



NASA CONNECTICUT SPACE GRANT CONSORTIUM

REQUEST FOR PROPOSALS

Faculty Programs

(Revised August 2018)

Faculty Research Grant

STEM Education Research Grant

STEM Education Programming Grant

Travel Grant

Community College Quadcopter Challenge

Undergraduate Student–Faculty Summer Research

Helicopter/UAS Training Workshop

RockOn Workshop

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.

Research infrastructure includes all factors that promote the development and maintenance of research activity. These include, but are not limited to, faculty seed funds for research, travel to use NASA facilities, cultivate collaborative arrangements or proposal contacts, technical support, and dissemination of research results. Due to the relatively small size of awards, the applicant should be aware that the Consortium is interested in supporting scholars new to their fields, and those experienced researchers who are looking to redirect their research or refocus on NASA's objectives. These funds are seed money and not a replacement for other sponsored research funds or institutional funds.

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.

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Capital Community College

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Middlesex Community College

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Tunxis Community College

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Fairfield University

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University of Bridgeport

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jpallis@bridgeport.edu

University of New Haven

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203.479.4189
dxiao@newhaven.edu

Housatonic Community College

Stella Litwinowicz
203.332.8588
slitwinowiczr@hcc.commnet.edu

Naugatuck Valley Community College

Dr. Peter Angelastro
Ekstrom Hall, E411
203.596.8690
pangelastro@nv.edu

Quinebaug Valley Community College

Professor Jakob Spjut
Room C217A
860.932.4156
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Consortium Office:
 Janet Spatcher, Program Coordinator
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 Avenue (Dana 203), West Hartford, CT 06117
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Dr. Hisham Alnajjar, Director
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 860.768.4846, 860.768.5073 (fax)

Dr. Mary “Cater” Arico, Associate Director
arico@hartford.edu
 860.768.4681

Dr. H. Kenny Nienhusser, Assistant Director
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NASA Connecticut Space Grant Consortium

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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

A proposal must demonstrate a link between the proposal work and one of NASA's strategic enterprises. They are Space Science, Mission to Planet Earth, Human Exploration and Development of Space, Space Technology, and Aeronautics.

Faculty who respond must show a 1:1 Non-Federal cost match ratio within their budgets. For example, if you are responding to a \$10,000 research grant, your budget needs to show \$20,000 with a \$10,000 match (funds not supplied by the federal government) and \$10,000 supplied by the Consortium. Evidence of your institution's agreement to this match should be included within your proposal. **Please be sure to contact the appropriate grants office within your institution before submitting your proposal; institutional office signature is required on your application.**

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

Eligibility Requirements

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 the Request for Proposals booklet available on our website. (Subpart A of 14 CFR Part 1260).

Recipients of Space Grant money 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

Note: please do not send a copy of your proof of citizenship to the consortium office.

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 only accepts materials submitted via an official University/college email address, following the specified format requirements. Individual application cover sheets (organized by grant award type) can be found on the NASA CTSGC website. (Application checklists can be found on the pages that follow.)

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 6 weeks following application deadline.*

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

Project Periods

Awards may be for a single semester, full academic year, and/or summer time periods. The applicant must include specific beginning and ending dates (mm/dd/yyyy) on the Application Cover Sheet.

Evaluation of Funded Projects and Reporting Requirements

Report: A project report is due immediately upon completion of the project. The required reporting format can be found on the NASA CTSGC website. The Consortium considers a successful project an investment in the future of the researcher, their department and the institution. Therefore the following outcomes represent success: patents and published papers, increased institutional collaboration, and an increase in the number of proposal submissions. Each researcher is to inform the Consortium office of publications, patents and proposals that result from their receiving NASA CTSGC funding.

Student Participant Tracking: Tracking of all graduate and undergraduate student participants involved in the supported research is required. Please use the “Direct Participant” form for each student.

Forms: The forms required for these reporting responsibilities can be found under Forms on the NASA CTSGC website.

Poster Session: Faculty will be required to furnish a research poster for an annual forum following the completion of their project. Details will be communicated closer to the date.

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

Equipment and Supplies

NASA CTS GC 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 CTS GC funds may be used for the purchase of supplies.

Prior Award Recipients

Applications will not be accepted from award recipients who have received a Faculty Research Grant from NASA CTS GC during the prior academic year. All other program award recipients, including Undergraduate Student-Faculty Summer Research, are eligible to apply for NASA CTS GC in consecutive academic years. Please note, NASA CTS GC defines an academic year as beginning on or about September 1st and ending on or about August 31st. Eligible prior award recipients should provide the following in their narrative: (a) all NASA CTS GC award title(s); (b) NASA CTS GC prior award period(s); (c) brief narrative of all the outcomes (e.g., presentations, articles) associated with all prior award(s).

