

# Kentucky Space Grant Consortium 2025 Request for Proposals

Announcement: RFP-25-001

Release Date: April 7, 2025

Proposals Due: Wednesday, May 7, 2025
Proposal files submitted online at
nasa.engr.uky.edu/requests-for-proposals/submit

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## **Kentucky Space Grant Consortium 2025 Request for Proposals**

### **NASA Kentucky Space Grant Consortium Overview**

The Kentucky Space Grant Consortium (KYSGC) partners with the NASA Office of STEM Engagement (OSTEM) and 29 Kentucky affiliates to support student fellowships and internships, research projects and workforce development in STEM areas of interest to NASA and Kentucky. The <u>National Space Grant College & Fellowship Program</u> (Space Grant) promotes networking and cooperation among education, industry and government at the local, state and Federal levels. Recruitment and training of US citizens for careers in aerospace science and technology is a national priority. KYSGC supports Kentucky students, faculty and educational outreach through funding programs in this RFP that address the national priorities of NASA and state goals of Kentucky.

### 2025 Request for Proposals

NASA KY invites proposal submissions from KY Space Grant Consortium affiliates for the following programs:

- Graduate Fellowships (GF)
- Research Experience for Undergraduates (REU)
- Research Initiation Awards (RIA)

- Team Projects (TP)
- Affiliate Program Grants (APG)
- Mini-Grants (MG)

Program Descriptions	See the following pages
Period of Performance	Award periods of up to 12 months, beginning July 2025 or later
Cost-Share	Cost-share requirement varies by funding program
Number of Awards	Number of awards per program category is determined by size of individual awards and available program funding levels. Approximately 25 awards expected.
Eligibility	Proposals will be accepted from KYSGC affiliate institutions. US Citizenship is required for students in GF and REU programs. Otherwise, US citizenship is not required.
Submission limit	Pls are limited to 1 proposal submission per program category. There is no limit on collaboration as a Co-I.

### **Proposal Submission Instructions**

Submit proposals as PDF files via the NASA KY website. Proposal filenames should begin with the PI last name and the Program (GF, REU, etc). Proposal forms are available at <a href="mailto:nasa.engr.uky.edu/requests-for-proposals/forms">nasa.engr.uky.edu/requests-for-proposals/forms</a>. Proposals should include:

1) SIGNED COVER PAGE: Digital signatures are acceptable.
2) BUDGET: Complete the NASA KY budget form and include budget narrative with detailed justification of requested support.
<ul> <li>3) PROJECT DESCRIPTION:</li> <li>12-point font, 1-inch margins, single spaced</li> </ul>
<ul> <li>5-page limit - See specific program guidelines for required content</li> </ul>
4) ADDITIONAL PAGES
<ul> <li>See specific program guidelines on following pages for required additional pages</li> </ul>
5) STUDENT INFORMATION FORM (SIF): Include with GF and REU projects

Submit proposals online at <u>nasa.engr.uky.edu</u> through Wednesday, May 7, 2025

Submissions prior to the deadline are encouraged



## **Kentucky Space Grant Consortium Proposal Guidelines**

### **General Guidelines**

Proposals that omit required materials or exceed page limits may be rejected without review. Proposals from PIs who have not completed reporting requirements or proposed work on prior NASA Kentucky awards may be rejected without review. Submitted proposals must be consistent with the PI institution's policies and practices (e.g. definition of equipment, stipend, etc). Proposers should contact NASA KY about allowable costs.

- Capital Equipment and Facilities Construction are not eligible as expenses or cost-share.
- Travel funds are restricted to domestic travel only and must be related to the project.
- Cost-share must be from non-Federal sources and reported concurrent with project expenses.
- Letters of support must be included from cost-share sources and partners participating in the project

Performance Period: Project activities can be conducted over a 12-month period, beginning as early as July 2025.

**F&A Rates:** Space Grant is primarily a higher education workforce development program and proposals should align with the intent of the program, i.e., projects that recruit and train Kentucky students for careers in aerospace-related science and technology or associated fields. In line with this program, proposing universities and colleges should use their <u>"other sponsored projects"</u> or <u>training F&A rate</u> if one exists, instead of a full research F&A rate. University of Kentucky on-campus proposers should use the <u>34% "Other"</u> F&A rate. A 15% <u>de minimis</u> indirect rate may be allowable for institutions without an established Federal F&A rate. <u>No F&A is permitted on NIFs awards (GF, REU)</u> as directed by the NASA Office of STEM Engagement. Some projects may be funded by Kentucky state matching funds, which do not allow for F&A (to be determined at time of award).

**Eligibility for Kentucky Space Grant Awards:** Proposals will be accepted from NASA Kentucky Space Grant Consortium Affiliate Institutions. Affiliate Institutions are listed on the following pages and the <u>NASA KY website</u>. Reporting on current and prior awards must be up-to-date to be eligible for funding. PIs may submit 1 proposal per each program category.

- Academic affiliates of Kentucky Space Grant Consortium are eligible for all programs.
- Non-profit and Industry affiliates can participate in partnership with Academic affiliates or can propose directly involving students of various educational levels to MG, APG, TP and REU programs.
- Kentucky commercial and educational institutions (including K-12) who are not affiliates can participate
  in projects proposed by KY Space Grant Consortium affiliate institutions.

**Citizenship**: U.S. citizenship is required for students funded under GF and REU programs. There is no citizenship restriction for other programs. There is no citizenship restriction for faculty mentors or cost-share.

**Cost-Share:** The NASA Office of STEM Engagement (OSTEM) requires significant cost-share of all Space Grant consortia, therefore some NASA Kentucky Space Grant Consortium programs also require cost-share that contributes to this NASA requirement. Voluntary match is accepted for all programs that helps contribute to NASA match requirements for KY Space Grant Consortium cost share. Cost-share can be matching funds or in-kind and must be from non-Federal sources and not used as cost-share on other projects. Cost-share from non-US citizen faculty effort is allowable. Cost-share must be reported concurrently with expenses.

Proposals that do not meet the cost-share requirement will still be considered. Regional and KCTCS institutions are not required to commit cost-share for Team Projects (TP) or Research Experience for Undergraduate (REU) projects under this RFP (2025 funding year).



### **General Proposal Requirements**

<u>Participation and mentorship</u>: All proposals should describe plans to engage and mentor participants and encourage active participation. GF, REU and TP must demonstrate plans for significant faculty mentorship of student participants and should describe intended outcomes of mentorship, such as thesis, research papers, capstone design. etc.

<u>Communications</u>: Proposals must demonstrate plans to extend the impact and reach of the project through communications and/or featured media about project activities, including project opportunities, progress and results to be shared with the public and/or academic/educational community.

<u>KYSGC alignment</u>: Proposals must describe how the proposed project and its activities align with goals, strategic themes and program objectives of the Kentucky Space Grant Consortium.

