



OSGC Undergraduate Team Experience Award Program 2018-19 Call for Proposals



Release Date: September 21, 2018
Proposals Due: **November 2, 2018**

Introduction

Student teams at Oregon NASA Space Grant Consortium's (OSGC) affiliated institutions are invited to submit proposals to the OSGC Undergraduate Team Experience Award Program. The intent of the Undergraduate Team Experience Award Program is to fund student-led, research projects that develop diverse, capable, and prepared human capital in aerospace related science, technology, engineering, and mathematics (STEM) disciplines and provide a unique student team experience. Projects should be hands-on STEM based research projects supporting NASA's vision *to discover and expand knowledge for the benefit of humanity*, align with NASA's four major themes to Discover, Explore, Develop, Enable, and are relevant contributions to solving NASA Mission Directorate challenges. Preference will be given to projects leading to participation in national and international student competitions. Potential projects include, but are not limited to, the NASA Micro-g NExT Opportunity, NASA University Student Launch Initiative, AIAA Experimental Sounding Rocket Association Intercollegiate Rocket Engineering Competition, NASA Robotics Mining Competition, NASA Human Exploration Rover Challenge, and the RockOn!, RockSat-C, or RockSat-X Space Grant/NASA Wallops Programs. Participation of female and underrepresented minorities in the STEM fields is strongly encouraged; OSGC strives to make awards congruent with state demographics of 40% female and 15.9% underrepresented minorities in STEM. Please take these metrics into consideration with forming teams. Preference will be given to teams comprised of a diverse membership. Teams are encouraged to conduct K-12 outreach activities in association with their research projects.

Amount and Duration of Awards

A total of \$60,000 will be competitively awarded to student teams for the 2018-19 funding cycle. If awarded, all work must be completed by June 28, 2019.

Proposal Guidelines

- Teams may submit requests for funding up to \$12,000 per team. A minimum 1.5-to-1 match obligation is required and is non-negotiable. Please note that cost share above the minimum amount is acceptable. Matching funds include donations, discounts, team travel contributions, and faculty advisor time from non-federal sources. The criteria and procedures for the allowability and allocability of cash and non-cash contributions are governed by 2 CFR 200.306. The applicable Federal cost principles are cited in Subpart E, which is incorporated by reference.
- Funding requests may include supplies, parts, registration fees and/or lodging accommodations related to the project competition. Airline tickets may be included in the proposal; students may be required to pass an internal review panel prior to purchase of airline tickets. No equipment purchases (over \$5,000) are allowed under this program.
- Submitted proposals must include documentation of support and approval from the applicant's department and their university's or college's Sponsored Programs Office.

Please allow extra time for this process. Exceptions to application date will not be made due to proposals held up in Sponsored Programs. NOTE: Proposals submitted by OSU teams are not required to seek approval from the OSU Sponsored Programs Office.

- Expenditures for foreign travel are prohibited, nor can these expenses be applied to the project's cost share requirements.

Note: Oregon Space Grant Consortium's obligation to make awards is contingent upon availability of funds from the NASA National Space Grant College and Fellowship Program.

Eligibility

- Recognized student teams from OSGC affiliate institutions are eligible to apply.
- All students participating in the project must be enrolled at an Oregon Space Grant affiliate institutions. The list of OSGC affiliate institutions is found on the OSGC website at <http://spacegrant.oregonstate.edu/members-oregon-nasa-space-grant-consortium>.
- Participation of females, underrepresented minorities in STEM fields, and persons with disabilities is strongly encouraged; preference will be given to teams who take this into consideration.
- All students participating in the project must be U.S. citizens.

Proposal Requirements

Proposals should be single-spaced, using standard 8½ x 11 paper, in font not smaller than 12-point with a minimum of 1" margins. All pages must be numbered sequentially.

- Cover Page (Page limit: As needed): Include Project Title/Team Name, Institution, Team Lead (name, address, phone, and email), Team Faculty Advisor/Mentor (name, address, phone, and email), and Date of Submission.
- Project Description (Page limit: 3 pages): Succinctly describe research the team is proposing including methodologies and approaches. Summarize the scholarly and creative aspects of the project and how this supports your educational objectives. What are the expected outcomes from your research (e. g. senior thesis, participation in industry competition, increased understanding of research, art exhibition, etc.), and how will you achieve these outcomes?
- Synergy (Page limit: 2 pages): Describe the aspects of the project that enhance the collaborative learning experience between your team and your project advisor. Describe any leveraging opportunities the project will provide for funding or further research. Will the project lead to additional opportunities for either the team or the advisor that would not have otherwise been developed, or is the activity being used as a mechanism to fund a project such as a senior thesis?
- Aerospace Relevancy (Page limit: 1 page): Briefly describe how your research supports the mission of NASA and how it is tied to one or more of NASA's Mission Directorates. See Appendix A. Strategic Framework for NASA or for a detailed description of NASA's mission, history, and future plans, visit the NASA website at http://www.nasa.gov/about/highlights/what_does_nasa_do.html.
- Budget (Page limit: As needed): The budget must reflect a clear alignment with the content and text of the proposal. Include matching support as a separate column.
- Team lead's current résumé (Page limit: 2 pages).