Funds Distribution

- Faculty Research Grant: Funds will be available upon successful completion of a sub-award to the master agreement 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 faculty grants. Final payment will be made upon submission of all post-award reporting. Details will be conveyed within the award agreement.
- STEM Education Research: Funds will be available upon successful completion of a sub-award to the master agreement 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 faculty grants. Final payment will be made upon submission of all post-award reporting. Details will be conveyed within the award agreement.
- STEM Education Programming: Funds will be available upon successful completion of a sub-award to the master agreement 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 faculty grants. Final payment will be made upon submission of all post-award reporting. Details will be conveyed within the award agreement.

- Travel Grant: Reimbursement will require the completion of a sub-award to the master agreement between the grant award recipient's institution and the University of Hartford. Reimbursement usually requires the submission of detailed, itemized receipts to the appropriate office at the affiliate Consortium campus. No travel advances will be allowed from Consortium funds. **International travel will not be supported from this grant.** Final payment will be made upon submission of all post-award reporting.
- Community College Quadcopter Challenge: Funds will be distributed in two payments to the faculty or student's institution; the institution will pay the student upon completion of a Sub-award between the institution and the University of Hartford. An invoice must be sent to the NASA CTSGC Office to begin the payment process. The first payment will be 50% of the stipend at the beginning of research. The remaining balance will be paid upon submittal of all required post-award documentation.
- 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 research. The remaining balance will be paid upon submittal of all required post-award documentation.
- Helicopter/UAS (odd years) OR Aircraft Readiness (even years) Workshop Grant: NASA CTSGC will cover full workshop registration and room/board, which are paid directly to Workshop. The workshop will take place in Connecticut during odd years, and in North Carolina during even years. Out of state travel to/from the workshop requires the completion of a Travel Grant. Note: NASA CTSGC cannot award final payment until all post-award requirements are met.
- RockOn: (Rocket Payload Assembly Workshop; Wallops, VA) Registration paid by NASA CTSGC. Additionally, room/board/travel will be supported up to \$2,000 per participant upon completion of an 'Amendment' to the affiliate agreement and submittal of required Awardee Verification Form to the Consortium Office. Travel funds will be reimbursed to the attendee from their home institution. Note: NASA CTSGC cannot award final payment until all post-award requirements are met.

Important Notes

- All federal requirements pass through from the NASA CTSGC 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>.**

- **University of Hartford faculty applicants:** Even though the Consortium accounting is handled through the University of Hartford, an internal subcontract will still be needed to ensure clarity of understanding of all the pass-through NASA grant requirements by all parties involved in NASA CTSGC research.

Program Information

Faculty Research Grant

To encourage faculty participation in research in areas related to the mission of NASA at Connecticut Space Grant Consortium member institutions, the Consortium will award faculty research grants during the program year. Research grants are available to support faculty, staff, and students in research pursuits.

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

Eligible Applicants – Full-time Faculty at Consortium Member Institutions who are U.S. Citizens are eligible to apply. Full-time research staff and associates are also eligible to apply. Also, have not received a NASA CTSGC Faculty Research Grant 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.

Preference will be given to applicants who 1) are non-tenured and/or early career, 2) who use these funds as seed money, 3) who collaborate with other Consortium members (within Connecticut), and 4) whose research involves/supports students.

Reminder: 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 the Request for Proposals booklet available on our website. (Subpart A of 14 CFR Part 1260).

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

Eligible Budget Items – The budget may include items such as technician and support staff salaries, summer salaries, student stipends, fringe benefits, supplies, and materials. ***Faculty/staff salary and stipend (including fringe/benefits) may not exceed 50% of the award amount.*** No indirect costs may be charged to the NASA Grant, however indirect charges may be included within the matching contributions, but are limited. To avoid duplication with other Consortium Grant programs, travel may not be charged to a Faculty Research Grant. *Reminder: Faculty who respond must show a 1:1 cost match ratio. For example, if you are responding to a \$10,000 research grant, your budget needs to show \$20,000 with a \$10,000 match and \$10,000 supplied by the Consortium.*

Proposal Format and Checklist – Submit application following NASA CTSGC email submission guidelines. Required components of the Faculty Research Grant application can be found in the Application Checklist.

Reporting – A short project report is due upon completion of the work. All students involved in the project (either funded directly by NASA CTSGC funds, or by institutional match funds) need to be reported and tracked. The required report forms can be downloaded from the NASA CTSGC website.

Poster Session – Faculty 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.

Application Checklist

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

1. the Contact and Demographic Info form, and
2. a single PDF containing the appropriate cover sheet, abstract, proposal narrative, budget worksheet, CV, and Grant Verification Form. 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. **Page limits are strictly observed. Proposals exceeding the page limits will be rejected as non-compliant.**

Details for Faculty Research Grant attachments

1. **Applicant Contact/Demographic Information** - Typed into the 'Contact/Demographic Information' form, and saved as a .doc, .docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the NASA CTSGC website. (Note: this information is used separately for blind reporting to NASA.) (For team proposals, please attach a separate sheet for each team member as addendums to the proposal narrative pdf file.)

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 Grants Office review/approval of your proposal before the deadline.

2. PLEASE ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:

- **Faculty 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.

