

# NASA/New York Space Grant Consortium

## REQUEST FOR PROPOSALS



<http://astro.cornell.edu/spacegrant/>

RESEARCH INITIATION GRANTS  
*and*  
STEM CURRICULUM ENHANCEMENT GRANTS

Award Period: June 1, 2019 – December 31, 2019

Proposal submission deadline  
(electronic): 5:00 p.m. EST on Wednesday,  
May 1, 2019

## NY Space Grant Request for Proposals (RFP) Summary

The New York Space Grant (NYSG) Consortium is pleased to announce a call for two categories of proposals. Grants up to \$30,000 each will be competitively considered. Matching funds are not required. A total of \$30,000 in Space Grant funds are expected to be awarded for this RFP. The period of performance is seven months (June 1 – December 31, 2019).

### **(1) RESEARCH PROPOSALS:**

Research initiation grants are intended to help faculty at NYSG affiliate colleges and universities (see list below) initiate research that will lead to competitive research projects in NASA's priority areas. Proposals are welcome in all fields of science & engineering research and technology development that support NASA's strategic plans and missions. These priorities are summarized in the NASA documents and web sites listed in [Appendix B](#), among others.

### **(2) STEM HIGHER EDUCATION CURRICULUM ENHANCEMENT PROPOSALS:**

Proposals for significantly improving educational programs and resources in science, technology, engineering, and math (STEM) fields at NYSG affiliate colleges/universities (see list below) are solicited. Successful proposals will present detailed plans for enhancing existing classes/curricula or developing new courses or curriculum resources in NASA priority areas. Proposals involving curriculum changes or additions should provide clear documentation of support for the proposed project by appropriate administrators (department heads, deans, etc.).

#### **NYSG Affiliate Colleges and Universities**

Alfred University	Rensselaer Polytechnic Institute
Barnard College	Rochester Institute of Technology
Binghamton University	Stony Brook University
City College of New York (CUNY)	SUNY at Geneseo
Clarkson University	Syracuse University
Colgate University	Union College
Columbia University	University at Buffalo
Cornell University	University of Rochester
Medgar Evers College (CUNY)	York College (CUNY)
New York University	

## Proposal Details

### 1) ELECTRONIC SUBMISSION ONLY:

- Submit a single file of the entire proposal package (PDF document) via electronic mail **no later than 5:00 pm EST on Wednesday, May 1, 2019**

TO: [spacegrant@astro.cornell.edu](mailto:spacegrant@astro.cornell.edu)

CC: [the NYSG affiliate director on your campus](#)

### 2) FUNDING PERIOD:

The NYSG Research and Curriculum Enhancement grants will run one year, with the period of performance beginning June 1, 2019 and ending December 31, 2019.

**3) ELIGIBILITY:** Persons holding faculty appointments at NYSG affiliate campuses or the NYSG lead institution are eligible to apply (see list on previous page):

- **Research Proposals** are especially encouraged from new faculty, faculty changing research directions, and tenured faculty who wish to become research-competitive in NASA-related fields.
- **Curriculum Enhancement Proposals** should clearly show how the proposed funding and program will substantially enhance NASA-related STEM education at collegiate levels in the state of New York.

Individuals must be permitted to serve as principal investigators (PIs) at their respective institutions. The New York Space Grant Consortium encourages proposals from women, persons with disabilities, and underrepresented minorities in STEM.

**4) BUDGET:** NASA Space Grant funding requested may not exceed \$30,000. Cost share is optional for this opportunity. Voluntary matching funds (from non-federal sources) are appreciated, but will not be factored into proposal selection. Facilities and Administration costs (F&A, also known as indirect or overhead costs) may be charged to the grant, using the appropriate rules and rates for your institution. However, it is encouraged that such costs come out of your matching funds. **It is a policy of the Space Grant Program that neither management fees, nor indirect costs, shall be charged on student fellowships/scholarships or internship stipends.**

All proposals should use the two-column budget form available at:

[https://www.nyspacegrant.org/wp-content/uploads/2019/04/budget\\_template.xls](https://www.nyspacegrant.org/wp-content/uploads/2019/04/budget_template.xls)

