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## NASA CONNECTICUT SPACE GRANT CONSORTIUM

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# REQUEST FOR PROPOSALS

## Student Programs

*Graduate Research Fellowship*

*Undergraduate Research Grant*

*Student Project Grant*

*Undergraduate & Community College Scholarship*

*Community College Transfer Scholarship*

*Travel Grant*

*Summer Internship*

**History:** In order to encourage broader participation in NASA research programs, Trinity College, University of Connecticut, University of Hartford, and the University of New Haven formed the Connecticut Space Grant College Consortium in 1991. The philosophical intent of this program was and continues to be, to build a research infrastructure in Connecticut which supports the aerospace, space science, engineering and technology related initiatives of federal and state government and private industry.

Each Consortium Member institution has a Campus Director (listed below). Questions should be directed to that person. If you are unable to contact the appropriate Campus Director, inquiries may be directed to the NASA CTS GC Office.

| 4-Year Intuition Consortium Members  |   |   |
|--|---|---|
| <b>Central Connecticut State University</b><br>Dr. Thomas Vasko<br>School of Engineering<br>860.832.1896<br><a href="mailto:vaskothj@mail.ccsu.edu">vaskothj@mail.ccsu.edu</a>                 | <b>Eastern Connecticut State University</b><br>Dr. Elizabeth A. Cowles<br>Department of Biology<br>860.465.4385<br><a href="mailto:cowlese@easternct.edu">cowlese@easternct.edu</a>       | <b>Fairfield University</b><br>Dr. Harvey Hoffman<br>School of Engineering<br>203.254.4000 x3080<br><a href="mailto:hhoffman@fairfield.edu">hhoffman@fairfield.edu</a>                  |
| <b>Southern Connecticut State University</b><br>Dr. Todd Schwendemann<br>Department of Physics<br>203.392.6431<br><a href="mailto:schwendemat1@southernct.edu">schwendemat1@southernct.edu</a> | <b>Trinity College</b><br>Dr. John Mertens<br>Department of Engineering<br>860.297.2301<br><a href="mailto:john.mertens@trincoll.edu">john.mertens@trincoll.edu</a>                       | <b>University of Bridgeport</b><br>Dr. Jani Pallis<br>Dept. of Mechanical Engineering<br>203.576.4579<br><a href="mailto:jpallis@bridgeport.edu">jpallis@bridgeport.edu</a>             |
| <b>University of Connecticut</b><br>Dr. Daniel Burkey<br>School of Engineering<br>860.486.5466<br><a href="mailto:daniel@enr.uconn.edu">daniel@enr.uconn.edu</a>                               | <b>University of Hartford</b><br>Dr. Brian Wells<br>College of Arts and Sciences<br>860.768.4318<br><a href="mailto:brwells@hartford.edu">brwells@hartford.edu</a>                        | <b>University of New Haven</b><br>Dr. Chong Qiu<br>Department of Chemistry<br>203.479.4888<br><a href="mailto:CQiu@newhaven.edu">CQiu@newhaven.edu</a>                                  |
| <b>Wesleyan University</b><br>Dr. Seth Redfield<br>Astronomy Department<br>860.685.3669<br><a href="mailto:sredfield@wesleyan.edu">sredfield@wesleyan.edu</a>                                  | <b>Yale University</b><br>Dr. Andrew Szymkowiak<br>Department of Physics<br>203.432.9854<br><a href="mailto:andrew.szymkowiak@yale.edu">andrew.szymkowiak@yale.edu</a>                    |   |
| Community College Consortium Members   |   |   |
| <b>Asnuntuck Community College</b><br>Professor Amely Cross<br>Department of Chemistry/Physics<br>860.253.3056<br><a href="mailto:across@acc.commnet.edu">across@acc.commnet.edu</a>           | <b>Capital Community College</b><br>Dr. Andre Freeman<br>Department of Science & Mathematics<br>860.906.5177<br><a href="mailto:afreeman@ccc.commnet.edu">afreeman@ccc.commnet.edu</a>    | <b>Housatonic Community College</b><br>Professor David Platt<br>Department of Mathematics<br>203.332-5115<br><a href="mailto:dplatt@hcc.commnet.edu">dplatt@hcc.commnet.edu</a>         |
| <b>Manchester Community College</b><br>Dr. Fatma Salman<br>Department of Physics<br>860.512.2743<br><a href="mailto:fsalman@mcc.commnet.edu">fsalman@mcc.commnet.edu</a>                       | <b>Middlesex Community College</b><br>Dr. Lin Lin<br>Dept. of Engineering, Computer Science & Technology<br>860.343.5763<br><a href="mailto:llin@mxcc.edu">llin@mxcc.edu</a>              | <b>Naugatuck Valley Comm. College</b><br>Dr. Peter Angelastro<br>Department of Biology<br>203.596.8690<br><a href="mailto:pangelastro@nv.edu">pangelastro@nv.edu</a>                    |
| <b>Northwestern CT Community College</b><br>Douglas Hoffman<br>Department of Mathematics<br>860.738.6332<br><a href="mailto:dhoffman@nwcc.commnet.edu">dhoffman@nwcc.commnet.edu</a>           | <b>Norwalk Community College</b><br>Dr. Mobin Rastgar Agah<br>Department of Mathematics<br>203.857.3366<br><a href="mailto:mrastgaragah@norwalk.edu">mrastgaragah@norwalk.edu</a>         | <b>Quinebaug Valley Community College</b><br>Professor Jakob Spjut<br>Department of Engineering<br>860.932.4156<br><a href="mailto:jspjut@qycc.commnet.edu">jspjut@qycc.commnet.edu</a> |
| <b>Three Rivers Community College</b><br>Professor Mark Vesligaj<br>Department of Engineering<br>860.215.9442<br><a href="mailto:mvesligaj@trcc.commnet.edu">mvesligaj@trcc.commnet.edu</a>    | <b>Tunxis Community College</b><br>Dr. Karen Wosczyzna-Birch<br>Department of Chemistry<br>860.490.4545<br><a href="mailto:kwosczyzna-birch@commnet.edu">kwosczyzna-birch@commnet.edu</a> |   |
| Leadership Team  |   |   |
| <b>Dr. Mary (Cater) Arico , Director</b><br><a href="mailto:arico@hartford.edu">arico@hartford.edu</a><br>860.768.4681   | <b>Dr. Yingcui Li, Assistant Director</b><br><a href="mailto:vinli@hartford.edu">vinli@hartford.edu</a><br>860.768-4533   | <b>Janet Spatcher, Program Manager</b><br><a href="mailto:ctspgrant@hartford.edu">ctspgrant@hartford.edu</a><br>860.768.4813  |

