
# Announcement: RFP-14-002

# Space Grant Consortium 2013 Request for Proposals

**Release Date: September 9, 2013**

**Proposals Due: 5:00 pm EDT, October 22, 2013**
Proposal files submitted online at nasa.engr.uky.edu

**For more information contact: Jacob Owen, Program Coordinator**
**(859) 323-4542**
jacob.owen@uky.edu

**Dr. Suzanne Weaver Smith, Director**
**Dr. Janet K. Lumpp, Associate Director**
**NASA Kentucky**
**112 RMB (Robotics)**
**Lexington, KY 40506-0108**
**(859) 218-NASA (6272)**
nasa@uky.edu

**Additional links, forms and FAQ available at nasa.engr.uky.edu/space-grant/**
**and nasa.engr.uky.edu/submit/requests-for-proposals/**

**NASA Kentucky Space Grant Consortium Overview:** The NASA Kentucky Space Grant Consortium is a NASA Higher Education program supporting student fellowships/scholarships, research initiation and workforce development in STEM areas of interest to NASA and Kentucky. Space Grant also promotes networking and cooperation among education, industry, and local, state and federal government. The recruitment and training of US Citizens, especially women, underrepresented minorities and persons with disabilities, for careers in aerospace science and technology is a national priority. Space Grant Consortium Programs support faculty, students and outreach through Graduate Fellowship (GF), Undergraduate Scholarship (US), Team Project (TP), Research Initiation, (RIA), Course Development/Revision (CDR), and Mini-Grant (MG) awards.

NASA Kentucky Space Grant Consortium and EPSCoR Programs invite proposal submissions for a variety of programs addressing the national interests of NASA and specific needs of Kentucky:

**Deadline:** Proposal files submitted online at **nasa.engr.uky.edu** by 5:00 pm EDT, October 22, 2013.

**Period of Performance:** NASA Kentucky will support awards up to one year in the period January 1, 2014 to December 31, 2014.

**Numbers of Awards:** Numbers of awards in each category are determined by the sizes of the individual awards and available program funding levels.

**Eligibility for Space Grant Awards [RIA, GF, US, TP, CDR, MG]:** Proposals will be accepted from NASA Kentucky Space Grant Consortium Affiliate Institutions. A list of Affiliate Institutions may be found at nasa.engr.uky.edu/space-grant/. Per NASA training grant guidelines, US Citizenship is required for students and faculty receiving direct support or reporting effort as cost-share.

**Reporting Requirements**: Principal Investigators are required to report research productivity and students supported using the KY EPSCoR Reporting System (KERS) during the award period, within 30 days of the end of the award (final technical report), and annually for 5 years post-award (Kentucky EPSCoR requirement). Project reporting must be up to date to meet program report cycles due annually in March and June for NASA and July for state funding. Reporting on current and prior awards must be up to date to be eligible for funding under RFP-14-002. Proposals from PIs who are delinquent in meeting reporting requirements may be rejected without review.

**Table 1. Summary of NASA Kentucky Space Grant Consortium Programs**

| Funding Source | Award Program | Program Abbreviation | Program Description | US Citizen Required | Maximum Award | Indirect Costs Allowed | Required Cost-Share $CS:$Award |
|---|---|---|---|---|---|---|---|
| Space Grant | Graduate Fellowships | GF | Salary or stipend, tuition, materials and travel for MS and PhD students to conduct NASA aligned research | **YES** | $30,000 | No | 1:1 including 12.5% faculty FTE |
| Space Grant | Undergraduate Scholarships | US | Salary or stipend, materials and travel for undergraduate students to conduct NASA aligned research | **YES** | $6,000 | No | None[1] |
| Space Grant | Team Projects | TP | Materials and travel for student teams participating in NASA related competitions | **YES** | $10,000 | No | 0.5:1 |
| Space Grant | Research Initiation Awards | RIA | Faculty directed research to explore NASA collaborations and NASA aligned research topics | **YES** | $15,000 | Yes | 1:1 |
| Space Grant | Course Development/Revision | CDR | Higher education curriculum development and revision of aerospace courses | **YES** | $3,000 | Yes | 1:1 |
| Space Grant | Mini-Grants | MG | Precollege and science center outreach activities, targeted recruiting and teacher PD | **YES** | $5,000 | Yes | None[1] |

[1]*Cost-share* NOT required for US and MG in 2013.