- (Optional) matching funds as defined above should be shown in the last column labeled “cost sharing.” Match may be in the form of cash, in-kind contributions, release time or contributed effort, value of research facility usage, donated services, etc.
- For all grants, NASA funds may not be used
  - for foreign travel or
  - to purchase permanent equipment (the legal definition of “permanent equipment” varies from campus to campus; consult your Research office to find your campus’s definition).
- Requests may be made for items such as expendable supplies used in the project, faculty summer salary, graduate or undergraduate students, technical help, academic year faculty release time, project-related travel. Any faculty, students, or other personnel directly paid with these award funds must be U.S. nationals.
- Fringe benefits for salaries should be shown as a separate line item; benefits must be included on personnel per your institution’s policies.
- For more budget guidance, see the “Budget Preparation Guide” in [Appendix A](#) for specific requirements. Please do not hesitate to contact the NYSG consortium office if you have budget questions. Errors or inconsistencies in the budget will lead to difficulties in review and evaluation.

**5) INSTITUTIONAL COMMITMENT:** All proposals must include an institutional letter of commitment signed by an authorized official (most likely someone within your sponsored programs/research office), indicating review and approval of your proposal/budget, certifying that any cost share offered is from non-federal sources, and indicating that the necessary inter-institutional agreement will be made with Cornell University, the NYSG lead institution, if the proposal is funded. For proposals from Cornell PIs, download and complete this [Form 10](#) with the appropriate signatures in your proposal package (**do not send to OSP**), in lieu of an institutional letter.

**6) SELECTION PROCESS:** All proposals will be peer-reviewed, incorporating assessments from a selection committee based on the evaluation criteria listed in the next section. These will be used together with NYSG's overall budget constraints to determine which proposals may be funded.

**7) FUNDING ALLOCATION:** For the proposals selected for funding, NASA funds will be allocated to the college/university’s existing Space Grant subcontract with Cornell University, the NYSG lead institution. To receive/utilize the NASA funds, investigators must bill Cornell for project expenditures on a monthly or quarterly basis

–the same procedure used for existing Space Grant projects at affiliate institutions. For projects with Cornell PIs, departmental subaccounts will need to be set up for expending the NASA funds and properly documenting any cost share funds.

**8) FINAL REPORT: A final report on the results of the project will be due January 31, 2020 (one month beyond the period of performance).** The final report templates will be distributed to awardees in advance, requesting the following information:

- A) Executive summary of the project that is suitable for publication; 250-word limit.
- B) Statement on how the grant assisted the PI, institution, and students.
- C) Demographic information on all project participants (faculty, students, and other personnel).
- D) List of papers published (or pending publication) related to this award. Include title, publication, date, and author list.
- E) List of presentations delivered (or pending) related to this award. Include presentation title, location, and date.
- F) List of conferences attended related to this award. Include conference title, location, dates, and if PI presented.
- G) List of follow-on proposals or patents/inventions that were applied for and/or approved as a result of this award.
- H) Table summarizing actual expenditures (both NASA and matching funds) for all budgeted categories. Any unspent NASA funds at the completion of the project will be re-allocated back to the NYSG lead institution, Cornell University.

**EVALUATION CRITERIA:**

- For **Research Proposals**, the selection committee will consider the relevance of the project to NASA’s missions, research and technologies; quality of the work proposed; breadth of impact on the affiliate institution's research and student research/education; the ability of the PI to accomplish the proposed work; and the potential for this project to enable the PI to secure future funding.
- For **Curriculum Enhancement Proposals**, criteria include the extent to which the proposed project enhances NASA-related science, technology, engineering, and math higher education in New York in the long term, as well as how the proposed goals support the general national NASA Space Grant program goals.