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# About NASA CTSGC

NASA Connecticut Space Grant Consortium (CTSGC) is one of 52 state-based, university-led Space Grant Consortia funded by NASA Office of STEM Engagement (OSTEM) to develop and implement student fellowship and scholarship programs, interdisciplinary space-related research infrastructure, education, and public service programs; and cooperative initiatives with industry, research laboratories, and state, local and other governments. Space Grant operates at the intersection of NASA's interest as implemented by alignment with the Mission Directorates and NASA CTSGC's interests. Although it is primarily a higher education program, Space Grant programs should encompass the entire length of the education pipeline, including elementary/secondary and informal education.

# Proposal Development Considerations

Proposed research/work/interests should be related to one of NASA's Mission Directorates. They are Aeronautics Research, Human Exploration and Operations, Science, and Space Technology.

For the use of NASA facilities, University Affairs Offices at NASA Centers may be contacted. Contact information and NASA facility mission statements may be found at each of the NASA facilities' websites. For a directory of facility, websites see: <http://www.nasa.gov/about/sites/index.html>

## Eligibility Requirements

1. NASA Office of Management and Budget (OMB) mandates that students must be citizens of the United States of America to receive direct funding from any NASA Space Grant award. Direct funding for non-citizens must be comprised of institutionally matched funds or other non-federal funds. For further clarification, please see NASA Grants and Cooperative Agreements Subpart A of 14 CFR Part 1260.

Recipients of Space Grant funds must provide proof of U.S. Citizenship via the Grant Verification Form at the time of application. Proof of citizenship may be in the form of one of the following:

- U.S. Passport (may be valid or expired)
  - Naturalization Certificate
  - U.S. Birth Certificate
  - Military ID Card
2. Students must be considered a full-time student at their institution (enrolled in a minimum of 12 credits) at one of the Consortium Member Institutions with a minimum GPA of 3.0. An exception would be a student finishing their last semester, needing less than normal credit hours to fulfill their degree requirements.

## Preparation of Proposals

If you are considering applying for a NASA CTSGC funding, you should contact your Campus Director as far in advances as possible to review the application process, and the steps that should be followed for a successful application submission. Space Grant Campus Director information can be found on the NASA CTSGC website: <https://ctspacegrant.org/about-us/affiliates>.

## Period of Performance

All grant activity must be completed within one year of the date of award. A No Cost Extension (NCE) may be requested through your university Grant's Office.

## Review of Proposals

The proposal review committee is composed of NASA CTSGC academic Campus Directors. Reviews are performed after the submission of proposals. The reviewers may request additional information if needed. The request will be made through the NASA CTSGC Office. Decisions are anticipated within six weeks of the submission of proposals. Reviewers will evaluate proposals using the rubrics shown under each program.

## Application Submission

Submit the application and additional forms via the links at [ctspacegrant.org](http://ctspacegrant.org).

## Award Notification

Award/Decline Letters: Each application/applicant will receive an email notification of their application with an attached award/decline letter. *Decisions are typically made within six weeks following the application deadline.*

Website and Social Media: Awards will be announced on the NASA CTSGC website, via Twitter and Instagram. ([www.ctspacegrant.org](http://www.ctspacegrant.org), @CTSpaceGrant).

## Tax Consequences of Awards

Award recipients should familiarize themselves with tax laws to determine the tax status of their grants. NASA CTSGC does not give tax advice. Recipients may find it helpful to consult the Internal Revenue Service (IRS) Publication #520, "Scholarships and Fellowships," which is available at IRS offices. Any questions regarding the tax status of awards should be addressed to the IRS. Income Code 15 is available at <http://www.irs.gov/publications/p15/index.html>

## Evaluation of Funded Projects and Reporting Requirements

The following are required upon completion of the project: Project report, Longitudinal tracking, participation in Grants Expo Poster Session, and Outreach.

Public Information: This is a federal grant; therefore, information such as title, abstract, names, institution and year will be posted on the NASA CTSGC website and will be kept there for an extended period of time.

