

# Kansas Space Grant Consortium (KSGC) Policies & Procedures

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## ***Introduction***

This document provides information on the Kansas Space Grant Consortium's (KSGC) Policies and Procedures. The material should prove useful to consortium members, potential members, the leadership, and NASA.

### Updates and Approvals

It's important to recognize that this is, and should be, an organic document. Updates, consistent with affiliate, Kansas, and NASA interests are expected roughly every 5 years - usually in response to NASA Space Grant College and Fellowship Program solicitations.

Typically, the director is responsible for drafting policy and procedures changes and seeking approval.

*Changes to KSGC Policies and Procedures must be approved by at least 75% of the executive committee members.*

Once formally approved, the approval date is noted immediately under the title of this document.

### KSGC Strategic Plan

The KSGC has created general strategic plans in the past. Interestingly, the proposals developed in response to NASA Space Grant College and Fellowship Program solicitations serve as a better and more specific consortium plan.

Approved proposals outline consortium values, interests, and objectives and how they align with NASA's. Included are specific programs, objectives, and metrics. As mentioned, a new proposal is developed roughly every three to five years in response to NASA's solicitations. Consortium members are all necessarily involved in the development and approval of the plan/proposal.

## ***Consortium Background***

The Kansas Space Grant Consortium (KSGC) is funded by NASA's Office of STEM Education. They oversee the National Space Grant College and Fellowship Program: defining fundamental objectives, directions, funding, requirements, and hence a framework for the Kansas consortium's work.

The KSGC in its simplest form is about:

- Inspiring, engaging, educating, and employing the next generation of explorers through NASA-unique Science, Technology, Engineering, and Math (STEM) learning opportunities
- Building a diverse and skilled future STEM workforce
- Enabling contributions to NASA's work
- Strengthening the understanding of STEM through powerful connections to NASA
- Inspiring and engaging the public in aeronautics, space, and science

Together with NASA, the Kansas consortium contributes to the STEM workforce, research, and education needs of the state and nation. Given our surroundings, the consortium has a natural focus on aeronautics, biosciences, energy, and related technologies.

### Vision, Mission, and Goals

The KSGC vision statement is:

*Kansas will be known as a leader in fundamental science and engineering education; preparing individuals for STEM-based careers in aerospace, bioscience, energy, and other technology fields.*

Our mission statement is:

*The Kansas Space Grant Consortium will be a catalyst for Kansas to lead in STEM-based education, research, industry, and policy.*

The Kansas consortium's goals are synonymous with NASA's. Specific educational priorities and key areas of emphasis include, and align, as follows:

- Provide internships, fellowships, and scholarships that support STEM education
- Support authentic, hands-on student experiences in science and engineering
- Engage STEM teachers in hands-on curriculum enhancement activities, through exposure to NASA's scientific and technical expertise
- Improve the diversity of participants at Kansas institutions, including faculty and students, especially with regards to supporting underrepresented, underserved, and female participants
- Support research and educational experiences in traditional aerospace disciplines
- Support environmental science research activities
- Enhance the capacity of affiliate institutions and faculty to support innovative research activities related to NASA Mission Directorate needs and priorities

### KSGC Approach

The Kansas consortium has successfully utilized, for many years, an affiliate-centered and consortium-wide approach to fulfill Space Grant goals and objectives.

The affiliate-centered component allows consortium participants to concentrate on efforts that best match their institution, utilizing baseline funding allocations to implement specific KSGC projects exploiting their resources, interests, and strengths.

The consortium-wide component allows affiliates to propose additional activities. Proposals are competitively reviewed and selected for further funding allocations.

### Program Elements

The KSGC uses four major program elements to meet NASA Space Grant and state objectives. Specifically, affiliate member opportunities include the following:

- Student internships at NASA centers (consortium-wide)

- Student internships, fellowships, and scholarships in Kansas (affiliate-centered)
- Mission directorate projects (affiliate-centered)
- Teacher workshops (Consortium-wide)

Occasionally, other special opportunities surface as well. For example, in recent years NASA offered augmentation, anniversary (e.g., NASA’s 60th birthday), and Diversity Equity & Inclusion (DEI) related funding.

The Kansas Space Grant elements have a priority and focus consistent with NASA’s (e.g., as outlined in the FY 2020-2024 solicitation), specifically, we will:

- *“Attract, recruit, and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology*
- *Create opportunities that enable student contributions to the development of solutions addressing NASA Mission Directorate challenges*
- *Advance aerospace knowledge and expand related activities*
- *Strengthen the understanding of STEM through powerful NASA connections”*

## ***Outcomes & Continuous Improvement***

The NASA Office of STEM Education shares and updates expectations for space grant consortia nationwide, especially within new grant solicitations and during regional/national meetings. Some of the expectations are explicit and essentially fixed, and some are dynamic.

