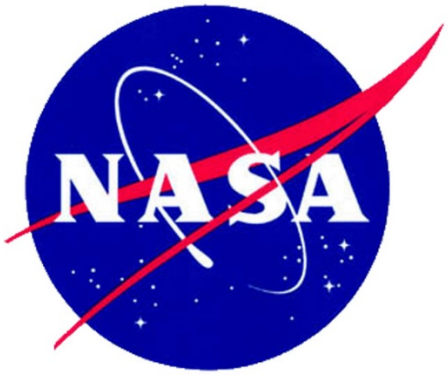

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
HEADQUARTERS
NASA Office of STEM Engagement
300 E STREET, SW
WASHINGTON, D.C. 20546-0001

NASA Fellowship Activity for Fiscal Year 2021

NOTICE OF FUNDING OPPORTUNITY (NOFO)

NNH21ZHA001N

CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA) NUMBER: 43.008

OMB Approval Number 2700-0092
Expires - 09/30/2022

Important Information

1. **This omnibus style solicitation supports the inclusion of multiple program elements. Program Element One focuses on Minority Serving Institutions (MSIs). Other Program Elements may be added in the future.**

2. **Proposals must be submitted by the dates and times listed.**

3. **All proposals are due by 11:59 pm Eastern Time.**

Appendix	Program Element	Release Date	Proposal Due Date
K	1.Minority Serving Institutions (MSIs)	March 24, 2021	May 24, 2021
L	2.All Institutions (MSIs and Non- MSIs)	TBD	TBD

NOTE: Interested applicants are responsible for regularly monitoring NSPIRES for any amendments to this NOFO or additional new program elements.

4. **Awards will be announced approximately three (3) months after the solicitation closes.**

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1. EXECUTIVE SUMMARY

The National Aeronautics and Space Administration's (NASA) journeys have propelled technological breakthroughs, pushed the frontiers of scientific research, and expanded our understanding of the universe. These accomplishments, and those to come, share a common genesis: education in science, technology, engineering, and mathematics (STEM).

The following statutory language authorizes NASA to initiate this Fellowship Activity, which aims to support the strengthening of research capability at U.S academic institutions:

1. The NASA Authorization Act for Fiscal Year 2019, Section 602 STEM Engagement Activities;
2. The National Aeronautics and Space Act [51 U.S.C. § 20101 et seq.] and;
3. The America COMPETES Reauthorization Act of 2010 (Public Law. No. 111-358).

Through the National Science and Technology Council's (NSTC) Committee on STEM Education (CoSTEM), federal agencies, including NASA coordinate their investments in STEM education to magnify the impact of their work.

NASA's Office of STEM Engagement (OSTEM) seeks to leverage NASA's unique mission activities to enhance and increase the capabilities, diversity, and size of the nation's next generation STEM workforce. This workforce is needed to enable future NASA discoveries. Through its internal collaboration with NASA Mission Directorates (MD), NASA Centers, NASA's Jet Propulsion Laboratory (JPL), and external STEM partners, OSTEM aims to bring unique opportunities to learners, educators, and institutions by providing access to NASA's mission content, people, resources, and facilities.

This NASA Notice of Funding Opportunity (NOFO), titled the NASA Fellowship Activity is an omnibus announcement that solicits proposals from accredited U.S. institutions for research training grants to begin each Academic Year. This NOFO is designed to support independently-conceived research projects by highly qualified graduate students, in disciplines needed to help advance NASA's mission, thus affording these students the opportunity to directly contribute to advancements in STEM-related areas of study. NASA Fellowship opportunities are focused on innovation and the generation of measurable research results that contribute to NASA's current and future science and technology goals.

The NASA Fellowship Activity opportunity is administered by NASA's OSTEM. It includes the use of program elements, which allows greater flexibility in meeting the activity goals and objectives. **Under Program Element One, NASA OSTEM intends to award research training grants to Minority Serving Institutions (MSIs). Additional program elements for Non-Minority Serving Institutions may be added in appendices to be issued later in the year.** This NASA Fellowship Activity NOFO provides flexibility, so that each program element has its unique expectations and selection criteria. Additionally, this NOFO demonstrates NASA's commitment to an integrated, Agency approach of STEM Engagement activities. Contingent upon available federal funding, NASA will administer the Fellowship until closeout, thereby fulfilling NASA's responsibilities to its Fellows.

Unique to this research and development fellowship, OSTEM's programmatic structure establishes a Professional Learning Community (PLC) consisting of active NASA Fellowship cohorts, institutional faculty advisers as the grant Principal Investigators (PIs), NASA researchers, scientists, fellowship managers, and subject matter experts (SMEs) from industry and other federal agencies. The PLC is

designed to provide a network of mentors committed to the successful completion of the proposed research. This fellowship includes the following benefits and allowances: Stipend, Tuition Offset and Fees, Center Based Research Experience Allowance, Health Insurance Allowance, Faculty Adviser Allowance, and Fellow Professional Development Allowance.

1.1 Agency-wide Priorities

NASA engages the public and students in its mission through a portfolio of STEM programs and activities. The *2018 NASA Strategic Plan* outlines the direction for NASA through 2021 and beyond. This Plan reinforces the Agency's commitment to inspiring an informed society; engaging the public in science, technology, discovery and exploration; and providing unique STEM opportunities for diverse stakeholders. NASA's investments in these areas are guided by *Strategic Goal 3: Address national challenges and catalyze economic growth, and Strategic Objective 3.3 Inspire and Engage the Public in Aeronautics, Space, and Science.*

1.2 NASA's Strategic Goals

Table 1.2 Strategic Goals

1. Discover	Expand new human knowledge through new scientific discoveries.
2. Explore	Extend human presence deeper into space and to the moon for sustainable long-term exploration and utilization.
3. Develop	Address national challenges and catalyze economic growth.
4. Enable	Optimize capabilities and operations.

NASA Strategic Objective 3.3: *Inspire and Engage the Public in Aeronautics, Space, and Science.*
Inspire, engage, educate, and employ the next generation of explorers through NASA-unique Science, Technology, Engineering and Mathematics learning opportunities.

NASA's OSTEM will play a critical role in achieving Strategic Objective 3.3 by implementing activities within the following three focus areas: 1) Create unique opportunities for students and the public to contribute to NASA's work in exploration and discovery; 2) Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA's people, content and facilities; and 3) Strengthen public understanding by enabling powerful connections to NASA's mission and work.

The goals and objectives for NASA OSTEM are:

Goal 1.0: Enabling contributions to NASA's work.

- **Objective 1.1:** Students contribute to NASA's endeavors in exploration and discovery.
- **Objective 1.2:** Research and development capacity of educational institutions is enhanced, enabling broad and diverse contributions that directly address NASA priorities.

Goal 2.0: Building a Diverse, Skilled Future STEM Workforce.

- **Objective 2.1:** A broad and diverse set of students are attracted to STEM through NASA opportunities.
- **Objective 2.2:** Students, including those from underrepresented and underserved communities, explore and pursue STEM pathways through authentic learning experiences and research opportunities with NASA's people and work.
- **Objective 2.3:** The portfolio of NASA STEM engagement opportunities meets agency workforce requirements and serves the nation's aerospace and relevant STEM needs.
- **Objective 2.4:** Strategic partnerships with industry, academia, non-profit organizations and educational institutions enhance and extend the impact of NASA's efforts in STEM engagement.

Goal 3.0: Strengthen Understanding of STEM through Powerful Connections to NASA.

- **Objective 3.1:** Youth are introduced to STEM concepts and content through readily available NASA STEM engagement resources and content.
- **Objective 3.2:** Students gain exposure to STEM careers through direct and virtual experiences with NASA's people and work.

NASA's multi-year Performance Goals (PGs) and annual Success Criteria are outlined in the NASA Volume of Integrated Performance (VIPer) report found on the *NASA Budget* website. Annually, NASA OSTEM generates a body of evidence-based data it collects from awardees to assess progress of its investments in achieving the following PGs:

- PG 3.3.3 Provide opportunities for students, especially those underrepresented in STEM fields to engage with NASA's aeronautics, space, and science people, content, and facilities in support of a diverse future NASA and aerospace industry workforce.
- PG 3.3.4 Provide opportunities for students to contribute to NASA's aeronautics, space, and science missions and work in exploration and discovery.

1.3 NASA's SAFETY POLICY

All proposals shall consider NASA's priority emphasis on safety.

Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including employees working under NASA award instruments), and (4) high-value equipment and property.

Proposers shall have a written safety policy. Fellowship awardees shall notify the NASA Shared Services Center (NSSC) of any mishaps and close calls related to award implementation within two business days of the occurrence of the close call or mishap. The following NASA procedural requirement applies to NASA entities and may be useful to non-NASA entities for benchmarking purposes:

NPR 8621.1C: *NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping*

Responsible Office: *Office of Safety and Mission Assurance*

For additional information see *NASA Safety and Mission Assurance Program*

Awards of proposals related to this solicitation shall comply with the National Environmental Policy Act (NEPA); thus, proposers are encouraged to plan and budget for any anticipated environmental impacts. While most research awards will not trigger action-specific NEPA review, some activities (including international actions) will. The majority of grant-related activities are categorically excluded as research and development (R&D) projects that do not pose any adverse environmental impact. A blanket NASA Grants Record of Environmental Consideration (REC) provides NEPA coverage for these anticipated activities. NSPRIES NASA Form NRESS-300W, Section VIII includes a questionnaire to determine whether a specific proposal falls within the Grants REC and shall be completed as part of the solicitation process. Activities outside of the bounding conditions of the Grants REC will require additional NEPA analysis. Examples of actions that will likely require NEPA analysis include but are not limited to: suborbital-class flights not conducted by a NASA Program Office; activities involving ground-breaking construction/fieldwork; and certain payload activities such as the use of dropsondes. Questions concerning environmental compliance may be addressed to Tina Norwood, NASA NEPA Manager, at *tina.norwood-1@nasa.gov* or (202) 358-7324.

