



## NASA CONNECTICUT SPACE GRANT CONSORTIUM

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# REQUEST FOR PROPOSALS

## Student Programs

(Revised March 2019)

*Graduate Research Fellowship*

*Undergraduate Research Fellowship*

*Student Project Grant*

*Undergraduate & Community College Scholarship*

*Community College Transfer Scholarship*

*Travel Grant*

*Community College Quadcopter Challenge*

*Undergraduate Student-Faculty Summer Research*

*Industrial/Educational Internship and Technical Internship*

*NASA Academy Fellowship Grant*

**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 CTSGC Office.

### Universities

#### **Central Connecticut State University**

Dr. Thomas Vasko  
School of Engineering  
860.832.1896  
[vaskothj@mail.ccsu.edu](mailto:vaskothj@mail.ccsu.edu)

#### **Southern Connecticut State University**

Dr. Todd Schwendemann  
Department of Physics  
203.392.6431  
[schwendemat1@southernct.edu](mailto:schwendemat1@southernct.edu)

#### **University of Connecticut**

Dr. Daniel Burkey  
School of Engineering  
860.486.5466  
[daniel@enr.uconn.edu](mailto:daniel@enr.uconn.edu)

#### **Wesleyan University**

Dr. Seth Redfield  
Astronomy Department  
860.685.3669, 860.685.2131 (Fax)  
[sredfield@wesleyan.edu](mailto:sredfield@wesleyan.edu)

### Community Colleges

#### **Asnuntuck Community College**

Amely Cross  
860.253.3119  
[across@acc.commnet.edu](mailto:across@acc.commnet.edu)

#### **Manchester Community College**

Dr. Fatma Salman  
860.512.2743  
[fsalman@mcc.commnet.edu](mailto:fsalman@mcc.commnet.edu)

#### **Northwestern CT Community College**

Douglas Hoffman  
Greenwood Hall, GW 217  
860.738.6332  
[dhoffman@nwcc.commnet.edu](mailto:dhoffman@nwcc.commnet.edu)

#### **Three Rivers Community College**

Mark Vesligaj  
860-215-9442  
[mvesligaj@trcc.commnet.edu](mailto:mvesligaj@trcc.commnet.edu)

#### **Eastern Connecticut State University**

Dr. Elizabeth A. Cowles  
354 Science Building  
860.465.4385 860.465.5213 (Fax)  
[cowlese@easternct.edu](mailto:cowlese@easternct.edu)

#### **Trinity College**

Dr. John Mertens  
Department of Engineering  
860.297.2301  
[john.mertens@trincoll.edu](mailto:john.mertens@trincoll.edu)

#### **University of Hartford**

Dr. Jean McGivney-Burelle  
Department of Mathematics, A&S  
860.768.5921 860.768.5244 (fax)  
[burelle@hartofrd.edu](mailto:burelle@hartofrd.edu)

#### **Yale University**

Dr. Hector Arce  
Department of Astronomy  
203.432.3018  
[hector.arce@yale.edu](mailto:hector.arce@yale.edu)

#### **Capital Community College**

Andre Freeman  
860.906.5177  
[afreeman@ccc.commnet.edu](mailto:afreeman@ccc.commnet.edu)

#### **Middlesex Community College**

Dr. Lin Lin  
860.343.5763  
[llin@mxcc.edu](mailto:llin@mxcc.edu)

#### **Norwalk Community College**

Dr. Mobin Rastgar Agah  
Room W008  
Norwalk, CT 06854  
[mrastgaragah@norwalk.edu](mailto:mrastgaragah@norwalk.edu)

#### **Tunxis Community College**

Dr. Karen Wosczyzna-Birch  
860.490.4545  
[kwosczyzna-birch@commnet.edu](mailto:kwosczyzna-birch@commnet.edu)

#### **Fairfield University**

Dr. Harvey Hoffman  
School of Engineering  
203.254.4000 x3080 203.254.4013 (Fax)  
[hhoffman@fairfield.edu](mailto:hhoffman@fairfield.edu)

#### **University of Bridgeport**

Dr. Jani Pallis  
Department of Mechanical Engineering  
203.576.4579  
[jpallis@bridgeport.edu](mailto:jpallis@bridgeport.edu)

#### **University of New Haven**

Dr. Dequan Xiao  
Dept. of Chemistry & Chemical Engineering  
203.479.4189  
[dxiao@newhaven.edu](mailto:dxiao@newhaven.edu)

#### **Housatonic Community College**

Stella Litwinowicz  
203.332.8588  
[slitwinowiczr@hcc.commnet.edu](mailto:slitwinowiczr@hcc.commnet.edu)

#### **Naugatuck Valley Community College**

Dr. Peter Angelastro  
Ekstrom Hall, E411  
203.596.8690  
[pangelastro@nv.edu](mailto:pangelastro@nv.edu)

#### **Quinebaug Valley Community College**

Professor Jakob Spjut  
Room C217A  
860.932.4156  
[jspiut@qvmc.commnet.edu](mailto:jspiut@qvmc.commnet.edu)

#### **Consortium Office:**

Janet Spatcher, Program Coordinator  
University of Hartford  
200 Bloomfield Avenue (Dana 203)  
West Hartford, CT 06117  
[www.ctspacegrant.org](http://www.ctspacegrant.org)  
[ctsprgrant@hartford.edu](mailto:ctsprgrant@hartford.edu)  
860.768.4813, 860.768.5073 (fax)

Dr. Hisham Alnajjar, Director  
[alnajjar@hartford.edu](mailto:alnajjar@hartford.edu)  
860.768.4846, 860.768.5073 (fax)

Dr. Mary "Cater" Arico, Associate Director  
[arico@hartford.edu](mailto:arico@hartford.edu)  
860.768.4681

# NASA Connecticut Space Grant Consortium (CTSGC)

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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 Education 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 CTSG'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. NASA CTSGC is a Capability Enhancement Consortium.