For example, a specific amount of consortium funding must be assigned to support student internships at NASA centers. Additionally, participation rates for women, underrepresented minorities, and persons with disabilities are tied explicitly to demographics, found in National Center for Education Statistics data.

For reference, the following summarizes critical consortium participation outcome targets for the current FY20-24 award:

- Women – 52%
- African Americans – 9.1%
- Hispanic Americans – 10.1%

Other outcome targets exist and are shared with affiliates, as NASA proposals are developed, and via annual reviews.

### **SMART Goals and Continuous Improvement**

NASA is very serious about consortia demonstrating and assessing outcomes. They require the use of SMART goals, for individual affiliates and the entire consortium. Additionally, NASA expects consortia to engage in a process of continuous improvement. SMART goals are key metrics within these efforts.

Consortium SMART goals are typically defined in direct response to NASA requirements. Affiliates are expected to contribute aggressively to the overall consortium outcome targets, as well as to meet their own proposed goals.

NASA expects the consortium to define, collect, assess, and act on outcomes annually. In summary, the KSGC currently employs the following:

- Annual consortium plans and SMART goals are defined and shared with affiliates
- Affiliates submit project plans and budgets, which include SMART goals
- Affiliates regularly report on their results or outcomes
- An Affiliate Tracking and Feedback (ATF) document is shared (privately) with each affiliate
- Additionally, an ATF for the entire consortium is compiled showing aggregate results
- The compiled ATF document is evaluated by all affiliates in an annual meeting
- Assessments and changes are identified and implemented as needed, at both the affiliate and consortia level
- Best practices are shared amongst affiliates, and the process repeats each year

Additional information on how to prepare SMART goals and many of the items noted above are provided in the following sections and the Appendices.

### Reporting

The consortium is required, at the minimum, to provide a midyear and annual report. Specific expectations and data requirements for each submission are shared by NASA. The midyear report typically revolves around expenditure progress and high-level program administration. NASA is under sustained pressure to spend down congressional appropriations. The annual report focuses most on program outcomes.

In addition to these, NASA often makes one or more short-fuse report requests. Many times these demands are a result of congressional or NASA leadership queries.

The KSGC central office does its best to prepare the reports, with the help of affiliates and associates. Every effort possible to provide adequate notice and to minimize the burden on consortia members are made by the central office.

The central office seeks, as best as possible, to identify the exact information needed and to streamline related documents. Special spreadsheet-based forms are often used.

### External Review

NASA expects the consortium to employ an external reviewer, to evaluate operations and outcomes. The reviewer provides feedback that is assessed by the executive committee, director, and affiliates to identify potential consortium changes.

An external review should happen at least once every three years.

### NASA Site Visit

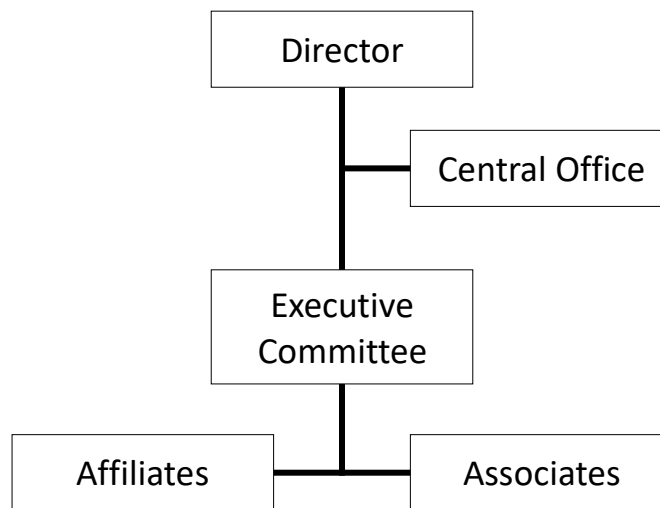
NASA has a requirement to conduct a virtual or in-person site visit for each grant period (i.e., every three to five years). Requirements and expectations vary but fundamentally revolve around a consortium self-study document - prepared by the director and central office. Content is defined by NASA and is comprehensive. Everything from financial operations to outcome assessment is addressed.

The time and effort involved in preparing for a site visit are substantial (i.e., months). A site visit is likely a daylong event, including numerous presentations and discussion sessions. Participants include multiple NASA persons, the director, central office staff, lead-institution support personnel (e.g., research and financial offices), affiliates, and observers from other states.