NASA alignment: All proposals should indicate which NASA Mission Directorate(s) their project is aligned with, either directly or linked to a KYSGC Strategic Theme. Research projects (GF, REU, RIA) must indicate alignment with NASA technical objectives or those of related organizations (including JPL, Space Telescope Science Institute, National Space Biomedical Institute, CASIS and others). Resources for NASA technical objectives are available on the NASA KY EPSCOR web page, including NASA Center Core Competencies, NASA Technology Taxonomy, and FY2025 NASA EPSCOR Focus Areas. NASA points of contact are available in these documents. In addition, proposers can review NASA Techport and NASA STI to survey NASA research that has been done in their area of interest.

Logic Model: All proposals must include a logic model, completed according to guidance in Appendix A.

<u>Support letters</u>: Letters of support should be included that describe committed support for cost-share or any resource not under direct control of the project PI. For example, contributions from a project partner. Letters of support should indicate collaboration or participation with the project; letters endorsing just the value or merit of the project without acknowledging involvement do not qualify as letters of support.

GF and RIA projects may choose to omit NASA support letters and instead submit support letters from collaborators of Kentucky-based, aerospace-related research partnerships; for example, in partnership with Kentucky airports, logistics carriers, data science companies, electric vehicle manufacturers, multiple KY universities, or similar collaborations. These proposals should demonstrate strong partnership with the KY collaborator, and also identify alignment with NASA goals and the potential for future NASA collaboration or follow-on funding. A limited number of GF and RIA projects without NASA support letters may be selected.

#### **KYSGC Policies**

**Cost reimbursement:** Subawards made under this RFP must invoice for expenses at least quarterly via the University of Kentucky Online Subaward Invoicing system, with a courtesy copy to nasa.invoices@uky.edu. Supporting documentation must be submitted for all invoiced expenses and cost-share. All subaward invoices must show appropriate documentation of cost share in proportion to expenses.

**Renewal Proposals:** No renewal projects are allowed to be proposed under this RFP. KYSGC funding is beginning a new prime award with NASA and all previous projects were funded under an expiring cooperative agreement.

**Performance Reporting**: Principal Investigators (PIs) are required to report project progress and results: 1) during the award period, 2) within 30 days of the end of the award (final technical report), and 3) annual updates postaward. Reporting must be current in order to meet NASA and state annual reporting cycles. Program evaluation surveys may be required during the course of the project.



**Project Evaluation and Longitudinal Tracking:** All students receiving support must be reported to KYSGC. Participants may be requested to complete requests related to program evaluation, longitudinal tracking, and registration of a NASA participant profile. Any student receiving a combination of \$3,000 or more in NASA funding and/or participating 160 hours or more on NASA-supported projects will be longitudinally tracked by KYSGC for three years using information provided on the NASA KY Student Information Form (SIF). Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 3-year period.

**Attribution:** Publications, posters, and presentations resulting from awards made under this RFP should include an attribution statement acknowledging KYSGC support. Example: "The material is based upon work supported by NASA and the Kentucky Space Grant Consortium." (contact NASA KY for specific sponsored award number)

### **Proposal Review Process**

Proposals will be funded according to available funding levels for each program. Reviewers will recommend proposals for funding to the NASA KY Director. Reviewers may include NASA KY Space Grant Affiliate representatives and external content specialists. Program objectives, past reporting, and accomplishments may be considered in evaluation of proposals. Proposals will be rated based on the following criteria. See Appendix B for detailed criteria.

- MERIT: Intrinsic merit of the proposed research or project activities (40%)
- RELEVANCE: Technical relevance of proposed activities to NASA and Kentucky priorities; programmatic alignment with NASA and KYSGC objectives (30%)
- FOLLOW-ON: Specific plans to expand project reach and impact, pursue follow-on funding, and further develop project collaborations (10%)
- MANAGEMENT: Reliable and effective plans for project management, including schedule (10%)
- BUDGET: Reasonableness and detail of budget narrative and effective use of funds (10%)

Additional information and FAQ: <a href="mailto:nasa.engr.uky.edu/space-grant">nasa.engr.uky.edu/space-grant</a>

Note: Program requirements and policies listed in this RFP are subject to change based on sponsor directives



## **Summary of Kentucky Space Grant Consortium Programs**

Award Program Category <sup>1</sup>	Category <sup>1</sup> Acronym Program Description		US Citizenship Required <sup>2</sup>	Max Award Request	Indirect Costs Allowed	Required Cost- Share (\$CS:\$Award)	Level of NASA Alignment
Graduate Fellowships	GF		Yes	\$50,000	No	1:1	Collaboration <sup>3</sup>
Research Experience for Undergraduates	Experience for REU travel for undergrad students to		Yes	\$10,000	No	0.5:1 / None <sup>6</sup>	Use of NASA resources <sup>4</sup>
Salary, materials, travel and other support for student teams Team Projects  TP participating in NASA-related competitions, research or design projects		No	\$17,500	Yes	0.5:1 / None <sup>6</sup>	Alignment with NASA/KYSGC objectives <sup>5</sup>	
Research Initiation Awards  RIA Faculty directed research to explore NASA collaborations at NASA-aligned research topics		explore NASA collaborations and	No	\$35,000	Yes	1:1	Collaboration <sup>3</sup>
Mini-Grants MG college o targeted		Pre-college, science center and college outreach activities, targeted student activities and teacher PD	No	\$10,000	Yes	None required	Alignment with NASA/KYSGC objectives <sup>5</sup>
Affiliate Program Grants  APG  Pre-college, science center and college projects aligned with KYSGC Strategic Themes or NASA Space Grant objectives		No	\$25,000	Yes	1:1	Alignment with NASA/KYSGC objectives <sup>5</sup>	

### Notes:

<sup>&</sup>lt;sup>1</sup> PIs are limited to one (1) proposal submission per program category. No limit for collaboration as a Co-I.

<sup>&</sup>lt;sup>2</sup> **US Citizenship** is required for students receiving direct support under NIF awards (GF, REU). Citizenship is not required for other programs.

<sup>&</sup>lt;sup>3</sup> Letter of support (preferred) or communication (such as email) required that describes NASA participation, partnership or collaboration with the project. Letters endorsing value or merit of the project without acknowledging involvement or support do not qualify. (See NASA KY FAQ for more information.) Letters of support may be from NASA or related organizations including Institutes/Laboratories such as JPL, Space Telescope Science Institute, National Space Biomedical Institute, CASIS, etc. A limited number of proposals for KY Research Partnerships may be selected which do not require NASA-affiliated letters of support.

<sup>&</sup>lt;sup>4</sup> NASA resources may include: facilities, collaborators, datasets, modeling, source code, curricula, images, citizen science projects, or other materials developed and made available to the public or researchers by NASA or NASA-supported projects. Links to NASA research studies are available through NASA STI (<a href="https://sti.nasa.gov/">https://sti.nasa.gov/</a>) and NASA Techport (<a href="https://sti.nasa.gov/home">https://sti.nasa.gov/home</a>).

<sup>&</sup>lt;sup>5</sup> See following sections for description of **NASA and KYSGC objectives**.

<sup>&</sup>lt;sup>6</sup> Match requirement: Match requirement for TP and REU is waived for regional and KCTCS institutions.



