- What achievements and/or successes have resulted from being a mentor/mentee that you would not have had
- Participating in the Nevada NASA Space Grant Community of Practice program has led me to have been nominated for a Nevada Regents Scholar award.
- If someone asked you to give them an elevator pitch on your research in 3 sentences, what would you say?
- My research project is titled, "Traveling at the Speed of Light." This project explores the possibilities of reaching faster than light travel through means of the Alcubierre Warp Drive, worm holes, or Mill's hypothetical warp drivers. Analysis of these theoretical systems has led to the conclusion that exotic matter is necessary to make FTL travel possible.
- Share something about yourself that you won't find on your resume.
 - I love to make costumes and attend science fiction conventions.





For more information:

nvstemmentor@nshe.nevada.edu

Michele Casella, mcasella@nshe.nevada.edu Athena Lewis, alewis@nshe.nevada.edu











TRANSFORMING EDUCATION BY **BUILDING LASTING CONNECTIONS**



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