1.4 NASA Guidebook for Proposers

All policies and procedures for the preparation and submission of proposals, as well as those for NASA's review and selection of proposals for funding, are presented in a separate document entitled *NASA Guidebook for Proposers Responding to a NASA Notice of Funding Opportunity (2021)* (also referred to as the "NASA Guidebook for Proposers"). The *2021 NASA Guidebook for Proposers* is hereby incorporated into this NOFO by reference, and proposers are responsible for understanding and complying with *NASA Guidebook for Proposers* before preparing and submitting their proposals. Unless otherwise noted, proposals that do not conform to the standards in the *NASA Guidebook for Proposers* may be deemed noncompliant and rejected without peer review. The chapters and appendices in the *NASA Guidebook for Proposers* provide supplemental information about the entire NOFO process, including NASA policies for the solicitation of proposals; guidelines for writing complete and effective proposals; NASA policies and procedures for the review and selection of proposals; as well as for issuing and managing the awards to the institutions that submitted selected proposals. Note that NASA's policy for proposals involving non-U.S. participants is provided in Appendix A of the *NASA Guidebook for Proposers.* If there is a conflict between the content of this NOFO and the *NASA Guidebook for Proposers*, this NOFO takes precedence. In case of a contradiction between this NOFO and its appendices, the individual program elements described in the appendices take precedence.

1.5 Data Management Plan

In keeping with the *NASA Plan for Increasing Access to Results of Scientific Research*, new terms and conditions about making manuscripts and data publicly accessible may be attached to NASA awards. All proposals shall provide a Data Management Plan (DMP) or an explanation as to why a DMP is not necessary given the nature of the work proposed. Proposers shall submit the DMP by responding to the section of the cover page for DMP in the NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) (limited to 4000 characters). DMPs shall describe how data generated by proposed research will be shared and preserved and how data collected will be made available to the public. If the proposer's position is that data should not be publicly shared, the proposer shall provide an

explanation as to why data-sharing and/or preservation is not possible or scientifically appropriate. Additionally, the DMP shall describe how data-sharing and preservation will enable validation of results, or how results will be validated if data are not shared or preserved. The DMP shall provide a plan for making all research data's underlying results and findings (found in publications) digitally accessible at the time of publication. NASA will review each proposer's DMP during the evaluation/peer review of proposals. The costs of developing/authoring the DMP shall be included in the proposed budget. For further information, see Section 3.11 in the *NASA Guidebook for Proposers*.

Any research project for which a DMP is not necessary shall provide an explanation in the DMP block. Example explanations:

- This is a development effort for flight technology that will not generate any data that the proposer can release, so a DMP is not applicable;
- The data that the proposer will generate will be subject to International Traffic in Arms Regulation (ITAR); or
- The proposer may explain why the project will not generate any data. The type of proposal that requires a DMP is described in the *NASA Plan for Increasing Access to Results of Scientific Research*.

The DMP shall contain the following elements, as appropriate to the project:

- A description of data types, volume, formats, and (where relevant) standards;
- A description of the schedule for data archiving and sharing;
- A description of the intended repositories for archived data, including mechanisms for public access and distribution;
- A discussion of how the plan enables long-term preservation of data; and
- A discussion of roles and responsibilities of team members in accomplishing the DMP. (If funds are required for data management activities, these should be covered in the budget and budget justification sections of the proposal).

Proposers who include a plan to archive data should allocate suitable time for this task. Unless otherwise stated, this requirement supersedes the data-sharing plan described in the *NASA Guidebook for Proposers.* In addition, researchers submitting NASA-funded articles in peer-reviewed journals or papers from conferences now shall make their work accessible to the public through *NASA's PubSpace*. PubSpace provides free access to NASA-funded and archived scientific publications. Research papers will be available within one year of publication to download and read.

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2. OVERVIEW OF SOLICITATION

2.1 Purpose of Fellowship

The NASA Fellowship Activity is designed to provide US academic institutions the ability to enhance graduate-level learning and development. Institutions are provided funds that support graduate students at a level that allows the students to fully concentrate on academic and research proficiency without the need to seek employment.

The NASA Fellowship Activity goals are to:

- Enhance research and development capacity of institutions and promote greater diversity in addressing NASA priorities;
- Recruit a diverse set of students through STEM Engagement opportunities by partnering with academia, non-profit organizations and institutions; and
- Expand connections with institutions by enhancing their research capabilities through NASA's unique people, facilities, and content.

To achieve these goals, NASA OSTEM strives to enhance higher education, support underrepresented communities, and strengthen online education. The intended outcome is a generation prepared to code, calculate, design, and discover its way to a new era of American innovation.

2.2 NASA Fellowship Activity Description

The NASA Fellowship Activity is designed to support NASA STEM Engagement objectives. This activity provides financial awards to institutions to support development and training of graduate researchers. Furthermore, this activity leverages the capabilities of academic research at institutions of higher education and includes professional development components, designed to provide experiences that enhance the Fellows with NASA's best and promising practices for STEM workforce development.

Proposed Research

The candidate and the faculty adviser shall connect with the NASA Technical Adviser in advance to secure a letter of support. NASA Technical Adviser Points of Contact (POCs) are listed in **Appendix E** of this NOFO. The institution's candidate will independently conceive a research hypothesis or an engineering design project concept in response to one of the NASA graduate research opportunities listed in the NOFO (See **Appendix E** for NASA Research Opportunities). The institution's candidate, guided by a Faculty Adviser, shall develop a proposal in collaboration with the NASA Technical Adviser in order to assure institutional capability and capacity, ensure relevance to Mission Directorate priorities, and secure NASA's technical support for use of its unique facilities, content and/or subject matter experts (SMEs). The institution shall submit the proposal on behalf of a graduate student. If a NASA research training grant is awarded, the Faculty Adviser shall serve as the Principal Investigator (PI) under the awarded grant.

An institution may submit proposals on behalf of multiple candidates; however, each individual candidate is permitted to have only one proposal submitted on his or her behalf.
NOTE: Entities shall not submit duplicate proposals. If more than one proposal is submitted on behalf of an institution's candidate, then all proposals will be deemed **ineligible** for that student and will not be forwarded for peer review.

On-Site Experience
If the proposal is selected and awarded a grant, the NASA Technical Adviser becomes an integral part of the team and an additional member of the research cohort. The NASA Technical Adviser promotes NASA's innovation-oriented culture and provides entry into NASA-unique facilities; access to specialized equipment, and exposure to NASA's partners and collaborators. NASA Fellows shall be mentored by the NASA Technical Adviser at a host NASA Center or JPL during an annual mandatory 10-week Center-Based Research Experience (CBRE). The CBRE occurs in the summer months, in order to benefit from the dynamic Federal research and development (R&D) environment and other related professional development activities. However, a possible unavailability of needed specific Center test facility and/or equipment due to its commitment to on-going NASA mission-related work may necessitate off-summer CBRE at the affected Center. Through the CBRE, Fellows will advance their STEM education through gaining relevant research experience, expanding their professional networks, learning best practices, developing and strengthening research ethics, and cultivating an understanding of specific research processes. **NOTE:** Due to the current conditions caused by the COVID 19 pandemic, the on-site student experience may be conducted as an eight-week Virtual Center-Based Research Experience. NASA Technical Advisers will modify projects and assignments accordingly.

Period of Performance and Optional One-Year Extension
The NASA Fellowship Activity is a 2-year award for a Master's Fellow and a 3-year award for a Doctoral Fellow. Both are dispersed annually consistent with the renewal process. This NOFO is designed to provide an extension for an optional third year of funding for a Master's Fellow and an optional fourth year of funding for a Doctoral Fellow. Additional details regarding the renewals process can be found in Section 3D and Appendix G of this NOFO. Additional details and Instructions for applying for an additional year extension can be found in **Appendix H** of this NOFO.

Professional Networking Opportunity
NASA Fellows will be able to participate in annual prestigious conferences during which they will have the opportunity to network with their cohort of Fellows, meet prospective recruiters, and participate in professional development sessions. However, due to COVID-19, some (or all) of these conferences may be held virtually or cancelled.

Requirement to Notify NASA of Other Funding Submissions/Selections
Each proposal shall clearly indicate if it is being submitted to more than one NASA office at the same time. For example, proposal submission to EONS (Engagement Opportunities in NASA STEM) and NASA Fellowships Activity, this information shall be included in the program specific data section of the proposal. NASA will make appropriate determinations in the selection process if the same proposal is recommended for award to multiple NASA offices. In other words, the same proposal cannot be selected for an award to more than one NASA office.

2.3 NASA Relevance

Each proposed research/engineering project is to be developed in response to one of the NASA Fellowship Research Opportunities. Each proposal shall include a letter of support from a NASA Technical Adviser stating the Center's or JPL's support of the proposal and willingness to serve as a NASA Technical Adviser. Additionally, the Technical Adviser's letter shall indicate concurrence from the Center's Office of STEM Engagement and/or JPL's Education Office to support tasks associated with on-boarding and/or off-boarding the fellow. The NASA Technical Advisers are identified in the opportunities

posted under **Appendix E** of this NOFO. It is the proposing team's responsibility to contact the NASA Technical Adviser in advance to coordinate the requirements of proposal submission. In addition, the NASA Technical Adviser shall document the agreed-upon collaboration, including a communication plan, specific equipment, and/or facility use and other investments. Both the Faculty Adviser and the NASA Technical Adviser's proposed collaboration shall be included, with areas of collaboration interests and potential outcomes clearly documented. Coordination with the potential NASA Technical Adviser is mandatory. If applicants have questions about a research opportunity, they are to contact the NASA Technical Adviser identified in the opportunity. The NASA Technical Adviser associated with the opportunity will provide review and guidance on the activities in his or her lab. Also, proposals shall clearly and concisely describe:

- The relevance of the proposed work to NASA's currently funded research priorities as described in the funding opportunity;
- The relevance of the proposed work to the interests and abilities of the Institution's candidate; and
- How the work will increase the capacity of executing cutting-edge research at the institution.