- **Proposal Abstract** (100 word maximum) – include information relating the proposed project's to NASA's strategic enterprises.
- **Narrative:** Page maximum – six double-spaced pages and should address each of the following:
 1. Project goals and objectives
 2. Relevance to NASA's strategic goals
 3. Methods and procedures
 4. Timeline
 5. Budget narrative
 6. Evidence of student involvement
 7. Expected outcomes

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

- **Budget Worksheet** – Download the Budget Worksheet from the NASA CTSGC website. Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals. *Reminder: Faculty who respond must show a 1:1 cost match ratio.*
- **Curriculum Vitae** – One page maximum. (Please include a CV for each collaborator.)
- **Grant Verification Form** – Completed and signed by the Campus Director

Reminder:

- **All forms are available on the NASA CTSGC website.**
- **All proposals and attachments must be submitted together in a single email.**

Faculty Research Grant Rubric

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
Abstract	Abstract is clear, concise and gives the reader an excellent sense of the scope of project.	Abstract is clear and concise.	Abstract is somewhat clear and concise.	Abstract is unclear and/or not concise.	5
Goals and objectives	Goals and objectives are clearly stated. Compelling reasons offered to pursue project.	Goals and objectives are clearly stated. Some evidence to support the importance of project.	Goals and objectives are unclear. Little evidence to support importance of project.	Goals and objectives are not clearly stated. No evidence to support importance of project.	10
Relevance to NASA's strategic goals	Proposed project is very relevant to one or more of NASA's strategic goals.	Proposed project is relevant to one or more of NASA's strategic goals.	Proposed project is somewhat relevant to one or more of NASA's strategic goals.	Proposed project is not relevant to one or more of NASA's strategic goals.	15
Methods and procedures	Proposal includes a detailed, well-written explanation of proposed methods and procedures to achieve project's goals and objectives. Strong link between methodology and goals of project.	Proposal includes a detailed explanation of proposed methods to achieve project's goals and objectives. Link between methodology and goals of project.	Proposal includes an explanation of proposed methods to achieve project's goals and objectives. No strong link between methodology and goals of project.	Proposal lacks a detailed explanation of proposed methods to achieve project's goals and objectives. No link made between methodology and goals of project.	15
Timeline and feasibility	Proposed timeline is clear, detailed, and closely aligned with goals and objectives. Institutional support is strong. When applicable, equipment/resources are readily available.	Proposed timeline is aligned with the goals and objectives. Institutional support is evident. When applicable, equipment/resources are readily available.	Proposed timeline is vague and somewhat aligned with goals and objectives. No evidence of institutional support. No evidence of equipment/resources (when applicable).	Proposed timeline is either not provided or lacks sufficient detail. No evidence of institutional support or equipment/resources (when appropriate).	10
Budget narrative and worksheet	Clear, detailed, budget plan, including a justification of expenditures for proposed plan and a complete budgetary schedule for length of program.	Budget plan with a justification of expenditures for proposed project and a partial budgetary schedule.	Budget plan with little justification of expenditures. Schedule is vague, not within program limits, or has unrealistic timeline.	No budget plan provided.	9
Student involvement	Students play a significant role in project and are included in budget.	Students play a role in project and are included in budget.	Students play a limited role in project and are included in budget.	Students are not included in project and/or not included in budget.	5
Expected outcome	Great potential for innovation, publications, or future funding. Proposal includes well-defined plan for disseminating findings.	Good potential for innovation, publications, or future funding. Proposal includes a plan for disseminating findings.	Some potential for innovation, publications, or future funding. Proposal does not include a plan for disseminating findings.	Little/no potential for innovation, publications, or future funding. Proposal does not include a plan for disseminating findings.	5
Collaboration	Strong evidence of collaboration either across disciplines, across colleges/institutions or with external partners.	Evidence of collaboration either across disciplines, across colleges/institutions or with external partners.	Little evidence of collaboration either across disciplines, across colleges/institutions or with external partners.	No evidence of collaboration either across disciplines, across colleges/institutions or with external partners.	10
Faculty qualifications	Strong evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	Evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	Little evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	No evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	5
FT and pre-tenure/early career status	Applicant is full-time and pre-tenure/early career.				5
Recent award	Never	Four or more academic years	Three academic years	Two academic years	6
					100

STEM Education Research Grant

Award Details – Successful applicants will show a plan to carry out research in the STEM Education field. This research may include, but is not limited to: K-12 Curriculum Development, K-12 or Higher Education STEM Outcomes, STEM Education Outreach Programs, or Social/Psychological Influences on STEM Education (e.g., gender disparities, educational access, career trajectories).

Eligible Applicants – Full-time Faculty at Consortium Member Institutions who are U.S. Citizens are eligible to apply. Full-time staff and associates are also eligible to apply. Collaboration with K-12 or other informal education partners is appropriate; however, the PI must be an eligible faculty/staff member of an academic affiliate institution.

Award Information – Refer to the NASA CTSGC website for the award amount and number of awards available each program year.