## Equipment and Supplies

NASA CTSGC funds may not be used for equipment purchases. The definition for equipment, as stated in 45 CFR Parts 74 and 92, is an article of tangible nonexpendable personal property that has a useful life of more than one year and an acquisition cost of \$5,000 or more per unit. Items below \$5,000 are classified as supplies. If essential to the project, NASA CTSGC funds may be used for the purchase of supplies. NASA CTSGC funds may not be used to purchase computers or tablets.

## Prior Award Recipients

Applications will not be accepted from applicants who received a(n) Undergraduate Scholarship, Community College Transfer Scholarship, Community College Scholarship, Graduate Research Fellowship, Undergraduate Research Grant award from NASA CTSGC during the prior academic year. Please note, NASA CTSGC defines an academic year as beginning on or about September 1<sup>st</sup> and ending on or about August 31<sup>st</sup>.

## Funds Distribution

- Graduate Research Fellowship: Funds will be available upon successful completion of a sub-award between the grant awardee's institution and the University of Hartford, and then will be paid to grant awardee's institution to be distributed according to its policies related to graduate student research grants. Graduate applicants should meet with their respective institution's grants' office prior to application submission. Note: NASA CTSGC cannot award final payment until all post-award requirements are met. Details will be conveyed within the award agreement.

- Undergraduate Research Grant: Funds will be distributed in two payments to the student's institution; the institution will pay the student upon completion of a sub-award between the institution and the University of Hartford. The first payment will be \$3,000 at the beginning of the research. The remaining balance will be paid upon submittal of all required post-award documentation.
- Student Project Grant: Funds will be paid to the student's institution upon receipt of a detailed invoice on a reimbursement basis; the institution will pay the student upon completion of a sub-award agreement between the institution and the University of Hartford. Submission of a completed budget form (most institutions will also need detailed, itemized original receipts). Note: NASA CTSGC cannot award final payment until all post-award requirements are met.
- Undergraduate Scholarship: Full amount is paid directly to the student award recipient from their respective institution Financial Aid Office upon completion, submission and approval of a report.
- Community College Scholarship: Full amount is paid directly to the student award recipient from their respective institution Financial Aid Office upon completion, submission and approval of a report.
- Community College Transfer Scholarship: Full amount is paid directly to the student award recipient from their respective institution Financial Aid Office upon completion, submission and approval of a report.
- Travel Grant: Funds will be paid to the student's institution on a reimbursement basis. NASA CTSGC will pay detailed invoices from the affiliate upon completion of a sub-award to the master agreement. Most affiliate institutions will require detailed, itemized receipts. Contact your Campus Director for details. No travel advances will be allowed from NASA CTSGC funds. ***International travel is not allowed to be funded with Space Grant dollars.*** Note: NASA CTSGC cannot award final payment until all post-award requirements are met.
- Industrial, Education, and Technical Internship: Funds will be distributed in three equal payments directly to the partner, as follows: first payment at the beginning of the internship, a second upon receipt of a mid-point report from the supervisor of satisfactory performance, with the final balance paid upon submission of all required post-award documentation. Student interns will be paid in accordance with the sponsoring organizations' practices.
- NASA Internship: Funds will be paid to the student's institution in two payment types, one for stipend and one on a reimbursement basis for travel costs. NASA CTSGC will pay detailed invoices from the affiliate upon completion of a "sub-award" to the master agreement. CTSGC, as well as most affiliate institutions, will require detailed, itemized receipts for reimbursable travel costs. Contact your Campus Director for details. No travel advances will be allowed from NASA CTSGC funds. Note: NASA CTSGC cannot award final payment until all post-award requirements are met.

# Program Information

## Graduate Fellowship

### About this award

**Award** – Graduate Fellowships are available to promote and support graduate student research in areas that align with NASA Mission Directorates. Refer to the NASA CTSGC website for the number and amounts of awards available each academic year. A student is eligible for one NASA CTSGC fellowship per academic year. (Note: Space Grant Fellowship recipients cannot receive other federal fellowships or traineeships while receiving a Space Grant fellowship. Please be sure to specify the proposed period of performance within your application to ensure no overlap of federal fellowships/traineeships.)

**Eligibility** – Graduate student applicants must be full-time graduate students at one of the Consortium Member Institutions with a minimum GPA of 3.0. First-semester graduate students should provide an undergraduate transcript. Applicants must provide proof of U.S. Citizenship through the Grant Verification Form. Also, have not received a(n) Undergraduate Scholarship, Community College Transfer Scholarship, Graduate Research Fellowship, or Undergraduate Research Fellowship award from NASA CTSGC during the prior academic year. Please note, NASA CTSGC defines an academic year as beginning on or about September 1st and ending on or about August 31st.

**Award Opportunities** – Funding opportunities are available to Graduate Students preparing for careers useful to NASA.

**Eligible Budget Items** – The budget may include items such as tuition, student stipend, technician and support staff salaries, summer salaries, fringe benefits, supplies, and materials. Funds may also be used to support travel *directly related* to the performance of the research/study. Funds may **not** be used for equipment/computers, entertainment, entry fees, or indirect costs. All federal requirements pass through NASA CT Space Grant Consortium’s lead institution, University of Hartford, to all awarded grants. When preparing budget proposals, it may be helpful to reference the Office of Management and Budget Uniform Guidance link: <https://www.nssc.nasa.gov/grants> **Equipment and Supplies** – NASA CTSGC funds may not be used for equipment purchases. The definition for equipment, as stated in 45 CFR Parts 74 and 92, is an article of tangible nonexpendable personal property that has a useful life of more than one year and an acquisition cost of \$5,000 or more per unit. Items below \$5,000 are classified as supplies. If essential to the project, NASA CTSGC funds may be used for the purchase of supplies. NASA CTSGC funds may not be used to purchase computers or tablets.