The NASA websites below can be reviewed to access information about the Agency's Mission Directorates:

- *Aeronautics Research*
- *Human Exploration Operations*
- *Space Technology*
- *Science Mission Directorate*

2.4 NASA Fellowship Program Elements

Program Element One: Minority Serving Institutions (MSIs)

NASA intends to award up to $550,000 in research training grants in FY 2021 for 10 - 11 Fellows. NASA investments enhance the research, academic, and technology capabilities of Minority Serving Institutions (MSIs) through awards that assist faculty and students in research and provide authentic STEM engagement related to NASA missions.

For Program Element One, NASA will consider the submission of applications from MSIs, to include historically underrepresented groups and underserved populations, such as women, minorities, persons with disabilities, LGBTQs and veterans.

Under this program element, NASA Fellowship Activity's goal is to increase NASA's responsiveness to federal mandates related to MSIs, such as Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), Asian American and Native American Pacific Islanders Serving Institutions (AANAPISIs), Tribal Colleges and Universities (TCUs), Native American-Serving Nontribal Institutions (NASNTIs), and other MSIs as required by the following MSI-focused Presidential Executive Orders(E.O.): E.O. 13779 on HBCUs; E.O. 13270 on TCUs; E.O. 13230 on Educational Excellence for Hispanic Americans; E.O. 13515 on Increasing Participation of Asian American and Pacific Islanders (AAPI); and E.O. 13621 on Educational Excellence for African Americans in Federal Programs and Predominantly Black Institutions. **As such, Program Element One is only open to proposals from Minority Serving Institutions.**

Program Element Two: All Institutions (MSIs and Non-MSIs)

Details on Program Element Two are to be determined and may be published at a later date.

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3. AWARD INFORMATION

A. Anticipated Type of Award

The NASA Fellowship funding is issued to the awardee's institution by NSSC in the form of a NASA research training grant. Cooperative agreements and contracts will not be awarded as a result of this opportunity.

B. Estimated Number of Awards

Awards are subject to NASA's receipt of proposals of adequate merit and to the availability of Congressional appropriations in each FY. Please refer to the posted program element for award details.

C. Cancellation of Announcement

NASA reserves the right to not make any awards under this NOFO and/or to cancel any or all aspects of this NOFO at any time. NASA assumes no liability (including proposal preparation costs) for canceling this NOFO or for an entity's failure to receive an actual notice of cancellation.

D. Period of Performance and Renewals

All awards are dispersed annually and may be renewed pending availability of Congressional funds and a successful annual review of the effort. Fellows shall justify extended third- and fourth-year requests. Annual renewals are contingent upon NASA's acceptance of the renewal application, which includes satisfactory progress (as reflected in the Fellow's academic performance and research progress, recommendation by the Faculty Adviser, recommendation by the NASA Technical Adviser, and effective costing of the annual budget).

Requests for deferment of awards are not encouraged and will only be considered in emergency situations. Approvals for deferments are not guaranteed.
Institutions seeking renewals shall submit a Renewal Proposal Applications Package to the NASA Fellowship Managers in May of each year. Specific details will be released to Fellowship awardees upon acceptance of the award.

Additional details regarding the renewals process can found in Appendix G of this NOFO.

E. Transfer of Award

The PI and the institution's AOR shall provide a timely statement to NASA Fellowship Management advising of any changes in the Fellow's enrollment status.
If the Fellow withdraws within the first half of the award year, the institution may submit a request for replacement of a graduate student with similar achievement and research objectives to

complete the remaining months of the current award. Since this is a highly competitive program, replacement Fellows may be recommended from NASA's current database of alternative applicants, who have already passed a review process and have met all the requirements for the award.
NOTE: See 3.1 for additional information.

F. Administrative and National Policy Requirements

All administrative and federal and NASA policy requirements for grants can be found in : 2 Code of Federal Regulations (CFR) 200, 2 CFR 1800 and the *NASA Grant and Cooperative Agreement Manual (GCAM)*.

G. Access to NASA Facilities

Award recipients with individuals working under the award who require access to NASA facilities and/or systems shall promptly work with NASA staff to ensure proper credentialing. Such individuals include U.S. citizens and lawful permanent residents ("green card" holders).

H. Post-Proposal Review and Process for Appeal

All proposers will be notified via NSPIRES and provided with a written review after online and face-to-face panel evaluation. Proposers may contact the Technical Officer for a debriefing if deemed appropriate. (See **Appendix K** of this NOFO for more details on appeal process).

I. Research Terms and Conditions

Awards from this funding announcement that are issued under 2 CFR 1800 are subject to the *Federal Research Terms and Conditions (RTC)*. In addition to the RTC and NASA-specific guidance, three companion resources can also be found on the website: Appendix A— Prior Approval Matrix, Appendix B—Subaward Requirements Matrix, and Appendix C—National Policy Requirements Matrix.

3.1. Funding Information

The NASA Fellowship will be awarded as a **non-portable** research training grant to accredited U.S. institutions on behalf of Fellows selected under this NOFO. As such, this award cannot be transferred to another institution. If a Fellow transfers to a different institution during the award's period of performance, the Fellow shall reapply to the activity and follow the guidelines for a new Institution's candidate, submit a new proposal, and compete for any future NASA Fellowship Activity awards. If the PI transfers to another institution, the award remains with the institution that received the initial award funding, and not with the PI (or any other individual(s)). For each Fellow, their institution receives up to a $55,000 annual award ($50,000 for Master's student and $55,000 for Doctoral student), with the following **annual** maximums per budget category:

Table 3.1. Funding Categories

TYPE OF FUNDING	FUNDING AMOUNT
Fellowship Stipend	$25,000 (Master's) $30,000 (Doctoral)
Tuition Offset and Fees	$8,000
Center-Based Research Experience (CBRE) Allowance	$8,000
Health Insurance Allowance	$3,000
Faculty Adviser Allowance	$4,500
Fellow Professional Development Allowance	$1,500

Refer to **Section 3.2** for detailed information on each of the above funding categories.

NOTE: Institutions are allowed to transfer Tuition Offset and Fees funds to health insurance and professional development allowance, upon approval from the NASA Fellowship Manager and the NASA Grants Officer. Students are exempt from paying any tuition differences (i.e., the difference between the tuition and fees allowance and the actual tuition and fees.) A statement should be provided by the institution during acceptance of the award that the students are exempted from paying any tuition differences.

3.2 Allowances Explained

Fellowship Stipend: A stipend offsets the Fellow's living expenses. Stipend payments shall be prorated evenly across a ten-month academic school year.

Tuition Offset and Fees: Permissible up to the maximum value. While the student is funded as a result of selection from the NASA Fellowship Activity solicitation, the institution shall exempt the student from paying the difference between the tuition and fees allowance and the actual tuition and fees.

Center-Based Research Experience (CBRE) Allowance: This allowance is to be used to support travel and other expenses associated with the CBRE experience. CBRE funds are to be released from the institution to the NASA Fellow in two incremental payments. The first payment shall be released within a month of the planned CBRE, and the last payment shall be released after the successful completion of the 5th week of the CBRE. In accordance with the NASA research training grants reporting process, all institutions shall submit receipts for all financial transactions to the NASA Fellowship Activity Manager. **NOTE:** Due to the current pandemic, students' on-site experience may be replaced with an eight-week Virtual Center Based Research Experience. NASA Technical Advisers will modify projects and assignments accordingly.

Health Insurance Allowance: Permissible up to a maximum value, only to the level of the actual expected cost.

Faculty Adviser Allowance: This allowance is designated to support and facilitate a collaborative research team. Faculty Advisers are significant contributors to the execution of the NASA research training grant's research goals. This allowance supports on-site visit(s) during the NASA Fellow's CBRE to discuss various research-related topics with the team and to explore additional research opportunities with NASA.

Fellow Professional Development Allowance: This allowance may be used in direct support of training, attendance at technical and scientific conferences, and publication needs of the Fellow. This allowance may be used in concurrence with the Faculty Adviser Allowance to cover the Fellow's approved domestic travel to technical and scientific meetings. Each Fellow shall attend at least one technical conference (in person or virtual) to present the work he or she is **conducting under the awarded research proposal.** All technical conferences shall follow procedures for approval by the NASA Fellowships Manager. Conferences are to be attended **after the first year of the research training grant.** Fellows presenting their research papers at conferences shall have advanced written approval to do so from their NASA Technical Advisers and NASA's export control office.

Allowable expense details for attending professional research, conferences, symposiums, and workshops are as follows:

a) Registration Fees.
b) Accommodation - maximum three nights in a **fire safe hotel*** per event (per diem 3 full days and two ½ days).
c) Travel costs to and from event.
d) Publication costs for conference presentation materials, related research papers, thesis, and dissertation.
e) Training for professional required skills such as software training, etc.

Details to fire safe hotels and property selection criteria and cost of travel can be found on *U.S. General Services Administration* rates. ***NOTE: Shared homes, including Airbnb are not included in the list of acceptable lodging.**

NASA funds must not be used to purchase equipment such as computers, furniture, and non-related research equipment.

The NASA Fellowship supports graduate research training and development and does not provide funding for institutional overhead/indirect costs.