# Proposal Development Considerations

Proposal research/work/interests should be related to one of NASA's strategic enterprises. They are Space Science, Mission to Planet Earth, Human Exploration and Development of Space, Space Technology, and Aeronautics.

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 only citizens of the United States of America may 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). 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 NASA CTSGC funding, you should contact your Campus Director as far in advance as possible to understand exactly what steps need to be followed and to allow sufficient time for approvals.

## 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**

NASA CTSGC accepts materials submitted through the space grant website; please follow the appropriate links on the forms page.

## **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 and via Twitter. ([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**

Report: NASA CTSGC requires a project report from each funded student upon completion of research/project/travel-related 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.

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.

Poster Session: Students are required to furnish a research poster for an annual forum which follows the completion of the award-related work/research. Details will be communicated closer to the date. A template for the poster is available on the NASA CTSGC website.

Outreach: Student award recipients are expected to share their knowledge of and enthusiasm for STEM careers by performing outreach within the college or middle/high school community of their choice. (For example, giving a presentation to a local middle school class about studying or careers in STEM.) Please give a brief summary, 3-4 sentences, of your outreach including photographs, to NASA CTSGC. This documentation must be included in your final report. Potential outreach opportunities and previous student experiences are available on the NASA CTSGC website.

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.

### **Prior Award Recipients**

Applications will not be accepted from applicants who 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 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 Fellowship: 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.
- Community College Quadcopter Challenge: Funds will be distributed to the team's institution; the institution will pay the faculty advisor and student, as they participate, upon completion of a sub-award between the institution and the University of Hartford.
- 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.
- Undergraduate Student-Faculty Summer Research Grant: Funds will be distributed in two payments to the faculty advisor's institution; the institution will pay the student upon completion of an appropriate agreement between the faculty advisor's institution and the student's institution. The first payment will be 50% of the stipend at the beginning of the research. The remaining balance will be paid upon submittal of all required post-award documentation.
- NASA Academy: Funds will be paid to the student's institution in two payments, one for stipend payment, and once on a reimbursement basis. NASA CTSGC will pay detailed invoices from the affiliate upon completion of an 'Amendment' to the master agreement. 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 Research Fellowship

**Award** – Graduate Student Research Fellowships are currently available. Refer to the NASA CTSGC website for the number and amounts of awards available each program year. A student is eligible for one NASA CTSGC fellowship per program 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. No indirect costs may be charged. To avoid duplication with other Consortium Grant programs, travel may not be charged to this fellowship research grant. 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>

**Proposal Format and Checklist** – Submit applications on the NASA CTSGC website under the forms page.

**Reporting** – A project report will be requested upon completion of the fellowship work. A reporting format is available on the NASA CTSGC website.

**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.) Please give a brief summary, 3-4 sentences, of your outreach including photographs, to NASA CTSGC. 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.

### **Application Checklist**

Submit the application via the links on the forms page of the space grant website.

### **Details for Graduate Research Fellowship attachments**

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online
2. **THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**
  - **Application Cover Sheet** - This form will need to have review and signatures of your institution’s grant office and Dean as part of the online application.
  - **Proposal Abstract** (100 words maximum) – includes information relating the proposed project to NASA’s strategic enterprises.
  - **Narrative** – Five double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit, and remaining pages of the narrative will not be reviewed*).
    1. Purpose and objectives
    2. Relationship to NASA’s strategic goals
    3. Methodology
    4. Feasibility and timeline (plan) of the project
    5. Budget narrative
    6. Expected outcomes and Assessment Plan
    7. Career potential

*\* Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*
  - **Budget** – Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals

- **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*
- **Resume/Curriculum Vitae** – One-page maximum. For team proposals please submit a resume/CV for each team member.
- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.
- **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Graduate Research Fellowship Rubric**

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	Max Score
<b>Abstract</b>	States a specific testable research question or objective	States a clear, but untestable research and background question or the objective is not clear	States a vague, untestable research question and/or the objective is not clear	No research question posed	10
<b>Relation to NASA's strategic goals</b>	Clearly stated and directly related to the mission of NASA/ aerospace/STEM	Clearly stated and to some degree agrees with the mission of NASA/ aerospace/STEM	Clearly stated but does not agree with the mission of NASA/ aerospace/STEM	Not stated and/or not clear	15
<b>Methodology</b>	Provides a clear explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product	Provides an adequate explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product	Provides an unorganized explanation of proposed experimental or theoretical methods/ hypothesis/prototype/ product	Explanation of experimental methods missing	15
<b>Feasibility &amp; timeline (planning)</b>	Facilities are available, and the timeline is appropriate for conducting the proposed research	Facilities are available, but the timeline is inappropriate for conducting the proposed research	Facilities are not adequately available. The schedule is vague, not within program limits, or has an unrealistic timeline	Neither facilities nor timeline are appropriate for conducting the research	15
<b>Budget narrative and worksheet (not applicable for UG Fellowship projects)</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	There is a budget plan with a justification of expenditures for the proposed project and a partial budgetary schedule.	There is a budget plan with little justification of expenditures.	No budget plan provided.	14
<b>Expected outcome</b>	Deliverables are clear, innovative, with a clear assessment plan and obtainable in the specified time frame	Deliverables are clear, innovative, with a clear assessment plan but it is not clear how this could be accomplished in the specified time frame	Deliverables are not clear, and the assessment plan does not match deliverables	Deliverables are not clear and no assessment plan provided	20
<b>Career potential</b>	Relationship to prior work and future plans is well documented	Relationship to prior work and future plans is not well documented	Relationship to prior work and future plans is poorly documented	Relationship to prior work and future plans not documented	5
<b>Recent award</b>	Never	Four or more academic years	Three academic years	Two academic years	6
					100

## Undergraduate Research Fellowship

**Award** – Undergraduate Student Research Fellowships are currently available. Refer to the NASA CTSGC website for the number and amounts of awards each program year. A student is eligible for one fellowship per program 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 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** – 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 strategic enterprises: Earth Science, Space Science, Human Exploration and Development of Space, and Office of Aero-Space Technology and/or which will assist them in establishing relationships within NASA, and/or with local industrial contacts. Students desiring to complete their fellowship in collaboration with local STEM companies should contact the companies in advance and include a letter of support from the firm along with their application.