Eligible Budget Items – The budget may include items such as technician and support staff salaries, summer salaries, student stipends, fringe benefits, supplies, and materials. ***Faculty/staff salary and stipend (including fringe/benefits) may not exceed 50% of the award amount.*** No indirect costs may be charged to the NASA Grant, however indirect charges may be included within the matching contributions, but are limited. To avoid duplication with other Consortium Grant programs, travel may not be charged to a STEM Education Research Grant. *Reminder: Faculty who respond must show a 1:1 cost match ratio. For example, if you are responding to a \$10,000 research grant, your budget needs to show \$20,000 with a \$10,000 match and \$10,000 supplied by the Consortium.*

Proposal Format – See: Faculty Application Checklist.

Reporting – A short project report is due upon completion of the work. All students involved in the project (either funded directly by NASA CTSGC funds, or by institutional match funds) need to be reported and tracked. The required report forms can be downloaded from the NASA CTSGC website.

Poster Session – Faculty 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.

Application Checklist

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

1. the Contact and Demographic Info form and

2. a single PDF containing the appropriate cover sheet, abstract, proposal narrative, budget worksheet, CV, and Grant Verification Form. 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. **Page limits are strictly observed. Proposals exceeding the page limits will be rejected as non-compliant.**

Details for STEM Education Research attachments

1. **Applicant Contact/Demographic Information** - Typed into the 'Contact/Demographic Information' form, and saved as a .doc,.docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the NASA CTSGC website. (Note: this information is used separately for blind reporting to NASA.) (For team proposals, please attach a separate sheet for each team member as addendums to the proposal narrative pdf file.)

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 Grants Office review/approval of your proposal before the deadline.

2. PLEASE ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:

- **Faculty Application Cover Sheet** – Download the form from the NASA CTSGC website and obtain the signatures of your institution's grants office and Dean before scanning along with the other application materials into a single file for uploading into the online application.
- **Proposal Abstract** – 100 word maximum (include information relating the proposed project's to NASA's strategic enterprises).
- **Proposal Narrative** – Page maximum – six double-spaced pages and should address each of the following:
 1. Project goals and objectives
 2. Relevance to NASA's strategic goals
 3. Methods and procedures
 4. Timeline
 5. Budget narrative
 6. Evidence of student involvement
 7. Expected outcomes

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

- **Budget Worksheet** – Download the Budget Worksheet from the NASA CTSGC website. Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals. *Reminder: Faculty who respond must show a 1:1 cost match ratio.*
- **Curriculum Vitae** – One page maximum. (Please include a CV for each collaborator.)
- **Grant Verification Form** – Completed and signed by the Campus Director

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.**

STEM Education Research Rubric

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
Abstract	Abstract is clear, concise and gives the reader an excellent sense of the scope of the project.	Abstract is clear and concise.	Abstract is somewhat clear and concise.	Abstract is unclear and/or not concise.	5
Goals and objectives	Goals and objectives are clearly stated. There are compelling reasons offered to pursue the project.	Goals and objectives are clearly stated. There is some evidence to support the importance of this project.	Goals and objectives are unclear. There is little evidence to support the importance of this project.	Goals and objectives are not clearly stated. There is no evidence to support the importance of this project.	10
Relevance to NASA's strategic goals	Proposed project is very relevant to one or more of NASA's strategic goals.	Proposed project is relevant to one or more of NASA's strategic goals.	Proposed project is somewhat relevant to one or more of NASA's strategic goals.	Proposed project is not relevant to one or more of NASA's strategic goals.	10
Methods and procedures	Proposal includes a clear and detailed plan to carry out research in STEM education including but not limited to K-12 curriculum development, K-12 higher education STEM education outcomes, or STEM education outreach programs. There is a clear link between methodology and goals of the project.	Proposal includes a detailed plan to carry out research in STEM education including but not limited to K-12 curriculum development, K-12 higher education STEM education outcomes, or STEM education outreach programs. There is a link between methodology and goals of the project.	Proposal includes a plan to carry out research in STEM education including but not limited to K-12 curriculum development, K-12 higher education STEM education outcomes, or STEM education outreach programs, but it lacks details or clarity. There is not a strong link between methodology and goals.	Proposal does not include a plan to carry out research in STEM education including but not limited to K-12 curriculum development, K-12 higher education STEM education outcomes, or STEM education outreach programs. There is no link made between methodology and goals of the project.	15
Timeline and feasibility	Proposed timeline is clear, detailed, and closely aligned with the goals and objectives. Institutional support is strong. When applicable, equipment/ resources are readily available.	Proposed timeline is aligned with the goals and objectives. Institutional support is evident. When applicable, equipment/ resources are readily available.	Proposed timeline is vague and somewhat aligned with the goals and objectives. There is no evidence of institutional support. No evidence of equipment/ resources (when applicable).	Proposed timeline is either not provided or lacks sufficient detail. No evidence of institutional support or equipment/resources (when appropriate).	10
Budget narrative and worksheet	Clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program.	Budget plan has a justification of expenditures for the proposed project and a partial budgetary schedule.	Budget plan has little justification of expenditures. The schedule is vague, not within program limits, or has unrealistic timeline.	Budget plan not provided.	9
Student involvement	Students play a significant role in the project and are included in the budget.	Students play a role in the project and are included in the budget.	Students play a limited role in the project and are included in the budget.	Students are not included in the project and/or not included in the budget.	5
Expected outcome	Great potential for innovation, publications, or future funding. Proposal includes well-defined plan for disseminating findings.	Good potential for innovation, publications, or future funding. Proposal includes a plan for disseminating findings.	Some potential for innovation, publications, or future funding. Proposal does not include a plan for disseminating findings.	Little/no potential for innovation, publications, or future funding. Proposal does not include a plan for disseminating findings.	10
Collaboration and inter-disciplinary approach	Strong evidence of collaboration either across disciplines, across colleges/universities or with external partners.	Some evidence of collaboration either across disciplines, across colleges/universities or with external partners.	Little evidence of collaboration either across disciplines, across colleges/universities or with external partners.	No evidence of collaboration either across disciplines, across colleges/universities or with external partners.	10
Faculty qualifications	Strong evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	Some evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	Little evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	No evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	5
FT and pre-tenure /early career status	Applicant is full-time and pre-tenure/early career.				5
Recent award	Never	Four or more academic years	Three academic years	Two academic years	6
					100

