



## NASA CT SPACE GRANT COLLEGE CONSORTIUM

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# REQUEST FOR PROPOSALS

## Faculty Programs

*Research Grants*

*Seed Research Grants*

*Research Collaboration Grant*

*STEM Education Research Grant*

*STEM Education Programming Grant*

*Travel Grants*

**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, development or revision of curricula, and 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.

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NASA CT SPACE GRANT COLLEGE CONSORTIUM

203 Dana Hall, University of Hartford (Lead Institution)

200 Bloomfield Avenue, West Hartford, CT 06117

860.768.4813 [ctspgrant@hartford.edu](mailto:ctspgrant@hartford.edu) [www.ctspacegrant.org](http://www.ctspacegrant.org)

**Contact Points:** 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 Consortium Office.

### Universities

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

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

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

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#### **Fairfield University**

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School of Engineering  
203.254.4000 x2764 203.254.4013 (Fax)  
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#### **Southern Connecticut State University**

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

#### **Trinity College**

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

#### **University of Bridgeport**

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Department of Mechanical Engineering  
203.576.4579 203.576.4343 (Fax)  
[jpallis@bridgeport.edu](mailto:jpallis@bridgeport.edu)

#### **University of Connecticut**

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

#### **UConn Health Center**

Dana Carroll, Temporary Contact  
Office of Research & Sponsored Programs  
860.679.4040  
[grantaward@adp.uchc.edu](mailto:grantaward@adp.uchc.edu)

#### **University of Hartford**

Dr. Jean McGivney-Burelle, Campus Director  
ENHP, Department of Education  
860.768.5921 860.768.5244 (fax)  
[burelle@hartford.edu](mailto:burelle@hartford.edu)

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

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

#### **Wesleyan University**

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

#### **Yale University**

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

### Community Colleges

#### **Capital Community College**

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

#### **Gateway Community College**

Susan Spencer or Eric Flynn, Campus Director  
203.285.2452 or 203.285.2371  
[sspencer@gatewayct.edu](mailto:sspencer@gatewayct.edu) or [eflynn@gatewayct.edu](mailto:eflynn@gatewayct.edu)

#### **Housatonic Community College**

Robert Ryder, Campus Director  
203.332.5158  
[rryder@hcc.commnet.edu](mailto:rryder@hcc.commnet.edu)

#### **Manchester Community College**

Eileen Roark, Campus Director  
Great Path, MS #17  
860.512.2775  
[eroark@manchestercc.edu](mailto:eroark@manchestercc.edu)

#### **Middlesex Community College**

Mark Busa, Campus Director  
Wheaton 313, 100 Training Hill Road  
860.343.5779  
[mbusa@mxcc.edu](mailto:mbusa@mxcc.edu)

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

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

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

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

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

Mark Vesligaj, Campus Director  
742 Upper Maple Street  
860.932.4167  
[mvesligaj@qvcc.commnet.edu](mailto:mvesligaj@qvcc.commnet.edu)

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

Mike Gentry, Campus Director  
Manufacturing Engineering Technology  
860.215.9428  
[mgentry@trcc.commnet.edu](mailto:mgentry@trcc.commnet.edu)

#### **Tunxis Community College**

Dr. Karen Wosczyzna-Birch, Campus Director  
271 Scott Swamp Road  
860.490.4545  
[kwosczyzna-birch@commnet.edu](mailto:kwosczyzna-birch@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) [ctspgrant@hartford.edu](mailto:ctspgrant@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

Dr. H. Kenny Nienhusser, Assistant Director  
[nienhusse@hartford.edu](mailto:nienhusse@hartford.edu)  
860.768.4411

# NASA Connecticut Space Grant Consortium

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# Proposal Development Considerations

Each application requires that a contact is made with either NASA or other federal agencies with aerospace or space related interests. In some cases a contact with private industry may be appropriate. These contacts can be facilitated through the Consortium Office or Campus Director.