Pre-award costs are not allowable.

Tax questions should be directed to the *Internal Revenue Service*. Refer to IRS publications on "Scholarships and Fellowships."

3.3 Funding Sources

NASA may elect to support some of the proposals submitted under this NOFO through the use of internal NASA funding sources, such as Minority University Research Education Program (MUREP), NASA Mission Directorates, NASA Centers, and/or JPL.

This NOFO builds in flexibility, so that each funding source may have its unique expectations and selection requirements. It demonstrates NASA's commitment to streamlining and consolidating activities. Funding will continue for these fellowships until closeout, thereby fulfilling NASA's responsibilities to its Fellows. However, this is all contingent upon available Congressional funding.

3.4 Cost Sharing

NASA may consider voluntary cost sharing options, as deemed appropriate. Submitting institutions shall describe in their proposals any such cost-sharing that is offered.

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4. PROGRAMMATIC REQUIREMENTS

The NASA Fellowship activity seeks to foster a new generation of highly skilled scientists and engineers in the critically important area of STEM research in core competencies of NASA missions. Fellows shall participate in these activities to help them grow professionally:

1. The Fellow shall participate in all monthly Professional Development activities. Exceptions should be approved by the NASA Activity Manager on a case by case basis. If a Fellow does not participate in these activities, the Fellowship will not be renewed.

2. The Fellow shall submit a detailed research report compiled at the end of each academic year.

3. The Center Based Research Experience (CBRE) is a mandatory requirement of the program. If a Fellow does not participate in the CBRE, the Fellowship will not be renewed, and the stipend for the CBRE will be withheld. **NOTE:** Due to current pandemic, students' on-site experience may be replaced with an eight-week Virtual Center Based Research Experience. NASA Technical Advisers will modify projects and assignments accordingly.

4. The Fellow shall receive a positive CBRE evaluation indicating successful completion of research activities during the ten-week period from the NASA Technical Adviser. If this does not occur, the Fellowship will not be renewed for the next year.

5. Each Fellow shall publish one peer-reviewed paper by the end of the research training grant's performance period. Presentation at a scientific conference will also be encouraged depending on the outcome of the research effort.

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5. ELIGIBILITY REQUIREMENTS

TABLE 5.1 Candidate Eligibility Requirement

Institutions are submitting research ideas on behalf of their respective candidates. To be eligible to apply for receipt of a NASA Fellowship, the candidate shall satisfy all of the following criteria:
Be a U.S. citizen or a U.S. national on the date of proposal submission.
Hold a Bachelor's degree earned before August 31 of the academic year for the grant award.
Have a minimum GPA of 3.0 on a 4.0 scale on the most recent transcript. (All college level transcripts are required. Unofficial transcripts are acceptable at the time of proposal submission. However, once selected official transcripts shall be submitted.)
Be enrolled in a full-time Master's or Doctoral degree program in a NASA STEM-related field (See **Appendix C** of this NOFO) no later than September 1 of the academic year for the grant award.
Have a projected degree plan for continuous full-time enrollment equating to the period of performance of the grant award. Candidates shall be no later than in the first academic year of their Master's degree program, or no later than in the second academic year of their doctoral degree program. (Students should not plan to graduate before the end of the period of performance of the grant award.)

5.2 Degree and/or Field of Study

Fellowships are awarded for graduate studies leading to research-based Master's and Doctoral degrees in a NASA-specific STEM discipline. Please refer to **Appendix C** of this NOFO for more information.

5.3. Institutional Eligibility

Accredited U.S. institutions of higher education, offering graduate level degrees in eligible STEM fields (per Appendix C of this NOFO), and having a physical campus located in the U.S. or its territories are eligible for this NOFO.

Proposals under Program Element One shall originate from a U. S. Minority Serving Institution (MSI). The following MSI link leads potential proposers to the official NASA MSI list. If a proposer's institution is not listed as an MSI by the proposal due date, the institution's AOR shall provide confirmation of its MSI status via email to *NASA.fellowships@nasaprs.com* by May 17, the proposal due date. The following categories of U.S. institutions are eligible to propose to Program Elements One and Two (i.e., Appendices K and L).

TABLE 5.3. Table of Eligibility for Minority-Serving Institutions

Institution Type	Eligible
Alaska Native and Native Hawaiian-Serving Institutions (ANNH)	Yes
Tribal Colleges and Universities (TCU)	Yes
Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI)	Yes
Hispanic-Serving Institutions (HSI)	Yes
Historically Black Colleges and Universities (HBCU)	Yes
Native American-Serving Nontribal Institutions (NASNTI)	Yes
Predominately Black Institutions (PBI)	Yes

Proposals involving bilateral participation, collaboration, or coordination in any way with China or any Chinese-owned company, whether funded or performed under a no-exchange-of-funds arrangement, shall be ineligible to receive an award.

5.4 Faculty Adviser / PI Eligibility

The PI shall be a tenured or tenure-track faculty member at an eligible accredited U.S. institution (if a tenure system is established). Eligible institutions that do not have a tenure track instead shall submit a letter of commitment to comply with the rule that any proposed change to the PI under the agreement is subject to NASA's advance written approval. The PI shall have a Ph.D. or equivalent in an engineering, computer science, technology, mathematics, or science discipline that is relevant to NASA's research needs.

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6. PROPOSAL SUBMISSION

The institution's candidate shall be the principal author of the submitted research proposal, except for the impact statement, which is written in collaboration with the faculty adviser. By submitting the proposal for consideration, the institution's candidate and the Faculty Adviser/PI certify that the institution's candidate is the principal author of the proposal.

The NASA civil servants listed in Appendix E of this NOFO as potential Technical Advisers, shall not assist in the development or any formal pre-submission review of specific proposals. This restriction begins on the release date of this NOFO. Additionally, any NASA civil servants who will serve as proposal reviewers for this NOFO shall not "pre-read" any proposals nor provide letters of support to an entity/entity that plan(s) to submit a proposal. However, submitters shall contact the potential NASA Technical Advisers (as identified in **Appendix E**, the Research Opportunities by Center) for information regarding a review of the work currently being performed in the respective lab. The proposed research idea shall align with the research opportunity listed in **Appendix E** and **shall** be approved by the NASA Technical Adviser for that specific research opportunity.

Proposals shall respond to one of the research opportunities listed in Appendix E and shall include a letter of support from the NASA Technical Adviser associated with the given opportunity and the respective NASA Center or JPL. Proposals that do not comply with these requirements will be deemed ineligible for award.

6.1 Fellowship Proposal Submission Guidelines

All proposals shall be submitted via NSPIRES in electronic format by the institution's Authorized Organization Representative (AOR) by 11:59 PM Eastern Time. Proposals received after this deadline are considered "LATE" and will be deemed ineligible for award. NASA does not pre-approve the submission of late proposals. If a late proposal is submitted, it is within NASA's sole decision to decide whether to accept it. If NSPIRES is available for proposal submissions, the site automatically captures the time the system received the proposal. Proposals submitted later than 11:59 PM Eastern time on the proposal due date are considered "LATE." The NSPIRES system may prevent the submission of proposals after the deadline. Extensions will not be given to accommodate late or partial submissions. No hard copy proposals will be accepted. Incomplete proposal packages will be deemed **non-compliant and ineligible**

for further review. Refer to **Appendix D** of this NOFO for Step-by-Step Submission Instructions under "Other Documents" in NSPIRES. All information needed to apply to this solicitation is contained in the companion documents to this NOFO and in the *NASA Guidebook for Proposers – 2021* edition.

Proposers are strongly encouraged to access the NSPIRES electronic proposal submitting system well in advance of the proposal due date. Proposers are also required to coordinate all submission steps with the institution's AOR to ensure timely proposal submissions.

Proposals **shall** include all the items listed below, appropriately labeled, in the *exact order* specified below:

1. Proposal Cover Page (including Project Summary, Program Specific Data and Data Management Plan)
2. Impact Statement
3. Faculty Adviser/PI Curriculum Vitae (CV)
4. Project Description
5. Candidate's Degree Program Schedule
6. Candidate's Curriculum Vitae (CV)
7. Personal Statement
8. Candidate's Transcripts
9. Letters of Recommendation
10. Letter of Support

Proposals shall not include extraneous information nor materials that are not specifically requested or outlined in this NOFO. The proposal shall not include any additional information provided by way of links to web pages, except as part of citations in the "References Cited" section. Images may be included in the page limits. Review of the proposal is based solely on those materials received by the proposal deadlines. The proposal shall be submitted using the following format:

- Standard 8.5" x 11" page size
- 12-point, Times New Roman font
- 10-point font may be used for citations, references, footnotes, figure captions, and text within figures
- 1" margins on all sides
- Single-spaced

A listing of available research opportunities throughout NASA is included in this solicitation (see **Appendix E** of this NOFO). Institutions' representatives and student candidates shall review the opportunities and discuss with their NASA Technical Adviser the viability and relevance of the applicant's research concept to the selected opportunity of interest.

6.2 Proposal Submission Requirements

6.2.1. NSPIRES Registration Information

A **Prerequisite** for an organization to register in *NASA Solicitation and Proposal Integrated Review and Evaluation System* (NSPIRES) is registration in the *System for Award Management (SAM)*. Note that if the submitting organization is not registered in SAM, it may take 15 business days or more to complete the registration, so proposers are advised to start the SAM and NSPIRES registration processes well in advance of the proposal deadline in order to complete organization registration in SAM and then complete organization registration and proposer affiliation in NSPIRES before the proposal due date.

