Nanoscale Science and Engineering Centers (NSECs)

Guidelines for NSEC Continuation Requests (FY 2013)

NSF distinguishes between **continuation** requests and **renewal** proposals. These guidelines apply to the former.

The NSEC continuation request should contain the items shown in the Guidelines in the order specified below.

<u>The annual project report is due on April 15, 2013</u>. The report covers the period March 16, 2012 to March 15, 2013. The data base compilation for the various tables should cover the period from January 15, 2012 to January 14, 2013. Data must be reported in **two** ways: (1) as part of this report; and (2) in the NSEC web data collection system located at <u>https://www.nsecweb.org</u>

You must provide a certification of the amount of cost sharing for the past reporting period, documented on an annual and cumulative basis via the FastLane notifications and requests module. The budget request pages must cover the period of 12 months between anniversary dates of your award.

Significant Change: Transition from FastLane to the new Research Performance Project Report (RPPR) system in Research.gov as follows:

In accordance with the instructions provided in this document, the Nanoscale Science and Engineering Centers (NSEC) Annual Project Report must be submitted directly to the cognizant NSEC Program Director as a single PDF via e-mail and include the contents as specified in the annual report guidelines. The submitted report will be uploaded into the NSF eJacket system by the Program Director. The Annual Report will be reviewed and approved within eJacket, as was done when the reports were submitted via FastLane. The center does not use <u>Research.gov</u> to submit the contents of its Annual Report, but it does use <u>Research.gov</u> to indicate that the Report has been submitted, as described below.

- Submit notification to <u>Research.gov</u> as follows:
 - 0 <u>**Cover Tab</u>**: Review all the information displayed in the Cover tab within the Annual Project Report section of <u>Research.gov</u>. Please verify the information in the Cover Tab within the Annual Project Report section of Research.gov. If any corrections are required, contact the Research.gov Help Desk 7 AM 9 PM Eastern Time, Monday through Friday (except federal holidays) at <u>rgov@nsf.gov</u> or 1-800-381-1532.</u>
 - O <u>Accomplishments Tab</u>: Under the Accomplishments tab, insert the following statement into the first box that asks "What are the major goals of the project?"

- "In accordance with the instructions provided to the Nanoscale Science and Engineering Centers (NSECs) in the NSEC Annual Reporting Guidelines, the Annual Project Report has been submitted separately directly to the cognizant NSEC Program Director and includes the content specified in the guidelines. The report is uploaded into the NSF eJacket system."
- Next, there are four boxes under the question, "What was accomplished under these goals (you must provide information for at least one of the 4 categories below)?" In the first box, Major Activities, insert the same statement identified above: "In accordance with the instructions provided to the Nanoscale Science and Engineering Centers (NSECs) in the NSEC Annual Reporting Guidelines, the Annual Project Report has been submitted separately directly to the cognizant NSEC Program Director and includes the content specified in the guidelines. The report is uploaded into the NSF eJacket system."
- Leave the next three boxes blank.
- The last three boxes have a "nothing to report" or "no change" checkbox. Do not enter any text; just mark the "nothing to report" or "no change" checkbox for each question.
- **Products tab:** Under the products tab, do not enter any information. Mark the "nothing to report" checkbox for each question.
- **Participants tab:** The section "What individuals have worked on the project?" will be pre-populated with the names of the PIs for the NSEC. Review and edit as appropriate.

• For the "What other organizations have been involved as partners?" question, mark the "nothing to report" checkbox.

• For the "Have other collaborators or contacts been involved?" mark No.

- **Impact tab:** Mark the "nothing to report" checkbox for all of the questions.
- **Changes/Problems tab:** Mark the "nothing to report" checkbox for all of the questions.
- **O Certify and submit.** Check the Certification checkbox and click on the Submit Report Button.

Note: All of the information regarding the center's accomplishments, contributions, publications, products, etc. must be contained within the Annual Report that is submitted directly to the NSEC Program Director. Entering "nothing to report" in the Annual Report submission in <u>Research.gov</u> does not imply that the center did not make progress or contributions during the reporting period. It is a means of allowing the NSECs to continue to report under the Annual Reporting guidelines and submitting an integrated set of documents useful to site visit teams and to NSF program officers.

Additional Changes:

- 1. NSF requires that an Authorized Organization Representative (AOR) sign budget pages submitted in annual reports.
- 2. Table 2 will need to be signed by an Authorized Institutional Representative of the primary institution as it contains budgetary data.

NSEC ANNUAL REPORT and CONTINUATION REQUEST For FY 2013

CONTENTS

Narrative Sections:

1. Cover Page

Cover pages were automatically generated by FastLane. Your center can prepare a cover page of your own design

2. Table of Contents

3. Project Summary

The summary should include goals, programs and major achievements and should address both the technical aspects and the broader impacts of the Center.

4. List of Center Participants, Advisory Boards, and Participating Institutions

- (a) List all individual center participants that have received support since the start of the center. Indicate in BOLD the current participants. Support can be in the form of salary support, and/or support for students, postdoctoral associates, equipment, or other monetary support. List separately as "Affiliated Participants" all those who form an integral part of the Center but who receive no center support. For each name list the appropriate discipline / department.
- (b) List members of the **external advisory boards**.
- (c) List all **academic institutions** that have a significant participation in activities of the center. Include minority-serving institutions that have substantial research and/or educational interactions with the center. *Note: there does not need to be a financial relationship between the center and the academic participating institutions*. Enter data in Table 6 and place Table 6 directly after Table 5.
- (d) List all **non-academic participating institutions**. Include industry, state supported institutions, national laboratories and other federal agencies, international partners, museums, etc. *Note: there does not need to be a financial relationship between the center and the non-academic participating institutions*. Enter data in Table 6.