## General Proposal Guidelines: ALL PROGRAMS

Proposals that omit required materials or that exceed the page limits may be rejected without review. Proposals from PIs who are delinquent in meeting reporting requirements on current or prior NASA Kentucky awards may be rejected without review.

- *Equipment* may not be purchased or used as cost-share in any NASA Kentucky award.
- *Travel* funds are restricted to domestic travel only.
- *Cost-share* must be from non-federal sources.
- All proposals must be submitted electronically as uploaded PDF files. In the specified file naming convention, PI is last name of proposer and PGM is program abbreviation (see Table 1).
  - ☐ *Completed and SIGNED Cover Page* (SG_Cover_2013.pdf) – scan signed original, save as PDF, filename format PI_PGM_SG_Cover_2013.pdf
  - ☐ *Completed and SIGNED Budget Form* including justification detailing requested support and cost-share (SG_Budget_2013.pdf) –scan signed original, save as PDF, filename format PI_PGM_SG_Budget_2013.pdf
  - ☐ *Project Description* - filename format PI_PGM_Project_2013.pdf
    - 12 point font, 1 inch margins, single spaced
    - 5 page limit - See specific program guidelines for required content
    - Additional pages - See specific program guidelines for lists of documents
  - ☐ *Upload* at **nasa.engr.uky.edu** by 5:00 pm EDT, October 22, 2013
    - *Original signed Cover Page and original signed Budget Form* must be mailed to the NASA KY Director with a postmark no later than October 29, 2013.

## Review Process

To avoid conflicts of interest, alternate reviewers may be recruited by the NASA KY Director. Proposals will be rated, ranked and funded up to the budgeted amounts available for each program.

**Space Grant Consortium Proposal Review Process**

The NASA Kentucky Space Grant Affiliate Representatives and external content specialists will review the proposals and rate the technical content as Definitely Fund, Fund if Possible or Do Not Fund (Review Criteria). Proposals will also be reviewed for budget compliance and programmatic alignment by NASA KY staff. As a panel, the reviewers will recommend proposals for funding to the NASA KY Director. Proposals will be rated, ranked and funded up to the budgeted amount available for each program. Past reporting and accomplishments will be considered in evaluation of proposals.

## NASA Kentucky Space Grant Consortium Strategic Themes

The 2010-2014 NASA Kentucky Space Grant Consortium overarching themes bridge NASA Education Outcomes 1-3 (Figure 1) and guide the strategic selection of programmatic elements. All awards granted through NASA Kentucky Space Grant programs should initiate and further students, faculty and industry partners along the various pathways towards careers, federally funded research and job creation in Kentucky.

***KSGC Strategic Theme #1: Pathways of Opportunities*** – Programs will build on Kentucky's space science specialization, start immediately and span the full five years of the plan to: 1) Provide integrated progressions of opportunities for STEM workforce development to meet NASA priorities (Figure 1); 2) Mirror NASA's Education Framework to Inspire, Engage, Educate, Employ; 3) Incorporate recognized local scientific sites (e.g., planetaria and observatories) for teacher training, student internships, diversity engagement and KSGC Affiliate leadership and involvement; 4) Be a catalyst for higher education recruitment; and 5) Enhance in-state employment in Kentucky's aerospace industry.