## **Kentucky Space Grant Consortium Affiliate Members**

The Kentucky Space Grant Consortium consists of 18 academic affiliates and 11 non-academic affiliates across the Commonwealth. Affiliate institutions and representatives are listed below.

### **Academic Affiliates**

Asbury University	Duk Lee	duk.lee@asbury.edu
Ashland CTC	Mark Riggs	mark.riggs@kctcs.edu
Bellarmine University	Akhtar Mahmood	amahmood@bellarmine.edu
Berea College	Wei Wu	wuw@berea.edu
Bluegrass CTC	Tracy Knowles	tracy.knowles@kctcs.edu
Centre College	James Kelly	james.kelly@centre.edu
Eastern Kentucky University	Anthony Blose	anthony.blose@eku.edu
Hopkinsville CC	Sherry McCormack	smccormack0001@kctcs.edu
Kentucky State University	Alexander Lai	alexander.Lai@kysu.edu
Morehead State University	Tom Pannuti	t.pannuti@moreheadstate.edu
Murray State University	Aleck Leedy	aleedy@murraystate.edu
Northern Kentucky University	Nathan De Lee	deleenm@nku.edu
Owensboro CTC	Shawn Payne	shawn.payne@kctcs.edu
Thomas More University	Austin Hinkel	hinkela@thomasmore.edu
University of Kentucky	Janet Lumpp	jklumpp@uky.edu
University of Louisville	John Kielkopf	john.kielkopf@louisville.edu
West Kentucky CTC / Challenger Center	Mellisa Duncan	mellisa.duncan@kctcs.edu
Western Kentucky University	Mike Carini	mike.carini@wku.edu

### **Science Center and STEM Education Affiliates**

Aviation Museum of Kentucky	Tina Nance	tina.nance@aviationky.org
Challenger Learning Center of KY	Alivia Sturgill	asturgill0081@kctcs.edu
Kentucky FIRST Robotics	Kelli Gowan	kelli@kyfirstrobotics.org
Kentucky Science Center	Veronica Greenwell	Veronica.Greenwell@louisvilleky.gov
Living Arts and Science Center	Jeanette Tesmer	jtesmer@lasclex.org
Sky Science Festival, Inc.	Richard Gelderman	rgelderman@me.com

### **Industry Affiliates**

Faradine Systems	Jason Rexroat	jason@faradinesystems.com
Innoviator, LLC	Alan Beaven	alan@innoviator.com
Kentucky Science and Technology Corporation	Terry Samuel	tsamuel@kstc.com
Million Concepts	Chase Million	chase@millionconcepts.com
Space Tango, Inc.	Twyman Clements	tclements@spacetango.com



## **Programmatic Objectives for KYSGC Funded Projects**

Proposers should align projects with goals and objectives of the NASA Kentucky Space Grant Consortium, the National Space Grant College and Fellowship Program, NASA missions and research, as well as educational and workforce training interests of their own institution and the state of Kentucky. See <a href="KYSGC Executive Summary">KYSGC Executive Summary</a> and the following for more information on NASA and KYSGC alignment.

Proposals shall address how the proposed project and its activities align with:

- 1. Goals and program objectives of the Kentucky Space Grant Consortium
- 2. One or more KYSGC strategic themes and/or research priorities of NASA Mission Directorates
- 3. Priorities of their own institution and/or state priorities of Kentucky

### **National Space Grant Program Goals and Objectives**

The National Space Grant College & Fellowship Program ("Space Grant") was initiated by Congress in 1987 to help maintain America's pre-eminence in aerospace science and technology. State-based consortia, consisting of universities and other organizations involved in aerospace activities, form a national network that includes over 1,000 affiliates from universities, colleges, industry, museums, science centers, and state and local agencies. These institutions are working to expand opportunities for Americans to understand and participate in NASA's aeronautics and space projects by supporting and enhancing science and engineering education and research. Lead institutions provide leadership and support for program objectives in their state and nationally.

Goals for the NASA Space Grant program are to:

- Create unique opportunities for students to contribute to NASA's work in exploration and discovery.
- Build a future STEM workforce by engaging students in authentic learning experiences with NASA's people, content, and facilities.
- Attract students to STEM through learning opportunities that spark interest and provide connections to NASA's mission and work.

Kentucky Space Grant Consortium supports national Space Grant objectives via goals, program elements and strategic themes described below, to help contribute outcomes aligned with priorities of the NASA Office of STEM Engagement and interests of the state of Kentucky.

## **Kentucky Space Grant Consortium Overview**

**Kentucky Space Grant Consortium (KYSGC)** is led by the University of Kentucky (UK) and consists of 29 affiliate members, including 18 Kentucky higher education affiliates (universities, colleges, community colleges), 5 industry partners, and 6 STEM educational organizations. KYSGC programs engage participants in STEM education and training primarily at the post-secondary level, including developmental pipeline pre-college programs. Participation of the state's students and faculty, multiple academic disciplines and institutional types is essential and integral to success. KYSGC is administered by the UK Department of Mechanical and Aerospace Engineering.

The primary goal of Kentucky Space Grant Consortium is to serve the needs of its stakeholders, develop expertise and expand capacity for aeronautics, space and science research and education in Kentucky. Three strategic themes chosen by the Consortium to help define KYSGC priority areas and align KYSGC projects with NASA Mission Directorates are *Data + Science*, *Earth + Space*, and *Aerospace + Innovation*. Special focus areas to increase program impact in Kentucky include supporting mentorship and local focus, participation of students from rural and urban areas, and partnerships among Kentucky institutions. A fundamental premise of KYSGC programs is that STEM education should inspire and recruit talent from all student populations to engage and enable innovative contributions to NASA and the National Space Grant College and Fellowship Program.



### **Kentucky Space Grant Consortium Goals**

KYSGC contributes to STEM education in Kentucky by preparing students and teachers; maintaining a network of universities in Kentucky that contribute to aeronautics and space; encouraging collaborations among academia, industry, NASA and government agencies; supporting aerospace training, research and public outreach; and recruiting and training U.S. citizens, encouraging participation from all students. Consortium goals include:

- 1) Effective Learning Opportunities: Facilitate unique opportunities to attract and retain Kentucky students, enhance STEM education effectiveness in aerospace-related disciplines, inform the public, and engage with NASA and Space Grant programming.
- 2) Workforce Training: Advance Kentucky students toward STEM degree and career goals, including hands-on design, research and teamwork experience, and contribute to NASA missions and work, KY R&D, and the future workforce.
- 3) Research & Development: Provide crucial support for Kentucky faculty to engage in early-stage NASA-aligned research, mentor students, increase NASA collaborations, and pursue larger research awards that will expand the state's R&D enterprise.