To successfully register in NSPIRES proposers are required to have the following:

1) An Employer Identification Number (EIN) or the Tax Identification Number (TIN) can be obtained from the *IRS* website.
2) A *Data Universal Numbering System (DUNS)* number.
3) If the organization is a non-U.S. organization, a valid *NATO Commercial and Government Entity (NCAGE)* code.
4) A valid *login.gov* account.
5) A valid registration with the *SAM*: As part of SAM registration, U.S. organizations will receive a Commercial and Government Entity (CAGE) code.
6) A valid registration with NSPIRES.

6.3 Proposal Submission Process

Below is the proposal submission information and checklist.

Table 6.3 Proposal Submission Information and Checklist

			Page Limit
✓	**NSPIRES Registration Information:** The institution shall be registered with NSPIRES through the Electronic Business Point of Contact (EBPOC) listed in the *System for Award Management (SAM)* database. Step-by-step instructions for proposal submission can be found in NSPIRES in "Other Documents" under the NASA Fellowship Activity.		N/A
	AOR	Each registered institution shall have a designated AOR, who shall submit the Institution's proposal for graduate-level research support. (Please see "NOTE" in section 5, Table 5.1 of this NOFO if the institution does not have an AOR.)	
	PI	The Faculty Adviser (PI) shall be registered in NSPIRES and affiliated with the registered institution. (Please see "NOTE" below if the candidate has not been accepted or has not selected the institution of their choice yet and thus does not have a PI.)	
	Institution's Candidate	The institution's candidate shall be registered in NSPIRES and activate his/her account.	
	Deadline	**Proposal Submission Deadline (See appropriate appendix for each specific program element)**	

		Extensions will not be granted to accommodate late proposals or partial proposal submissions.	
a). NSPIRES-generated Proposal Cover Page: The cover page to be completed online includes a **Project Summary** to be titled in the proposal as "Project Summary." This summary shall be a clear, concise, cohesive paragraph of approximately 1,000 characters. Also, this summary shall be a complete synopsis of the proposed project description stating the purpose, methodology, findings, and the conclusion or expected outcome of the project. The cover page also includes responses to the Program Specific Data Questions and Data Management Plan.			
The following elements are not part of the NSPIRES Proposal Cover Page form and shall be combined into a **single PDF** document and uploaded on NSPIRES for submission.			
	Format	• Standard 8.5" x 11" page size • 12-point, Times New Roman font • 10-point font may be used for references, footnotes, figure captions, and text within figures • 1" margins on all sides • Single-spaced	
NOTE: The following elements (b – k) are not part of the NSPIRES Proposal Cover Page and shall be combined into a single PDF document and uploaded on NSPIRES for submission. **b). Impact Statement:** This proposal section shall be titled "Impact Statement" and shall be jointly written by the Institution's candidate and Faculty Adviser (PI). The Impact statement shall address the following:			
	Pages	Shall not exceed two pages in length.	2
	Content	1. State the research gap and identify how the candidate's research proposal addresses the research gap within their STEM field in the scientific literature. 2. Discuss the impact of NASA partnership on the institution's capacity and capabilities. 3. Explore the potential for commercialization – possible technology transfer. 4. Consider scientific impact of the proposed effort on NASA and the larger scientific society, with a focus on the candidate's specific field of study. 5. The statement shall have specific information on the need for NASA participation in the research due to NASA-unique facilities, personnel, and institutional knowledge. To expand on the impact statement, the candidate shall state how their prior experience will enhance the proposed NASA research.	
c). Faculty Adviser/PI Curriculum Vitae (CV)			
	PI	• The PI shall be a tenured or tenure-track faculty member at an eligible institution (if a tenure system is established). • Eligible institutions that do not have a tenure track shall submit a letter of commitment to comply with the rule that	

		any proposed change to the PI under the agreement is subject to prior written NASA approval. • The PI shall have a Ph.D. or equivalent in an engineering, computer science, technology, mathematics, or science discipline that is relevant to NASA's research needs.	
	Pages	Shall not exceed three pages in length.	3
	Content	1) Name 2) Current position 3) Title 4) Department 5) Institution address 6) Institution phone number 7) Principal publications (within the last three years) 8) Relevant career experience 9) Research 10) Awards 11) Scholarships 12) Other relevant accomplishments	
e). Project Description: This proposal section shall be titled "Project Description." This Project Description shall provide a clear description of the candidate's proposed research and shall be written in response to a specific Research Opportunity listed under "Other Documents," and with the support of a NASA Technical Adviser. The Project Description follows the order below and shall contain all the following technical elements:			
	Pages	Shall not exceed six single-spaced pages in length	6
	Content	1. Abstract 2. A statement of the problem to be addressed 3. A description of the science background and relevance to previous work in the field 4. General methodology 5. Project Schedule / Timeline 6. Explanation of new or novel techniques 7. Expected results and their significance or application 8. Literature citations	
f). Candidate's Degree Program Schedule: This section shall be titled "Degree Program Schedule," and shall include the following information:			
	Pages	Shall not exceed two pages in length.	2
	Content	1) Proposed start and completion dates. 2) Anticipated candidate degree program milestones, such as candidacy exams.	
g). Candidate's Curriculum Vitae (CV)			
	Pages	Shall not exceed two pages in length.	2
	Content	1. Name 2. Current Academic Level 3. Title 4. Department 5. Institution address 6. Institution phone number	

		7. Relevant career or Academic experience 8. Research or Significant Projects 9. Awards and Recognition 10. Other relevant accomplishments	
h). Candidate's Personal Statement: How does graduate school prepare the candidate for a career contributing to the expansion of scientific understanding and the alignment of proposed research with NASA's mission?			
	Pages	Shall not exceed two pages in length.	2
	Content	1. Describe personal motivation to pursue advanced NASA-related STEM research. 2. Include specific examples of any relevant research, class project and/or professional activities in which the candidate has participated. 3. Chronicle STEM graduate school preparation activities and the results. 4. Describe the contributions of the candidate's activity to advancing knowledge in STEM fields, as well as the potential impacts to NASA Missions.	
i). Candidate's Transcripts: Include all undergraduate and graduate transcripts. The candidate shall have a minimum GPA of 3.0 on a 4.0 scale on his or her most recent official transcript. (All college-level transcripts are required, however, only the GPA from the most recent institution is required to be a minimum GPA of 3.0 on a 4.0 scale. While official and unofficial transcripts are acceptable at the time of the application, official transcripts will be required following selection.)			N/A
	Format	Shall be legible and unaltered.	
	Note	Redact the candidate's social security number and date of birth, if they appear on the transcript, prior to submission (These two redactions are the only permitted alterations to a transcript.)	
	Foreign Transcripts	Transcripts from institutions outside of the United States also have the option to be accompanied by an international credential evaluation from a third party, such as, but not limited to, the *World Education Services* (WES). Explanatory statements regarding transcripts are optional and shall be used to explain special cases, such as non-English Language transcripts. Adding a simple reference/link to an institution's website in order to explain the credit allocation and conversion of grades to the U.S. system or websites that translate from foreign languages into English is not an explanatory statement since websites may not work. The necessary explanatory text shall be fully contained within the supplemental transcript explanation.	
j). Letters of Recommendation			
	Content	Each institution's candidate shall submit three current letters of recommendation as part of the proposal by the proposal due date on an organization's official letter head.	N/A

	Restrictions	Recommenders shall not be family members of the candidate. If a NASA civil servant or JPL employee provides a Letter of Recommendation for a proposal, then they **cannot** provide the Letter of Support for that proposal.	
	Details	Each letter shall contain the recommender's contact information. One letter shall be from (and signed by) the candidate's proposed Faculty Adviser/PI on official institution/organization letterhead. It shall include the following information: name and title of the letter writer, department, and institution or organization. **It shall include a statement indicating the level of assistance provided to the candidate during the preparation of the project description**. (**NOTE:** If a candidate has not yet been accepted into their institution of choice, then they shall submit a letter of recommendation from his or her current academic adviser.) *The identified PI is not permitted to be a family member. The other two letters shall be written by individuals (e.g., teachers, professors, STEM professionals, advisers, mentors, work supervisors) with detailed knowledge of the candidate's abilities.	
	Requirement	All letters of recommendation for the proposed candidate shall be submitted as part of the proposal by the proposal due date and the letters shall be on the organization's letter head with the recommender's name, title, organization, and contact information.	
k). Letter of Support			N/A
	Technical Adviser	The contributing NASA Technical Adviser shall: (1) be a NASA civil servant or JPL employee; and (2) provide a letter on the organization's letterhead stating his/her support of the proposal and willingness to serve as a NASA Technical Adviser. Additionally, the Technical Adviser shall obtain concurrence of support from the Center's Office of STEM Engagement/JPL's Education Office for tasks associated with onboarding and offboarding the fellows and written concurrence of host organizations Division Chief's support on the letter of support. **NOTE: An exception to the letterhead requirement is permitted only for JPL Technical Advisers.**	
	Content	A statement of support shall be included for any research expenses not covered by the research training grant and identified as an in-kind contribution from NASA.	
	Restriction	A NASA civil servant or JPL employee providing a Letter of Support for the proposal **cannot** also provide a Letter of Recommendation for the proposal. *The identified NASA Technical Adviser should not be related to any proposers on this effort.	

7. APPLICATION REVIEW AND EVALUATION INFORMATION

A. Proposal Review and Selection

All eligible proposals will be reviewed by NASA and non-NASA subject matter experts (SMEs) via online and/or face to face panel reviews. These reviewers will be identified by NASA, ensuring they are experts in the STEM subjects closely related to the candidate's field of study (See **Appendix C** of this NOFO). As part of the selection process, the fellowship managers will ensure panel reviewers have no conflicts of interest with the submitting institution, the institution's candidate, and/or the proposal team. Panel reviewers shall be required to sign a nondisclosure/ conflict of interest form prior to being granted access to the proposals. NASA technical experts and fellowship managers will complete a technical review of proposals and submit their findings and results to the selection officials for final award decisions.