STEM Education Programming Grant

Award Details – Successful applicants will show a plan to undertake and complete programming related to the STEM Education field. Funding may be used to support one-time or repeated initiatives that collaborate with other educational, industrial or institutional partners (i.e., high schools, science centers, museums, colleges, businesses) to educate and increase exposure of students to an aspect of STEM education (e.g., careers, fields of study, research, history, emerging technologies). Examples include (but are not limited to) funding to bring a speaker to a high school, develop a program at a museum, hold a science and technology fair, or host a symposium. Applicants must show a plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes.

Eligible Applicants – Full-time Faculty at Consortium Member Institutions who are U.S. Citizens are eligible to apply. Full-time staff and associates are also eligible to apply. Collaboration with K-12 or other informal education partners is appropriate; however, the PI must be an eligible faculty/staff member of an academic affiliate institution.

Award Information – Refer to the NASA CTSGC website for the award amount and number of awards available each program year.

Eligible Budget Items – The budget may include items such as technician and support staff salaries, summer salaries, student stipends, fringe benefits, supplies, and materials. ***Faculty/staff salary and stipend (including fringe/benefits) may not exceed 50% of the award amount.*** No indirect costs may be charged to the NASA Grant, however indirect charges may be included within the matching contributions, but are limited. To avoid duplication with other Consortium Grant programs, travel may not be charged to a STEM Education Programming Grant. *Reminder: Faculty who respond must show a 1:1 cost match ratio. For example, if you are responding to a \$10,000 research grant, your budget needs to show \$20,000 with a \$10,000 match and \$10,000 supplied by the Consortium.*

Proposal Format – See: Faculty Application Checklist.

Reporting – A short project report is due upon completion of the work. All students involved in the project (either funded directly by NASA CTSGC funds, or by institutional match funds) need to be reported and tracked. The required report forms can be downloaded from the NASA CTSGC website.

Poster Session – Faculty 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.

Application Checklist

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

1. the Contact and Demographic Info form and
2. a single PDF containing the appropriate cover sheet, abstract, proposal narrative, budget worksheet, CV, and Grant Verification Form. 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. **Page limits are strictly observed. Proposals exceeding the page limits will be rejected as non-compliant.**

Details for STEM Education Programming attachments

1. **Applicant Contact/Demographic Information** - Typed into the 'Contact/Demographic Information' form, and saved as a .doc,.docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the NASA CTS GC website. (Note: this information is used separately for blind reporting to NASA.) (For team proposals, please attach a separate sheet for each team member as addendums to the proposal narrative pdf file.)

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 Grants Office review/approval of your proposal before the deadline.

PLEASE ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:

- **Faculty Application Cover Sheet** – Download the form from the NASA CTS GC website and obtain the signatures of your institution's grants office and Dean before scanning along with the other application materials into a single file for uploading into the online application.
- **Proposal Abstract:** 100 word maximum – include information relating the proposed project's to NASA's strategic enterprises.
- **Proposal Narrative:** Page maximum – six double-spaced pages and should address each of the following:
 1. Project goals and objectives
 2. Relevance to NASA's strategic goals
 3. Methods and procedures
 4. Timeline

5. Budget narrative
6. Evidence of student involvement
7. Expected outcomes

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

- **Budget Worksheet** – Download the Budget Worksheet from the NASA CTSGC website. Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals. *Reminder: Faculty who respond must show a 1:1 cost match ratio.*
- **Curriculum Vitae** – One page maximum. (Please include a CV for each collaborator.)
- **Grant Verification Form** – Completed and signed by the Campus Director