The consortium receives constructive feedback and scores from NASA before, during, and after the site visit. Preparatory and post-visit consortium meetings are used to keep consortium members involved and informed.

### ***Consortium Organization, Roles, and Responsibilities***

The Kansas Space Grant Consortium (KSGC) organizational chart is shown in the following figure (1).



**Figure 1 Kansas Consortium Organizational Chart**

Consortium member roles are outlined in the following sections.

#### Director

The director has overall KSGC program management responsibility and chairs the executive committee. Most importantly, the director works closely with NASA and affiliates to assure goals and objectives are properly developed, shared, evaluated, and satisfied.

The director represents the consortium at meetings, in the public, and oversees central office operations. The following list outlines many other director responsibilities:

- Serves as the primary contact and liaison between KSGC, NASA, Kansas, and industry
- Calls for and coordinates consortium meetings
- Prepares proposals
- Develops and monitors budgets
- Oversees NASA progress report preparations and submissions (including longitudinal tracking and financial information)
- Compiles consortium outcomes, provides feedback, and leads evaluations
- Prepares and issues KSGC Requests for Proposals (RFPs)

Processes and procedures for consortium director changes are outlined in the documentation available from NASA.

#### Lead Institution & Central Office

The KSGC central office is located at the lead institution. The lead institution is the director's home organization.

Central office staff members assist the director and executive committee in day-to-day consortium operations. Typically, besides the director, there is a coordinator, associate director, student assistant, and institutional support staff (e.g., office of research administration). Given NASA's expectation that administrative costs should be minimized, except for the coordinator all other staff is part-time.

A dedicated, adequate, and efficient central office is expected. The office space should include reception, work, meeting, and storage areas for the KSGC staff and visitors. Additional and significant, institutional resources to support the management of financial accounts, contracts, and records are required.

The lead institution agrees at a minimum to accomplish the following:

1. Act as the primary point of contact between the consortium and the NASA Space Grant College and Fellowship Program management
2. Represent the KSGC in day-to-day operations to many constituents
3. Prepare and submit required and requested reports to the NASA management (including longitudinal tracking and financial information)
4. Maintain an up-to-date web page documenting KSGC goals, objectives, program opportunities, important news, and activities
5. Provide the financial management for the KSGC NASA grants
6. Coordinate and oversee awards and related administration

#### Executive Committee

The executive committee consists of one representative from each affiliate receiving an annual funding allocation. This group works jointly with the director in running the Kansas consortium.



Together, the executive committee and director make major KSGC decisions.

The executive committee:

1. Assists in the development of KSGC proposals and budgets to be submitted to NASA
2. Reviews, evaluates, and adjusts KSGC program elements, emphasis, and management as needed, typically in response to NASA solicitations
3. Recommends formation of review committees for acceptance or rejection of affiliate and other competitive proposals
4. Monitors program performance evaluations and makes recommendations to the director regarding modifications to affiliate awards
5. Formally approves Strategic Plan and Policies and Procedure documents
6. Considers and votes on the addition of consortium associate and affiliate members

### Affiliates

Each KSGC affiliate organization agrees at a minimum to accomplish the following:

1. Provide an individual to serve as the affiliate point of contact (i.e., an affiliate representative)
2. Develop activities and programs supporting KSGC and NASA Space Grant objectives
3. Submit a program plan and budget (i.e., a simple proposal), including specific annual goals and methods that allow progress monitoring
4. Submit, on time, reports that document information requested by the KSGC director or central office staff
5. Secure required matching funds from their institution
6. Effectively expend any awarded NASA and matching funds as soon as possible (NASA is under intense pressure to spend down congressionally allocated space grant funds)

### Associates

Associate organizations, once approved, are eligible to submit proposals for state-wide competitive and, when applicable, special funding opportunities. However, associate members are not eligible for affiliate-standing annual allocations.

Each KSGC associate agrees at a minimum to accomplish the following:

1. Provide an individual to serve as the point of contact or representative
2. Develop and implement activities and programs supporting KSGC and NASA Space Grant objectives
3. Explore opportunities for collaborations with KSGC affiliates (strongly encouraged)
4. Where appropriate, submit proposals for KSGC state-wide competitions
5. Report on space grant relevant outcomes, as requested by the central office
6. If desired, prepare and submit a proposal for promotion to affiliate status after a 3-year probationary period

## Current Consortia Affiliate and Associate Members

The following is a list of current KSGC affiliates:

*Emporia State University*  
*Exploration Place*  
*Fort Hays State University*  
*Haskell Indian Nations University\**  
*Cosmosphere International SciEd Center & Space Museum*  
*Kansas State University\*\**  
*Pittsburg State University*  
*University of Kansas\*\**  
*Wichita State University\*\**

Haskell Indian Nations University, marked with an asterisk (\*), is a federally funded university affiliate. Kansas State University, University of Kansas, and Wichita State University, marked with double-asterisks (\*\*), are Ph.D. granting and research-oriented university affiliates. The significance of these notes will be more obvious in sections of this document that address budget allocations.