### **KYSGC Strategic Themes**

Kentucky Space Grant Consortium strategic themes help to communicate aerospace-related priorities and opportunities across the Commonwealth to students, faculty and organizations engaging with NASA and Kentucky's growing aerospace industry sector. Affiliates annually propose for KYSGC funding and are competitively selected to conduct scientific research or educational projects of value to NASA's missions and work, as expressed by national NASA and Space Grant program objectives, as well as Kentucky and KYSGC program objectives, including technical focus areas expressed in the following strategic themes. See the <a href="KYSGC Executive Summary">KYSGC Executive Summary</a> for detail (pgs. 4-6):

- 1) Data + Science (Multidisciplinary Data Science)
- 2) Earth + Space (Earth & Space Discovery)
- 3) Aerospace + Innovation (KY Engineering, Technology & Workforce Development)

### **KYSGC Programmatic Focus Areas**

Special focus areas to improve program impact in Kentucky include mentorship and local focus, participation of students from rural and urban areas, and partnerships among Kentucky institutions. See the <u>KYSGC Executive Summary</u> for detail about programmatic focus areas (pg. 4):

### **Kentucky Space Grant Consortium Funding Programs**

KYSGC projects are competitively selected annually from proposals conceived and led by affiliate members under guidelines of KYSGC funding programs designed to serve NASA and Consortium objectives. Project topics and objectives are flexible, allowing affiliates to incorporate their own priorities and expertise, and address needs of constituents and stakeholders in their region. Individual award amounts vary by program, ranging from seed funding to significant student support. Innovation and collaboration opportunities are highly encouraged.

Links to NASA and KYSGC opportunities and a listing of previously funded projects are available on the NASA KY website at nasakentucky.org.

### KYSGC Program Area 1: NASA Internships and Fellowships (NIF)

Graduate Fellowship (GF) and Research Experience for Undergraduates (REU) programs (following pgs. 11-12)



**GF** and **REU** programs are designed to support independently conceived or designed research by highly qualified students, mentored by faculty advisors in disciplines needed to help advance NASA's missions and serving to advance student knowledge and provide experience working in scientific and R&D settings. Projects should identify and align with research priorities and technical needs of NASA Mission Directorates.

### **KYSGC Program Area 2: Higher Education R&D**

Team Project (TP) and Research Initiation Award (RIA) programs (pgs. 13-14)

Funding in the Higher Education program category is designed to support competitive awards in multiple areas of resource needs for KYSGC affiliates. **TP** support faculty-mentored participation in team engineering competitions, capstone research/design projects, and flight opportunities. **RIA** provide support for early-stage NASA-aligned research as an entry point to sustained NASA research collaboration, led by faculty who are establishing new research programs (early-career) or exploring new research directions into topics closely aligned with NASA priorities.

### **KYSGC Program Area 3: STEM Experience and Education**

Affiliate Program Grants (APG) and Mini-Grant (MG) programs (pgs. 15-16).

Education and outreach program elements include objectives to broaden the impact of KYSGC activities with support for projects that help fill the higher education pipeline with well-prepared, inspired and engaged students, motivated to pursue their degrees. **APG** support projects with sustainable, effective, evidence-based approaches from KYSGC affiliate partners experienced in educational pre-college or higher education program development. **MG** support pilot projects to develop program concepts, demonstrate outcomes and evidence-based educational practices, and make efforts toward projects that can be developed into programs of larger scope.

## **NASA Research, Technology and STEM Priorities**

The NASA Office of STEM Engagement (OSTEM) identifies research and technology priorities based on alignment with NASA's Mission Directorates. The Aeronautics Research Mission Directorate (ARMD), Exploration Systems Development Mission Directorate (ESDMD), Science Mission Directorate (SMD), Space Operations Mission Directorate (SOMD), and the Space Technology Mission Directorate (STMD) identify their priorities on the NASA website (<a href="mailto:nasa.gov/about/directorates/index.html">nasa.gov/about/directorates/index.html</a>). For information on NASA's missions, research and educational objectives, please visit <a href="mailto:nasa.gov/nasa-missions/">nasa.gov/nasa-missions/</a> and the following websites:

- Aeronautics Research (ARMD) (aeronautics.nasa.gov)
- Exploration Systems Development (ESDMD) (nasa.gov/directorates/exploration-systems-development)
- Science (SMD) (<u>science.nasa.gov</u>)
- Space Operations (SOMD) (nasa.gov/directorates/space-operations-mission-directorate)
- Space Technology (STMD) (nasa.gov/directorates/spacetech/home/index.html)
- NSPIRES (<u>nspires.nasaprs.com/external/</u>)
- NASA Proposal Resources (nasa.gov/general/grants-policy-and-compliance-team/#section-2)
- NASA Space Grant (nasa.gov/learning-resources/national-space-grant-college-and-fellowship-project/)
- NASA EPSCoR (nasa.gov/learning-resources/established-program-to-stimulate-competitive-research/)
- NASA Office of STEM Engagement (OSTEM) (nasa.gov/stem)
- NASA OSTEM Higher Education (<u>nasa.gov/stem/highereducation/index.html</u>)
- NASA SMD Science Education (science.nasa.gov/learn)
- NASA STEM Gateway (<u>stemgateway.nasa.gov/public/s/</u>)



### NASA Mission Directorate (MD) Descriptions

Aeronautics Research Mission Directorate (ARMD): NASA aeronautics has made decades of contributions to aviation. Every U.S. commercial aircraft and U.S. air traffic control tower has NASA-developed technology on board that helps improve efficiency and maintain safety. Research conducted by ARMD directly benefits today's air transportation system, the aviation industry, and the passengers and businesses who rely on aviation every day. ARMD scientists, engineers, programmers, test pilots, facilities managers and strategic planners are focused on aviation's future. They design, develop and test advanced technologies that will make aviation much more environmentally friendly, maintain safety in more crowded skies, and ultimately transform the way we fly. NASA's aeronautics research is primarily conducted at four NASA centers: Ames Research Center and Armstrong Flight Research Center in California, Glenn Research Center in Ohio, and Langley Research Center in Virginia.

Exploration Systems Development Mission Directorate (ESDMD): The Exploration Systems Development Mission Directorate defines and manages systems development for programs critical to the NASA's Artemis program and planning for NASA's Moon to Mars exploration approach in an integrated manner. ESDMD manages the human exploration system development for lunar orbital, lunar surface, and Mars exploration. ESDMD leads the human aspects of the Artemis activities as well as the integration of science into the human system elements. ESDMD is responsible for development of the lunar and Mars architectures. Programs in the mission directorate include Orion, Space Launch System, Exploration Ground Systems, Gateway, Human Landing System, and Extravehicular Activity (xEVA) and Human Surface Mobility. ESDMD duties were previously managed under the Human Exploration and Operations Mission Directorate (HEOMD).

Science Mission Directorate (SMD): NASA's Science Mission Directorate (SMD) is responsible for directing and overseeing the nation's space research program in Earth and space science. The Directorate engages the external and internal science community to define and prioritize science questions and seeks to expand the frontiers of four broad scientific pursuits: Earth Science, Planetary Science, Heliophysics, and Astrophysics. Through a variety of robotic observatory and explorer craft, and through sponsored research, the Directorate provides virtual human access to the farthest reaches of space and time, as well as practical information about changes on our home planet.