***KSGC Strategic Theme #2: NextGen Partnerships*** - Programs will be developed early in the 5-year cycle then phased-in to provide: 1) A new in-state aerospace engineering degree option; 2) An emphasis on aeronautics R&D; 3) New links to the Kentucky Community and Technical College System (KCTCS); and 4) A new high-school-to-higher-education pathway combining aviation and aerospace inspiration supporting NASA's NextGen Air Transport initiative.

## NASA Current Areas of Emphasis

NASA has articulated the following emphases for its education programs:

**E1.** Authentic, hands-on student experiences in science and engineering disciplines – the incorporation of active participation by students in hands-on learning or practice with experiences rooted in NASA-related, STEM-focused questions and issues; the incorporation of real-life problem-solving and needs as the context for activities.

**E2.** Engage middle school teachers in hands-on curriculum enhancement capabilities through exposure to NASA scientific and technical expertise. Capabilities for teachers to provide authentic, hands-on middle school student experiences in science and engineering disciplines.

**E3.** Summer opportunities for secondary students on college campuses with the objective of increased enrollment in STEM disciplines or interest in STEM careers.

**E4.** Community Colleges – develop new relationships as well as sustain and strengthen existing institutional relationships with community colleges.

**E5.** Aeronautics research – research in traditional aeronautics disciplines; research in areas that are appropriate to NASA's unique capabilities; directly address the fundamental research needs of the Next Generation Air Transportation System (NextGen).

**E6.** Environmental Science and Global Climate Change – research and activities to better understand Earth's environments.

**E7.** Diversity of institutions, faculty, and student participants.

**E8.** Enhance the capacity of institutions to support innovative research infrastructure activities to enable early career faculty to focus their research toward NASA priorities.

## NASA Education Strategic Coordination Framework

The ***NASA Education Strategic Coordination Framework: A Portfolio Approach*** describes the alignment of NASA's education portfolio with the *2006 NASA Strategic Plan* and creates an agency-wide strategic planning, implementation and evaluation framework for NASA's investments in education. The framework summarized in Figure 1 establishes three educational outcomes:

- **Outcome 1 – Higher Education:** Contribute to the development of the STEM workforce in disciplines needed to achieve NASA's strategic goal through a portfolio of investments.
- **Outcome 2 – Elementary and Secondary Education:** Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers, and faculty.
- **Outcome 3 – Informal Education:** Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA's mission.

The plan encompasses all education efforts undertaken by NASA and guides the Agency's relationships with external education partners. Proposers are strongly encouraged to become familiar with this document. It may be found at: www.nasa.gov/pdf/189101main_Education_Framework.pdf