The following criteria shall be used to evaluate proposal applications: Academic Merit and Distinction, Broader Impact, and Scientific Merit. The weights and a description of these areas are provided below.

1. **Academic Merit and Distinction (30%).** Based upon the review of the Institution's candidate's transcripts, degree program schedule, personal statement, impact statement, letters of recommendation and candidate's CV, reviewers shall analyze the applicant's potential to conduct NASA relevant research based upon the following criteria:
    a. The applicant's ability to synthesize and evaluate original thoughts into a clear and concise document;
    b. The applicant's previous experiences conducting research and/or desire/potential to conduct research in an authentic lab setting; and
    c. The applicant's intrinsic motivation and determination to complete an advanced degree.

2. **Broader Impact (10%).** Based upon the review of the applicant's "Project Description," reviewers shall analyze the proposed research's potential to benefit society or advance desired societal outcomes. These include activities that are directly related to the specific research projects or activities that are supported by and are complimentary to the project. Examples include participation by an underrepresented and/or underserved community, enhancement of STEM education and educator development, improved well-being of individuals, increased partnership between academia and industry, and improved national security.

3. **Scientific Merit of the Proposed Research (60%).** Based upon the review of the applicant's Project Description, reviewers shall analyze the quality of the proposed NASA relevant research based upon the following:
    a. The proposal's ability to address research gap in the scientific literature;
    b. The proposal's ability to clearly describe a collaborative approach to conducting research within NASA;
    c. The proposal's ability to clearly describe the connection between the proposed research area and the academic discipline that the Institution's candidate is pursuing; and
    d. The proposal's ability to clearly describe the uniqueness of their proposal against the goals described in the Fellowship solicitation.

After the panel review, NASA technical experts and fellowship managers will make selections based on the panel recommendations.

B. Review of Applicants in the Federal Awardee Performance and Integrity Information System (FAPIIS)

Before making a Federal award with a total amount of Federal funding greater than the simplified acquisition threshold (currently $250,000), NASA is required to review and consider any information about the candidate that is in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System—FAPIIS) accessible through the *System for Award Management (SAM)* (see 41 U.S.C. 2313).

At their option, applicants may review information in the designated integrity and performance systems accessible through SAM and comment on any information about themselves that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.

NASA will consider any comments by the applicant, in addition to the other information in FAPIIS, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205 Federal awarding agency review of risk posed by applicants.

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8. REPORTING REQUIREMENTS

The reporting requirements for awards made through this NOFO will be consistent with 2 CFR 1800.335 and 2 CFR 1800.350. Award recipients may also be subject to reporting requirements under the NASA Plan for Increasing Access to Results of Federally-Funded Research. Such requirements include reporting of final peer-reviewed manuscripts in annual and final progress reports. In other words, award recipients should report on progress in archiving of data and manuscripts in their progress reports and especially in the final report. All requirements will be identified in the Notice of Award. If the total value of the recipient's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds $10,000,000 for any period during performance of this Federal award, additional reporting requirements will apply. *See 2 CFR 200 Appendix XII—Award Term and Condition for Recipient Integrity and Performance Matters.*

Award recipients may also be subject to reporting requirements under *the NASA Plan for Increasing Access to Results of Federally Funded Research.* Any such requirements will be identified in the Notice of Award.

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9. INTELLECTUAL PROPERTY

Data Rights

Recipients may copyright any work that is subject to copyright and was developed under a NASA grant. NASA reserves a royalty-free, non-exclusive and irrevocable right to reproduce, publish, distribute to the public, prepare derivative works, or otherwise use the work in whole or in part in any manner for Federal purposes, and to authorize others to do so for Federal purposes.

Invention Rights

Recipients are subject to applicable regulations governing patents and inventions, including Government-wide regulations issued by the Department of Commerce at 37 Part 401, *"Rights to Inventions Made by Nonprofits Organizations and Small Business Firms Under Government Awards, Contracts, and Cooperative Agreements."*

Patent Rights

As stated at 2 CFR 200.315(c), this award is subject to the provisions of 37 CFR 401.3(a), which requires use of the standard clause set out at 37 CFR 401.14, "Patent Rights (Small Business Firms and Nonprofit Organizations)" and the following:

(a) Definitions

The words "contract" or "Contractor" are used in 37 CFR 401.14. Those words shall be replaced by the word's "award" or "recipient," respectively.

The term "Federal Agency," "agency," or "funding Federal agency" is used 37 CFR 401.14, the term shall be replaced by the term "NASA."

The term "award," as used in this term and condition, means any actual or proposed grant, cooperative agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, subaward, or subcontract executed or entered into thereunder.

(b) The below items are added to the end of paragraph (c) of 37 CFR 401.14 are as follows:

"(5) The recipient may use whatever format is convenient to disclose subject invention required in subparagraph (c)(1). NASA prefers that the recipient use either the electronic or paper version of NASA Form 1679, Disclosure of Invention and New Technology (Including Software), to discl ose subject inventions. Both the electronic and paper version of the NASA Form 1679 may be accessed at the electronic New Technology Reporting Web site *https://invention.nasa.gov.*

"(6) In addition to the above, the recipient shall provide the New Technology Representative, as designated under term and condition "Designation of New Technology Representative and Patent Representative" at Appendix D27 of the GCAM, the following:

(i) A yearly interim new technology summary report listing any subject inventions required to be disclosed during the preceding year (or a statement certifying there were none).

(ii) A final new technology summary report listing all subject inventions (or a statement

certifying there were none) for the entire award period; which report shall be submitted within 120 days after the end date for the period of performance within the designated system noted within the award document."

(c) The below item is added to the end of paragraph (f)(1) of 37 CFR 401.14 "Patent Rights" as follows:

(iii) The recipient shall through employee agreements or other suitable recipient policy, require that its employees "will assign and do hereby assign" to the recipient all right, title and interest in any subject invention under this award.

(d) The term "subcontract" in paragraph (g) of 37 CFR 401.14 shall include purchase orders.

(e) The following constitutes paragraph "(l)" of in 37 CFR 404.14

"(l) Communications A copy of all submissions or requests required 37 CFR 401.14, plus a copy of any reports, manuscripts, publications or similar material bearing on patent matters, shall be sent to the Center Patent Counsel and the NASA Grant Officer in addition to any other submission requirements in the award terms and conditions (*e.g.,* as specified in this term and condition and in term and condition under Appendix D27 of the GCAM "Designation of New Technology Representative and Patent Representative"). If any reports contain information describing a "subject invention" for which the recipient has elected or may elect to retain title, NASA will use reasonable efforts to delay public release by NASA or publication by NASA in a NASA technical series until an application filing date has been established, provided that the recipient identify the information and the "subject invention" to which it relates at the time of submittal. If required by the Patent Representative or requested by the New Technology Representative, as designated under Appendix D27 of the GCAM "Designation of New Technology Representative and Patent Representative," the recipient shall provide the filing date, serial number and title, a copy of the patent application, and a patent number and issue date for any "subject invention" in any country in which the recipient has applied for patents. Additionally, the NASA shall have an irrevocable power to inspect and make copies of the patent application file, when a Federal Government employee is a co-inventor."

(f) NASA Inventions

NASA will use reasonable efforts to report inventions made by NASA employees as a consequence of, or which bear a direct relation to, the performance of specified NASA activities under this agreement and, upon timely request, will use reasonable efforts to grant the recipient an exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to practice or have practiced the invention by or on behalf of the Government.

(g) The recipient agrees, subject to (g)(1) below, that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this term and condition.

(1) Publishing information concerning an invention before a patent application is filed on a subject invention may create a bar to a valid patent. To avoid this bar, agencies may withhold information from the public that discloses any invention in which the Government owns or may own a right, title, or interest (including a nonexclusive license) (see 35 U.S.C. 205 and 37 CFR part 401). Agencies may only withhold information

concerning inventions for a reasonable time in order for a patent application to be filed. Once filed in any patent office, agencies are not required to release copies of any document that is a part of a patent application for those subject inventions.

(2) In the event NASA contractors are tasked to perform work in support of specified activities under a cooperative agreement and inventions are made by contractor employees, the contractor will normally retain title to its employee inventions in accordance with 35 U.S.C. 202, 14 CFR part 1245, and/or Executive Order 12591. In the event the contractor decides not to pursue rights to title in any such invention and NASA obtains or retains title to such inventions, NASA will use reasonable efforts to report such inventions and, upon timely request, will use reasonable efforts to grant the recipient an exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to practice or have practiced the invention by or on behalf of the Government.

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10. NASA CONTACTS

Please note that the following information is current at the time of publishing. See activity website for any updates to the points of contact.

A. *Cognizant Point of Contact:*

- Vandhana Lal
  NASA Fellowship Activity Manager
  NASA Ames Research Center
  Office of STEM Engagement
  Mountain View, CA 94035
  650-604- 4709
  Email: *Vandhana.lal@nasa.gov*

B. *Proposal Submission Assistance Contact:*

- NASA Fellowship Support Team
  NASA Research and Education Support Services (NRESS)
  2345 Crystal Drive, Suite 500
  Arlington, VA 22202
  202-479-9030 x413
  Email: *NASA.Fellowships@nasaprs.com*

C. *Management Contact and Technical Officer:*

- Carolyn Knowles
  NASA Fellowship Manager
  NASA Headquarters Washington, DC 20546
  Email: *NASA.Fellowships@nasaprs.com*

D. *Proposal Submission Help Desk* (NSPIRES):

- NSPIRES Help Desk
  202-479-9376 from 8 am to 6 pm Eastern Time, Monday to Friday (except on federal holidays).
  Email: *nspires-help@nasaprs.com*

E. *NASA Shared Service Center* (NSSC):

- NSSC Customer Contact Center
  1-877-677-2123 (1-877-NSSC123)
  Email: *nssc-contactcenter@nasa.gov*

Appendix A: Professional Development Requirements

The goal of the Professional Development activities is to broaden the Fellows' skills and prepare them for the workforce. These include skills (beyond core research skills), that will position the students for success in a variety of career paths. Knowledge of career options, educational requirements, advanced professional skills, soft skills significantly enhance the likelihood of successfully navigating into the STEM workforce. The Professional Development activities are designed to develop skills in areas such as research and career planning, communication, presentation, project management, and leadership. Fellows are required to participate in all mandatory monthly professional development activities. Any exceptions shall be approved on a case-by-case basis by the NASA Fellowship Manager.