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IF YOU HAVE ANY QUESTIONS, CONTACT THE CONSORTIUM OFFICE:

[spacegrant@astro.cornell.edu](mailto:spacegrant@astro.cornell.edu)

## OUTLINE FOR PREPARING **RESEARCH PROPOSALS**

- I. TITLE PAGE: Proposal title, type of proposal (research), PI name and signature, address, phone number, e-mail address, and total budget request (indicate both amount of NASA funding requested and any cost share offered).
- II. TABLE OF CONTENTS
- III. ABSTRACT: limit to 250 words
- IV. BODY of proposal (4-page maximum). Minimum 12-pt font.
  - A. 1-page introductory material (stress your contributions to the research area).
  - B. Rationale for doing the work as it relates to the existing corpus of knowledge.
  - C. Goals of the project (be specific).
  - D. Detailed description of your approach & methods.
  - E. Explain how the proposed research relates to NASA's priorities.
- V. COMPETITIVE STATEMENT: Indicate how this proposal, if funded, will improve your national competitiveness for NASA (or other appropriate agency) funding. Describe plans for subsequent research and grant activity that will be enabled by this seed funding.
- VI. BIOGRAPHICAL INFO and list of pertinent publications (for last 5 years). Short CV should include a list of grant support, title of proposals, dates, funding agency, and amount of awards. Particularly note previous involvement with NASA-funded research. Include biographical information for all faculty involved, and (if available) students to be involved in the project if the identity of students is known at this point. Involvement of women, underrepresented minorities, and persons with disabilities is highly encouraged.
- VII. BUDGET: Provide a summary budget table using [the two-column budget format](#), categorizing NASA and non-federal matching funds for all proposed expenditures. Your budget must be approved and certified by an authorized official at your campus, as indicated in the subsequent institutional commitment letter.
- VIII. BUDGET JUSTIFICATION – NARRATIVE AND DETAILS: See “Budget Preparation Guide” ([Appendix A](#) of this announcement) for more details. Describe how each budget item will support the proposed research. Describe sources of matching funds, including a breakdown of cash match and/or non-cash contributions.
- IX. PRESENT FUNDING: Provide a listing of all current and pending support. For pending grant proposals under review, include amount of request, title, award status, and dates.
- X. INSTITUTIONAL COMMITMENT LETTER: Signed by an authorized official or Form 10 for Cornell PIs – see more details on [page 4](#) of this announcement.

## OUTLINE FOR PREPARING **STEM HIGHER EDUCATION CURRICULUM ENHANCEMENT PROPOSALS**

- I. TITLE PAGE: Proposal title, type of proposal (curriculum enhancement), PI name and signature, address, phone number, e-mail address, and total budget request (indicate both amount of NASA funding requested and any cost share offered).
- II. TABLE OF CONTENTS
- III. ABSTRACT: limit to 250 words
- IV. BODY of proposal (4-page maximum). Minimum 12-pt font.
  - A. Introduction (describe the general notion of the proposed project, explain why you are the right person to implement it).
  - B. Rationale as it relates to the state of science, technology, engineering, and math (STEM) higher education (collegiate level) in New York at present.
  - C. Goals of the project (be specific).
  - D. Statement on how you plan to proceed (describe schedule and milestones).
  - E. Description of long-term impact of your project: how will the results of your project extend beyond the funding period? Give details.
  - F. How will your project be evaluated? Provide specific metrics, plan, and timeline.
- V. BIOGRAPHICAL INFO for all faculty members (and, if appropriate, students) involved in the project. Involvement of women, underrepresented minorities, and persons with disabilities is highly encouraged. Professional qualifications in areas of STEM education and research should be clearly stated: publications, previous NASA grants, aerospace-related classes previously taught, etc.
- VI. BUDGET: Provide a summary budget table using [the two-column budget format](#), categorizing NASA and non-federal matching funds for all proposed expenditures. Your budget must be approved and certified by an authorized official at your campus, as indicated in the subsequent institutional commitment letter.
- VII. BUDGET JUSTIFICATION – NARRATIVE AND DETAILS: See “Budget Preparation Guide” ([Appendix A](#) of this announcement) for more details. Describe how each budget item will support the proposed research. Describe sources of matching funds, including a breakdown of cash match and/or non-cash contributions.
- VIII. PRESENT FUNDING: Provide a listing of all current and pending support. For pending grant proposals under review, include amount of request, title, award status, and dates.
- IX. INSTITUTIONAL COMMITMENT LETTER: Signed by an authorized official or Form 10 for Cornell PIs – see more details on [page 4](#) of this announcement.