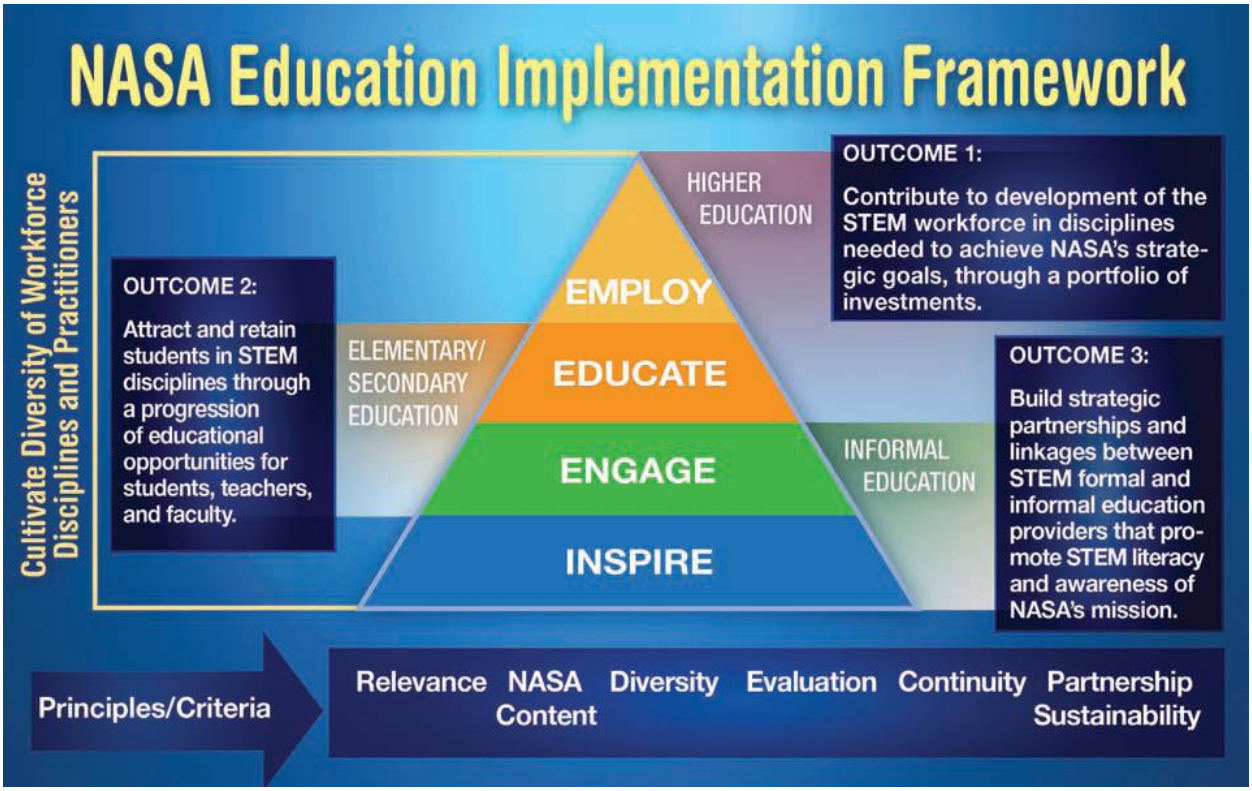


Figure 1. NASA Education Outcomes and Framework.

**Mission Directorates (MD) and Office of the Chief Technologist (OCT)**

**Human Exploration and Operations Mission Directorate (HEOMD) -** formerly Exploration Systems Mission Directorate (ESMD) and Space Operations Mission Directorate (SOMD)
Agency role is to develop a sustained human presence on the moon; to promote exploration, commerce, and U.S. preeminence in space; and to serve as a stepping-stone for the future exploration of Mars and other destinations. HEOMD establishes the NASA exploration research and technology development agenda. Specifically, HEOMD develops capabilities and supporting research and technology that will enable sustained and affordable human and robotic exploration. It also works to ensure the health and performance of crews during long-duration space exploration. In the near-term, HEOMD does this by developing robotic precursor missions, human transportation elements, and life-support systems. HEOMD provides the Agency with leadership and management of NASA space operations related to human exploration in and beyond low-Earth orbit. HEOMD enables current space exploration in low earth orbit through its Space Shuttle and International Space Station Programs. HEOMD is also responsible for Agency leadership and management of NASA space operations related to Launch Services, Space Transportation, and Space Communications in support of both human and robotic exploration programs. (www.nasa.gov/directorates/heo/home/index.html)

**Aeronautics Research Mission Directorate (ARMD)** conducts vital research to make air travel more efficient, safe, green, and to uncover leading-edge solutions for the Next Generation Air Transportation System (NextGen) in the United States. ARMD's fundamental research in traditional aeronautical disciplines and emerging disciplines helps address substantial noise, emissions, efficiency, performance and safety challenges that must be met in order to design vehicles that can operate in the NextGen. (www.aeronautics.nasa.gov)

**Science Mission Directorate (SMD)** leads the Agency in four areas of research: Earth Science, Heliophysics, Planetary Science, and Astrophysics. SMD works closely with the broader scientific community, considers national initiatives, and uses the results of National Research Council studies to define a set of "Big Questions" in each of these four research areas. These questions, in turn, fuel mission priorities and the SMD research agenda. The SMD also sponsors research that both enables, and is enabled by, NASA's exploration activities. SMD has a portfolio of Education and Public Outreach projects that are connected to its research efforts. (nasascience.nasa.gov)