Appendix B: Performance and Evaluation

NASA OSTEM is in the process of moving beyond basic quantitative output measures of successful implementation, to a more robust, comprehensive approach to understand the scope and impacts of investments by generating a body of evidence with increased rigor and focused on outcomes. OSTEM's historic use of quantitative output measures provided a limited understanding of the scope of NASA's STEM engagement activities; however, it did not provide the depth of understanding and quality of evidence needed to make meaningful programmatic decisions. To address this gap, OSTEM is now operating under a Learning Agenda, which serves as the foundational document for building a culture of learning and continual improvement. The implementation of this Learning Agenda provides a systematic approach for building and using new knowledge about project and operational performance for evidence-based decision making and continual improvement.

The purpose of this Learning Agenda is to put forth ***Learning Questions*** with associated sub-questions, ***Learning Activities*** and assessment methodologies, and ***Learning Products*** that will inform the NASA OSTEM's understanding of the scope, methods, mechanisms, and impacts of its investments. While many of the Learning Activities are OSTEM-led, OSTEM continuously collects evidence that can be used to support its Learning Questions. These questions focus on how NASA STEM Engagement investments are a) contributing to NASA's missions and work; b) contributing to the diversity of the future aerospace industry's STEM workforce; c) broadening participation of historically underrepresented and underserved groups in STEM fields in NASA STEM engagement activities; and c) sparking student interest in STEM.

NASA identifies evidence of effective practices in its STEM Engagement investments through program evaluation. Evidence is a key criterion in NASA's competitive processes for allocating resources, ensuring that the most effective STEM engagement activities are supported. Program evaluations are planned studies using research methods to collect and analyze data to assess to what extent activities/programs are being implemented and what, if any, impact can be measured. Evaluations answer specific questions about performance and may focus on assessing activity/program process and outcomes.

In fiscal year (FY) 2021, NASA will begin utilizing a new approved data management system (NASA STEM Gateway) for collecting and analyzing performance data. To facilitate data input into the NASA STEM Gateway system, the NASA Fellowship Activity Manager will collect institutional data via required reports (See **Section 8** of this NOFO**,** Reporting Requirements). NASA award recipients shall provide and verify performance data for the awarded activity with the NASA Fellowships Activity Manager. Award recipients may also be required to respond to OSTEM data calls, utilize the NASA STEM Gateway system, and/or participate in future performance assessment and evaluation activities (i.e., performance data planning and reporting in NASA STEM Gateway system, focus groups, interviews, complete and/or administer surveys, documentation review, lessons learned discussions) in alignment with Federal, Agency and OSTEM performance and evaluation priorities and requirements. The NASA Fellowship Activity Manager will provide additional communications and guidance regarding data calls, future performance assessment and evaluation efforts, and timelines

Appendix C: Eligible Graduate STEM Disciplines

Applied Science
Chemistry
Computer and Information Science and Engineering (CISE)
Engineering
Geosciences
Industrial Technology
Life Sciences
Materials Research
Mathematical Sciences
Physics and Astronomy

NOTE: The following programs and areas of study are <u>not eligible</u>:

- Practice-oriented, professional degree programs (e.g., MBA, MSW, MPH, ED);
- Joint science-professional degree programs (e.g., MD/Ph.D., JD/Ph.D.);
- Business administration or management;
- Social work/sciences;
- History (except for history of science);
- Public health programs;
- Medical programs;
- Dental programs;
- Counseling programs;
- Research with disease-related goals, including the etiology, diagnosis or treatment of physical or mental disease, abnormality or malfunction;
- Clinical areas of study including programs that are patient-oriented research; epidemiological and behavioral studies; outcomes research; and health services;
- Research in pharmacologic, non-pharmacologic, and behavioral interventions for disease prevention, prophylaxis, diagnosis, or therapy; and community and other population-based intervention trials.

Appendix D: Please click on the following link under "Other Documents" for Step-by-Step Instructions.

Appendix E: NASA Fellowship Activity Research Opportunities by Center

List of opportunities are subject to change each year. The list of opportunities posted is for 2021.
Please click on the following link under "Other Documents" for Research Opportunities MSI Fellowship 2021.

Added, "000" Category for the "Open" opportunities *(An open opportunity allows the student to submit a NASA relevant, independently conceived research proposal with the concurrence of a university principal investigator and a NASA Technical Adviser).*

Appendix F: Fellowship Travel Funds Procedure

Details pertaining to travel will be provided by NASA upon award selection.

Appendix G: Annual Renewal Process

The Annual Renewal Process is contingent upon satisfactory progress, as reflected in the academic performance, research progress, recommendation by the faculty adviser, NASA Technical Adviser and the availability of funds. Fellows seeking renewal shall submit a Renewal Application Package to fellowship management and the grant management at the NASA Shared Services Center (NSSC) for each Academic Year. The Renewal Application Package includes the Annual Progress Report that is a comprehensive summary of significant accomplishments during the reporting period or for the duration of the grant. The purpose of the Annual Report is to provide an update on the progress of the Fellow's research and/or degree progression. The submission of the Renewal Application Package is required before the Activity Grants Officer can release funding for additional years. The responsible parties for submitting the documentation for renewals are the Fellow and the PI; this documentation is submitted to fellowship management.

Annual Progress Report for Renewal

The NASA Grant and Cooperative Agreement Manual (GCAM) - Exhibit E, identifies the publications and reports required for submission. Technical Publications and Reports should be submitted in accordance with the terms and conditions at 2 CFR 1800.902.

Grant recipients shall comply with 2 CFR 180.335 and 2 CFR 180.350 of the reporting requirements. In addition to the annual progress report, recipients are also required to submit quarterly and final Federal Financial Reports (SF-425s) per the award terms and conditions (see *NASA Grant and Cooperative Agreement Manual*, Appendix D, Section D6, pg. 59) via the HHS Payment Management System.

NOTE: ***Any changes in academic status shall be reported and submitted with the renewal application. It is the PI's responsibility to ensure that all documents are submitted prior to 5pm ET on June 30 of each Government fiscal year, which runs from October 1 to September 30. Failure to meet this deadline will result in non-renewal of the NASA Fellowship. Annual Progress Packages shall be sent to the following email address:*** *Fellowships@mail.nasa.gov*

The Annual Progress Package includes the following:

- Annual Progress Report, Faculty Adviser Evaluation and NASA Technical Adviser Evaluation Form (templates will be provided at least 30 days in advance of the due date);
- Certification of Compliance (PDF Form NF1206) completed by the AOR (Not required if a Certificate of Compliance has been completed at the time of proposal application submission);
- Budget Report (All budgeted items shall be fully justified);

Appendix H: Additional Year Extension Process

Fellows may apply for a one-year extension during their final year of the period of performance, pending availability of Government funds. For Doctoral Fellows, the additional year extension is an opportunity to ask creative questions related to research from the previous years. It is intended to provide teams with the chance to apply their findings in new settings or build upon discoveries not previously outlined in the original proposal. For Master's Fellows, the additional year extension is an opportunity to receive consideration for a revised proposal that describes specific differences from the original proposal.

NOTE:
Those interested in an additional year extension should seek additional guidance at least 6 months in advance. Proposals based heavily on the need for more time to complete the initially proposed work or the Fellow's graduation date will not be considered.

Appendix I: Process for Appeals and Formal Requests for Reconsideration

Program Element One in this NOFO is limited to the awarding of research training grants to Minority Serving Institutions (MSIs). Accordingly, the appeals and reconsideration processes under this element in the NOFO do not include protest rights either at the U.S. Government Accountability Office (GAO) or with the Agency, as defined in FAR 33.101. The provisions at 48 FAR 52.233-2 ("Service of Protest") and NFS 1852.233-70 ("Protests to NASA") do not apply to this NOFO.

A Principal Investigator (PI) who is not satisfied with the explanation of the basis for the declination of its proposal may contact the Selecting Official, in writing (delivered via e-mail, fax or regular mail) stating the reasons for requesting reconsideration of the declination and requesting a written or oral debriefing (see Formal Request for Reconsideration, below).

Formal Requests for Reconsideration

(a) Debriefing by the NASA Fellowship Manager

A PI whose proposal has not been selected may request a written or oral debriefing from the NASA Fellowship Manager. The debriefing will be provided expeditiously, i.e., usually within two weeks.

(b) Written Request for Reconsideration to Selecting Official

Following the debriefing, dissatisfied PIs shall, within 30 calendar days of the debriefing, submit a written Request for Reconsideration to the Selecting Official. If no debriefing has been conducted, the Request for Reconsideration shall be submitted within 60 calendar days of notification that the proposal had not been selected. The Selecting Official will respond in writing to the Request for Reconsideration within 30 calendar days of receipt of the request. If additional time is required to prepare a response, an explanation of the need for more time will be provided to the PI within 30 calendar days.