There are currently no associate members. Future versions of this document will list associates here.

### Affiliate Representative

Affiliate representatives are responsible for overseeing KSGC programs conducted at their organizations or institutions. They manage, when awarded, any NASA KSGC awards and matching funds. Perhaps most important, they communicate, coordinate, administer, manage, and report on all KSGC programs conducted on their campus.

Specific responsibilities include:

- Serving on the KSGC executive committee
- Representing the KSGC and NASA on their campus
- Serving as the Principal Investigator (PI) for any funding allocation
- Developing a program plan and budget (e.g., a proposal) for their organization
- Identifying target objectives, consistent with the KSGC's targets
- Securing required matching funds
- Coordinating relevant activities on their campus
- Communicating the wide range of opportunities on their campus
- Seeking a broad range of participation (especially by the underrepresented, women, and persons with disabilities)
- Watching for collaborative opportunities, especially with associates, NASA, and industry
- Reporting on outcomes (including longitudinal tracking and financial information)
- Assisting the director in the implementation of KSGC programs
- Attending KSGC meetings

- Assisting KSGC consortium-wide competitive program investigators in implementing and reporting on their awards
- Evaluating and acting on outcomes relative to their and consortium targets

### Associate Representative

Associate representatives are responsible for overseeing KSGC programs conducted at their institutions. They manage, when supplied, any NASA KSGC awards and matching funds. Perhaps most important, they communicate, coordinate, administer, manage, and report on all KSGC programs conducted on their campus.

Specific responsibilities include:

- Representing the KSGC and NASA on their campus
- Developing and submitting state-wide competitive or special proposals for their organization
- Serving as the Principal Investigator (PI) for any funded awards
- Identifying target objectives, consistent with the KSGC's targets
- Securing required matching funds
- Coordinating relevant activities on their campus
- Communicating the wide range of opportunities on their campus
- Seeking a broad range of participation (especially by the underrepresented, women, and persons with disabilities)
- Watching for collaborative opportunities, especially with other KSGC affiliates, NASA, and industry (strongly encouraged)
- Reporting on outcomes
- Attending KSGC meetings
- Evaluating and acting on outcomes relative to their and consortium targets

## ***Consortium Membership***

The following sections outline consortium membership-related processes and procedures.

In summary, consortium members fall into either an affiliate or associate member category. Affiliate and associate members come from universities, colleges, museums, and science centers. Broader industry and state and local agency involvement are encouraged via affiliate and associate member collaborations.

New consortium members are expected to enter at the associate level. After at least three years associates can propose to be promoted to full affiliate status.

### Affiliate Membership

Associate members with at least three years of demonstrated consortium contributions and appropriate plans can propose to be changed to affiliate status. The executive committee will review the submitted proposal. To become an affiliate, the associate member must receive a positive vote from at least 75 percent of the executive committee.

As has been mentioned, affiliates are eligible for all consortium opportunities, including annual funding allocations. However, given the difficulty of making major budget adjustments after a NASA grant has started, new affiliate member funding allocations may not be available until a new multi-year space grant is awarded.

### Associate Membership

Kansas private and public institutions with demonstrated interests in Science, Technology, Engineering, or Mathematics (STEM) are eligible to apply for KSGC associate membership status. KSGC associate status does not imply automatic annual NASA funding awards.

Institutions desiring to become a KSGC affiliate must submit a proposal to the KSGC Director:

- Briefly outline the institution's history and organization
- Defining current and planned STEM activities and benefits
- Expected contributions to the NASA and Kansas space grant goals

The executive committee will review the submitted proposal. To become an associate member, an applicant must receive an approval vote from at least 75 percent of the KSGC executive committee.

### Removal

To ensure consortium goals and expectations are satisfied, the KSGC annually reviews and evaluates member outcomes relative to proposed program plans. When serious deficiencies are identified, the director communicates concerns and seeks to resolve the issues directly with the affiliate or associate member.

Sustained major deficiencies are, at the director's discretion, taken to the executive committee for further evaluation. The executive committee will then make recommendations to the member, or in severe cases recommend the issuance of a warning letter to the non-compliant member.