**Space Technology Mission Directorate (STMD) / Office of the Chief Technologist (OCT)** STMD is newly incorporated in 2013. STMD develops and demonstrates revolutionary, high-payoff technologies through collaborative partnerships. OCT serves as the NASA Administrator's principal advisor and advocate on matters concerning agency-wide technology policy and programs. OCT is responsible for direct management of NASA's Space Technology programs and for coordination and tracking of all technology investments across the agency. The office also serves as the NASA technology point of entry and contact with other government agencies, academia and the commercial aerospace community. The office is responsible for developing and executing innovative technology partnerships, technology transfer and commercial activities and the development of collaboration models for NASA. (www.nasa.gov/directorates/spacetech/home/index.html
www.nasa.gov/offices/oct/home/index.html)

**Description:** Higher education is the top priority of NASA's Space Grant Program. NASA seeks to promote science, technology, engineering and mathematics (STEM) education; encourage inter-disciplinary training, research and public service programs related to aerospace; and recruit and train US Citizens for careers in aerospace science and technology. NASA Kentucky Space Grant **Graduate Fellowships** recognize and support students addressing the challenges of aerospace research related to NASA's strategic goals. Research advisors at Affiliate Institutions may apply for a one year fellowship for a specific graduate student. Research projects must emphasize connections to NASA, 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 NASA Kentucky Space Grant Consortium Affiliate Institutions on behalf of Master's or Doctoral students in space science and aeronautics related disciplines. Women and minorities are strongly encouraged to apply. US Citizenship is required.

**Requirements:** The proposed research topic must be aligned with NASA themes addressed by one or more of the MD/OCT. Connections with Kentucky companies will be viewed favorably.

**Proposal Content:** See General Proposal Guidelines for formatting and file naming instructions.
**Project Description:** PI_GF_Project_2013.pdf

- No more than 5 pages including tables and figures describing: abstract (200-300 words), project summary, alignment with NASA Mission Directorate(s), specific goals for the funded period, anticipated outcomes and progress toward degree.
- Additional pages - included in PI_GF_Project_2013.pdf after 5 page project description
  - Bibliography/References as needed
  - Unofficial transcript
  - Student's resume
  - Letter of recommendation from a faculty member other than the research advisor
  - Research Advisor's 2 page CV
  - Letter of support from NASA collaborator

**Student Information Form**: SLN_GF_SIF_2013.pdf where SLN is the student's last name - Completed by the student applicant and uploaded with proposal files.

**Budget Guidelines:** Maximum award level is $30,000 per student per year. Allowable costs include student stipend or salary consistent with recipient institution policies and practices up to a maximum of $18,000, fringe benefits, tuition and fees, materials and supplies up to $2000, and student domestic travel up to $1000. Required cost-share of at least 1:1 ($CS:$Award) must be provided by the proposing institution including a minimum of 12.5% FTE faculty time for the research advisor required as cost-share. Indirect costs are not allowed, but unrecovered indirect costs on subrecipient direct cost-share may be used as cost-share.

**Longitudinal Tracking of Students:** All students receiving compensation must be reported in KERS. Any student receiving $5,000 or more in NASA funding or working 160 hours or more on NASA supported projects will be longitudinally tracked by NASA for five years using information provided on the SIF. Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 5-year period.