**Fund Distribution** – Funds will be available upon successful completion of a sub-award between the grant awardee’s institution and the University of Hartford, and then will be paid to grant awardee’s institution to be distributed according to its policies related to graduate student research grants. Graduate applicants should meet with their respective institution’s grants’ office prior to application submission. Note: NASA CTSGC cannot award final payment until all post-award requirements are met. Details will be conveyed within the award agreement.

### **Post award responsibilities**

**Reporting** – A project report will be requested upon completion of the fellowship work. The required reporting format is available on the NASA CTSGC website. NASA CTSGC considers a successful project investment in the future of the researcher, their department and the institution, and therefore track these outcomes for reporting to NASA.

**Outreach** – Fellowship award recipients are required to share their knowledge of and enthusiasm for STEM careers by performing outreach within the college, community college, or middle/high school community of their choice. (For example, giving a presentation to a local middle/high school class or to college first-year students about studying or careers in STEM.) For additional information on outreach opportunities, please refer to the NASA CTSGC website.

**Poster Session** – Students will be required to furnish a research poster for an annual forum following the completion of their research. Details will be communicated closer to the date. A template for the poster is available on the NASA CTSGC website.

**Longitudinal Tracking** – NASA CTSGC and NASA require tracking of all significant student awardees to their “next career step.” Please be aware that you will be contacted by your Campus Director to follow up on your career path and/or progress.

### **Apply for this award**

Submit the application and additional forms via the links at [ctspacegrant.org](http://ctspacegrant.org).

Form 1. **Applicant Contact/Demographic Information**

*\* This information is utilized for NASA reporting only.*

Form 2. **Proposal Information**

- a. **Proposal Abstract** (100 word maximum) – includes information relating the proposed project to NASA’s Mission Directorates.
- b. **Narrative** – 5 page maximum
  - i. Purpose and objectives
  - ii. Relationship to NASA’s Mission Directorates
  - iii. Methodology
  - iv. Feasibility and timeline (plan) of the project
  - v. Budget narrative
  - vi. Expected outcomes and Assessment Plan
  - vii. Career potential

*\* Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*

- c. **Budget** – Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals.

- d. **Two Letters of Recommendation** (internal or external) – One letter must be from the research project supervisor. All recommendation letters need to be signed and on institutional letterhead. *Faculty who wish to submit confidential letters of recommendation may use the online system.*
- e. **Resume/Curriculum Vitae** – One-page maximum. For team proposals please submit a resume/CV for each team member.
- f. **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

**Evaluation rubric**

| <b>Criteria</b>                                | <b>Evaluation</b>  | <b>Max Score</b> |
|--|--|------------------|
| <b>Abstract</b>                                | States a specific testable research question or objective.   | 10               |
| <b>Relation to NASA’s Mission Directorates</b> | Clearly stated and directly related to the mission of NASA/aerospace/STEM through Mission Directorate alignment.   | 15               |
| <b>Methodology</b>                             | Provides a clear explanation of the proposed experimental or theoretical methods, hypothesis, prototype, or product.   | 15               |
| <b>Feasibility &amp; timeline (planning)</b>   | The facilities and advisor/expertise are available and the timeline is appropriate for conducting the proposed research.   | 15               |
| <b>Budget narrative and worksheet</b>          | There is a clear, detailed budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program. | 15               |
| <b>Expected outcome &amp; Assessment plan</b>  | The deliverables are clear, innovative, with a clear assessment plan.  | 20               |
| <b>Career potential</b>                        | Relationship to prior work and future plans is well documented.  | 5                |
| <b>Recent award</b>                            | Student has never received a NASA CTSGC award.   | 5                |
|  |  | 100              |

## Undergraduate Research Grant

### About this award

**Award** – Undergraduate Student Research Grants are available to support and promote undergraduate research with faculty advisors at their institution. Refer to the NASA CTSGC website for the number and amounts of awards each academic year. A student is eligible for one award per academic year.

**Eligibility** – Undergraduate student applicants must be full-time students at the time of application and during the entire project period at one of the Consortium Member Institutions with a minimum GPA of 3.0. Applicants are required to provide proof of U.S. Citizenship through the Grant Verification Form. Also, have not received a(n) Undergraduate Scholarship, Community College Transfer Scholarship, or Undergraduate Research Grant award from NASA CTSGC during the prior academic year. Please note, NASA CTSGC defines an academic year as beginning on or about September 1st and ending on or about August 31st.

**Award Opportunities** – Students may be preparing for senior design projects, honors research, or searching for an educational experience, which is consistent with the mission of NASA as exemplified by its four Mission Directorates. Students desiring to complete their research in collaboration with local STEM companies should contact the companies in advance and include a letter of support from the partner along with their application.

**Budget** – A budget is not required for Undergraduate Research Grant. Funds will be paid directly to the student as a stipend.