The KSGC director and the executive committee will make every effort possible to counsel deficient affiliate members on needed improvements. The executive committee by a 75% vote can change the affiliate to an associate member if, after the warning letter and counseling, the affiliate's performance does not improve within 12 months.

Deficient associate members can be dismissed from the consortia if they are inactive or fail to meet expectations for more than 12 months. Again, a 75% vote is required by the executive committee to remove a member from the consortia.

Unawarded funding allocations for members who are demoted or removed are reallocated to consortia NASA center internship and/or state-wide competition pools.

## ***Consortium Budget***

Considering NASA requirements and executive committee plans, an annual budget plan is developed - initially in response to each multi-year national space grant college and fellowship program solicitation.

There are differences in the amount of NASA solicitation money available, restrictions, and various interests with each space grant solicitation, but the KSGC typically allocates grant funds in the following areas:

- Central office staffing, operations, travel, etc.
- The consortium-wide NASA Center Internship Program (NCIP)
- Affiliate NASA Internships/Fellowships/Scholarship (A-NIFS) programs
- Affiliate-centered NASA Mission Directorate Projects (MDP)
- The consortium-wide Teacher Workshop Program (TWP)
- Other special programs, when available from NASA
- Indirect costs
- Cost sharing

As mentioned previously, NASA typically explicitly specifies an amount of money that must be allocated for student support, especially for center internships. Exact information is provided in each NASA solicitation and during space grant national and regional meetings.

The distribution of available money over KSGC programs (e.g., A-NIFS, MDP, TWP, etc.) is determined in consultation with the executive committee as each multi-year proposal is developed.

The lead institution has traditionally waived some or all of its indirect costs. This approach maximizes NASA funding availability for students and affiliate programs and reduces the cost-share burden for affiliates.

### Affiliate Funding Distributions

Funding allocations across affiliates, for affiliate-centered programs, projects, and internships/fellowships/scholarships have usually followed a basic formulation. Specifically, Ph.D. granting and research-oriented university affiliates are traditionally allocated double the funding as smaller university and museum/science center affiliates.

The one exception is Haskell Indian Nations University (HINU), a completely federally-funded minority-serving university that cannot receive money for student internships, fellowships, or scholarships or provide cost share. Traditionally, the KSGC director works with the HINU affiliate representative when a new multi-year proposal is prepared to identify a reasonable project and program funding allocation for HINU.

## ***Affiliate Allocations and Awards***

### Affiliate Proposals and Awards

The director and central office will notify affiliates as soon as NASA's annual funding is available. In response, affiliate representatives distribute news of opportunities on their campus and prepare plans and budgets and seek official approval to meet cost share requirements.

At a minimum an affiliate proposal will include:

- A program plan
- A budget
- An official commitment to meet match requirements

### Affiliate Program Plan

The program plan outlines and describes planned affiliate activities, unique to their organization, that align with KSGC and NASA objectives.

Specific requirements must be incorporated within the plan. For example, NASA requires a certain amount of money to go to student internships/fellowships/scholarships. Additionally, all consortium members are expected to meet underrepresented participation levels (e.g., 52% women, 9.1% African Americans, and 10.1% Hispanic Americans). Other requirements will be shared as defined by NASA or the executive committee (e.g., mission directorate linkages).

Reasonable descriptions of planned activities should be included in the proposal.

### Affiliate Budget and a Commitment to Cost Share

The proposal budget shows how annual KSGC allocated affiliate funds are to be distributed for proposed plans. Budgets typically include:

- Direct labor
- Travel
- Supplies and services
- Other costs
- Indirect costs
- NIFS
- Cost matching

Direct labor costs and travel expenses should focus most on supporting students participating in the proposed space grant activities. Supply and service-related costs should be minimized and, again, mostly focused on supporting students. Other costs should be adequately explained and directly related to the proposed programs.

Every effort possible should be made to minimize or waive indirect costs. Reduced or eliminated indirect costs increase funding available for students and projects.

Cost matching or sharing is required by all consortia members (except HINU since they are

already federally funded). The amount is identified in the KSGC annual budget.

Cost sharing can take many forms, including actual hard money, waived indirect costs, the representative's time supporting KSGC work, etc. Keep in mind that other federal money cannot be used to match NASA space grant (federal) funds.

In all cases, the affiliate representative will need to secure the organization's commitment to meeting its cost share requirement. A letter or signed form, from a designated organization official, detailing the cost share commitment is adequate.

A standardized form has been created by the central office to better facilitate proposal preparation and submission. This form also incorporates a means for affiliates to specify their annual SMART goals.

### Reporting

All funded affiliates must submit progress and final reports on activities and the use of NASA and affiliate matching funds. Unfunded affiliates are encouraged to document their progress toward goals in support of improving their competitive status for future funding.