Following a response from the Selecting Official, if the PI is still not satisfied with the Selecting Official's decision, the PI may request a formal reconsideration within 30 days of the selecting Official's decision. Electronic or faxed requests for formal reconsiderations are not usually accepted. However, due to COVID 19, formal requests may be accepted for this NOFO via email. Email address can be provided upon request. Formal requests shall: 1) detail the reasons for the reconsideration request; 2) be placed on institutional letterhead; 3) be co-signed by the PI and the AOR; and 4) be addressed to the Deputy Associate Administrator for STEM Engagement, Kris Brown, NASA Headquarters, Washington, DC 20546, Telephone: 202-358-0103.

(c) Appeals above the Deputy Associate Administrator for STEM Engagement

Appeals above the Deputy Associate Administrator for STEM Engagement shall be made within 30 calendar days of receipt of that decision. Electronic or faxed requests for appeals are not usually accepted. However, due to COVID 19, formal requests may be accepted for this NOFO via email. Formal requests shall be addressed to Associate Administrator for STEM Engagement, Mike Kincaid, NASA Headquarters, Washington, DC 20546, Telephone: 202.358.0103. Email address can be provided upon request. A response to the appeal should be provided to the PI within 30 calendar days.

Appendix J: Acronyms

AANAPISI	Asian American and Native American Pacific Islanders Serving Institution
ANNH	Alaska Native-serving Institution or Native Hawaiian-serving Institution
AOR	Authorized Organization Representative
APG	Annual Performance Goal
API	Annual Performance Indicator
ARC	Ames Research Center, Moffett Field, CA
AFRC	Armstrong Flight Research Center, Edwards, CA
ARMD	Aeronautics Research and Mission Directorate
CBRE	Center Based Research Experience
CFR	Code of Federal Regulations
CO	Contracting Officer
CO-I	Co-Investigator
DMP	Data Management Plan
DUNS	Data Universal Numbering System; a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of over 100 million businesses worldwide
EIN	Employer Identification Number
FAPIIS	Federal Awardee Performance and Integrity Information System
FAQ	Frequently Asked Questions
FFRDC	Federally Funded Research and Development Center
FTR	Federal Travel Regulation
FY	Fiscal Year (Federal) (October 1 –September 30)
GCAM	NASA Grant and Cooperative Agreement Manual
GO	Grant Officer
GRC	Glenn Research Center, Cleveland, OH
GSFC	Goddard Space Flight Center, Greenbelt, MD
HBCU	Historically Black Colleges and Universities
HEOMD	Human Exploration and Operations Mission Directorate
HSI	Hispanic-Serving Institution
ITAR	International Traffic in Arms Regulations
JPL	Jet Propulsion Laboratory, Pasadena, CA
JSC	Johnson Space Center, Houston, TX
KSC	Kennedy Space Center, Cape Canaveral, FL
LaRC	Langley Research Center, Hampton, VA
MSIs	Minority Serving Institutions (refers collectively to HBCUs, HSIs, TCUs, and other MSIs of higher education)
MSFC	Marshall Space Flight Center, Huntsville, AL
MUREP	Minority University Research and Education Project
NEPA	National Environmental Policy Act
NIF	NASA Internships and Fellowships
NOFO	Notice of Funding Opportunity
NOI	Notice of Intent
NRESS	NASA Research and Education Support Services
NSPIRES	NASA Solicitation and Proposal Integrated Review and Evaluation System
NSTC	National Science and Technology Council

NSSC	NASA Shared Services Center
OSTEM	Office of STEM Engagement
PBI	Predominately Black Institution
PG	Performance Goal
PI	Principal Investigator
PLC	Professional Learning Community
R&D	Research and Development
REC	Record of Environmental Consideration
RTC	Federal Research Terms and Conditions
SAM	System for Award and Management
SMD	Science Mission Directorate
SME	Subject Matter Expert
SRO	Sponsored Research Office
SSC	Stennis Space Center, Hancock County, MS
STEM	Science, Technology, Engineering, and Mathematics
STMD	Space Technology Mission Directorate
STI	Scientific and Technical Information
TCU	Tribal Colleges and Universities
TM	Technical Monitor
TO	Technical Officer
VIPer	Volume of Integrated Performance Report

Appendix K: Program Element One: Minority Serving Institutions (MSIs)

K.1 Scope of Activity

K1.1 Agency-wide Priorities
Refer to Section 1 of the Notice of Funding Opportunity (NOFO).

K1.2 Agency Strategic Goals for STEM Engagement
Refer to Section 1.2 of the NOFO.

K1.3 Relevance to NASA
Refer to Section 2.4 of the NOFO.

K1.4 Funding Opportunity
Refer to Section 2.5 of the NOFO.

K1.5 Award Information

Anticipated Type of Award	Research Training Grant
Number of Years of Support	Proposals seeking Master's support shall request at least 2 years of support (with a possibility of a one year extension); Proposals seeking Doctoral support shall request at least 3 years of support (with a possibility of a one year extension).
Total Funding **Estimated Number of Awards**	Approximately $550,000 NASA's OSTEM anticipates awarding 10 – 11 Graduate Research Fellows per fiscal year (FY) under this NOFO, pending the availability of funds. **NOTE:** If opportunities for cost sharing become available, this estimate may increase.

K1.6 Funding Categories
The table below outlines the breakdown of categories by type of funding and funding amounts.

TYPE OF FUNDING	FUNDING AMOUNT
Fellowship Stipend	$25,000 (Master's) $30,000 (Doctoral)
Tuition Offset and Fees	$8,000
Center Based Research Experience (CBRE) Allowance	$8,000
Health Insurance Allowance	$3,000
Faculty Adviser Allowance	$4,500
Fellow Professional Development Allowance	$1,500

Refer to **Section 3.2** of the NOFO for detailed information on each of the above funding categories.

NOTE:
Institutions are allowed to transfer Tuition Offset and Fees funds to Health Insurance and Professional Development allowance, upon approval from the NASA Fellowship Manager and the NASA Grants Officer. Students are exempt from paying tuition differences (i.e., the difference between the tuition and fees allowance and the actual tuition and fees).

K1.7 Funding Eligibilty Criteria – Minority Serving Institutions (MSIs)
The following MSI link leads to the official NASA MSI list. MSIs include Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), Asian American and Native American Pacific Islander-Serving Institutions (AANAPISIs), Tribal Colleges and Universities (TCUs), Alaska Native and Native Hawaiian-Serving Institutions (ANNHs), Native American Serving Nontribal Institutions (NASNTIs), and Predominantly Black Institutions (PBIs). If a proposer's institution is not listed as an MSI by the proposal due date, the institution's AOR shall provide confirmation of the institution's MSI status via email to *NASA.fellowships@nasaprs.com* within 24 hours of the proposal due date.

K1.8 Professional Networking Opportunity
NASA Fellows shall participate in the mandatory Southern Regional Education Board (SREB) conference each year. They will have the opportunity to network with other Fellows, meet prospective recruiters, participate in professional development sessions, and attend a graduation ceremony. However, due to COVID-19, this conference may be held virtually or cancelled.

K1.9 Proposal Submission
Refer to Section 6 and Appendix D of this NOFO on Step-by-Step Instructions for Proposal Submission.

K1.10 Pre-proposal Questions and Answers

For clarifications and questions related to Fellowship activity, prospective institutions' candidates and Faculty Advisers are asked to submit their questions in writing to the NASA Fellowship Manager, Carolyn Knowles, at *NASA.Fellowships@nasaprs.com.* Responses to the submitted questions will be posted on NSPIRES as FAQ under the "Other Documents" section. The list will be updated periodically during the open period of the opportunity.

WebEx details and times will be announced on the NASA Fellowships and NSPIRES websites for both pre-proposal teleconferences.	April 7, 2021 May 4, 2021

The Pre-proposal teleconferences will outline critical deadlines, eligibility requirements, frequently asked questions, and other details of the Fellowship activity. Institutions' candidates and Faculty Advisers (PI) are encouraged to attend. Refer to the NASA Fellowship Activity on NSPIRES for connection details.

K1.11 Application Review and Evaluation Information
See Section 7 of the NOFO regarding proposal review and selection.

K1.12 Summary of Key Information

Key Information	Summary
Total ESTIMATED annual budget for each NASA Fellowship Activity	$50K (Master's) $55K (Doctoral)
Total funding Number of new awards	Approximately $550K 10 - 11 awards pending the availability of funds.
Start date of award (estimated)	August 16, 2021
Duration of awards	Up to 2 years for a Master's student and up to 3 years for a Doctoral student (Optional Additional Year Extension, See Appendix H)
Award type	Research Training Grant
Solicitation Release Date	March 24, 2021
Pre-proposal Teleconference: WebEx details and times will be announced on the *NASA Fellowships* and NSPIRES website for both the pre-proposal teleconferences.	April 7, 2021 May 4, 2021
Due date for Proposals	May 24, 2021
Public announcement of awards	Estimated three months after proposals are submitted (After award selections, award notifications will be sent to each PI for acceptance of award.)
Detailed instructions for the preparation and submission of proposals	See the *NASA Guidebook for Proposers 2021 edition*
Submission medium	Electronic proposal submission is required via NSPIRES; hard copies will not be accepted. See Chapter 4 of the *NASA Guidebook for Proposers 2021 edition*
Website for submission of proposal via NSPIRES	NSPIRES help desk available at *nspires-help@nasaprs.com* or (202) 479-9376 from 8 am to 6 pm Eastern Time, Monday to Friday (except on federal holidays).
Selection Official	Carolyn Knowles NASA Fellowship Manager NASA Office of STEM Engagement - NASA Headquarters
Point of Contact	Vandhana Lal NASA Fellowship Activity Manager NASA Ames Research Center Office of STEM Engagement Mountain View, CA 94035 650-604-4709 *vandhana.lal@nasa.gov*