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.**

For use of NASA facilities, University Affairs Offices at NASA Centers must be contacted. Contact information and NASA facility missions 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

Recipients of Space Grant money must provide proof of U.S. Citizenship via the Grant Verification Form, in the form of one of the following:

- U. S. Passport (may be currently valid or expired)
- Citizenship Certificate
- Naturalization Certificate
- Birth Certificate
- Voter's Registration Card
- US Citizen Identification Card
- American Indian Card
- Military or Company ID Card (Must show citizenship)
- Certified letter from some other organization that has verified citizenship

## Review of Proposals

The proposal review committee is composed of representative from each member institution. Reviews are performed a few weeks after the submission of proposals. The reviewers may request additional information, if needed. If necessary, this request will be made through the Consortium Office. Decisions are anticipated within six weeks.

The following rubrics are used as a guide and the results are subject to committee review. Possible exceptions may include scores for a Faculty Research Grant; application should not be penalized if it is a follow-up to a Seed Grant.

## Selection Criteria Rubrics

### 1. Faculty Research/Faculty Seed Research/Collaboration

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	<b>Max Score</b>
<b>Abstract</b>	The abstract is clear, concise and gives the reader an excellent sense of the scope of the project.	The abstract is clear and concise.	The abstract is somewhat clear and concise.	The abstract is unclear and/or not concise.	5
<b>Goals and Objectives</b>	The goals and objectives are clearly stated. There are compelling reasons offered to pursue the project.	The goals and objectives are clearly stated. There is some evidence to support the importance of this project.	The goals and objectives are unclear. There is little evidence to support the importance of this project.	The goals and objectives are not clearly stated. There is no evidence to support the importance of this project.	10
<b>Relevance to NASA's Strategic Goals</b>	The proposed project is very relevant to one or more of NASA's strategic goals.	The proposed project is relevant to one or more of NASA's strategic goals.	The proposed project is somewhat relevant to one or more of NASA's strategic goals.	The proposed project is not relevant to one or more of NASA's strategic goals.	15
<b>Methods and Procedures</b>	The proposal includes a detailed, well-written explanation of the proposed methods and procedures to achieve the projects goals and objectives. There is a strong link between the methodology and goals of the project.	The proposal includes a detailed explanation of the proposed methods to achieve the projects goals and objectives. There is a link between the methodology and goals of the project.	The proposal includes an explanation of the proposed methods to achieve the projects goals and objectives. There is not a strong link between the methodology and goals of the project.	The proposal lacks a detailed explanation of the proposed methods to achieve the projects goals and objectives. There is no link made between the methodology and goals of the project.	15
<b>Timeline and Feasibility</b>	The proposed timeline is clear, detailed, and closely aligned with the goals and objectives. Institutional support is strong. When applicable, equipment/resources are readily available.	The proposed timeline is aligned with the goals and objectives. Institutional support is evident. When applicable, equipment/resources are readily available.	The 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).	A proposed timeline is either not provided or lacks sufficient detail. No evidence of institutional support or equipment/resources (when appropriate).	10
<b>Budget Narrative and Worksheet</b>	There is a clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program.	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. The schedule is vague, not within program limits, or has unrealistic timeline.	There is no budget plan provided.	10
<b>Student Involvement</b>	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
<b>Recent Award</b>	Never	Three or more years ago	Two years ago	Last year	5
<b>Expected Outcome</b>	There is great potential for innovation, publications, or future funding. The proposal includes well-defined plan for disseminating findings.	There is good potential for innovation, publications, or future funding. The proposal includes a plan for disseminating findings.	There is some potential for innovation, publications, or future funding. The proposal does not include a plan for disseminating findings.	There is little/no potential for innovation, publications, or future funding. The proposal does not include a plan for disseminating findings.	10
<b>Collaboration</b>	There is strong evidence of collaboration either across disciplines, across colleges/universities or with external partners.	There is evidence of collaboration either across disciplines, across colleges/universities or with external partners.	There is little evidence of collaboration either across disciplines, across colleges/universities or with external partners.	There is no evidence of collaboration either across disciplines, across colleges/universities or with external partners.	5
<b>Faculty Qualifications</b>	There is strong evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	There is evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	There is little evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	There is no evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	5
<b>FT and/or Tenure Status</b>	The applicant is full-time and/or pre-tenure/early career.				5
					100