**Fund Distribution** – Funds will be distributed in two payments to the student's institution; the institution will pay the student upon completion of a sub-award between the institution and the University of Hartford. The first payment will be \$3,000 at the beginning of the research. The remaining balance will be paid upon submittal of all required post-award documentation.

### Post award responsibilities

**Reporting** – A project report will be requested upon completion of the work. The required reporting format is available for download on the NASA CTSGC website. NASA CTSGC considers a successful project investment in the future of the researcher, their department and the institution, and therefore track these outcomes for reporting to NASA.

**Outreach** – Award recipients are required to share their knowledge of and enthusiasm for STEM careers by performing outreach within the college, community college, or middle/high school community of their choice. (For example, giving a presentation to a local middle/high school class or to college first-year students about studying or careers in STEM.) For additional information on outreach opportunities, please refer to the NASA CTSGC website.

**Poster Session** – Students will be required to furnish a research poster for an annual forum following the completion of their research. Details will be communicated closer to the date. A template for the poster is available on the NASA CTSGC website.

**Longitudinal Tracking** – NASA CTSGC and NASA require tracking of all significant student awardees to their “next career step.” Please be aware that you will be contacted by your Campus Director to follow up on your career path and/or progress.

**Apply for this award**

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- a. **Proposal Abstract** (100 word maximum) – includes information relating the proposed project to NASA’s Mission Directorates.
- b. **Narrative** – 5 page maximum
  - i. Purpose and objectives
  - ii. Relationship to NASA’s Mission Directorates
  - iii. Methodology
  - iv. Feasibility and timeline (plan) of the project
  - v. Expected outcomes
  - vi. Career potential

*\* Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*

- c. **Two Letters of Recommendation** (internal or external) – One letter must be from the research project supervisor. All recommendation letters need to be signed and on institutional letterhead. *Faculty who wish to submit confidential letters of recommendation may use the online system.*
- d. **Resume/Curriculum Vitae** – One-page maximum. For team proposals please submit a resume/CV for each team member.
- e. **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

## Evaluation Rubric

| <b>Criteria</b>                                | <b>Evaluation</b>  | <b>Max Score</b> |
|--|--|------------------|
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| <b>Relation to NASA's Mission Directorates</b> | Clearly stated and directly related to the mission of NASA/ aerospace/STEM through alignment with the Mission Directorates | 15               |
| <b>Methodology</b>                             | Provides a clear explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product            | 20               |
| <b>Feasibility &amp; timeline (planning)</b>   | Facilities are available, and the timeline is appropriate for conducting the proposed research                             | 20               |
| <b>Expected outcome</b>                        | Deliverables are clear, innovative, with a clear assessment plan and obtainable in the specified time frame                | 20               |
| <b>Career potential</b>                        | Relationship to prior work and future plans is well documented   | 5                |
| <b>Recent award</b>                            | Student has never received a NASA CTSGC award  | 10               |
|  |  | 100              |

## Student Project Grant

### About this award

**Award** – The purpose of these grants is to allow students to purchase items needed for senior capstone, undergraduate research, or extracurricular club design projects including materials, electronic components, chemicals, etc. NASA CTSGC recognizes these small grants will allow students to choose projects that are beyond the normal funds allocated by departments, colleges, and universities. Refer to the NASA CTSGC website for the number and amounts of awards available each academic year.

**Eligible Projects** – Any group or individual project that is consistent with the mission of NASA as exemplified by its four Mission Directorates, is eligible.

**Eligible Applicants** – Individual students and informal/formal groups of students may apply. The project leader/Primary Investigator (P.I.) must be a U.S. Citizen, and all project team members must be full-time students at a Consortium Member Institution at the beginning of the project. Individual Applicants/Project Leader (for group projects) must have a minimum 3.0 GPA. There must be a faculty member who agrees to serve as the project advisor. Applicant P.I. must provide proof of U.S. Citizenship through the Grant Verification Form.

**Budget** – Funds may be used for supplies and materials only. Funds may not be used for travel\*, equipment/computers, entertainment, entry fees, tuition, salaries, fringe benefits, or indirect costs.

*\*Students may also apply for Travel Grants to visit NASA Centers, participate in professional meetings, etc.*

**Fund Distribution** – Funds will be paid to the student’s institution upon receipt of a detailed invoice on a reimbursement basis; the institution will pay the student upon completion of a sub-award agreement between the institution and the University of Hartford. Submission of a completed budget form (CTSGC as well as most institutions will also need detailed, itemized original receipts). Note: NASA CTSGC cannot award final payment until all post-award requirements are met.

### Post award responsibilities

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**Longitudinal Tracking** – NASA CTSGC and NASA require tracking of all significant student awardees to their “next career step.” Please be aware that you will be contacted by your Campus Director to follow up on your career path and/or progress.

## **Apply for this award**

Submit the application and additional forms via the links at [ctspacegrant.org](http://ctspacegrant.org).