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.**

STEM Education Programming Rubric

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
Abstract	Abstract is clear, concise and gives the reader an excellent sense of the scope of the project.	Abstract is clear and concise.	Abstract is somewhat clear and concise.	Abstract is unclear and/or not concise.	5
Goals and objectives	Goals and objectives are clearly stated. There are compelling reasons offered to pursue the project.	Goals and objectives are clearly stated. There is some evidence to support the importance of this project.	Goals and objectives are unclear. There is little evidence to support the importance of this project.	Goals and objectives are not clearly stated. There is no evidence to support the importance of this project.	10
Relevance to NASA's strategic goals	Proposed project is very relevant to one or more of NASA's strategic goals.	Proposed project is relevant to one or more of NASA's strategic goals.	Proposed project is somewhat relevant to one or more of NASA's strategic goals.	Proposed project is not relevant to one or more of NASA's strategic goals.	10
Implementation	Proposal shows a clear, feasible and well-defined plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. Clear and well-supported link between programming, educational plans, and the designated goal of increasing exposure of students to a specific aspect of STEM education.	Proposal shows a feasible plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. Link between programming, educational plans, and the designated goal of increasing exposure of students to an aspect of STEM education.	Proposal shows a plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. Not a strong link between programming, educational plans, and the designated goal of increasing exposure of students to an aspect of STEM education.	Proposal does not include a plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. No link made between programming, educational plans, and the designated goal of increasing exposure of students to an aspect of STEM education.	15
Timeline and feasibility	Proposed timeline is clear, detailed, and closely aligned with the goals and objectives. Institutional support is strong. When applicable, resources are readily available.	Proposed timeline is aligned with the goals and objectives. Institutional support is evident. When applicable, resources are readily available.	Proposed timeline is vague and somewhat aligned with the goals and objectives. There is no evidence of institutional support. No evidence of resources (when applicable).	Proposed timeline is either not provided or lacks sufficient detail. No evidence of institutional support or resources (when appropriate).	10
Budget narrative and worksheet	Clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program.	Budget plan has a justification of expenditures for the proposed project and a partial budgetary schedule.	Budget plan has little justification of expenditures. The schedule is vague, not within program limits, or has unrealistic timeline.	Budget plan not provided.	10
Student involvement	Students play a significant role in the project and are included in the budget.	Students play a role in the project and are included in the budget.	Students play a limited role in the project and are included in the budget.	Students are not included in the project and/or not included in the budget.	5
Recent award	Never	Three or more years ago	Two years ago	Last year	5
Expected outcome	Great potential for innovation, publications, or future funding. Proposal includes well-defined plan for disseminating findings.	Good potential for innovation, publications, or future funding. Proposal includes a plan for disseminating findings.	Some potential for innovation, publications, or future funding. Proposal does not include a plan for disseminating findings.	Little/no potential for innovation, publications, or future funding. Proposal does not include a plan for disseminating findings.	10
Collaboration and inter-disciplinary approach	Strong evidence of collaboration either across disciplines, across colleges/universities or with external partners.	Some evidence of collaboration either across disciplines, across colleges/universities or with external partners.	Little evidence of collaboration either across disciplines, across colleges/universities or with external partners.	No evidence of collaboration either across disciplines, across colleges/universities or with external partners.	10
Faculty qualifications	Strong evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	Some evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	Little evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	No evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	5
FT and pre-tenure /early career status	Applicant is full-time and pre-tenure/early career.				5
Recent award	Never	Four or more academic years	Three academic years	Two academic years	6
					100

Travel Grant

To encourage travel to NASA facilities to use their unique resources, and present Space Grant and NASA funded research at conferences, NASA CTSGC awards travel grants. During the Space Grant program year, the Consortium expects to award multiple travel grants, based upon available funding.

Eligible Travel – Domestic 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, giving plenary 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 Faculty at Consortium Member Institutions who are U.S. Citizens are eligible to apply. Full-time research staff and associates are also eligible to apply.

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

Budget – Travel may be funded up to a maximum of \$1,000 (the Consortium reserves the right to adjust funding requests based upon the number and quality of applications). Funds will be paid to the grant awardees' institution at the conclusion of the trip on a reimbursement basis after submission of receipts to the awardee's affiliate office. No travel advances are allowed. *Reminder: Faculty who apply must show a 1:1 cost match ratio. For example, if you are responding to a \$1,000 travel grant, your budget needs to show \$2,000 with a \$1,000 match and \$1,000 supplied by the Consortium.*

Proposal Format – See: Faculty Application Checklist.

Reporting – A short project report is due upon completion of the travel, and prior to reimbursement. The required report format can be downloaded from the NASA CTSGC website.

Application Checklist

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

1. the Contact and Demographic Info form and
2. a single PDF containing the appropriate cover sheet, abstract, proposal narrative, budget worksheet, CV, and Grant Verification Form. 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. **Page limits are strictly observed. Proposals exceeding the page limits will be rejected as non-compliant.**

Details for Travel Grant attachments

1. **Applicant Contact/Demographic Information** - Typed into the 'Contact/Demographic Information' form, and saved as a .doc,.docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the NASA CTSGC website. (Note: this information is used separately for blind reporting to NASA.) (For team proposals, please attach a separate sheet for each team member as addendums to the proposal narrative pdf file.)