Space Operations Mission Directorate (SOMD): NASA's Space Operations Mission Directorate (SOMD) is responsible for enabling sustained human exploration missions and operations in our solar system. SOMD manages NASA's current and future space operations in and beyond low-Earth orbit (LEO), including commercial launch services to the International Space Station. SOMD operates and maintains exploration systems, develops and operates space transportation systems, and performs broad scientific research on orbit. In addition, SOMD is responsible for managing the space transportation services for NASA and NASA-sponsored payloads that require orbital launch, and the agency's space communications and navigation services supporting all NASA's space systems currently in orbit. SOMD duties were previously managed under the Human Exploration and Operations Mission Directorate (HEOMD).

Space Technology Mission Directorate (STMD): Technology drives exploration to the Moon, Mars and beyond. NASA's Space Technology Mission Directorate (STMD) develops transformative space technologies to enable future missions. As NASA embarks on its next era of exploration, STMD is focused on advancing technologies and testing new capabilities at the Moon that will be critical for crewed missions to Mars. In many ways, the Moon will serve as a technology testbed and proving ground for Mars. STMD engages and inspires thousands of entrepreneurs, researchers and innovators, creating a community of America's best and brightest working on the nation's toughest challenges. Space technology research and development take place at NASA centers, universities and national labs. STMD leverages partnerships with other government agencies as well as commercial and international partners. Our current technology portfolio spans a range of discipline areas and technology readiness levels. Investments in revolutionary, American-made space technologies provide solutions on Earth and in space. NASA technology turns up in nearly every corner of modern life. We make our space tech available to commercial companies to generate real world benefits – everything from creating jobs to saving lives.



## NASA Kentucky Space Grant Consortium Graduate Fellowships (GF)

## KY Space Grant Consortium – Graduate Fellowships - \$50,000

**Description: KYSGC Graduate Fellowships (GF)** recognize and support graduate students addressing advanced research and engineering challenges related to NASA's strategic goals. Research advisors at Affiliate Institutions may apply for a fellowship for a specific graduate student. Research projects must emphasize connections to NASA technical interests and KYSGC goals, address specific goals for the fellowship year, and contribute to program metrics including publications, presentations, and student advancement in disciplines of interest to NASA.

**Eligibility:** Proposals will be accepted from Principal Investigators at KYSGC Affiliate Institutions to mentor a Masters or Doctoral student in NASA-aligned disciplines. US citizenship is required for the student.

**Requirements:** The proposed research topic must utilize NASA (or related) resources and identify alignment with NASA technical priorities addressed by one or more NASA Mission Directorates. Letter of support (preferred) or email required describing NASA (or related) involvement with the project. Kentucky research partnerships may choose instead to submit a support letter from KY-based collaborators (limited selection). Connections with Kentucky companies are viewed favorably. Proposals should demonstrate significant mentorship from the faculty research advisor for student training to produce outcomes of tangible results. See Proposal Guidelines (pgs. 1-10).

**Proposal Content:** All proposals should utilize the NASA KY cover sheet and budget form, followed by the project description and additional pages. See Submission Instructions (pg. 1)

### 1) Project Description:

- No more than 5 pages including tables and figures describing: Abstract (200-300 words), project summary, alignment with NASA and KYSGC goals, specific goals for the funded period that align with research priorities of NASA Mission Directorates, mentorship plan, schedule, milestones, anticipated outcomes, plans to communicate project activities and results, and student's progress toward degree.
- Additional pages included after 5-page project description:
  - Logic Model (see App. A)
  - Bibliography/References as needed
  - Statement by the student relating the project to their career goals (1 page)
  - Student's resume and unofficial transcript
  - o Letter of recommendation from a faculty member other than the research advisor
  - Research Advisor's 2-page CV
  - o List of Current and Pending Awards: Award title, sponsor, dates, amount, commitment
  - Executive summary describing results of prior NASA KY funding (1-2 pages)
  - Letter of support from a NASA (or related) or KY collaborator (See above and NASA KY FAQ)
- 2) Student Information Form (SIF): Completed by the student applicant and uploaded with proposal files.

Budget Guidelines: Proposers may request up to \$50,000 to support one student for up to a 12-month period. The funding is dedicated only to student support, including student salary or stipend consistent with recipient institution policies and practices, fringe benefits, tuition and fees, materials and supplies, and student domestic travel to attend conferences or technical meetings. Required 1:1 (\$CS:\$Award) cost-share must be committed by the proposing institution. Indirect costs are not allowed, but unrecovered indirect costs on direct cost-share may be included as cost-share. Non-citizen faculty effort may be used as cost-share. Budget justification should provide adequate detail and demonstrate effective use of funds aligned with the proposed project. All proposed costs and cost-share should be fully described in the budget justification.

**Project Evaluation and Longitudinal Tracking of Students:** All students receiving compensation must be reported to KYSGC. Projects must adhere to project evaluation policies described on pg. 4.



## NASA Kentucky Space Grant Consortium Research Experience for Undergraduates (REU)

## KY Space Grant Consortium – Research Experience for Undergraduates - \$10,000

**Description: KYSGC Research Experience for Undergraduates (REU)** recognize and support undergraduate students addressing scientific and engineering challenges related to NASA's strategic goals. Research advisors at Affiliate Institutions may apply to support a specific undergraduate student to conduct 1-on-1 mentored research during the academic year or summer period. Research projects must emphasize connections to NASA and KYSGC, address specific goals for the project period, and contribute to program metrics including publications, presentations and student advancement in disciplines of interest to NASA. Projects should describe plans to use NASA resources (or related) and how these resources will be accessed (e.g., public domain, collaborator, etc).

**Eligibility:** Proposals will be accepted from Principal Investigators at KYSGC Affiliate Institutions on behalf of undergraduate students in NASA-aligned disciplines. US citizenship is required for the student.

**Requirements:** The proposed research topic must utilize NASA (or related) resources and identify alignment with NASA technical priorities addressed by one or more NASA Mission Directorates. Connections with Kentucky companies are viewed favorably. Proposals should demonstrate significant mentorship from the faculty advisor for student training to produce outcomes of tangible results. <u>See Proposal Guidelines</u> (pgs. 1-10).

**Proposal Content:** All proposals should utilize the NASA KY cover sheet and budget form, followed by the project description and additional pages. See Submission Instructions (pg. 1).

### 1) Project Description:

- No more than 5 pages including tables and figures describing: Abstract (200-300 words), project summary, alignment with NASA and KYSGC goals, specific goals for the funded period that align with research priorities of NASA Mission Directorates, description of NASA resources (or related) to be used, mentorship plan, schedule, milestones, anticipated outcomes, plans to communicate project activities and results and student progress toward degree.
- Additional pages included after 5-page project description
  - Logic Model (see App. A)
  - Bibliography/References as needed
  - Statement by the student relating the project to their career goals (not to exceed 1 page)
  - Student's resume and unofficial transcript
  - Letter of recommendation (from a faculty member, employer or educator)
  - Research Advisor's 2-page CV
  - Executive summary describing results of prior NASA KY funding (1-2 pages)
  - Letter of support from collaborator (NASA or related) if applicable (See above and NASA KY FAQ)
- 2) Student Information Form (SIF): Completed by the student applicant and uploaded with proposal files.