**Proposal Format and Checklist** – Submit applications on the NASA CTSGC website under the forms page.

**Reporting** – A project report is required upon completion of the fellowship work. A reporting format is available on the NASA CTSGC website.

**Outreach** – Undergraduate Fellowship award recipients are expected to share their knowledge of and enthusiasm for STEM careers by performing outreach within the college or middle/high school community of their choice. Example: giving a presentation to a local middle/high school class or to college first-year students about STEM studies or careers. Please give a brief summary, 3-4 sentences, of your outreach including photographs, to the Consortium Office. 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.

## **Application Checklist**

Submit the application via the links on the forms page of the space grant website.

### **Details for Undergraduate Research Fellowship attachments**

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online
2. **THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**

- **Application Cover Sheet** - This form will need to have review and signatures of your institution's grant office and Dean as part of the online application.
- **Proposal Abstract** (100 words maximum) – includes information relating the proposed project to NASA's strategic enterprises.
- **Narrative** – Five double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit, and remaining pages of the narrative will not be reviewed*). Please include the following sections:
  1. Purpose and objectives
  2. Relationship to NASA's strategic goals
  3. Methodology
  4. Feasibility and timeline (plan) of the project
  5. Expected outcomes
  6. Career potential

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

- **Two Letters of Recommendation** – One letter must be from the research project supervisor. The second from a responsible researcher who is familiar with the quality of the student's work. All recommendation letters must be submitted on the space grant website.
- **Resume/Curriculum Vitae** – One-page maximum. For team proposals, please submit a resume/C.V. for each team member.

- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.
- **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Undergraduate Research Fellowship Rubric**

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	<b>Max Score</b>
<b>Abstract</b>	States a specific testable research question or objective	States a clear, but untestable research and background question or the objective is not clear	States a vague, untestable research question and/or the objective is not clear	No research question posed	10
<b>Relation to NASA's strategic goals</b>	Clearly stated and directly related to the mission of NASA/ aerospace/STEM	Clearly stated and to some degree agrees with the mission of NASA/ aerospace/STEM	Clearly stated but does not agree with the mission of NASA/ aerospace/STEM	Not stated and/or not clear	15
<b>Methodology</b>	Provides a clear explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product	Provides an adequate explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product	Provides an unorganized explanation of proposed experimental or theoretical methods/ hypothesis/prototype/ product	Explanation of experimental methods missing	15
<b>Feasibility &amp; timeline (planning)</b>	Facilities are available, and the timeline is appropriate for conducting the proposed research	Facilities are available, but timeline is inappropriate for conducting the proposed research	Facilities are not adequately available. Schedule is vague, not within program limits, or has unrealistic timeline	Neither facilities nor timeline are appropriate for conducting the research	15
<b>Budget narrative and worksheet (not applicable for UG Fellowship projects)</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	There is a budget plan with a justification of expenditures for the proposed project and a partial budgetary schedule.	There is a budget plan with little justification of expenditures.	No budget plan provided.	14
<b>Expected outcome</b>	Deliverables are clear, innovative, with a clear assessment plan and obtainable in the specified time frame	Deliverables are clear, innovative, with a clear assessment plan but it is not clear how this could be accomplished in the specified time frame	Deliverables are not clear, and the assessment plan does not match deliverables	Deliverables are not clear and no assessment plan provided	20
<b>Career potential</b>	Relationship to prior work and future plans is well documented	Relationship to prior work and future plans is not well documented	Relationship to prior work and future plans is poorly documented	Relationship to prior work and future plans not documented	5
<b>Recent award</b>	Never	Four or more academic years	Three academic years	Two academic years	6
					100

## Student Project Grant

**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 program year.

**Eligible Projects** – Any group or individual project that is consistent with the mission of NASA as exemplified by its four strategic enterprises: Earth Science, Space Science, Human Exploration and Development of Space, and Office of Aero-Space Technology, is eligible.

**Eligible Applicants** – Individual students and informal/formal groups of students may apply. The project leader 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.*

**Proposal Format and Checklist** – Submit applications on the NASA CTSGC website under the forms page.

**Reporting** – A student project report is required upon completion of the research project. A reporting format is available on the NASA CTSGC website.

**Poster Session** – Students are required to furnish a research poster for an annual forum.

### Application Checklist

1. Submit the application via the links on the forms page of the space grant website

### Details for Student Project Grant attachments

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online

**2. THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**

- **Application Cover Sheet** - This form will need to have review and signatures of your institution's grant office and Dean as part of the online application.
- **Proposal Abstract** – 100-word maximum to include information relating the proposed project to NASA's strategic enterprises.
- **Narrative** – Five double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit, and remaining pages of the narrative will not be reviewed*). Please include the following sections:
  1. Purpose and objectives
  2. Relationship to NASA's strategic goals
  3. Methodology
  4. Feasibility and timeline (plan) of the project
  5. Budget narrative
  6. Expected outcomes
  7. Career potential

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

- **Budget** – Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals.
- **One Letter of Recommendation** – Must be from the project's faculty advisor. Applicants may submit additional letters of support. All recommendation letters must be submitted on the space grant website.
- **Resume/Curriculum Vitae** – One-page maximum. (*For a team or group, please include a resume for each member.*)
- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.
- **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