**Description:** Higher education is the top priority of NASA's Space Grant Program. NASA seeks to promote science, technology, engineering and mathematics (STEM) education; encourage inter-disciplinary training, research and public service programs related to aerospace; and recruit and train US Citizens for careers in aerospace science and technology. NASA Kentucky Space Grant **Undergraduate Scholarships** recognize and support students addressing the challenges of aerospace research related to NASA's strategic goals. In cooperation with their research advisors, undergraduate students at Affiliate Institutions may apply for one year scholarships to conduct 1-on-1 mentored research. Research projects must emphasize connections to NASA, address specific goals for the scholarship 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 NASA Kentucky Space Grant Consortium Affiliate Institutions on behalf of undergraduate students in space science and aeronautics related disciplines. Women and minorities are strongly encouraged to apply. US Citizenship is required.

**Requirements:** The proposed research topic must be aligned with NASA themes addressed by one or more of the MD/OCT. Connections with Kentucky companies will be viewed favorably.

**Proposal Content:** See General Proposal Guidelines for formatting and file naming instructions.
**Project Description:** PI_US_Project_2013.pdf

- No more than 5 pages including tables and figures describing: abstract (200-300 words), project summary, alignment with NASA Mission Directorate(s), specific goals for the funded period, anticipated outcomes and progress toward degree.
- Additional pages - included in PI_US_Project_2013.pdf after 5 page project description
  - Bibliography/References as needed
  - Unofficial transcript
  - Letter of recommendation from a faculty member other than the research advisor
  - Research Advisor's 2 page CV
  - Letter of support from NASA collaborator

**Student Information Form**: SLN_US_SIF_2013.pdf where SLN is the student's last name - Completed by the student applicant and uploaded with proposal files.

**Budget Guidelines:** Maximum award level is $6,000 per student per year. Allowable costs include student stipend or salary, fringe benefits, tuition and fees, materials and supplies up to $500, and student domestic travel up to $1,000. Indirect costs are not allowed. *Cost-share not required for 2013.*

**Longitudinal Tracking of Students:** All students receiving compensation must be reported in KERS. Any student receiving $5,000 or more in NASA funding or working 160 hours or more on NASA supported projects will be longitudinally tracked by NASA for five years using information provided on the SIF. Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 5-year period.

**Description:** Higher education is the top priority of NASA's Space Grant Program. NASA seeks to promote science, technology, engineering and mathematics (STEM) education; encourage inter-disciplinary training, research and public service programs related to aerospace; and recruit and train US Citizens for careers in aerospace science and technology. NASA Kentucky Space Grant **Team Project awards** provide support for higher education student groups participating in design competitions sponsored by NASA or related engineering and science organizations. Example competitions include but are not limited to: NASA Robotic Mining Competition, NASA Great Moonbuggy Race, NASA University Student Launch Initiative, AIAA Design/Build/Fly, and AUVSI. An expanded list of examples with links is available at nasa.engr.uky.edu/space-grant/.

**Eligibility:** Proposals will be accepted from Principal Investigators at NASA Kentucky Space Grant Consortium Affiliate Institutions on behalf of teams of students in space science and aeronautics related disciplines. Women and minorities are strongly encouraged to apply. US Citizenship is required.

**Requirements:** The proposed competition must be aligned with NASA themes addressed by one or more of the MD/OCT. Connections with Kentucky companies will be viewed favorably.

**Proposal Content:** See General Proposal Guidelines for formatting and file naming instructions.
**Project Description:** PI_TP_Project_2013.pdf

- No more than 5 pages including tables and figures describing: abstract (200-300 words), project summary, alignment with NASA Mission Directorate(s), specific goals for the funded period, anticipated outcomes, prior experience with team competitions and schedule of competition deadlines.
- Additional pages - included in PI_TP_Project_2013.pdf after 5 page project description
  - Bibliography/References as needed
  - Faculty Advisor's 2 page CV
  - If applicable, letter of support from collaborator

**Budget Guidelines:** Maximum award level is $10,000 per team per year. Allowable costs include registration fees, materials and supplies, shipping costs to/from competition site, and faculty advisor and student team member domestic travel. Required cost-share of at least 0.5:1 ($CS:$Award) must be provided by the proposing institution. Indirect costs are not allowed, but unrecovered indirect costs on subrecipient direct cost-share may be used as cost-share.