- List of team members (Page limit: 2 pages): Include names of student team members and summary of demographics - number or percentages of male/female students, underrepresented minority students in STEM, students with military experience, and students with disabilities.
- Letter of support from the team's Faculty Project Advisor/Mentor (Page limit: 2 pages).

Deliverables if Awarded

- **Team Letter of Acceptance:** Team agrees to sign a letter of acceptance providing 1) the team lead name and contact info; 2) the point of contact with Space Grant if different than the team lead; 3) a complete list of all team members who are significantly involved with the project; 4) verification of team members' US citizenship; and 5) signature from the team's mentor agreeing to the accepted responsibilities and deliverables of the award.
- **Student Profile Form:** All team members who are significantly involved with the project must complete an online Student Profile Form. This information is used for reporting and longitudinal tracking purposes, to evaluate the effectiveness of NASA's higher education programs.
- **Internal Review Panel:** If your project requires travel, for example to a competition or workshop, you may be subject to an internal review panel of Space Grant and industry experts in order to gain approval for using the award funds for travel. This does not preclude you from using your cost share funds for travel. The team should allow sufficient time to schedule said review with the Oregon Space Grant office prior to making travel arrangements.
- **Final Report:** A final report describing the execution of the project, the outcome of the competition, evaluation and analysis of the results, budget expenditures including match funds, and list of publications arising from the work is due July 30th of the awarded year.
- **OSGC must be cited as a source of funding in all publications resulting from the team's work using the phrase "...supported in part through NASA/Oregon Space Grant Consortium, grant NNX15AJ14H".**
- The team agrees to notify OSGC of any changes in mailing address, email, and telephone number for contact purposes.
- The team grants permission to release and/or publish requested recipient information to NASA or other appropriate parties.
- **Student Symposium:** The team agrees to provide both a poster and presentation for participation in the annual OSGC Student Symposium, scheduled for November of the awarded year.

Submission Guidelines

Submit an electronic file of the complete package with signatures (Microsoft Word or PDF) by close of business, Friday, **November 2, 2018** via email to:

Catherine Lanier, Associate Director, OSGC Catherine.Lanier@oregonstate.edu

Schedule of Awards

Award announcements will be made the week of November 12, 2018.

Appendix A. Strategic Framework for NASA

I. NASA's Vision

To discover and expand knowledge for the benefit of humanity

II. NASA's Mission

Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and bring new knowledge and opportunities back to Earth. Support growth of the Nation's economy in space and aeronautics, increase understanding of the universe and our place in it, work with industry to improve America's aerospace technologies, and advance American leadership.

III. Four strategic themes are the foundation for the 2018 Strategic Plan and NASA's goals:

DISCOVER – Expand human knowledge through new scientific discoveries

EXPLORE – Extend human presence deeper into space and to the Moon for sustainable long-term exploration and utilization

DEVELOP – Address national challenges and catalyze economic growth

ENABLE – Optimize capabilities and operations

NASA Strategic Plan 2018:

https://www.nasa.gov/sites/default/files/atoms/files/nasa_2018_strategic_plan.pdf

IV: NASA's vision and mission draw support from the organizational structure of the Mission Directorates, each with a specific responsibility.

NASA's Mission Directorates

- [Aeronautics Research Mission Directorate \(ARMD\)](#): transforms aviation with research to dramatically reduce the environmental impact of flight, and improves aircraft and operations efficiency while maintaining safety in increasingly crowded skies. ARMD also generates innovative aviation concepts, tools, and technologies for development and maturation by the aviation community. <https://www.nasa.gov/aeroresearch>
- [Human Exploration and Operations \(HEOMD\)](#): leads human exploration in and beyond low Earth orbit by developing new transportation systems and performing scientific research to enable sustained and affordable human life outside of Earth. HEOMD also manages space communication and navigation services for the Agency and its international partners. <http://www.nasa.gov/directorates/heo/home/>
- [Science Mission Directorate \(SMD\)](#): expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth. <http://science.nasa.gov/>
- [Space Technology Mission Directorate \(STMD\)](#): pursues transformational technologies that have high potential for offsetting future mission risk, reducing cost, and advancing existing capabilities. STMD uses merit-based competition to conduct research and technology development, demonstration, and infusion of these technologies into NASA's missions and American industry. This mission directorate is being refocused as a new Exploration Research & Technology (ER&T) organization to support exploration as a primary customer. <http://www.nasa.gov/directorates/spacetech/home/index.html>.

- [The Mission Support Directorate \(MSD\)](https://www.nasa.gov/msd): enables the Agency's missions by managing institutional services and capabilities. MSD is actively reducing institutional risk to NASA's current and future missions by improving processes, stimulating efficiency, and providing consistency and uniformity across institutional standards and practices. <https://www.nasa.gov/msd>.