## **Student Project Grant Rubric**

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	Max Score
<b>Abstract</b>	States a specific testable research question or objective	States a clear, but untestable research and background question or the objective is not clear	States a vague, untestable research question and/or the objective is not clear	No research question posed	10
<b>Relation to NASA's strategic goals</b>	Clearly stated and directly related to the mission of NASA/ aerospace/STEM	Clearly stated and to some degree agrees with the mission of NASA/ aerospace/STEM	Clearly stated but does not agree with the mission of NASA/ aerospace/STEM	Not stated and/or not clear	15
<b>Methodology</b>	Provides a clear explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product	Provides an adequate explanation of the proposed experimental or theoretical methods/ hypothesis/prototype/ product	Provides an unorganized explanation of proposed experimental or theoretical methods/ hypothesis/prototype/ product	Explanation of experimental methods missing	15
<b>Feasibility &amp; timeline (planning)</b>	Facilities are available, and the timeline is appropriate for conducting the proposed research	Facilities are available, but timeline is inappropriate for conducting the proposed research	Facilities are not adequately available. The schedule is vague, not within program limits, or has unrealistic timeline	Neither facilities nor timeline are appropriate for conducting the research	15
<b>Budget narrative and worksheet</b> <i>(not applicable for UG Fellowship projects)</i>	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	There is a budget plan with a justification of expenditures for the proposed project and a partial budgetary schedule.	There is a budget plan with little justification of expenditures.	No budget plan provided.	14
<b>Expected outcome</b>	Deliverables are clear, innovative, with a clear assessment plan and obtainable in the specified time frame	Deliverables are clear, innovative, with a clear assessment plan but it is not clear how this could be accomplished in the specified time frame	Deliverables are not clear, and the assessment plan does not match deliverables	Deliverables are not clear and no assessment plan provided	20
<b>Career potential</b>	Relationship to prior work and future plans is well documented	Relationship to prior work and future plans is not well documented	Relationship to prior work and future plans is poorly documented	Relationship to prior work and future plans not documented	5
<b>Recent award</b>	Never	Four or more academic years	Three academic years	Two academic years	6
					100

## Undergraduate Scholarship

**Awards** – Refer to the NASA CTSGC website for the number and amounts of awards available each program year. A student is normally eligible for one scholarship or fellowship per program 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, have not received a(n) Undergraduate Scholarship, Community College Transfer Scholarship, 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.

**Proposal Format and Checklist** – Submit application on th NASA CTSGC website on the forms page.

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

### Application Checklist

1. Submit the application via the links on the forms page of the space grant website.

### Details for Undergraduate Scholarship attachments

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online
2. **PLEASE ATTACH THE FOLLOWING APPLICATION COMPONENTS AS A SINGLE PDF FILE:**
  - **Application Cover Sheet** - This form will need to have review and signatures of your institution’s grant office and Dean as part of the online application.
  - **Narrative** – Three double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit, and remaining pages of the narrative will not be reviewed*). Please include the following sections:
    1. Describe your academic and career goals.
    2. Describe information on any research experiences or other relevant experiences you have had and how you believe they have influenced your career in STEM.
    3. Describe your community service, extra-curricular activities, work experience awards and/or honors.
    4. Briefly explain the benefits that you expect to derive from a NASA CTSGC Scholarship.

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

- **One Letter of Recommendation** – All recommendation letters must be submitted on the space grant website.
- **Resume** – One-page maximum.
- **Student Transcript** – Unofficial transcript is acceptable. Students should include a transcript from all previous institutions, or these credits should appear in their current transcript.
- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Undergraduate Scholarship Rubric**

	Outstanding (16-20)	Above Average (11-15)	Average (6-10)	Below Average (1-5)	Not Evident (0)
Academic and career goals relate to NASA CTSGC mission					
Student demonstrates and/or describes interest in science and technology subject matter and careers					
Student academic performance					
Student demonstrates and describes community service, extracurricular, work and/or academic honors, experiences, and awards that support his or her application to the award					
Student describes benefits from receiving the scholarship and/or articulates reasons for deserving the scholarship					

**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.

TOTAL POINTS: \_\_\_\_\_/100

## Community College Scholarship

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

**Proposal Format and Checklist** – Submit applications on the NASA CTSGC website under the forms page.

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

### Application Checklist

Submit the application via the links on the forms page of the space grant website.

### Details for Community College Scholarship attachments

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online
2. **THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**
  - **Application Cover Sheet** - This form will need to have review and signatures of your institution's grant office and Dean as part of the online application.
  - **Narrative** – Three double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit, and remaining pages of the narrative will not be reviewed*). Please include the following sections:
    1. Describe your academic and career goals.
    2. Describe information on any research experiences or other relevant experiences you have had and how you believe they have influenced your career in STEM.
    3. Describe your community service, extra-curricular activities, work experience awards and/or honors.
    4. Briefly explain the benefits that you expect to derive from a NASA CTSGC Scholarship.

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

- **One Letter of Recommendation** – All recommendation letters must be submitted on the space grant website.
- **Resume** – One-page maximum.
- **Student Transcript** – Unofficial transcript is acceptable. Students should include a transcript from all previous institutions, or these credits should appear in their current transcript.
- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Community College Scholarship Rubric**

	Outstanding (16-20)	Above Average (11-15)	Average (6-10)	Below Average (1-5)	Not Evident (0)
Academic and career goals relate to NASA CTSGC mission					
Student demonstrates and/or describes interest in science and technology subject matter and careers					
Student academic performance					
Student demonstrates and describes community service, extracurricular, work and/or academic honors, experiences, and awards that support his or her application to the award					
Student describes benefits from receiving the scholarship and/or articulates reasons for deserving the scholarship					

**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.

TOTAL POINTS: \_\_\_\_\_/100

## **Community College Transfer Scholarship**

**Award** – In an effort to improve postsecondary education transfer rates of students from community colleges to 4-year institutions, we offer scholarships to students who have transferred to a 4-year institution from a 2-year community college. Refer to the NASA CTSGC website for the number of awards and amounts available each program year. A student is normally eligible for one scholarship or fellowship per program 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 from their previous and/or current institution. Students must demonstrate 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. Also, have not received a(n) Undergraduate Scholarship, Community College Transfer Scholarship, 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. Please note, the Grant Verification Form should be done at the 4-year Consortium Member postsecondary education institution. Applicants are required to provide proof of U.S. Citizenship through the Grant Verification Form.