**Longitudinal Tracking of Students:** All students receiving compensation must be reported in KERS. Any student receiving $5,000 or more in NASA funding or working 160 hours or more on NASA supported projects will be longitudinally tracked by NASA for five years using information provided on the SIF. Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 5-year period.

**Description:** Alignment with NASA interests and meaningful collaborations with NASA scientists are essential to the development of competitive proposals for federal funding opportunities. **Research Initiation Awards (RIA)** are a flexible funding program for faculty to become familiar with NASA research programs and Mission Directorates, establish and cultivate relationships with NASA scientists, and visit NASA facilities. RIA funding is the first step in the faculty pathway to build capacity to conduct NASA aligned research. Next steps in the pathway include NASA KY EPSCoR Research Infrastructure Development Grants (RIDG), student support for research through Graduate Fellowships and Undergraduate Scholarships, and NASA ROSES and other NASA research solicitations. RIA proposals may include travel, experiments to obtain preliminary results, data analysis or manuscript preparation. Any combination of faculty salary, student support, travel, materials and supplies, and corresponding indirect costs may be requested up the $15,000 maximum award amount. Preference will be given to early career faculty and faculty changing research directions.

**Eligibility:** Proposals will be accepted from Principal Investigators at NASA Kentucky Space Grant Consortium Affiliate Institutions to develop NASA aligned research activities. Women and minorities are strongly encouraged to apply. US Citizenship is required.

**Requirements:** The proposed research topic must be aligned with NASA themes addressed by one or more of the MD/OCT. Principal Investigators are expected to submit at least one proposal for follow-on funding based on the RIA activities.

**Proposal Content:** See General Proposal Guidelines for formatting and file naming instructions.
**Project Description:** PI_RIA_Project_2013.pdf

- No more than 5 pages including tables and figures describing: abstract (200-300 words), project summary, alignment with NASA Mission Directorate(s), specific goals for the funded period, anticipated outcomes and plans for follow on funding.
- Additional pages - included in PI_RIA_Project_2013.pdf after the 5 page project description
  - Bibliography/References as needed
  - Principal Investigator's 2 page CV
  - Letter of support from a NASA collaborator expressing mutual interest in the research topic and agreement to meet with the Principal Investigator in person at a research facility or a specific conference.

**Budget Guidelines:** Maximum award level is $15,000 per faculty member per year. Allowable costs include faculty salary, student stipend or salary, fringe benefits, tuition, materials and supplies, and domestic travel. Required cost-share of at least 1:1 ($CS:$Award) must be provided by the proposing institution. Indirect costs are allowed and unrecovered indirect costs may be used as cost-share.

**Longitudinal Tracking of Students:** All students receiving compensation must be reported in KERS. Any student receiving $5,000 or more in NASA funding or working 160 hours or more on NASA supported projects will be longitudinally tracked by NASA for five years using information provided on the SIF. Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 5-year period.

**Description:** In addition to research and student support, the NASA Space Grant Program emphasis on higher education promotes systemic improvements to curricula in disciplines of interest to NASA. NASA seeks to promote science, technology, engineering and mathematics (STEM) education; encourage inter-disciplinary training, research and public service programs related to aerospace; and recruit and train US Citizens for careers in aerospace science and technology. NASA Kentucky Space Grant **Course Development/Revision** awards assist faculty revising or developing content and/or hands-on instruction for new or existing courses, adapting course materials for on-line delivery, or authoring textbooks.

**Eligibility:** Proposals will be accepted from Principal Investigators at NASA Kentucky Space Grant Consortium Affiliate Institutions. Women and minorities are strongly encouraged to apply. US Citizenship is required.