## Appendix A: Budget Preparation Guide

For the budget summary, use the two-column form available at:

[https://www.nyspacegrant.org/wp-content/uploads/2019/04/budget\\_template.xls](https://www.nyspacegrant.org/wp-content/uploads/2019/04/budget_template.xls)

1. In addition to the summary table, all proposers are required to submit a thorough budget justification/narrative that clearly lists and describes how all proposed costs are allowable, allocable, reasonable, and directly related to the project and scope of work. This narrative must provide adequate detail and state the source of any cost estimates used.
2. Salary breakdown must include amount of time each person being paid from the grant devotes to the program. It should be indicated by the percentage of the individual's total effort (fraction of FTE).
3. Per NASA rules for Space Grant funds, overhead/indirect costs/F&A cannot be charged on student stipends, fellowships, or scholarships.
4. Permanent/non-expendable equipment, including modifications to such equipment, may not be charged to the grant.
5. Purchase of personal computers and/or commercial software at or above \$5,000: Such items are usually considered by NASA to be general purpose equipment that must be purchased from general, organizational overhead (Indirect or F&A) budgets and not directly from the proposal budget, unless it can be demonstrated that such items are to be used uniquely and only for the proposed research.
6. If travel funds are requested, describe in detail the purpose in relation to the project and provide the basis of estimate, including information or assumptions on destination, number of travelers, number of days, conference fees, air fare, per diem, miscellaneous expenses, etc. If destinations are not known, make reasonable assumptions about the potential destination and use historical cost data based on previous trips taken or conferences attended. Any travel, for which funding is requested, must be directly related to the project. Per grant rules, only US flag air carriers can be used for travel. Foreign travel may not be charged to these grants.
7. The use of a consultant requires the submission of his/her resume, work statement, and a breakout of his/her hourly rate.
8. **Faculty, students, and other personnel receiving direct payments from Space Grant, a NASA training grant, must be U.S. nationals.**

## Appendix B: NASA Research and Technology Development Priorities

NASA STEM Engagement Priorities

<https://www.nasa.gov/education/partnerships/priorities-stem-engagement-education-partnerships.html>

NASA's Moon to Mars Plans

<https://www.nasa.gov/topics/moon-to-mars>

2017 NASA Strategic Technology Investment Plan

[https://www.nasa.gov/sites/default/files/atoms/files/2017-8-1\\_stip\\_final-508ed.pdf](https://www.nasa.gov/sites/default/files/atoms/files/2017-8-1_stip_final-508ed.pdf)

NASA Technology Roadmaps and Strategy

<https://www.nasa.gov/offices/oct/strategicintegration>

NASA Aeronautics Strategic Implementation Plan

<https://www.nasa.gov/sites/default/files/atoms/files/sip-2017-03-23-17-high.pdf>

NASA Human Exploration and Operations Programs

<http://www.nasa.gov/directorates/heo/programs.html>

NASA Science Strategy

<https://science.nasa.gov/about-us/science-strategy>

NASA 2014 Science Plan

[https://smd-prod.s3.amazonaws.com/science-red/s3fs-public/atoms/files/2014\\_Science\\_Plan\\_PDF\\_Update\\_508\\_TAGGED\\_1.pdf](https://smd-prod.s3.amazonaws.com/science-red/s3fs-public/atoms/files/2014_Science_Plan_PDF_Update_508_TAGGED_1.pdf)

Decadal Surveys

<https://science.nasa.gov/about-us/science-strategy/decadal-surveys>

NASA Strategic Knowledge Gaps for lunar, Mars, and small body missions

<https://www.nasa.gov/exploration/library/skg.html>

2018 NASA Strategic Plan

[https://www.nasa.gov/sites/default/files/atoms/files/nasa\\_2018\\_strategic\\_plan.pdf](https://www.nasa.gov/sites/default/files/atoms/files/nasa_2018_strategic_plan.pdf)