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 Grants Office review/approval of your proposal before the deadline.

2. PLEASE ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:

- **Faculty Application Cover Sheet** – Download the form from the NASA CTSGC website and obtain the signatures of your institution's grants office and Dean before scanning along with the other application materials into a single file for uploading into the online application.
- **Proposal Abstract** (100 word maximum) – include information relating the proposed project's to NASA's strategic enterprises.
- **Narrative** – Two double spaced pages maximum. Outline description and rationale for the travel and how you will fund the travel if you do not receive full Space Grant funding.
- **Invitation/Other Supporting Materials** – Scan and Attach with the other application materials as a file into the on-line application. *Other examples: Letter or Conference paper acceptance notice (copy of email or WEB page of program acceptable).*
- **Budget Worksheet** – Download the Budget Worksheet from the NASA CTSGC website. Please be sure to include a Budget Worksheet for each institution involved in collaboration grant proposals. *Reminder: Faculty who respond must show a 1:1 cost match ratio.*
- **Curriculum Vitae** – One page maximum. (Please include a CV for each collaborator.)
- **Grant Verification Form** – Completed and signed by the Campus Director

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.

Faculty Travel Rubric

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
Abstract	Abstract is clear, concise and gives the reader an excellent sense of the scope of the travel.	Abstract is clear and concise.	Abstract is somewhat clear and concise.	Abstract is unclear and/or not concise.	5
Purpose of travel	Clear and detailed description of and rationale for travel, including an 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/no supporting materials.	No description of, nor rationale for travel. No invitation to participate or supporting materials provided.	20
Relevance to NASA's strategic goals	Proposed travel is very much relevant to one or more of NASA's strategic goals.	Proposed travel is relevant to one or more of NASA's strategic goals.	Proposed travel is somewhat relevant to one or more of NASA's strategic goals.	Proposed travel is somewhat relevant to one or more of NASA's strategic goals.	15
Goals and objectives	Goals and objectives of the travel are clearly stated. There are compelling reasons offered to pursue the travel.	Goals and objectives of the travel are clearly stated. There is some evidence to support the importance of this travel.	Goals and objectives are unclear. There is little evidence to support the importance of this travel.	Goals and objectives are not clearly stated. There is no evidence to support the importance of this travel.	10
Timeline	Proposal includes a clear and detailed timeline of travel, including a feasible schedule for achieving teaching, research, or future funding outcomes related to travel.	Proposal includes a timeline of travel, including a feasible schedule for achieving teaching, research, or future funding outcomes related to travel.	Proposal includes a timeline of travel, but the schedule for achieving teaching, research, or future funding outcomes related to travel appears not feasible.	Proposal includes a clear and detailed timeline of travel, but there is no schedule for achieving teaching, research, or future funding outcomes related to travel.	15
Budget narrative and worksheet	Clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program.	Budget plan has justification of expenditures for the proposed project and a partial budgetary schedule.	Budget plan has little justification of expenditures. Schedule is vague, not within program limits, or has unrealistic timeline.	No budget plan provided.	9
Expected outcome	Great potential for travel to positively impact research, teaching, or future funding. Proposal includes well-defined plan for achieving outcomes and the PI has a demonstrated record of output.	Good potential for travel to positively impact research, teaching, or future funding. Proposal includes a plan for achieving outcomes and the PI has a demonstrated record of output.	Some potential for travel to positively impact research, teaching, or future funding. Proposal includes a plan for achieving outcomes. There is some record of output on the part of the PI.	Little potential for travel to positively impact research, teaching, or future funding. Proposal includes a weak/no plan for achieving outcomes and the PI does not have a demonstrated record of output.	20
Recent award	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 – *The 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.

Please note: 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 the Request for Proposals booklet available on our website. (Subpart A of 14 CFR Part 1260).

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 – brief description of structure of the program at 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

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
(Student) Purpose & objectives	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
(Student) Career potential	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
(Faculty) Goals & objectives	Goals and objectives are clearly stated. There are compelling reasons offered to pursue project. <i>If this is the 2nd 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
(Faculty) Methodology	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
(Faculty) Expected outcome	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 aero-space 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 amount 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>. **Please Note:** Faculty must show a minimum of \$7,500 cost match within the budget. Cost match may include direct costs for additional students or staff, or in-kind match such as lab space, equipment rental, equipment & supplies, and mentoring time (above and beyond the equivalent of \$1,000 stipend.)*

Proposal Format and Checklist – A joint student/faculty application must be submitted by the faculty member, following NASA CTSGC email submission guidelines. Required components of the Application can be found in the Application Checklist. (**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

The Faculty PI should submit the application via email (csgcinfo@hartford.edu). The email must include **three attachments**:

1. the Contact and Demographic Info form for the faculty,
2. the Contact and Demographic Info form for the student(s), and
3. a single PDF containing the appropriate cover sheet, faculty application material, and student application material. 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. **Page limits are strictly observed. Proposals exceeding the page limits will be rejected as non-compliant.**

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)** – Typed into the ‘Contact/Demographic Information’ form, and saved as a .doc, .docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the CT Space Grant website. (Note: this information is used separately for blind reporting to NASA.) Please attach a separate sheet for each team member.
2. **Applicant Contact/Demographic Information (Students)** – Typed into the ‘Contact/Demographic Information’ form, and saved as a .doc, .docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the CT Space Grant website. (Note: this information is used separately for blind reporting to NASA.) Please attach a separate sheet for each team member.