**Proposal Format and Checklist** – Submit applications on the NASA CTSGC website under the forms page.

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

### **Application Checklist**

Submit the application via the links on the forms page of the space grant website.

### **Details for Community College Transfer Scholarship attachments**

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online

2. **THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**

- **Application Cover Sheet** - This form will need to have review and signatures of your institution's grant office and Dean as part of the online application.
- **Narrative** – Three double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit and remaining pages of the narrative will not be reviewed*). Please include the following sections:
  1. Describe your academic and career goals.
  2. Describe information on any research experiences or other relevant experiences you have had and how you believe they have influenced your career in STEM.
  3. Describe your community service, extra-curricular activities, work experience awards and/or honors.
  4. Briefly explain the benefits that you expect to derive from a NASA CTSGC Scholarship.

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

- **One Letter of Recommendation** – All recommendation letters must be submitted on the space grant website.
- **Resume** – One-page maximum.
- **Student Transcript** – Unofficial transcript is acceptable. Students should include a transcript from all previous institutions, or these credits should appear in their current transcript.
- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Community College Transfer Scholarship Rubric**

	Outstanding (16-20)	Above Average (11-15)	Average (6-10)	Below Average (1-5)	Not Evident (0)
Academic and career goals relate to NASA CTSGC mission					
Student demonstrates and/or describes interest in science and technology subject matter and careers					
Student academic performance					
Student demonstrates and describes community service, extracurricular, work and/or academic honors, experiences, and awards that support his or her application to the award					
Student describes benefits from receiving the scholarship and/or articulates reasons for deserving the scholarship					

**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.

TOTAL POINTS: \_\_\_\_\_/100

## Travel Grant

**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 program 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.**

**Proposal Format and Checklist** – Submit applications on the NASA CTSGC website under the forms page.

**Reporting** – A short report is required upon return from the trip. A reporting format is available on the NASA CTSGC website.

**Poster Session** – Students are required to furnish a research poster for an annual forum.

### Application Checklist

Submit the application via the links on the forms page of the space grant website.

### **Details for Travel Grant attachments**

1. **Applicant Contact/Demographic Information** – This information will be included on the NASA CTSGC application online
2. **THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**
  - **Application Cover Sheet** - This form will need to have review and signatures of your institution's grant office and Dean as part of the online application.

- **Proposal Abstract** (100-word maximum).
- **Narrative** – Two double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit, and remaining pages of the narrative will not be reviewed*). Please include the following sections:
  1. 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 WEB page of the program is acceptable). Please remember that Space Grant can only support domestic travel.
  2. Relevance to NASA’s strategic goals
  3. Goals and Objectives
  4. Timetable
  5. 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.*)

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

- **Budget Justification** – Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals.
- **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.
- **Resume** – One-page maximum. (*For a team or group, please include a resume for each member.*)
- **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.
- **Student Transcript** – Official is preferred; however, unofficial is acceptable if availability at the time of submission is a problem.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Travel Grant Rubric**

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	<b>Max Score</b>
<b>Abstract</b>	Abstract is clear, concise and gives reader an excellent sense of the scope of travel	Abstract is clear and concise	Abstract is somewhat clear and concise	Abstract is unclear and/or not concise	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	Description of and rationale for travel, including an invitation to participate and/or other supporting material	Description of and rationale for travel. No invitation to participate and weak or no supporting material	No description of, nor rationale for travel. No invitation to participate nor supporting material	25
<b>Relevance to NASA's strategic goals</b>	Purpose of travel is very relevant to one or more of NASA's strategic goals	Purpose of travel is relevant to one or more of NASA's strategic goals	Purpose of travel is somewhat relevant to one or more of NASA's strategic goals	Purpose of travel is not relevant to NASA's strategic goals	15
<b>Goals and objectives</b>	Goals and objectives of travel are clearly stated. There are compelling reasons offered to pursue travel	Goals and objectives of travel are clearly stated. There is some evidence to support importance of travel	Goals and objectives are unclear. There is little evidence to support importance of travel	Goals and objectives are not clearly stated. There is no evidence to support importance of travel	30
<b>Timetable</b>	Includes a clear and detailed timeline of travel, which is aligned with goals and objectives	Includes a timeline of travel, which is aligned with goals and objectives	Timeline provided is either unclear or lacks sufficient detail. There is a weak alignment with goals and objectives	Timeline provided is weak/missing. There is no alignment 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	There is a budget plan with a justification of expenditures for the proposed travel and a partial budgetary schedule	There is a budget plan with little justification of expenditures. The schedule is vague, not within program limits, or has unrealistic explanations	There is no budget plan provided	14
<b>Recent award</b>	Never	Four or more academic years	Three academic years	Two academic years	6
					100

## Community College Quadcopter Challenge

The goal of the challenge is to support a community college-based program in order to improve STEM recruitment and retention, primarily of underserved populations. This program is designed to:

1. Increase the number of community college students who graduate with STEM degrees and/or transfer to STEM programs at 4-year institutions,
2. Increase the ability of community college faculty members to deliver aerospace-related content in areas of interest to NASA, and
3. Enhance the diversity (race/ethnicity and gender) of students pursuing STEM fields at Connecticut community colleges.