Form 1. **Applicant Contact/Demographic Information**

*\* This information is utilized for NASA reporting only.*

Form 2. **Proposal Information**

- a. **Proposal Abstract** (100 word maximum) – includes information relating the proposed project to NASA’s Mission Directorates.
- b. **Narrative** – 5 page maximum
  - i. Purpose and objectives
  - ii. Relationship to NASA’s Mission Directorates
  - iii. Methodology
  - iv. Feasibility and timeline (plan) of the project
  - v. Budget narrative
  - vi. Expected outcomes
  - vii. Career potential

*\* Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*

- c. **Budget** – Please be sure to include a Budget Worksheet for each institution involved in collaborative grant projects.
- d. **One Letter of Recommendation**– The letter must be from the research project supervisor/advisor. All recommendation letters need to be signed and on institutional letterhead. *Faculty who wish to submit confidential letters of recommendation may use the online system.*
- e. **Resume/Curriculum Vitae** – One-page maximum. For team proposals please submit a resume/CV for each team member.
- f. **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

## Evaluation rubric

| <b>Criteria</b>                         | <b>Evaluation</b>   | <b>Max Score</b> |
|---|---|------------------|
| Abstract                                | States a specific testable research question or objective   | 10               |
| Relation to NASA's Mission Directorates | Clearly stated and directly related to the mission of NASA/ aerospace/STEM through alignment with the Mission Directorates.   | 15               |
| Methodology                             | Provides a clear explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product.  | 15               |
| Feasibility & timeline (planning)       | Facilities are available, and the timeline is appropriate for conducting the proposed research.   | 15               |
| Budget narrative and worksheet          | There is a clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program. | 15               |
| Expected outcome                        | Deliverables are clear and innovative.  | 20               |
| Career potential                        | Relationship to prior work and future plans is well documented.   | 5                |
| Recent award                            | Student has never received a NASA CTSGC award.  | 5                |
|   |   | <b>100</b>       |

## Scholarship: Undergraduate Scholarship, Community College Scholarship, Community College Transfer Scholarship

### About this award

**Awards** – Refer to the NASA CTSGC website for the number and amounts of awards available each academic year. A student is normally eligible for one scholarship or fellowship per academic year.

**Eligibility** – Undergraduate student applicants must be full-time students at the time of application at one of the Consortium Member Institutions with a minimum GPA of 3.0. Applicants are required to provide proof of U.S. Citizenship through the Grant Verification Form. Also, applicant may not have received a Scholarship, or Undergraduate Research award from NASA CTSGC during the prior academic year. Please note, NASA CTSGC defines an academic year as beginning on or about September 1<sup>st</sup> and ending on or about August 31<sup>st</sup>.

**For Community College Transfer Scholarship applicants:** Students must demonstrate that they began their postsecondary education at a community college (typically through a student transcript) where they enrolled for a minimum of two terms and are currently enrolled (typically through a student transcript) in or have been admitted (typically through a letter of admission) to a 4-year Consortium Member postsecondary education institution. Students may only be awarded the Community College Transfer Scholarship once in their academic careers.

**Fund Distribution** – Full amount is paid directly to the student award recipient from their respective institution Financial Aid Office upon completion, submission and approval of a report.

### Post award responsibilities

**Reporting** – Contact and demographic-related information is required prior to scholarship payment. The form is available on the NASA CTSGC website.

**Longitudinal Tracking** – NASA CTSGC and NASA require tracking of all significant student awardees to their “next career step.” Please be aware that you will be contacted by your Campus Director to follow up on your career path and/or progress.

### Apply for this award

Submit the application and additional forms via the links at [ctspacegrant.org](http://ctspacegrant.org).

Form 1. **Applicant Contact/Demographic Information**

*\* This information is utilized for NASA reporting only.*

Form 2. **Proposal Information**

a. **Narrative** – 3 page maximum. Please include the following sections:

- i. Describe your academic and career goals.
- ii. Describe information on any research experiences or other relevant experiences you have had and how you believe they have influenced your career in STEM.
- iii. Describe your community service, extra-curricular activities, work experience awards and/or honors.

- iv. Briefly explain the benefits that you expect to derive from a NASA CTSGC Scholarship.

*\* Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*

- b. **One Letter of Recommendation** – All recommendation letters need to be signed and on institutional letterhead. *Faculty who wish to submit confidential letters of recommendation may use the online system.*
- c. **Resume/Curriculum Vitae** – One-page maximum.
- d. **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

**Evaluation Rubric**

| <b>Criteria</b>  | <b>Max Score</b> |
|--|------------------|
| Academic and career goals relate to NASA CTSGC mission   | 20               |
| Student demonstrates and/or describes interest in science and technology subject matter and careers  | 20               |
| Student academic performance   | 10               |
| Letter of recommendation supports students academic performance and goals.   | 10               |
| Student demonstrates and describes community service, extracurricular, work and/or academic honors, experiences, and awards that support his or her application to the award | 20               |
| Student describes benefits from receiving the scholarship and/or articulates reasons for deserving the scholarship   | 20               |
|  | 100              |

**NOTICE: Prior NASA CTSGC Award Recipients:** Six points will be subtracted if the applicant received an award two academic years ago; four points will be subtracted if the applicant received an award three academic years ago; two points will be subtracted if the applicant received an award four or more academic years ago.

## Travel Grant

### About this award

**Award** – To encourage travel to NASA facilities to use their unique resources and/or present Space Grant and NASA funded research at conferences the NASA CTSGC awards travel grants. Refer to the NASA CTSGC website for the number of awards available each academic year.