It is important to note that NASA reporting periods vary and may not align perfectly with the current KSGC award. NASA typically does one major data call for all state Space Grant consortia in the fall, regardless of their award periods, as well as requiring calls for award specific reports based on each award (i.e., KSGC Annual Performance Report).

The KSGC central office will supply templates or forms and instructions to facilitate reporting. Funded affiliates are responsible for collecting data, including demographic information for participants, longitudinal tracking, expenditures, and program outcome tracking. Particular attention is focused on meeting underrepresented student participation and NIFS funding requirements.

Affiliates will report on the status of students they have supported. This longitudinal tracking reporting helps the consortium and NASA to assess program success in both attracting and retaining students in STEM fields.

Affiliate reporting is also used to create Affiliate Tracking and Feedback (ATF) documents, which address affiliate progress and performance towards each affiliate's individually proposed SMART Goals.

While reporting it is important to avoid double-counting or missing participants. Individual or program stories and feedback are very valuable, as NASA often requests such items. Information on partnerships and collaborations is also useful.

### Invoices

Affiliates should work to expend all allocated funds within the awarded periods. Additionally, affiliates should invoice the KSGC Central Office regularly. Every month is desirable, given NASA's need to spend down congressional allocations.

### No-cost Extensions

Requests for no-cost extensions should be avoided. However, situations may arise that warrant a no-cost extension. Requests are made to the KSGC director, who will act on the appeal (perhaps in consultation with the executive committee and NASA). NASA rules, regulations, and guidelines for such cases apply and must be followed.

### Rebudgeting

Rebudgeting of awards should be avoided. However, situations may arise that warrant a request to the KSGC director. NASA rules, regulations, and guidelines for such cases apply and must be followed. Specific and very detailed information justifying the request may ultimately be needed by NASA.

## ***Competitive Consortium-Wide Awards***

All consortium members, affiliate or associate, are eligible for competitive consortium-wide opportunities. These awards are announced via Requests for Proposals (RFP). The most common are teacher workshops.

### Teacher Workshop Program

Kansas STEM teacher workshops are planned annually to help teachers bring NASA-relevant material and content into the K-12 classrooms. Submitted Teacher Workshop Program (TWP) proposals are reviewed, scored, and selected competitively.

### Other Special

In some cases additional funding opportunities surface. NASA occasionally offers grant augmentations or special allocations. Examples include higher than anticipated congressional funding, anniversaries (e.g., the moon landing), or new area.

Such opportunities are announced via Requests for Proposals (RFP). Submitted proposals are reviewed, scored, and selected competitively.



## Appendix A: SMART Goals

SMART goals are:

S = Specific

M = Measurable

A = Appropriate and attainable

R = Realistic and results-focused

T = Timely and trackable

**Specific:** Be precise about what you are going to achieve.

- Specify target
- Specify intended outcome
- One outcome per objective
- Avoid vague verbs (e.g., know, understand)
- Make sure the objective is linked to the goal

**Measurable:** Set criteria for measuring progress toward the attainment of each goal you set.

- Use measures as indicators of program success
- If possible, establish a baseline

**Appropriate:** Align with the needs of the target audience.

- Meeting the objective will advance the goal
- Identify a specific target audience
- Are inclusive of diversity within your group

**Realistic:** Do you have the resources to make this objective happen?

- Are important to stakeholders
- Are adequately resourced
- Can be achieved (e.g., The baseline the previous year was 2%. Is a 1% increase in one year realistic?)

**Timely:** A goal should be carried out within a specific time frame.

- Provide timeframe indicating when objectives will be met

Here are a few SMART goal examples:

- By January 2023, at least 25 middle-school STEM teachers will have participated in the program
- At least 50% and 19%, respectively, of the participants will be women and underrepresented
- Follow-up surveys, 3-months after the workshop, will verify at least 90% of the participants are using NASA and workshop material regularly in the classroom

## Appendix B: NASA Definitions and Acronyms

The following includes some common NASA definitions and acronyms.

### NASA Internships, Fellowships, and Scholarships

- **Internships** are educational hands-on traineeships that provide unique NASA-related research and operational experiences for educators and high school, undergraduate, and graduate students. Internships integrate participants with career professionals emphasizing mentor-directed, degree-related, project task completion. NASA internships shall consist of at least 400 contact hours (320 for H.S. students or teachers) of mentored, degree-relevant, work-activity.
- **Fellowships** are designed to support independently conceived or designed research by highly qualified faculty, and graduate students, in disciplines needed to help advance NASA's missions. Fellowships afford students the opportunity to directly contribute to advancements in NASA's STEM-related areas of study or STEM Education fields. NASA fellowship opportunities are focused on innovation, and generate measurable research results that contribute to NASA's current and future science and technology goals.
- **Scholarships** provide financial support to undergraduate and graduate students pursuing STEM (science, technology, engineering, and mathematics) degrees and provide the opportunity for students to deepen their inquiry within STEM through a myriad of channels including a research experience, technical collaborations, and professional development.

