

# **Preliminary Faculty Competition**

**2018+**

**Multi-year Hands-On-Training  
Higher Education and/or Pre-College**



**Announcement for faculty at:**

University of Nevada, Las Vegas; University of Nevada, Reno; Nevada State College; College of Southern Nevada; Great Basin College; Truckee Meadows Community College; Western Nevada College;  
Desert Research Institute

**Applications must be received by:**

**Tuesday, August 22, 2017; 5:00 pm PT**



National Aeronautics and Space Administration (NASA)  
Space Grant College and Fellowship Training Program  
Cooperative Agreement #: NNX15AI02H



# Request For Proposal

## Multi-year Hands-On-Training

### Funding Information and eligibility criteria for HOT for Higher Education and/or Pre-College Students

NVSGC seeks to fund 2 projects with a maximum federal contribution of \$25,000 per year (\$75,000 over three years, \$50,000 over two years, federal contribution only). Due to requirements of the Space Grant program, a 1:1 institutional match is required on all awarded funds. The total maximum funding amount with match per proposal is \$50,000 per year (maximum \$25,000 federal + \$25,000 institutional match). Thus, the total maximum funding amount with institutional match per proposal is \$150,000 over three years or \$100,000 over two years. Proposed activities would commence after new Nevada Space Grant award is secured and are **contingent on the receipt thereof**. The selected HOT project proposals will be included in the Nevada proposal to the National Space Grant Office. **The number of awards and funding level is contingent on the availability of funds, which will not be known until June 2018.**

- **Student participation is strongly encouraged and can be included in your overall budget.**
- Partnership with other Space Grant supported projects, NASA Centers or scientists and business/industry will be reviewed favorably.
- Diversity and inclusion are integral to the mission success of NASA and we are tasked with funding a diverse cohort of student and faculty researchers that reflect NV demographics.
- Students receiving direct funding **must be US citizens, including:** Citizens of Puerto Rico, Washington DC, Guam, the U.S. Virgin Islands and Northern Marianas. *Permanent residence status, green card, or student visa are not accepted.*

### Hands - On - Training (HOT):

The primary focus of this program is to firmly establish new or continuing STEM hands-on-training activities that utilize NASA related interdisciplinary content for higher education and/or pre-college students. Proposals should include authentic, hands-on student activities in NASA-related STEM disciplines. Examples of topic areas that are being targeted include but are not limited to: NASA Challenges, space/planetary exploration, aeronautical engineering, off-grid habitation and utilization of NASA-specific assets (e.g., satellite data) for climate change evaluation and adaption topics and other NASA relevant topics. Proposals may include the development of teams to compete in science and engineering challenges relevant to NASA.

#### ***Proposals areas of interest must address one or more of the following:***

- Will develop programs to provide students with a knowledge base leading to successful employment at a NASA Center or a NASA-related private industry venture, or enrollment into a STEM college program.
- Provide engaged, interdisciplinary learning by integrating state-of the art facilities and equipment (e.g. 3d printers, panoramic displays and immersive individual displays).
- Incorporate faculty workshops, web posts, newsletters and other media that broaden the information provided to NSHE institutions about successful higher education content developed with Space Grant funding.
- Enhance outreach efforts to recruit more students representative of Nevada's diversity to enter STEM programs.

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- Explore current grant focus topics, including: small unmanned aircraft systems (sUAS) in areas such as engineering, software development, policy and flight operations or topics related to high altitude ballooning OR any Nevada NASA focus topic related to any of the following: aeronautics; astrobiology; astrochemistry; astrophysics; big data analytics; climate change; hydrologic impacts; new satellite data systems; planetary geology; remote sensing; STEM education; and sustainability. Develop teams that engage or participate in NASA-relevant engineering design challenges (such as: NASA Student Launch Program, CanSat competition, Human Exploration Rover Challenge, the Mars Societies University Rover Challenge, etc.).
- Create Programs that train multiple participants about how to access and utilize unique NASA assets for climate change research.
- Develop college- or university-industry partnerships that train multiple higher education students (including pre-service teachers) in aerospace science and engineering topics
- Engage multiple and diverse participants in hands-on activities

### NOTE:

1. Collaboration with other NSHE faculty is encouraged. If you have questions about this, please contact Lynn Fenstermaker at [lynn.fenstermaker@dri.edu](mailto:lynn.fenstermaker@dri.edu)
2. A webex seminar will be provided on July 13 at 3 pm (Pacific Time) to discuss this new solicitation. The access link to join this meeting is:  
<https://dri.webex.com/dri/j.php?MTID=m22f91345d485c579275710b03daff1c6>  
Join by phone: 650.429.3300  
Meeting Number/Access Code: 803 626 520

### Proposal Guidelines

1. **Cover Page Form (state whether this is a HOT Higher Education and/or Pre-college application.)**  
All Forms are available at:

[https://nasa.epscorspo.nevada.edu/wp-content/uploads/2016/03/Cover\\_Page\\_ProposalsFillable.pdf](https://nasa.epscorspo.nevada.edu/wp-content/uploads/2016/03/Cover_Page_ProposalsFillable.pdf)

2. **Results of Prior Nevada NASA Space Grant Consortium or Nevada NASA EPSCoR support (maximum of 600 words):** If any faculty on the project has received NVSGC or Nevada NASA EPSCoR award(s) in the past five years, information on the award(s) is required. Each faculty member who has received funding must provide the following:
  - a. The amount and period of support.
  - b. Summary of the results, including tangible outcomes, which could include, but are not limited to: resulting publications; proposals; new collaborations or partnerships; thesis/dissertations; student successes; and engagement of underrepresented groups.
3. **CV (2 page maximum)**
4. **Summary of the proposed project (maximum 4 page narrative). Include the following:**  
**Abstract:** 500 words or less summarizing the proposed activity.