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 Grants Office review/approval of your proposal before the deadline.

3. **PLEASE ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:**

- **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.
- **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** – Page maximum – six double-spaced pages and should address each of the following:
 1. Project goals and objectives
 2. Relationship to NASA's strategic goals
 3. Methodology
 4. Timeline
 5. Role of student researchers
 6. Expected outcomes

** Consult the scoring rubric for more information on how proposals will be evaluated according to these criteria.*
 3. **Budget Worksheet** – Download the Budget Worksheet from NASA CTSGC website.
Reminder: Faculty must show a minimum 1:1 cost match.
 4. **Curriculum Vitae** – One page maximum.
 5. **Grant Verification Form** – Completed and signed by the Campus Director.
- **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. 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** – Completed and signed by the Campus Director.

Reminder:

- **All forms are available on the NASA CTSGC website.**
- **All proposals and attachments must be submitted together in a single email.**

Undergraduate Student – Faculty Summer Research Rubric

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
(Student) Purpose and objectives	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
(Student) Career potential	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
(Faculty) Abstract	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
(Faculty) Goals and objectives	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
(Faculty) Relation to NASA's strategic goals	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
(Faculty) Methodology	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
(Faculty) Feasibility and timeline (planning)	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
(Faculty) Role of student researcher(s)	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
(Faculty) Expected outcome	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

Helicopter/UAS Training Workshop or RockOn Workshop

Helicopter Workshop – This workshop is held in collaboration with North Carolina Space Grant. On even years, when held in North Carolina, it is called the “Aircraft Readiness Engineering Workshop”.

RockOn! – This workshop is sponsored by Colorado and Virginia Space Grant Consortia, and is held each summer in Wallops Island, VA.

Award – Faculty of affiliated institutions are eligible to apply. The registration fee will be automatically paid to the Workshop for all NASA CTSGC students selected for participation. Refer to the NASA CTSGC website for the number of awards available. (For workshops held in NC or VA, students requiring out of state travel must complete a Travel Grant application.)

Eligibility – Faculty applicants must be a full-time faculty member at a Consortium Member Institution. Selected applicants must provide proof of US Citizenship through the Grant Verification Form.

Award Opportunities: Helicopter Workshop – This opportunity provides participants with a classroom instruction and hands-on opportunity to learn more about why helicopters and UAVs behave as they do during flight operations. Workshop participants will construct and flight test (wind tunnel and outdoor) radio controlled coaxial helicopters, and compete in an obstacle course using the coaxial helicopters and VTOL aircraft that they build. Two human power helicopter test fixtures will also be used for experimentation, to maximize lift over drag. Participants may also have an opportunity to network with aerospace leaders, and professionals, tour manufacturing and engineering facilities, and may have the opportunity to experience a 1-hour helicopter ride during this unique training experience. Local transportation, lodging and food are included in the workshop.

Award Opportunities: RockOn! – During the RockOn workshop, teams will learn through hands-on activities, how to build a sounding rocket payload or RocketSat. Teams of 3 will build their rocket payload from a kit in three days and launch it on sounding rocket to ~73 miles on the sixth day. Wallops will be providing the rocket and launch operations for the workshop. Wallops will also provide a tour and briefings on sounding rocket environments for future flights. This workshop is not about building rockets. It is about learning to build sounding rocket payloads. The Colorado and Virginia Space Grant Consortia organize this workshop.

Proposal Format and Checklist – Submit application following NASA CTSGC email submission guidelines. Required components of the Helicopter Workshop Application can be found in the Application Checklist.

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

Application Checklist

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

1. Contact/Demographic Info form and
2. Single PDF containing the appropriate cover sheet, narrative, letters of support, resume/CV, transcript, Grant Verification Form and may not exceed 25 MB in size.

Details for the Helicopter/UAS Training Workshop or RockOn Workshop

1. **Applicant Contact/Demographic Information** – Typed into the ‘Contact/Demographic Information’ form, and saved as a .doc, .docx, or .pdf file. This file should be added as an attachment to the application email, with a document title using the following format: LASTNAME_ContactInfo.doc. This form is available on the CT Space Grant website. (Note: this information is used separately for blind reporting to NASA.)

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 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. Why are you interested this opportunity?
 2. Describe how your technical interest/experience will be enhanced with opportunity.
 3. How will opportunity enhance/contribute to your long-term academic/career goals?
 4. List all experiences related to workshop and how you meet workshop requirements.
- **Resume/Curriculum Vitae** – One page maximum.
- **Grant Verification Form** – Completed and signed by the Campus Director.

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.**

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

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

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>.**