## 2. STEM Education Research and STEM Education Programming

	STRONGLY EVIDENT	EVIDENT	SOMEWHAT EVIDENT	NOT EVIDENT	Max Score
<b>Abstract</b>	The abstract is clear, concise and gives the reader an excellent sense of the scope of the project.	The abstract is clear and concise.	The abstract is somewhat clear and concise.	The abstract is unclear and/or not concise.	5
<b>Goals and Objectives</b>	The goals and objectives are clearly stated. There are compelling reasons offered to pursue the project.	The goals and objectives are clearly stated. There is some evidence to support the importance of this project.	The goals and objectives are unclear. There is little evidence to support the importance of this project.	The goals and objectives are not clearly stated. There is no evidence to support the importance of this project.	10
<b>Relevance to NASA's Strategic Goals</b>	The proposed project is very relevant to one or more of NASA's strategic goals.	The proposed project is relevant to one or more of NASA's strategic goals.	The proposed project is somewhat relevant to one or more of NASA's strategic goals.	The proposed project is not relevant to one or more of NASA's strategic goals.	10
<b>Methods and Procedures:</b> (Choose one for Research OR Programming)	RESEARCH: The 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.	RESEARCH: The 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.	RESEARCH: The 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 of the project.	RESEARCH: The 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
	PROGRAMMING: The proposal shows a clear, feasible and well-defined plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. There is a 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.	PROGRAMMING: The proposal shows a feasible plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. There is a link between programming, educational plans, and the designated goal of increasing exposure of students to an aspect of STEM education.	PROGRAMMING: The proposal shows a plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. There is not a strong link between programming, educational plans, and the designated goal of increasing exposure of students to an aspect of STEM education.	PROGRAMMING: The proposal does not include a plan for implementation, documentation of support of other partners, and methodology for assessment of programmatic outcomes. There is no link made between programming, educational plans, and the designated goal of increasing exposure of students to an aspect of STEM education.	
<b>Timeline and Feasibility</b>	The proposed timeline is clear, detailed, and closely aligned with the goals and objectives. Institutional support is strong. When applicable, equipment/resources are readily available.	The proposed timeline is aligned with the goals and objectives. Institutional support is evident. When applicable, equipment/resources are readily available.	The 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).	A proposed timeline is either not provided or lacks sufficient detail. No evidence of institutional support or equipment/resources (when appropriate).	10
<b>Budget Narrative and Worksheet</b>	There is a clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program.	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. The schedule is vague, not within program limits, or has unrealistic timeline.	There is no budget plan provided.	10
<b>Student Involvement</b>	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
<b>Recent Award</b>	Never	Three or more years ago	Two years ago	Last year	5
<b>Expected Outcome</b>	There is great potential for innovation, publications, or future funding. The proposal includes well-defined plan for disseminating findings.	There is good potential for innovation, publications, or future funding. The proposal includes a plan for disseminating findings.	There is some potential for innovation, publications, or future funding. The proposal does not include a plan for disseminating findings.	There is little/no potential for innovation, publications, or future funding. The proposal does not include a plan for disseminating findings.	10

<b>Collaboration &amp; Inter-disciplinary Approach</b>	There is strong evidence of collaboration either across disciplines, across colleges/universities or with external partners.	There is evidence of collaboration either across disciplines, across colleges/universities or with external partners.	There is little evidence of collaboration either across disciplines, across colleges/universities or with external partners.	There is no evidence of collaboration either across disciplines, across colleges/universities or with external partners.	10
<b>Faculty Qualifications</b>	There is strong evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	There is evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	There is little evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	There is no evidence that the applicant(s) is/are capable of completing project based on prior work and future plans.	5
<b>FT and/or Tenure Status</b>	The applicant is full-time and/or pre-tenure/early career.				5
					100