**Budget Guidelines:** Proposers may request up to \$10,000 to support one student for up to a 12-month period. The funding is dedicated only to student support and should primarily budget for student stipend or salary. Funding can also include fringe benefits, tuition and fees, materials and supplies up to \$1,200 and student domestic travel up to \$1,200 for fieldwork or to attend a conference or technical meeting. Required cost-share of at least 0.5:1 (\$CS:\$Award) must be committed by the proposing institution. Indirect costs are *not* allowed, but unrecovered indirect costs on direct cost-share may be included as cost-share. Non-citizen faculty effort may be used as cost-share. Budget justification should provide adequate detail and demonstrate effective use of funds aligned with the proposed project. All proposed costs and cost-share should be fully described in the budget justification. Cost-share requirements are waived for regional and KCTCS institutions.

**Project Evaluation and Longitudinal Tracking of Students:** All students receiving compensation must be reported to KYSGC. Projects must adhere to project evaluation policies described on pg. 4.



## NASA Kentucky Space Grant Consortium Team Projects (TP)

## KY Space Grant Consortium – Team Projects - \$17,500

**Description: KYSGC Team Project (TP)** awards provide support for higher education student groups participating in competitions, research or design projects offered by NASA, engineering and science organizations, or faculty. Teams will be faculty-mentored and focus on authentic, hands-on, student experiences in science and engineering disciplines, emphasizing active participation by students in experiential learning and real-life problem-solving in organized competitions, capstone research/design, and flight opportunities, towards STEM degree and career goals. Projects are encouraged to include efforts to train the next group of project leaders and to develop fundraising approaches that help sustain the team in future years. Teams are nominated and mentored by faculty.

Example competitions include but are not limited to: NASA Lunabotics Challenge, NASA Student Launch Challenge, AIAA Design/Build/Fly, AUVSI, RockOn, and entrepreneurial pitch competitions. Examples are available at <a href="masa.engr.uky.edu/space-grant">nasa.engr.uky.edu/space-grant</a>.

**Eligibility:** Proposals will be accepted from Principal Investigators at KYSGC Affiliate Institutions on behalf of student teams or clubs in NASA-aligned disciplines. US citizenship is not required.

**Requirements:** The proposed activity must be aligned with KYSGC objectives and NASA STEM priorities. Connections with Kentucky companies are viewed favorably. The proposal should support at least 5 students and demonstrate significant mentorship from the faculty advisor to manage tangible results. Proposals must demonstrate plans to recruit and engage participants. See Proposal Guidelines (pgs. 1-10).

**Proposal Content:** All proposals should utilize the NASA KY cover sheet and budget form, followed by the project description and additional pages. <u>See Submission Instructions</u> (pg. 1).

### 1) Project Description:

- No more than 5 pages including tables and figures describing: Abstract (200-300 words), project summary, alignment with NASA, NASA Mission Directorates, and KYSGC goals, specific goals for the funded period, mentorship plan, schedule, milestones, anticipated outcomes, plans to communicate project opportunities, activities and results, prior experience with team competitions, list of competition requirements and deadlines, and plans to pursue sustained or supplemental funding.
- Additional pages included after 5-page project description
  - Logic Model (see App. A)
  - o Bibliography / References / Supplemental Documents as needed
  - Faculty Advisor's 2-page CV
  - Executive summary describing results of prior NASA KY funding (1-2 pages)
  - Letter of support from collaborator (if applicable)

**Budget Guidelines:** Proposers may request up to \$17,500 per team for up to a 12-month period. Budgets should support teams of at least 5 students. Allowable costs include student stipend or salary, fringe benefits, registration fees, materials and supplies, shipping costs to/from competition or research site, and student team member domestic travel. Domestic travel and limited salary support for faculty advisers may also be included. Required cost-share of at least 0.5:1 (\$CS:\$Award) must be committed by the proposing institution. Unrecovered indirect costs on direct cost-share may be included as cost-share. Non-citizen faculty effort may be used as cost-share. Budget justification should provide adequate detail and demonstrate effective use of funds aligned with the proposed project. All proposed costs and cost-share should be fully described in the budget justification. Cost-share requirements are waived for regional and KCTCS institutions.

**Project Evaluation and Longitudinal Tracking of Students:** All students receiving compensation must be reported to KYSGC. Projects must adhere to project evaluation policies described on pg. 4.



## NASA Kentucky Space Grant Consortium Research Initiation Awards (RIA)

## KY Space Grant Consortium – Research Initiation Awards - \$35,000

Description: KYSGC Research Initiation Awards (RIA) support faculty to become familiar with NASA research programs and Mission Directorates, establish and cultivate relationships with NASA researchers and visit NASA facilities. RIA support development of early-stage research ideas from faculty PIs who are new to NASA research or are starting a new NASA-aligned research direction, as an entry point to sustained NASA research collaboration. RIA funding is an initial step in the faculty pathway to conduct NASA-aligned research. Next steps include mentoring Graduate Fellowships (GF) and leading proposals to NASA EPSCOR and NASA research solicitations (ROSES etc). RIA proposals should include support for academic year or summer effort for the PI. Projects should develop research concepts and collaboration closely aligned with NASA research priorities to prepare for next-step funding and contribute to publications, presentations, curriculum enhancement, and follow-on funding.

**Eligibility:** Proposals will be accepted from Principal Investigators at KYSGC Affiliate Institutions to develop NASA-aligned research activities. US citizenship is not required.

**Requirements:** Proposed research topics must utilize NASA (or related) resources and identify alignment with NASA technical priorities addressed by one or more NASA Mission Directorates. Letter of support (preferred) or email required describing NASA (or related) involvement with the project. Kentucky research partnerships may choose instead to submit a support letter from KY-based collaborators (limited selection). Connections with Kentucky companies are viewed favorably. Principal Investigators are expected to submit at least one proposal for follow-on funding based on RIA activities. See Proposal Guidelines (pgs. 1-10).

**Proposal Content:** All proposals should utilize the NASA KY cover sheet and budget form, followed by the project description and additional pages. <u>See Submission Instructions</u> (pg. 1).

### 1) Project Description:

- No more than 5 pages including tables and figures describing: Abstract (200-300 words), project summary, alignment with NASA and KYSGC goals, specific goals for the funded period that align with research priorities of NASA Mission Directorates, schedule, milestones, anticipated outcomes, plans to communicate project activities and results, and plans to pursue follow on funding.
- Additional pages included after the 5-page project description
  - Logic Model (see App. A)
  - Bibliography/References as needed
  - Principal Investigator's 2-pg CV
  - List of Current and Pending Awards: Award title, sponsor, dates, amount, commitment
  - Executive summary describing results of prior NASA KY funding (1-2 pages)
  - Letter of support from a NASA (or related) or KY collaborator expressing mutual interest in the research topic and agreement to be involved with the project, including meeting with the Principal Investigator in person at a research facility or a specific conference. (See above and NASA KY FAQ)

**Budget Guidelines:** Proposers may request up to \$35,000 for up to a 12-month period. Allowable direct costs include faculty salary, fringe benefits, materials and supplies, domestic travel, and student support. Indirect costs are allowed and unrecovered indirect costs may be included as cost-share. Required 1:1 (\$CS:\$Award) cost-share must be committed by the proposing institution. Space Grant is primarily a workforce development program. In line with this, proposing institutions should use an "other" or training grant F&A rate (if one exists) versus the research F&A rate and indicate so in the budget justification. Budget justification should provide adequate detail and demonstrate effective use of funds aligned with the proposed project. All proposed costs and cost-share should be fully described in the budget justification.