These objectives will be accomplished by the use of small model helicopters (quadcopters) in competitions between student design groups from the Connecticut community colleges. Faculty advisors from our Academic Affiliate community colleges will lead these design groups.

Teams of five students will be selected to participate, each advised by a community college faculty member.

**Award** – *NASA CTSGC will make available a special RFP for this challenge with all the requirements. The document can be found on the NASA CTSGC website.*

**Eligible Applicants** – Faculty: Full-time faculty or research staff at Consortium Member Community Colleges who are U.S. Citizens are eligible to apply. Student: Community college student applicants must be full-time students at the advisor's institution. Up to five students per team.

**Proposal Format and Checklist** – A joint student/faculty application must be submitted by the faculty advisor, following NASA CTSGC email submission guidelines. Required components of the application will be available through *a special RFP with all the details stipulated on the NASA CTSGC website.*

**Reporting** – A project report is due upon completion of the work. The required report format is part of the special RFP for this challenge and is available on the NASA CTSGC website.

**Demonstration Day** – Faculty and students will be required to participate to demonstrate their work at a location set by the Consortium Director late in the Spring Semester.

**Poster Session** – The winning team will be required to furnish a joint research/project poster for an annual forum following the completion of the competition. Details will be communicated closer to the date.

## **Application Checklist**

More detailed information regarding this opportunity is available in the Special RFP for this challenge, on the NASA CTSG website.

**Important: All required components of the application, noted below, must be saved as a single file and attached to the application email. Be sure to allow time for your institution's Grant's Office to review/approval your proposal before the deadline.**

### **Details for Community College Quadcopter Challenge attachments**

1. **Application Cover Sheet** – Download the form from the NASA CTSGC website and obtain the signatures of your institution's grant office and Dean before scanning along with the other application materials into a single file for uploading into the online application.
2. **Follow the Guidelines of the Special RFP for this Challenge on the NASA CTSGC.**
3. The Faculty or Staff Advisor should submit the application via email (csgcinfo@hartford.edu). The email must include the following
  - a single PDF containing the **Contact and Demographic Info** form for the faculty advisor and all participating team members
  - a single PDF containing the **Grant Verification Forms** for the faculty advisor and students, and
  - A single PDF containing the appropriate **Team Info**, faculty narrative, and the student application information.
    1. Faculty Narrative (3 pages maximum)
      - a. Goals and objective of the project
      - b. Methodology – a brief description of the structure of the program at your institution.
      - c. Expected Outcome
    2. Student application material must include the following for each student
      - a. Pre-Program Survey
      - b. Transcript showing full-time student status

Proposals must be typed in no smaller than 10-point font, double-spaced with margins of at least 1" on 8 1/2" x 11" paper.

#### **Reminder:**

- **All forms are available on the NASA CTSGC website.**
- **All proposals and attachments must be submitted together in a single email, and should be submitted to csgcinfo@hartford.edu.**

**Community College Quadcopter Challenge Rubric**

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	<b>Max Score</b>
<b>(Student) Purpose &amp; objectives</b>	Objectives of project are clearly stated, and well written.	Objectives of project are stated.	Objectives of project are vague.	Objectives of project are missing.	10
<b>(Student) Career potential</b>	Relationship to prior work (if any) and future plans is well documented	Relationship to prior work (if any) and future plans is not well documented	Relationship to prior work (if any) and future plans is poorly documented	Relationship to prior (if any) work and future plans is not documented	20
<b>(Faculty) Goals &amp; objectives</b>	Goals and objectives are clearly stated. There are compelling reasons offered to pursue project. <i>If this is the 2<sup>nd</sup> year of the challenge at your institution, state how the team will improve upon previous knowledge.</i>	Goals and objectives are clearly stated. There is some evidence to support the importance of project.	Goals and objectives are unclear. There is little evidence to support the importance of project.	Goals and objectives are not clearly stated.	20
<b>(Faculty) Methodology</b>	Provides a clear explanations of plan to execute project with a team that meets the guidelines as stated in RFP	Provides an adequate explanation of plan to execute project with a team that meets the guidelines as stated in RFP	Provides an adequate explanations of the plan to execute the project with a team that does not meet the guidelines as stated in RFP	Provides little or no explanations of plan to execute project with a team that does not meets the guidelines as stated in RFP	20
<b>(Faculty) Expected outcome</b>	The expected educational outcomes for the student are very well documented. Proposal includes a plan for documenting work including a reflective section about lessons learned.	The expected educational outcomes for the student are documented. The proposal includes a plan for documenting work including a reflective section about lessons learned.	The expected educational outcomes for the student are documented. The proposal does not include a plan for documenting work including a reflective section about lessons learned...	The expected educational outcomes for students are not documented. The proposal does not include a plan for documenting work including a reflective section about lessons learned.	30
					100

## Undergraduate Student–Faculty Summer Research Grant

To encourage undergraduate student engagement in the research process, NASA CTSGC has created a Student-Faculty Summer Research Project Grant. This grant will enable undergraduate students to gain meaningful research experience in NASA CTSGC Affiliate research laboratories in areas consistent with the mission of NASA as exemplified by its four strategic enterprises: earth science, space science, human exploration and development of space, and aerospace technology.

The award will support two undergraduate students (1 from a 4-year institution and the other from a community college) with a summer stipend and provide a small stipend for the faculty advisor. The research project should span a minimum of 8-weeks in length.

**Eligible Activities** – Research in any area related to the mission of NASA as illustrated by its strategic enterprises.

**Eligible Applicants** – Faculty: Full-time faculty or research staff at Consortium Member Institutions who are U.S. Citizens are eligible to apply. Student: 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 or higher. Applicants must provide proof of US Citizenship through the Grant Verification Form. NASA CTSGC funds are only available to US Citizens.