### 3. Faculty Travel

	<b>STRONGLY EVIDENT</b>	<b>EVIDENT</b>	<b>SOMEWHAT EVIDENT</b>	<b>NOT EVIDENT</b>	<b>Max Score</b>
<b>Abstract</b>	The abstract is clear, concise and gives the reader an excellent sense of the scope of the travel.	The abstract is clear and concise.	The abstract is somewhat clear and concise.	The abstract is unclear and/or not concise.	5
<b>Purpose of Travel</b>	There is a clear and detailed description of and rationale for travel, including an invitation to participate and/or other supporting material.	There is a description of and rationale for travel, including an invitation to participate and/or other supporting material.	There is a description of and rationale for travel. There is no invitation to participate and weak/no supporting materials	There is not a description of, nor rationale for travel. There is no invitation to participate nor supporting materials provided.	20
<b>Relevance to NASA's Strategic Goals</b>	The proposed travel is very much relevant to one or more of NASA's strategic goals.	The proposed travel is relevant to one or more of NASA's strategic goals.	The proposed travel is somewhat relevant to one or more of NASA's strategic goals.	The proposed travel is somewhat relevant to one or more of NASA's strategic goals.	15
<b>Goals and Objectives</b>	The goals and objectives of the travel are clearly stated. There are compelling reasons offered to pursue the travel.	The goals and objectives of the travel are clearly stated. There is some evidence to support the importance of this travel.	The goals and objectives are unclear. There is little evidence to support the importance of this travel.	The goals and objectives are not clearly stated. There is no evidence to support the importance of this travel	10
<b>Timeline</b>	The proposal includes a clear and detailed timeline of travel, including a feasible schedule for achieving teaching, research, or future funding outcomes related to travel	The proposal includes a timeline of travel, including a feasible schedule for achieving teaching, research, or future funding outcomes related to travel.	The proposal includes a timeline of travel, but the schedule for achieving teaching, research, or future funding outcomes related to travel appears not feasible.	The 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
<b>Budget Narrative and Worksheet</b>	There is a clear, detailed, budget plan, including a justification of expenditures for the proposed plan and a complete budgetary schedule for the length of the program.	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. The schedule is vague, not within program limits, or has unrealistic timeline.	There is no budget plan provided.	10
<b>Recent Award</b>	Never	Three or more years ago	Two years ago	Last year	5
<b>Expected Outcome</b>	There is great potential for travel to positively impact research, teaching, or future funding. The proposal includes well-defined plan for achieving outcomes and the PI has a demonstrated record of output.	There is good potential for travel to positively impact research, teaching, or future funding. The proposal includes a plan for achieving outcomes and the PI has a demonstrated record of output.	There is some potential for travel to positively impact research, teaching, or future funding. The proposal includes a plan for achieving outcomes. There is some record of output on the part of the PI.	There is little potential for travel to positively impact research, teaching, or future funding. The proposal includes a weak/no plan for achieving outcomes and the PI does not have a demonstrated record of output.	20
					100

## Application Submission

The CT Space Grant College Consortium only accepts materials submitted via official University email address, following the specified format requirements. Individual application cover sheets (organized by grant award type) can be found on the Consortium website under Faculty Applications on [www.ctspacegrant.org](http://www.ctspacegrant.org). (Application checklists can be found on the pages that follow.)

## 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 on the Application Cover Sheet.

### \* *Please Note:*

- *Award decisions will be made approximately 6 weeks following the application deadline.*
- *All work must be completed by September 30, 2016. A request for a “No Cost Extension” NCE will not be accepted after this date.*

## Award Notification

Award/Decline Letters: Each application/applicant will receive email notification as to their grant acceptance with an attached award/decline letter. Letters will no longer be sent by post.

## 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 Consortium website at [www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms). 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 Space Grant 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 CT Space Grant website ([www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms)).

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 CTSGC website and will be kept there for an extended period of time.



## Funds Distribution

Research Collaboration, STEM Education Research, STEM Education Programming & Faculty Research Grants: Funds will be available upon successful completion of an ‘Amendment’ to the master 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 faculty grants. Final payment will be made upon submission of all post-award reporting. Details will be conveyed within the award agreement.

Travel Grants: Reimbursement will require the completion of an ‘Amendment’ to the master sub-award agreement between the grant award recipient’s institution and the University of Hartford. Reimbursement usually requires the submission of 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.