## **Appendix C: NASA Mission Directorates**

The following contains some basic information on the NASA mission directorates. Recall that the NASA Space Grant program office expects consortia to work with, or at least align its projects with, the directorates.

### **NASA Mission Directorates**

#### **Aeronautics Research Mission Directorate**

The Aeronautics Research Mission Directorate (ARMD) generates the innovative concepts, technologies, and capabilities needed to enable revolutionary change to both the airspace system and the aircraft that fly within it. ARMD's concepts, technologies, and capabilities will lead to a safer and more efficient national air transportation system, as well as more environmentally friendly aircraft, as ARMD focuses on green aviation. ARMD's research will continue to play a vital role in supporting NASA's human and robotic space activities.

<https://www.nasa.gov/aeroresearch>

#### **Exploration Systems Development**

The Exploration Systems Development Mission Directorate (ESDMD) 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.

<https://www.nasa.gov/directorates/exploration-systems-development>

#### **Space Operations**

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), operates and maintains exploration systems, space transportation systems, and performs broad scientific research on orbit. In addition, SOMD is responsible for the agency's space communications and navigation services supporting all NASA's space systems currently in orbit.

<https://www.nasa.gov/directorates/space-operations-mission-directorate>

#### **Science Mission Directorate**

The Science Mission Directorate (SMD) studies the planet with an array of Earth-observing satellites; explores the solar system with spacecraft that visit other planetary bodies; deploys robotic landers, rovers, and sample return missions; and projects humankind's vantage point into space with Earth-orbit and deep space observatories. SMD organizes its work to achieve the goals through four divisions: Earth Science, Planetary Science, Heliophysics, and Astrophysics.

<https://science.nasa.gov/>

#### **Space Technology Mission Directorate**

Space Technology Mission Directorate (STMD) is a dedicated technology organization within the agency responsible for identifying and developing solutions to technological challenges

facing NASA missions and the nation while contributing to the nation's success at transforming discoveries into economic leadership, developing crosscutting technologies that also promote spinoffs and cultivate new business, and utilizing the nation's aerospace industry, academic, and small business workforce.

<https://www.nasa.gov/directorates/spacetech/home/index.html>

## **Appendix D: NASA Guidelines on Director and Lead Institution Changes**

The following guidelines are provided by NASA. They are not subject to modification by the Kansas consortium. When changes are anticipated, NASA leadership should be consulted to assure that these guidelines still apply or if there are new ones.

### **Guidelines for Space Grant Director & Lead Institution Changes Checklist for Consortia**

**Effective as of 8.16.2022**

#### **Change of Director**

##### ***Step 1: Notify NASA Headquarters National Space Grant Program Office***

If a consortium director leaves his/her position, or proposes to do so, the National Space Grant Program Manager/Deputy Manager should be notified in writing via email as soon as possible from the Chief Academic Officer/Authorizing Organization Representative (AOR) of the lead institution.

##### ***Step 2: Appoint an Interim Director***

The Chief Academic Officer/AOR of the lead institution will recommend to NASA, for approval, the appointment of an interim director. Note: Both the interim and permanent directors must be from the lead institution. This recommendation should also include the curriculum vitae of the recommended interim director. The Program Manager/Deputy Manager will communicate with the award technical officer to have the award documentation (NF 1687) updated.

The interim director should be appointed for a period not to exceed 12 months. The interim director's term will end upon transition of the new director into the Consortium.

##### ***Step 3: Convene a consortium-wide meeting***

Within six months after giving notice of the proposed change, the interim director or lead governing body of the consortium must convene a consortium-wide meeting to discuss proposed changes. The purpose of this meeting is to discuss consortium changes, reach a consensus on the proposed director change, and agree upon the contents of the formal request to NASA Headquarters. The list of invited attendees shall include names and institutions represented. Note: Include National Space Grant Program Staff in the attendee listing.