**Eligible Travel** – Travel supported by travel grants may include, but is not limited to, trips to NASA facilities to use specialized research equipment, trips to NASA Centers to discuss collaborations with NASA scientists and engineers, attendance at pre-proposal conferences sponsored by NASA, presentation of Space Grant funded research at conferences, participation in NASA or Space Grant programs/workshops/competitions, or invited papers at conferences, visits by NASA scientists/engineers to campuses for research collaboration. ***NASA CTSGC only supports domestic travel.***

**Eligible Applicants** – Full-time students at Consortium Member Institutions are eligible. All applicants must be US Citizens. Applicants must provide proof of U.S. Citizenship through the Grant Verification Form. Student applicants should have a minimum of 3.0 GPA.

**Budget** – Funds will be paid to the student or groups' institution upon submission of a completed budget form at the conclusion of the trip. **No travel advances are allowed.**

**Fund Distribution** – Funds will be paid to the student's institution on a reimbursement basis. NASA CTSGC will pay detailed invoices from the affiliate upon completion of a sub-award to the master agreement. Most affiliate institutions will require detailed, itemized receipts. Contact your Campus Director for details. No travel advances will be allowed from NASA CTSGC funds. ***International travel is not allowed to be funded with Space Grant dollars.*** Note: NASA CTSGC cannot award final payment until all post-award requirements are met.

### Post award responsibilities

**Reporting** – A project report will be requested upon completion of the travel. The required reporting format is available for download on the NASA CTSGC website. NASA CTSGC considers a successful project investment in the future of the researcher, their department and the institution, and therefore track these outcomes for reporting to NASA.

**Poster Session** – Students will be required to furnish a research poster for an annual forum following the completion of their research. Details will be communicated closer to the date. A template for the poster is available on the NASA CTSGC website.

**Longitudinal Tracking** – NASA CTSGC and NASA require tracking of all significant student awardees to their "next career step." Please be aware that you will be contacted by your Campus Director to follow up on your career path and/or progress.

## **Apply for this award**

Submit the application and additional forms via the links at [ctspacegrant.org](http://ctspacegrant.org).

Form 1. **Applicant Contact/Demographic Information**

*\* This information is utilized for NASA reporting only.*

Form 2. **Proposal Information**

- a. **Proposal Abstract** (100 word maximum) – includes information relating the proposed project to NASA’s Mission Directorates.
- b. **Narrative** – 2 page maximum. Please include the following sections
  - i. Purpose of Travel and Invitation: provide a copy of any supporting materials related to the travel, i.e., letter or conference paper acceptance notice (copy of email or webpage of the program is acceptable). Please remember that Space Grant can only support domestic travel.
  - ii. Relevance to NASA’s strategic goals
  - iii. Goals and Objectives
  - iv. Timetable
  - v. Budget Narrative: Please provide a description of how you will fund the travel if you do not receive full Space Grant funding for the total cost of the trip. *(Ex. If the total trip will cost \$1,500, describe how you will fund the remaining \$500 after the Space Grant award of \$1,000.)*

*\* Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*

- c. **Budget Justification** – Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals.
- d. **One Letter of Recommendation** – Must be from a faculty member familiar with the travel purpose. Applicants may submit additional letters of support. All recommendation letters must be submitted on the space grant website. *Faculty who wish to submit confidential letters of recommendation may use the online system.*
- e. **Resume/Curriculum Vitae** – One-page maximum. *(For a team or group, please include a resume for each member.)*
- f. **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

## Evaluation Rubric

| <b>Criteria</b>                                 | <b>Evaluation</b>  | <b>Max Score</b> |
|---|--|------------------|
| <b>Abstract</b>                                 | Abstract is clear, concise and gives reader an excellent sense of the scope of travel.   | 5                |
| <b>Purpose of travel and invitation</b>         | Clear and detailed description of and rationale for travel, including invitation to participate and/or other supporting material.  | 25               |
| <b>Relevance to NASA's Mission Directorates</b> | Purpose of travel is very relevant to one or more of NASA's Mission Directorates.  | 15               |
| <b>Goals and objectives</b>                     | Goals and objectives of travel are clearly stated. There are compelling reasons offered to pursue travel.  | 30               |
| <b>Timetable</b>                                | Includes a clear and detailed timeline of travel, which is aligned with goals and objectives.  | 5                |
| <b>Budget narrative and worksheet</b>           | There is a clear, detailed, budget plan, including a justification of expenditures for the proposed travel and a complete budgetary schedule for the length of the travel. | 15               |
| <b>Recent award</b>                             | Maximum points will be given to students who have never received a NASA CTSGC award.   | 5                |
|   |  | 100              |

## Summer Internships

### **About this award**

NASA CTSGC collaborates with Connecticut-based industries and organizations, in an effort to aid in securing full-time summer internship opportunities for student applicants. Internships may be in STEM-related industries, and informal education organizations. NASA CTSGC will solicit meaningful internship opportunities/projects from these professional partners. Eligible students may apply directly to specific projects of interest through the online application system. Applicants will be reviewed on a rolling application deadline basis.