**Award Information** – Refer to the NASA CTSGC website for the amounts and number of awards available each program year. Since this is an institutional award, a subcontract for each *lead institution* will be executed.

**Eligible Budget Items** – The budget is limited to include only student and faculty/staff summer stipend (including fringe and benefits). No indirect costs may be charged to the grant, however, indirect charges may be included within the matching contributions, but are limited. *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>.*

**Proposal Format and Checklist** – A joint student/faculty application must be submitted by the faculty member, following NASA CTSGC email submission guidelines. (**Attention Faculty PI**: *If you need assistance in recruiting a community college student to work on your team, (1) complete the Student-Faculty Summer Research Project proposal form, located on the NASA CTSGC website and (2) forward this document to the NASA CTSGC Office and campus directors for local community colleges (contact information available on NASA CTSGC website).*

**Reporting** – A short project report is due upon completion of the work. The required report forms can be downloaded from the NASA CTSGC website.

**Poster Session** – Faculty and students will be required to furnish a joint research poster for an annual forum following the completion of their research. Details will be communicated closer to the date.

### **Application Checklist**

Submit the application via the links on the forms page of the space grant website.

***Faculty applicants are encouraged to complete the Student-Faculty Project Proposal form to advertise their project to prospective undergraduate and community college students. This form is available on the NASA CTSGC website.***

### **Details for Undergraduate Student–Faculty Summer Research Grant attachments**

1. **Applicant Contact/Demographic Information (Faculty PI)** – This information will be included on the NASA CTSGC application online
  2. **Applicant Contact/Demographic Information (Students)** – This form i This information will be included on the NASA CTSGC application online
  3. **THE FOLLOWING PROPOSAL COMPONENTS WILL BE PART OF YOUR ONLINE APPLICATION:**
    - **Application Cover Sheet** – This form will need to have review and signatures of your institution’s grant office and Dean as part of the online application.
    - **Faculty Application:**
      1. **Proposal Abstract:** 100-word maximum – include information relating the proposed project’s to NASA’s strategic enterprises, and the role of students.
      2. **Proposal Narrative:** Six double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit and remaining pages of the narrative will not be reviewed*). Please include the following sections:
        - a) Project goals and objectives
        - b) Relationship to NASA’s strategic goals
        - c) Methodology
        - d) Timeline
        - e) Role of student researchers
        - f) Expected outcomes
- \* *Faculty should consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*

3. **Budget Worksheet** – Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals. *Reminder: Faculty must show a minimum 1:1 cost match.*
4. **Curriculum Vitae** (One-page maximum).
5. **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.

- **Student Application:**

*NOTE: Students are responsible to prepare the following sections of the application and submit to Faculty PI.*

1. **Narrative** – One double-spaced page maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page limit and remaining pages of the narrative will not be reviewed*). Please include the following sections:
  - a) Purpose and objectives
  - b) Career potential

*\* Students should consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*
2. **Student Transcript** – Official is preferred; however, unofficial is acceptable.
3. **Resume/Curriculum Vitae** – One page maximum. For team proposals please submit a resume/C.V. for each team member.
4. **Grant Verification Form** – This is an online form which will redirect to the Campus Director upon form submission.

**Reminder:**

- **All forms are to be submitted on the NASA CTSGC website.**

**Undergraduate Student – Faculty Summer Research Rubric**

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	Max Score
<b>(Student) Purpose and objectives</b>	Purpose of research and project objectives is clearly stated, and well written	Purpose of research and project objectives is stated	Purpose of research and project objectives is vague	Purpose of research and project objectives is missing	5
<b>(Student) Career potential</b>	Relationship to prior work and future plans is well documented	Relationship to prior work and future plans is not well documented	Relationship to prior work and future plans is poorly documented	Relationship to prior work and future plans is not documented	15
<b>(Faculty) Abstract</b>	States a specific testable research question or objective	States a clear, but untestable research and background question or the objective is not clear	States a vague, untestable research question and/or the objective is not clear	No research question posed	5
<b>(Faculty) Goals and objectives</b>	Goals and objectives are clearly stated. There are compelling reasons offered to pursue project.	Goals and objectives are clearly stated. There is some evidence to support the importance of project.	Goals and objectives are unclear. There is little evidence to support importance of project.	Goals and objectives are not clearly stated.	10
<b>(Faculty) Relation to NASA's strategic goals</b>	Clearly stated and directly related to mission of NASA/aerospace/STEM	Clearly stated and to some degree related to mission of NASA/aerospace/STEM	Clearly stated but not related to mission of NASA/aerospace/STEM	Not stated and/or not clear	5

<b>(Faculty) Methodology</b>	Provides a clear explanation of the proposed experimental or theoretical methods/hypothesis/prototype/product	Provides an adequate explanation of the proposed experimental or theoretical methods/hypothesis/prototype/product	Provides an unorganized explanation of proposed experimental or theoretical methods/hypothesis/prototype /product	Explanation of experimental methods missing	15
<b>(Faculty) Feasibility and timeline (planning)</b>	Facilities are available and the timeline is appropriate for conducting proposed research	Facilities are available but the timeline is inappropriate for conducting proposed research	Facilities are not adequately available; schedule is vague, not within program limits, or has unrealistic timeline	Neither facilities nor timeline are appropriate for conducting research	5
<b>(Faculty) Role of student researcher(s)</b>	Students play a significant role in project, and will gain meaningful research experience.	Students play a role in project, and will gain good experience.	Students play a limited role in project.	Student role is not well defined.	15
<b>(Faculty) Expected outcome</b>	Expected research and educational outcomes for students are very well documented. Proposal includes a plan for disseminating findings.	Expected research and educational outcomes for students are documented. Proposal includes a plan for disseminating findings.	Expected research outcomes for students are documented, but student educational outcomes are lacking.	Little/no documentation of expected research outcomes for students.	10
Budget narrative and worksheet	There is a clear, detailed, budget plan, including cost share			The budget does not include cost share details.	9
Recent award	Never	Four or more academic years	Three academic years	Two academic years	6
					100

## Industrial and Education Internships, and Technical Internships

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, including UTC Divisions, 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. Applicants must apply by the application deadline.