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**Who:** Roles and responsibilities of project participants and the anticipated number of faculty and student participants who will benefit from the project. Name all participants that are known at the time of submission.

**What:** 1. The objectives, methods and anticipated outcomes of the project.  
2. A plan for sustained or additional institutional support of the results after the project end date.  
3. Details regarding industry, other campus, or NASA-Center partners' involvement (this is highly encouraged).  
4. Please state if this proposal is in collaboration with another proposal submission.

**When:** Provide a timeline for the proposed project listing all critical project steps.

**Where:** Campus(s) and department(s) where the HOT project will be available.

**How:** 1. State how the activity will result in the enhancement of student STEM knowledge  
2. Provide an evaluation plan that will assess and demonstrate the effectiveness of the HOT project.  
3. Specify how this proposal is aligned with NASA's Strategic Plan 2014, missions or directorates (ARMD, SMD, SOMD), which can be found at:

[https://www.nasa.gov/sites/default/files/files/FY2014\\_NASA\\_SP\\_508c.pdf](https://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf)

<http://www.nasa.gov/about/directorates/index.html>

For your reference, ARMD, SMD, SOMD directorate information is provided at:

<http://education.nasa.gov/about/nasaent/index.html>

**5. Budget and Budget Justification:** There is a 1:1 institutional match requirement. Please calculate unrecovered F&A, as applicable, as part of the institutional match. Please work with your campus Sponsored Programs Office/Business Officers to determine the institutional match and develop budgets for each year of the proposed 2-3 year project period. A budget and budget summary are required and **must be completed using the template provided at:** <https://nasa.epscorspo.nevada.edu/nevada-nasa-space-grant-consortium/for-faculty/forms-resources/>. Dollar amounts proposed with no explanation may reduce proposal acceptability.

**Budget** – A signed budget by your institutional representative (SPO, Grants, Contracts, etc.).

**Budget Justification** –Proposed travel should include the number of trips, destination, duration, etc. Student participants must be identified individually.

*All reasonable costs are allowable **with the following exceptions:***

- No foreign travel may be charged under this NVSGC award.
- No equipment may be purchased; this also includes computer equipment.
- Funds may not be used for construction or remodeling of facilities.
- Only direct support of students who are US-citizens is allowed.

**SUBMISSION GUIDELINES must be followed exactly.**

- Proposals must be uploaded as one (1) complete PDF file (above mentioned documents 1-5) by your SPO, Grants & Contract, Business office, etc.at <https://nasa.epscorspo.nevada.edu/funding/2018-hands-on-training/> by the

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deadline of: **Tuesday, August 22, 2017 at 5:00 pm, PT.**

- Incomplete proposals as well as proposals submitted after that date and time will not be reviewed.
- PDF Naming Convention: **NVSGC\_HOT\_(PI last name).**

**Evaluation and Award Criteria:** The screening and selection process will include statewide representatives from NSHE institutions and will focus on the following areas:

- Clear, concise, well-written proposal.
- Articulate and clear plans for dissemination/outreach.
- Specific goals and objectives that have measurable outcomes.
- Alignment of the proposal with NASA's national missions and goals.
- Anticipated effect on STEM education.
- Plan for engaging underrepresented groups.
- Plan for evaluating effectiveness of the proposed activities.
- Plan and potential for sustainability past the duration of the initial award.
- Student participation.
- Budget is appropriate for scope of work.

**Diversity:** Diversity and inclusion are integral to the mission success of NASA. To stay competitive in today's global marketplace, we must have "an organizational culture and work environment where the best and brightest minds – employees with varying perspectives, education levels, skills, life experiences, and backgrounds – work together to achieve excellence and realize individual and organizational potential. NASA strives educate a more diverse American public on the need for robust space and aeronautics programs and their value in advancing the U.S. scientific, security, and economic interests." **With this in mind, proposals to NSHE for Space Grant Consortium Competitions should broadly aim to enrich and engage faculty and students that reflect the demographic diversity in Nevada.**

**Reporting:** Reporting will be required for all funded proposals.

- Reporting is the responsibility of the principle investigator of each successful submission. PI's will be responsible for working with the NVSGC program office and all project participants to provide text and data through an online reporting form.
- Profiles/identifier information must be reported for all students receiving significant funding and/or significant engagement ( $\geq 160$  contact hours) for all undergraduate, graduate, and or post-doctoral student participants. An online form is provided.
- Information to be furnished in the report includes:
  - o Project participants (i.e. Faculty, students, etc...) provide titles, roles, demographics;
  - o Highlights and results of the project activities (photos of activities are encouraged);
  - o Progress of the proposed activity(ies) as requested;
  - o Indirect and Direct Participants information: You will need to capture the total number of direct and indirect attendees reached via your activity(ies). *Direct participants are individuals who are direct beneficiaries of the activity (i.e. participants*

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*and/or attendees who may have registered for the activity) indirect participants are individuals who indirectly benefit from the NASA activity and/or can only be estimated (i.e. Students participating in revised courses that are developed);*

- o Plans for program sustainability and follow-on work; and
- o Publications, presentations, papers, reports, posters etc. Your information is used for required reporting to NASA Headquarters.
- o Preparation of a project Highlight that will be submitted to NASA and posted on the NV NASA Programs website.

### Contact Information:

**Lynn Fenstermaker**

Project Director

Nevada NASA Programs

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More information about NV Space Grant may be found at:  
<https://nasa.epscorspo.nevada.edu/>