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### IMPORTANT NOTES:

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*The CT Space Grant Consortium 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 the state’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. The Connecticut Space Grant Consortium is a Capability Enhancement Consortium.*

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 Circular A-21: <http://www.whitehouse.gov/omb/circulars/a021/2004/>.**

(\*Note to 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 CT Space Grant research.)

# Award Details

## STEM Education Research Grant, and STEM Education Programming Grant

**Award Details – STEM Education Research:** 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).

**Award Details – STEM Education Programming:** 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.

**Award Information** – Refer to [www.ctspacegrant.org/fellowships-and-grants/faculty-information#](http://www.ctspacegrant.org/fellowships-and-grants/faculty-information#) 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 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. Refer to OMB Circular A-21 for details. To avoid duplication with other Consortium Grant programs, travel may not be charged to a Curriculum Development, STEM Education Research Grant or 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 CTSG funds, or by institutional match funds) need to be reported and tracked. The required report forms can be downloaded at [www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms).

**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.

## Research Collaboration Grant

Following the lead of the National Space Grant College and Fellowship Program, the Connecticut Space Grant Consortium has established a diverse and vital network of colleges, industries, and research facilities to encourage faculty at Consortium institutions to use individual strengths to enhance the capabilities of two or more institutions. Through our Research Collaboration Program our goal is to share intellectual capital, leveraging resources to enhance national capability and accomplish research goals which fit NASA's mission and/or the needs of the local corporate community.

**Eligibility and Activity Guidelines** – Applications must come from at least two or more full-time faculty members of separate colleges within the same institution, or, at two separate Consortium institutions (CT affiliates or other state Consortium affiliates). Full-time research staff and associates are also eligible to apply.

- ❖ Preference will be given to applicants who 1) are non-tenured faculty, 2) who use these funds as seed money, and 3) whose research involves/supports students.
- ❖ Reminder: Space Grant funds may only be distributed to US Citizens. Evidence of citizenship is required.

**Award Information** – Refer to [www.ctspacegrant.org/fellowships-and-grants/faculty-information#](http://www.ctspacegrant.org/fellowships-and-grants/faculty-information#) 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 (but not limited to) technician and support staff salaries, summer salaries, student stipends, fringe benefits, supplies, and materials. *Faculty/staff salary and stipend 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. Refer to OMB Circular A-21 for details. To avoid duplication with other Consortium Grant programs, travel may not be charged to a Research Collaboration 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 CTSG funds, or by institutional match funds) need to be reported and tracked. The required report forms can be downloaded at [www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms) .

**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.

## Faculty Research & Seed 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 two levels of faculty research grants during the program year. Research grants, and smaller seed 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.

- ❖ 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 faculty (within CT), and 4) whose research involves/supports students.
- ❖ Reminder: Space Grant funds may only be distributed to US Citizens. Evidence of citizenship is required.

**Award Information** – Refer to [www.ctspacegrant.org/fellowships-and-grants/faculty-information#](http://www.ctspacegrant.org/fellowships-and-grants/faculty-information#) 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 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. Refer to OMB Circular A-21 for details. 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** – 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 CTSG funds, or by institutional match funds) need to be reported and tracked. The required report forms can be downloaded at [www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms) .

**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.

## Travel Grants

To encourage travel to NASA facilities to use their unique resources, and present Space Grant and NASA funded research at conferences, the Connecticut Space Grant Consortium 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. The Connecticut Space Grant Consortium 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 [www.ctspacegrant.org/fellowships-and-grants/faculty-information#](http://www.ctspacegrant.org/fellowships-and-grants/faculty-information#) 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 respond 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 at [www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms).