##### ***Step 4: Send formal request to NASA Headquarters, National Space Grant Program Manager***

The formal request to the National Space Grant Program Manager/Deputy Manager for changes in the consortium must include the following elements as a single package:

- Vita of recommended consortium permanent director;
- If the consortium-wide meeting results in recommendations for changes to the current program plan (including, but not limited to, budget distribution or allocation, consortium director salary/fringe, program assistants and/or CMIS point of contact), a new program plan with budget must be submitted;
- Statement from the lead institution describing matching funds, institutional resources, and general support for program leadership, including office space for management and other consortium activities;
- Minutes of the consortium consensus meeting, including a list of attendees, any proxies provided and institutions represented and including minority reports, if any. The Space Grant Manager/Deputy Manager will communicate with the award technical officer to make any required changes to the award documentation (NF1687).

## **Change of Lead Institution**

### ***Step 1: Notify National Space Grant Program Office***

In case the consortium determines that a change in the lead institution is needed/desired due to a variety of reasons, the National Space Grant Program Manager/Deputy Manager should be notified via email as soon as possible by the Chief Academic Officer/Authorizing Organization Representative (AOR) of the lead institution, that both the Lead Institution and possibly the Director will be changing (the Director must be from the lead institution). NOTE: In cases where the Lead Institution changes, NASA will terminate the old award, and issue a new award at the new Lead Institution, refer to the [NASA Grants and Cooperative Agreement Manual](#) Section 7.7.

### ***Step 2: Appoint an Interim Director***

If applicable, the consortium advisory board/committee and the Chief Academic Officer/AOR of the proposed lead institution will recommend to NASA, for approval, the appointment of an interim director. Note: Both the interim and permanent directors must be from the lead institution. This recommendation should also include the curriculum vitae of the recommended interim director. The Program Manager/Deputy Manager will communicate with the award technical officer to have the award documentation (NF 1687) updated.

The interim director should be appointed for a period not to exceed 12 months. The interim director's term will end upon transition of the new director into the Consortium.

### ***Step 3: Convene a consortium-wide meeting***

Within six months after giving notice of the proposed change, the interim director or lead governing body of the consortium must convene a consortium-wide meeting to discuss proposed changes. The purpose of this meeting is to discuss consortium changes, reach a consensus on the Lead Institution change (and change of Director if necessary), and agree upon the contents of the formal request to NASA Headquarters. The list of invited attendees

shall include names and institutions represented. Note: Include National Space Grant Staff in the attendee listing.

**Step 4: Send formal request to National Space Grant Program Manager, NASA Headquarters**

The formal request to the National Space Grant Program Manager/Deputy Manager for changes in the consortium must include the following elements:

- Vita of recommended consortium permanent director.
- If the consortium-wide meeting results in recommendations for changes to the current program plan (including, but not limited to, budget distribution or allocation, consortium director salary/fringe, program assistants and/or CMIS point of contact), a new program plan with budget must be submitted.
- Statement from the new lead Institution describing matching funds, institutional resources, and general support for program leadership, including office space for management and other consortium activities.
- Minutes of the consortium consensus meeting, including a list of attendees, any proxies provided and institutions represented and including minority reports, if any.

Submit Director and Lead Institution Change Packages via email to the technical officer:

Mitch Krell

Space Grant Deputy Program Manager Email: [mitch.krell@nasa.gov](mailto:mitch.krell@nasa.gov)

And CC: Space Grant Program Manager Tomas Gonzalez-Torres ([tomas.l.gonzalez-torres@nasa.gov](mailto:tomas.l.gonzalez-torres@nasa.gov)) and **HQ Space Grant Program Office** ([hq-space-grant@mail.nasa.gov](mailto:hq-space-grant@mail.nasa.gov))

Final Note –Excerpted from the Grants and Cooperative Agreements Manual: “*If the Technical Officer does not concur with a recommended new PI and the grant will not follow the PI to the new institution, then the grant with the current institution may be ended by mutual consent or, if necessary, unilaterally by the Grant Officer.*”

## **Appendix E: KSGC Relationship to Kansas NASA EPSCoR Program**

The Kansas space grant consortium director also serves as the director for another, separate, NASA Office of a STEM Education program called the NASA Established Program for Stimulating Competitive Research (EPSCoR). There are currently only 26 U.S. states or territories that are NASA EPSCoR program participants.

The Kansas NASA EPSCoR Program (KNEP) facilitates and manages research that is oriented toward helping Kansas investigators develop self-sustaining competitive research capabilities.

EPSCoR is perhaps best thought of as a research-infrastructure development effort, whereas space grant is mostly about developing people infrastructure (i.e., a STEM workforce).

NASA's expectations for EPSCoR and space grants vary, regularly. There is some overlap in efforts, but it is highly recommended that the director and executive committee work together to essentially separate both programs.

This decoupled approach will greatly minimize confusion, facilitate administration, ease reporting, and enhance the state-wide impact of both NASA programs.