**Project Evaluation and Longitudinal Tracking of Students:** All students receiving compensation must be reported to KYSGC. Projects must adhere to project evaluation policies described on pg. 4.



## NASA Kentucky Space Grant Consortium Affiliate Program Grants (APG)

## KY Space Grant Consortium – Affiliate Program Grants - \$25,000

Description: KYSGC Affiliate Program Grants (APG) support projects with sustainable, effective, evidence-based approaches to achieve beneficial outcomes for the Space Grant program and are designed to help realize well-defined programmatic objectives from KYSGC affiliate partners experienced in educational pre-college or higher education program development and aligned with Kentucky and NASA priorities for STEM education objectives, including pre-college outreach and recruiting, K-12 teacher training, support for student teams, and curriculum development. Project examples include short and long duration workshops, hands-on student activities, new or revised courses, professional development and pre-service teacher training, student recruitment and retention, learner-based educational programming at museums or science centers, or STEM competition activities. Projects must be aligned with NASA STEM initiatives, KYSGC and NASA Space Grant objectives. Projects must describe achievable outcomes, evidence-based educational practices (see NASA example), and efforts towards sustained impact and long-term results. Cost-share is required.

**Eligibility:** Proposals will be accepted from Principal Investigators at KYSGC Affiliate Institutions who may collaborate with scientific sites (museums, planetariums), schools and educational organizations, or affiliate institution recruiters. US citizenship not required.

**Requirements:** The proposed activity must be aligned with KYSGC objectives and NASA STEM priorities. Group travel awards must support an appropriate number of students and/or educators on the proposed trip. Connections with Kentucky companies and third-party sponsors are viewed favorably. Proposals must demonstrate plans to recruit and engage participants. See Proposal Guidelines (pgs. 1-10).

<u>Proposal Content</u>: All proposals should utilize the NASA KY cover sheet and budget form, followed by the project description and additional pages. See Submission Instructions (pg. 1).

#### 1) Project Description:

- No more than 5 pages including tables and figures describing: Abstract (200-300 words), project summary, alignment with NASA and KYSGC goals, specific goals for the funded period, schedule, milestones, event dates, anticipated outcomes, plans to communicate project opportunities, activities and results, and plans to pursue sustained or supplemental funding.
- Additional pages included after 5-page project description
  - Logic Model (see App. A)
  - o Bibliography / References / Supplemental documents as needed
  - Principal Investigator's CV (2-pg limit)
  - Executive summary describing results of prior NASA KY funding (1-2 pages)
  - Letter of support from institutional partner, scientific site and/or NASA collaborator (if applicable)

**Budget Guidelines:** Proposers may request up to \$25,000 per year. Allowable direct costs include registration and entry fees, materials and supplies, salary and fringe benefits, transportation (buses), domestic travel expenses for mentors, chaperones and students, and other related costs. Event meals and promotional items are <u>not allowable</u> as expenses or cost-share. Indirect costs are allowed. Required 1:1 (\$CS:\$Award) cost-share must be committed by the proposing organization. Unrecovered indirect costs may be used as cost-share. In-kind cost-share of any allowable cost is permitted. Budget justification should provide adequate detail and demonstrate effective use of funds aligned with the proposed project. All proposed costs and cost-share should be fully described in the budget justification.

**Project Evaluation and Longitudinal Tracking of Students:** All students receiving compensation must be reported to KYSGC. Projects must adhere to project evaluation policies described on pg. 4.



## NASA Kentucky Space Grant Consortium Mini Grants (MG)

## KY Space Grant Consortium - Mini-Grants - \$10,000

**Description: KYSGC Mini-Grants (MG)** support pilot projects to develop program concepts, demonstrate outcomes and <u>evidence-based educational practices</u>, and make efforts toward project sustainability that can be developed into programs of larger scope. MG support pre-college opportunities aligned with Kentucky and NASA priorities including STEM camps and competitions, K-12 teacher training, and museum-based astronomy and aerospace programs. MG can also support higher education objectives for curriculum development, outreach and recruitment. Project examples include student recruitment and retention, educational outreach programs, pre-college student field trips or workshops in disciplines of interest to NASA, professional development for K-12 STEM teachers, curriculum development and small group travel to events or a scientific site. Projects must be aligned with KYSGC objectives and can be aligned with NASA STEM initiatives.

**Eligibility:** Proposals will be accepted from Principal Investigators at KYSGC Affiliate Institutions who may collaborate with science-related groups or sites (museums, planetariums, etc), schools and educational organizations, or affiliate institution recruiters. US citizenship not required.

**Requirements:** The proposed activity must be aligned with KYSGC objectives and NASA STEM priorities. Small group travel awards must support at least six participants on the proposed trip. Connections with Kentucky companies and third-party sponsors are viewed favorably. Proposals must demonstrate plans to recruit and engage participants. See Proposal Guidelines (pgs. 1-10).

**Proposal Content:** All proposals should utilize the NASA KY cover sheet and budget form, followed by the project description and additional pages. <u>See Submission Instructions</u> (pg. 1).

### 1) Project Description:

- No more than 5 pages including tables and figures describing: Abstract (200-300 words), project summary, alignment with NASA and KYSGC goals, specific goals for the funded period, schedule, milestones, event dates, anticipated outcomes, and plans to communicate project opportunities, activities and results.
- Additional pages included after 5-page project description
  - Logic Model (see App. A)
  - Bibliography / References/ Supplemental documents as needed
  - Principal Investigator's CV (2-pg limit)
  - Executive summary describing results of prior NASA KY funding (1-2 pages)
  - Letter of support from institutional partner, scientific site and/or NASA collaborator (if applicable)

**Budget Guidelines:** Proposers may request up to \$10,000 for up to a 12-month period. Allowable direct costs include registration and entry fees, materials and supplies, salary and fringe benefits, transportation (buses), domestic travel expenses for mentors, chaperones and students, and other related costs. Event meals and promotional items are <u>not allowable</u> as expenses. Indirect costs are allowed. Cost-share not required, but in-kind match and third-party sponsorships are viewed favorably. Budget justification should provide adequate detail and demonstrate effective use of funds aligned with the proposed project. All proposed costs should be fully described in the budget justification.

**Project Evaluation and Longitudinal Tracking of Students:** All students receiving compensation must be reported to KYSGC. Projects must adhere to project evaluation policies described on pg. 4.

## **Appendix A: Logic Model Requirement**

A logic model provides a roadmap for the project, highlighting how it is expected to work, what activities need to come before others and how desired outcomes are achieved.