# Faculty Application Checklists

## Checklist: Collaboration, Research, and Seed Research Grant Applications

Submit the application via email ([csgcinfo@hartford.edu](mailto:csgcinfo@hartford.edu)). The email must include two attachments, the Contact and Demographic Info form and 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.**

- 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.) (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 Sponsored Research department's review/approval of your proposal before the deadline.**

### **ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:**

- Faculty Application Cover Sheet:** Download the form from the CT Space Grant 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:** 250 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 CT Space Grant 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 CT Space Grant Consortium website ([www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms)).**
- **All proposals and attachments must be submitted together in a single email.**

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**IMPORTANT REMINDER**

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*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 Circular A-21: [http://www.whitehouse.gov/omb/circulars a021 2004/](http://www.whitehouse.gov/omb/circulars/a021_2004/).***

*(\*Note to **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 CT Space Grant research.)*

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## Checklist: STEM Education Research Grant and STEM Education Programming Grant Applications

Submit the application via email ([csgcinfo@hartford.edu](mailto:csgcinfo@hartford.edu)). The email must include two attachments, the Contact and Demographic Info form and 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.**

- 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.) (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 Sponsored Research department's review/approval of your proposal before the deadline.**

### **ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:**

- Faculty Application Cover Sheet:** Download the form from the CT Space Grant 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:** 250 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 (STEM Research, STEM Programming)
  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 CT Space Grant 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 CT Space Grant Consortium website ([www.ctspacegrant.org/froms](http://www.ctspacegrant.org/froms)).**
- **All proposals and attachments must be submitted together in a single email.**

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**IMPORTANT REMINDER**

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*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 Circular A-21: [http://www.whitehouse.gov/omb/circulars a021 2004/](http://www.whitehouse.gov/omb/circulars/a021_2004/).***

*(\*Note to **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 CT Space Grant research.)*

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## Checklist: Travel Grant

Submit the application via email ([csgcinfo@hartford.edu](mailto:csgcinfo@hartford.edu)). The email must include two attachments, the Contact/Demographic Info form and a single PDF containing the appropriate cover sheet, abstract, trip proposal narrative, supporting material, 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.**

- 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.) (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 Sponsored Research department's review/approval of your proposal before the deadline.**

### **ATTACH THE FOLLOWING PROPOSAL COMPONENTS AS A SINGLE PDF FILE:**

- Faculty Application Cover Sheet:** Download the form from the CT Space Grant 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.
- Abstract:** 250 word maximum
- Narrative** – Two single 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:** Worksheets can be downloaded from the CT Space Grant website. *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 CT Space Grant Consortium website ([www.ctspacegrant.org/forms](http://www.ctspacegrant.org/forms)).**
- **All proposals and attachments, with the exception of the Applicant Contact/Demographic Information, must be submitted via email as a single PDF file.**



# 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 2014 NASA Strategic Plan: [http://www.nasa.gov/sites/default/files/files/FY2014\\_NASA\\_SP\\_508c.pdf](http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.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://education.nasa.gov>

NASA Space Grant Program Office:

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

NASA 2014 Strategic Plan

[http://www.nasa.gov/sites/default/files/files/FY2014\\_NASA\\_SP\\_508c.pdf](http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf)

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

[http://nces.ed.gov/programs/digest/d12/tables/dt12\\_265.asp](http://nces.ed.gov/programs/digest/d12/tables/dt12_265.asp).

Office of Education Performance Measurement System (OEPM)

<https://oedc.nasa.gov/dc/index.htm>

NASA One Stop Shopping Initiative (OSSI) and Recruiting for NASA Internships, Fellowships and Scholarships (NIFS) <https://intern.nasa.gov/ossi/web/public/main/>

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>

GUIDING FEDERAL CIRCULARS:

- **A-110** – Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations

[http://www.whitehouse.gov/omb/circulars\\_a110/](http://www.whitehouse.gov/omb/circulars_a110/)

- **A-21** - Cost Principles for Educational Institutions

[http://www.whitehouse.gov/omb/circulars\\_a021\\_2004/](http://www.whitehouse.gov/omb/circulars_a021_2004/)

**CT Higher Education Student Enrollment Figures:**

- 28.6% - Students from Racial Groups Underrepresented in STEM (*Source: NCES Digest of Education Statistics: [http://nces.ed.gov/programs/digest/d13/tables/dt13\\_306.60.asp](http://nces.ed.gov/programs/digest/d13/tables/dt13_306.60.asp)* )
- 55% - Female Students (*Source: NCES Digest of Education Statistics: [http://nces.ed.gov/programs/digest/d13/tables/dt13\\_304.30.asp](http://nces.ed.gov/programs/digest/d13/tables/dt13_304.30.asp)* )