The NASA CTSGC Internship program follows the model and structure of the highly competitive NASA Center Internships – specifically, project sponsors will identify projects ahead of time, and advertise for summer interns for those specified projects. By having projects identified ahead of time, more students, especially community college students, will be likely to apply for the opportunity. Internships will be dispensed dependent upon the funding available, the applicant pool and industry’s ability to accommodate the internships. Refer to the NASA CTSGC website for the internship opportunities available

**Award** – Industrial and Education Internship – Undergraduate (4-year institution)/Graduate students enrolled at affiliated institutions are eligible to apply. Undergraduate/Graduate student applicants must be full-time students at one of the Consortium Member Institutions with a minimum GPA of 3.0 or higher. Applicants must provide proof of US Citizenship through the Grant Verification Form. NASA CTSGC funds are only available to US Citizens.

Technical Internship (all students eligible) – Priority given to community college students enrolled in an Associate’s degree or Certificate program at an affiliated institution are eligible to apply. If space is available, internships may be offered to 4-year institution or graduate students. Undergraduate student applicants must be full-time students at one of the Consortium Member Institutions with a minimum GPA of 3.0 or higher. Applicants must provide proof of US Citizenship through the Grant Verification Form. NASA CTSGC funds are only available to US Citizens.

Internships will be dispensed dependent upon the funding available, the applicant pool and industry’s ability to accommodate the internships. ***Refer to the NASA CTSGC website for the internship opportunities available.***

**Eligibility** – Funds will be distributed in three equal payments directly to the industry partner, as follows: first payment at the beginning of the internship, a second upon receipt of a mid-point report from the supervisor of satisfactory performance, with the final balance paid upon submission of all required post-award documentation. Student interns will be paid in accordance with the sponsoring organizations’ practices.

### **Post award responsibilities**

**Reporting** – A project report will be requested upon completion of the work. The required reporting format is available: NASA CTSGC website. NASA CTSGC considers a successful project investment in the future of the researcher, their department and the institution, and therefore track these outcomes for reporting to NASA.

**Poster Session** – Students will be required to furnish a research poster for an annual forum following the completion of their research. Details will be communicated closer to the date. A template for the poster is available on the NASA CTSGC website.

**Longitudinal Tracking** – NASA CTSGC and NASA require tracking of all significant student awardees to their “next career step.” Please be aware that you will be contacted by your Campus Director to follow up on your career path and/or progress.

### **Apply for this award**

Submit the application via the online application system at [ctspacegrant.org](http://ctspacegrant.org). The following information will be needed when you apply.

1. **Applicant Contact/Demographic Information**

*\* This information is utilized for NASA reporting only.*

2. **Proposal Information**

a. **Narrative** – 3 page maximum

- i. Why are you interested in an internship?
- ii. Why should you be selected for this opportunity?
- iii. Describe how your interest/experience will be enhanced by this internship.
- iv. How will this internship enhance or contribute to your long-term academic and career goals?
- v. Please list all technical courses you have taken that may be helpful to hiring managers in considering your qualifications.
- vi. Please explain your interest in your top 3 project choices. How does each project fit with your current interests and/or proposed career goals?
- vii. What has been the extent of your contact with CT industry, particularly the company you are interested in working with? *(Please indicate the name of any individuals with whom you have been working/speaking.)*

b. **One Letter of Recommendation** (internal or external) – One letter must be from the research project supervisor. All recommendation letters need to be signed and on institutional letterhead. *Faculty who wish to submit confidential letters of recommendation may use the online system.*

c. **Resume/Curriculum Vitae** – One-page maximum. For team proposals please submit a resume/CV for each team member.

d. **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

# National Space Grant Program Goal and Objectives



## Goal:

Contribute to the nation's science enterprise by funding education, research, and public service projects through a national network of university-based Space Grant consortia.

## Objectives:

- Establish and maintain a national network of universities with interests and capabilities in aeronautics, space and related fields.
- Encourage cooperative programs among universities, aerospace industry, and Federal, state and local governments.
- Encourage interdisciplinary training, research and public service programs related to aerospace.
- Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology.
- Promote a strong science, mathematics, and technology education base from elementary through secondary levels.

## Important Resources:

NASA Office of STEM Engagement (OSTEM): <https://www.nasa.gov/stem>

Federal Strategy for STEM Education: <https://www.nasa.gov/press-release/nasa-national-science-foundation-announce-support-for-white-house-stem-engagement-plan>

Information on NASA's Mission Directorates

- Aeronautics Research: <https://www.nasa.gov/aeroresearch>
- Human Exploration and Operations: <https://www.nasa.gov/directorates/heo/index.html>
- Science: <https://science.nasa.gov/>
- Space Technology: <https://www.nasa.gov/directorates/spacetech/home/index.html>

NASA Space Grant Program Office:

<http://www.nasa.gov/offices/education/programs/national/spacegrant/home/index.html>

National Center for Education Statistics (NCES) enrollment for your state:

<http://nces.ed.gov/programs/digest/d14/>

Vision for Space Exploration [http://www.nasa.gov/missions/solarsystem/explore\\_main.html](http://www.nasa.gov/missions/solarsystem/explore_main.html)

NASA Centers & Facilities: <http://www.nasa.gov/offices/education/centers/index.html>

Guidebook for Proposers Responding to a NASA Research Announcement

<http://www.hq.nasa.gov/office/procurement/nraguidebook>

**FEDERAL UNIFORM GUIDANCE:** All federal requirements pass through from the CT Space Grant Consortium's lead institution, University of Hartford, to all awarded faculty grants. **When preparing budget proposals, it may be helpful to reference the Office of Management and Budget Uniform Guidance link:** <https://www.nssc.nasa.gov/grants>.