**Requirements:** The textbook or course to be developed/revised must have aerospace science or engineering content.

**Proposal Content:** See General Proposal Guidelines for formatting and file naming instructions.
**Project Description:** PI_CDR_Project_2013.pdf

- No more than 5 pages including tables and figures describing: abstract (200-300 words), project summary, alignment with NASA, specific goals for the funded period, anticipated outcomes, course offering and enrollment history since Fall 2010, and any applicable accreditation guidelines.
- Additional pages - included in PI_CDR_Project_2013.pdf after the 5 page project description
  - Bibliography/References as needed
  - Syllabus from most recent offering of the course or draft syllabus for new course
  - Textbook authors - Table of Contents for proposed textbook
  - Principal Investigator's 2 page CV
  - Letter of support from Department Chair

**Budget Guidelines:** Maximum award level is $3,000 per course per year. Allowable costs include faculty salary, student stipend or salary, fringe benefits, reusable instructional materials and consumable materials and supplies up to $500. Required cost-share of at least 1:1 ($CS:$Award) must be provided by the proposing institution. Indirect costs are allowed and unrecovered indirect costs may be used as cost-share.

**Longitudinal Tracking of Students:** All students receiving compensation must be reported in KERS. Any student receiving $5,000 or more in NASA funding or working 160 hours or more on NASA supported projects will be longitudinally tracked by NASA for five years using information provided on the SIF. Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 5-year period.

**Description:** Pre-college activities supported by the NASA Space Grant Program help to fill the pipeline with well prepared, inspired and engaged students motivated to pursue higher education. NASA seeks to promote science, technology, engineering and mathematics (STEM) education; encourage inter-disciplinary training, research and public service programs related to aerospace; and recruit and train US Citizens for careers in aerospace science and technology. NASA Kentucky **Mini-Grants** provide support for outreach programs at scientific sites (museums, observatories, planetariums, etc.), hosting pre-college students on campus, and group travel to NASA related events. Examples of mini-grant programs include but are not limited to: outreach programs at planetariums and observatories; pre-college student fieldtrips or workshops designed to recruit STEM students to the affiliate institution in disciplines of interest to NASA; professional development workshops for K-12 STEM teachers; and small group travel to Affiliate Institutions combined with travel to a NASA related event such as Space Camp, AirVenture, rocketry competition or scientific site.

**Eligibility:** Proposals will be accepted from Principal Investigators at NASA Kentucky Space Grant Consortium Affiliate Institutions collaborating with scientific sites (museums, observatories, planetariums, etc.) or institution recruiters. Women and minorities are strongly encouraged to apply. US Citizenship is required.

**Requirements:** The proposed activity must be aligned with NASA themes addressed by one or more of the MD/OCT. Small group travel awards must support at least six students on the proposed trip. Connections with Kentucky companies will be viewed favorably.

**Proposal Content:** See General Proposal Guidelines for formatting and file naming instructions.
**Project Description:** PI_MG_Project_2013.pdf

- No more than 5 pages including tables and figures describing: abstract (200-300 words), project summary, alignment with NASA Mission Directorate(s), specific goals for the funded period, anticipated outcomes and event dates.
- Additional pages - included in PI_MG_Project_2013.pdf after 5 page project description
  - Bibliography/References as needed
  - Principal Investigator's 2 page CV
  - Letter of support from institution partner, scientific site and/or NASA collaborator

**Budget Guidelines:** Anticipated award levels are $2,000 up to a maximum award amount of $5,000. Allowable costs include registration and entry fees, materials and supplies, salary and fringe benefits for college student assistants, transportation (buses), and domestic travel expenses for faculty advisor, chaperone and students. Indirect costs are allowed. *Cost-share not required for 2013.*

**Longitudinal Tracking of Students:** All students receiving compensation must be reported in KERS. Any student receiving $5,000 or more in NASA funding or working 160 hours or more on NASA supported projects will be longitudinally tracked by NASA for five years using information provided on the SIF. Longitudinally tracked students will need to keep their information current through follow-up correspondence for the 5-year period.