The NASA CTSGC Internship program has recently been restructured to attract more high-quality projects and applicants. The restructure 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.

**Award** – Industrial Internship – Undergraduate (4-year institution)/Graduate students enrolled at affiliated institutions are eligible to apply. Education Internship – Undergraduate (4-year institution and community college)/Graduate students enrolled at affiliated institutions are eligible to apply. 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. 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** – 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 U.S. Citizenship through the Grant Verification Form. NASA CTSGC funds are only available to U.S. Citizens.

**Proposal Format and Checklist** – Submit application following NASA CTSGC email submission guidelines. Required components of the Industrial and Education Internship and Technical Internship Applications can be found in the Application Checklist.

**Reporting** – An internship report is required upon completion of the internship. A reporting format is available on the NASA CTSGC website.

**Poster Session** – Students will be required to furnish an internship-related poster for an annual forum.

### **Application Checklist**

Submit the application via email (csgcinfo@hartford.edu). The email must include **two attachments**:

1. **Applicant Contact/Demographic Information** This information will be included on the NASA CTSGC application online
2. **PLEASE ATTACH THE FOLLOWING APPLICATION COMPONENTS AS A SINGLE PDF FILE:**
  - **Application Cover Sheet** (blank forms can be found under the Forms section of the website).
  - **Narrative:** – Three pages maximum (*Narrative sections page limits will be strictly enforced. Proposals that exceed the page limit will be reviewed only up to the page*)

*limit and remaining pages of the narrative will not be reviewed).* Please include the following sections:

- 1) Why are you interested in an internship?
  - 2) Why should you be selected for this opportunity?
  - 3) Describe how your interest/experience will be enhanced by this internship.
  - 4) How will this internship enhance or contribute to your long-term academic and career goals?
  - 5) Please list all technical courses you have taken that may be helpful to hiring managers in considering your qualifications.
  - 6) Please explain your interest in your top 3 project choices. How does each project fit with your current interests and/or proposed career goals?
  - 7) 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.)*
- **Resume/Curriculum Vitae** – One page maximum.
  - **One Letter of Recommendation** (internal or external) – Must be from an academic or research advisor. If you wish you may submit additional letters from industry contacts, past supervisors or past project advisors. All recommendation letters need to be signed and to be on institutional letterhead. *Faculty who wish to submit confidential letters of recommendation may email those to [csqinfo@hartford.edu](mailto:csqinfo@hartford.edu).*
  - **Grant Verification Form** – Completed and signed by the Campus Director
  - **Student Transcript** – Official is preferred; however, unofficial is acceptable.

**Reminder:**

- **All forms are available on the NASA CTSGC website.**
- **All proposals and attachments must be submitted together in a single email.**
- **The email size may not exceed 25 MB.**

## NASA Academy Fellowships

The NASA Academy is a unique summer or academic year experience at the university level for developing future leaders of the U.S. Space Program. The program is an intensive, resident, ten-week summer or 15-week academic semester experience with laboratory research work, a group project, lectures, meetings with experts and administrators, visits to NASA Centers and space-related industries, technical writing, and presentations. Students discover how NASA and its Centers operate, gain experience in world-class laboratories, participate in a team environment and build professional bonds. On graduation, Academy participants are inducted into the NASA Academy Alumni Association (NAAA) whose goal is to promote NASA, the NASA Academy, research, and space education. The 52 state-based members of the National Space Grant College and Fellowship Program have co-sponsored the NASA Academy since its founding in 1993. Students with disabilities are provided reasonable accommodation services. Women, minorities, and individuals with disabilities are especially encouraged to apply.

**Applying** – Apply directly to the NASA Academy and inform NASA CTSGC ([ctspgrant@hartford.edu](mailto:ctspgrant@hartford.edu)). **NASA CTSGC must be notified or funding may not be available.** NASA CTSGC will need to plan to support your participation. To apply, please use this link: <https://intern.nasa.gov/ossi/web/public/main/>

**Eligibility** – Rising junior, senior undergraduate or at the early graduate level in accredited U.S. college or university as of May of the program year; 3.0 average (minimum); major in engineering, science (physics, chemistry, biology, earth sciences, etc.), math, computer science or other areas of interest to the aerospace program; US citizenship required for NASA CTSGC support. NASA CTSGC will only support students from affiliate schools. Applicants must provide proof of US Citizenship through the Grant Verification Form.

**Poster** – Students are required to furnish a research poster for an annual forum.

**Award Opportunities** – *Duration:* Varying - fall or spring semester, or summer opportunities. *Locations and Application Deadlines (Posted on each NASA's website):* OSSI SOLAR: <https://intern.nasa.gov/ossi/web/public/main/>

# 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 Education – Outcomes: <http://www.pc.spacegrant.org/Outcomes.pdf>

NASA Strategic Goals and Objectives relevant to education are outlined by the 2015-2017 NASA Education Implementation Plan:

[http://www.nasa.gov/sites/default/files/atoms/files/nasa\\_education\\_implementation\\_plan\\_ve4\\_2015-2017.pdf](http://www.nasa.gov/sites/default/files/atoms/files/nasa_education_implementation_plan_ve4_2015-2017.pdf)

For information on all of NASA's missions, please visit: <http://www.nasa.gov/missions/index.html>

NASA <http://www.nasa.gov>

NASA Office of Education: <http://www.nasa.gov/offices/education/about/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/>

Office of Education Performance Measurement System (OEPM) <https://oedc.nasa.gov/dc/index.htm>

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>

NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES)

<http://nspires.nasaprs.com>

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>.**