### Benefits of a logic model:

A logic model aids project design to keep project activities focused on desired outcomes. The model serves as a basis to evaluate the project and enables quick understanding of how each major activity contributes to success, providing participants, evaluators and program managers with a common reference to better understand what happens in the project and which activities were successful. A logic model also helps to discover where the project is failing to perform as conceptualized.

The logic model clarifies the underlying rationale for the project and the conditions under which success is most likely to be achieved. This shows how a project aligns with Space Grant funding and helps KYSGC to report program successes to NASA and other stakeholders.

Each proposal should include a logic model using a blank version of the table below, beginning with a short introductory paragraph about the overall vision for the project. The table should include:

- Goals What are the goals of the project?
- Inputs What is needed to do this project (list all necessary inputs)
- Activities What activities will be done?
- Outputs What is the quantitative impact?
- Outcomes What will be the long-term accomplishments?
- Measures How will the project measure its outcomes to determine if goals were met?

### **Example: KYSGC Graduate Fellowship**

Project summary: This KYSGC graduate fellowship project will mentor a graduate student in an aerospace research topic in collaboration with NASA STMD

Goals	Inputs	Activities	Outputs	Outcomes	Measures
KYSGC Goals 1, 2	1 grad student	Research tasks	1 conference	Degree progress	Year 2
& 3  KYSGC Theme 3  Research collaboration with NASA STMD  Student mentorship	1 faculty mentor Funding for 2 semesters as research assistant Project schedule Mentorship plan NASA datasets NASA technical reviews Facilities & equipment Cost-share	Technical meetings with NASA and collaborators Paper preparation Conference paper presentation	paper 1 conference presentation 2 classroom or group present. 1 feature story from college / institution	Advanced research training  Contributions to technical community and NASA research Increased faculty collaboration with NASA	advancement toward dissertation Project timeline – all research tasks completed # of papers # of presentations # of meetings w/ collaborators # of follow-on proposals

## **Appendix B: KYSGC Proposal Review Form (2025)**

Reviewers will score proposals from 0-100. Criteria assess reasonableness of the proposed project and alignment to NASA-relevant objectives, including Merit, Relevance, Follow-on Potential, Management and Evaluation, and Budget.

### MERIT (40%)

Approach	and	Implemen	tation:
дрргоасп	anu	IIIIpicilicii	tation.

_	(0.00)	
Score	(0-20)	

4	8	12	16	20
creativity in problem for formulation or project approach. Limited opportunities for innovation or original outcomes. Goals and objectives unclear.	r creative project rmulation. A few oportunities for oject innovation or eativity may be ossible. Goals and ojectives are	for creativity and innovation in project formulation or possible approaches towards novel solutions. Goals and	innovation; evidence of potential novel approaches to existing problems. Potential for	Very creative and original concepts; novel and transformative approaches to project outcomes within or across fields. Clear and logical goals, objectives and tasks that meet requirements of the specific funding program.

## Proposal Narrative:

_			
Score	/N 1	$\sim$	
Score	(U- I	w	

2	4	6	8	10
Writing difficult to understand, but some signs of project conception and organization; minimal	poor writing style and		well organized;	Very clear and compelling approach, with excellent interdisciplinary organization, methodologies, and supporting evidence from
supporting evidence.	conceptualization.	evidence.		multiple viewpoints.

Intrinsic Merit: Score (0-10) \_\_\_\_

2	4	6	8	10
A seriously flawed proposal having one or more major weaknesses, such as an inadequate or flawed plan of research or strategy.	response to the	A competent proposal having neither significant strengths nor weakness and/or whose strengths or weaknesses essentially balance.	proposal of high merit whose strengths fully	A comprehensive, thorough, and compelling proposal of excellent merit with numerous and/or significant strengths and no major weaknesses.

### RELEVANCE (30%)

Score	(0-30	)

The proposal demonstrates alignment with NASA priorities, such as:

- Project is aligned with NASA Mission Directorates, NASA technical or scientific areas, and/or KYSGC strategic themes
- □ Project will explore innovative and unique objectives that relate to NASA goals and build upon previous NASA research or projects
- □ Proposal references NASA sources, such as Techport, NASA Technology Taxonomy, NASA EPSCoR Research Focus Areas, NASA STEM Gateway or other relevant resources
- □ Proposal includes communication from NASA (or related institutions) indicating intent to be involved with the project (e.g., technical advice, progress reviews, data sharing, assistance with analysis, student mentorship, etc).
- Proposal includes plan for regular interaction with NASA and other collaborators

The	proposal demonstrates alignment with KYSGC goals and	l objectives, such as:			
	Contributes to KYSGC goals of effective learning opportunities, workforce training, and/or research development in KY				
	Establishes or enhances Kentucky research or project activity in a NASA-related R&D o scientific area				
		Develops or expands partnerships between Kentucky faculty and educators and NASA and/or related industry, research and educational organizations			
	Discusses relationship of the proposal with previous effort	orts supported by NASA or KYSGC			
	Addresses special focus areas to increase program implocal focus, participation of students from rural and/or ur Kentucky institutions/organizations				
The	proposal demonstrates alignment with priorities of KY and	d the proposing institution, such as:			
	Contributes to KY goals for education, economic development, resource needs, etc.				
	Contributes to the teaching, research or outreach midepartment, or organization, including reference to straffindings				
	LOW-ON POTENTIAL (SUSTAINABILITY) (10%)	Score (0-10)			
The as:	proposal demonstrates plans to sustain project activities	and pursue follow-on efforts, such			
	Plans to communicate about the project, disseminate results and expand impact (press releases, conferences, publications, outreach, etc)				
	Plans to further develop partnerships and collaborations (NASA, Federal, state, industry, academic institutions, and research / education / community organizations)				
	Evidence that the proposing institution is supportive of the project and supports the research expertise with resource commitments (financial and/or non-financial) and strategic initiatives				
	Proposer identifies specific potential sponsored funding programs or fundraising approaches to pursue follow-on funding, especially from sources outside the NASA KY program				
	Proposer identifies potential contributions to workforce tr commercialization if applicable (IP, patents, entrepreneu				
<u>MAN</u>	NAGEMENT AND EVALUATION (10%)	Score (0-10)			
	proposal demonstrates reliable and effective plans for pro	, ,			
	Project schedule with timeline and milestones	,			
	Scope of work that can be accomplished within a 1-year timeframe				
	Personnel who are qualified and available				
	Necessary facilities and equipment that are available	active outcomes			
	Logic model that identifies a clear approach towards effective outcomes  Adequate metrics to evaluate progress towards anticipated outcomes				

<u>BUD</u>	OGET AND COST RISK (10%)	Score (0-10)			
The proposal demonstrates plans for effective use of funds, such as:					
	Planned expenses are well detailed, reasonable and appropria No obvious budget errors (F&A is included, etc)	te			
	Proposal budget supports adequate personnel effort to accomplish the scope of work				
	Proposal budget adequately describes materials needed to support the scope of work				
	Proposal budget supports efforts to expand the impact of project results				
	Proposal commits cost-share that meets requirements for the specific funding program (G RIA, etc); cost-share is adequately described and relevant to the project.				
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TOT	AL SCORE:				

<u>COMMENTS</u> (Optional):