5. Quantifiable Outputs

Insert Table 1 here (see appendix)

6. Mission, Significant Advances, and Broader Impacts

Provide the mission statement of your NSEC. Summarize the most significant advances in fundamental knowledge, technology, education, and industrial collaboration that the NSEC has accomplished during the past year. Briefly describe the current and potential impacts of the NSEC on teaching, training, and learning; outreach to pre-college institutions; broadening the participation of underrepresented groups; enhancement of infrastructure of research and education; dissemination to scientific and technological communities; and benefits to society.

7. Highlights

Highlights are a crisp summary with an interesting and informative image highlighting your NSF funded work. Include a title, list of authors with affiliation(s), an appropriate color image (avoid graphs), and an acknowledgement of support with award number(s) for each highlight. We plan to use these highlights to illustrate the work that NSECs supports. They might be used in NSF documents and presentations or posted on NSF and NSEC web pages, for example. The text and graphics should capture the essence of the activity you wish to highlight. The graphics are particularly important and can include images or photographs. The text and graphics should be at the level of a press release, explaining briefly and *in non-technical* language *what has been accomplished* and *why it is significant*. By sending us a Highlight in the annual report you grant NSF the right to reproduce and disseminate your images for various possible uses. If you are planning to patent your work it is your responsibility to consult with the appropriate person at your institution to ensure that sending us the requested material does not jeopardize your intellectual property rights. Observe the following guidelines:

- Provide one or more science Highlight per Thrust
- Provide one or two education related Highlights.
- Provide one to two other Highlights on shared facilities and/or partnerships (industry, national lab, international, etc.).

In addition to the annual report, prepare <u>all</u> highlights in MS PowerPoint, with one highlight per file, using the following file name: 'University' NSEC 'cooperative agreement number' 'author name' 'highlight title.' For example, a Highlight by Barbara Jones on Novel Nanoprobes from Stanford would read: Stanford NSEC 0425897 Barbara Jones Novel Nanoprobes.

- Highlights should also be posted on your Center's website.
- Please send all highlights via e-mail attachment to your NSF NSEC program officer (PowerPoint format) with a copy to nsechighlights@nsf.gov. NSEC Highlights may be made available to the public through NSF websites, brochures, CDs, and other media outlets.

8. Strategic Research Plan

The strategic research plan should identify the long-term research goals of the Center. The planned research activities should be organized to demonstrate that the results of the important research projects converge to the goals of the NSEC. It should be kept in mind that the Center is not merely a collection of individual projects.

For Centers with a systems level focus, a 3-plane strategic planning framework chart, available at <u>http://www.erc-assoc.org/images/erc2_strategic_frame.gif</u> should be used as a guide in developing and presenting the Center's strategic plan. The plan will be based on a thorough analysis of the state-of-the-art, specific knowledge gaps, goals/deliverables, and barriers. These barriers guide the selection of the specific research projects and test beds. A separate five-year milestone chart (at the Center

level) showing pathways between major goals, deliverables, key research projects and test beds (where applicable) should be included.

9. Research Program, Accomplishments, and Plans

State title of each thrust, then list names of each faculty investigator and senior participants by name, discipline/department; list number of graduate students, undergraduate students, and postdocs. Summarize the overall organization of the research program under manageable themes or thrusts. Describe major accomplishments under each thrust for the last reporting period. <u>Underline</u> the name of each faculty level investigator wherever it occurs. Where applicable, the progress towards proof-of-concept test beds and their impact on the overall research program should be described. List ongoing seed projects and the major outcomes.

Insert Table 2 here.

10. Center Diversity – Progress and Plans Background:

NSECs must seek to embrace the cultural, gender, racial, and ethnic diversity of the U.S. in the composition of their participants at <u>all</u> levels. NSF expects faculty and staff and the administrations of all institutions receiving NSF funding to share this commitment and to devote the time and effort required to ensure that the diversity of the centers' participants at all levels serves as a model for diversity within each institution and for the nation as a whole. This expectation is made with the understanding by NSF that NSECs do not generally have the authority to hire faculty, accept students, or grant degrees. However, Centers have high visibility and can serve as role models. Each NSEC is therefore expected to demonstrate a significant commitment to and success in the involvement of women and underrepresented racial/ethnic minorities as Center participants (NSEC leaders, faculty participants, undergraduate and graduate students, and postdoctoral associates). Since no set of formal requirements can ensure that a desired level of dedication to achieving diversity is engendered, the following are elements of a diversity strategy, the success of which depends in large part on the spirit in which they are implemented by the center and its collaborating departments and university-level schools.

NSEC Diversity Strategic Plan:

- a. **Current status and progress since the last reporting period and cumulatively since the start of the current cooperative agreement.** How effective was the NSEC's plan in increasing the diversity of the center's leadership, faculty, undergraduate, graduate student, and postdoctoral associate, as well as the REU and RET programs associated with the center
- b. **Plans for the next reporting period**. Describe goals and intended actions to increase the diversity of the center's leadership, faculty, undergraduate, graduate students, and postdoctoral associates, as well as the REU and RET programs associated with the center. The updated strategic plan should highlight key deficiencies identified in the plan for the last reporting period and new strategies to rectify them. The focus of these diversity efforts will be on achieving a demonstrated impact for the following underrepresented groups: (1) Women; (2) Underrepresented Racial Groups (African-Americans,

Native-Americans, and Pacific Islanders, and multi-racial combinations that include one or more of these), and, separately, (3) Ethnicity (Hispanics) in the research and education activities of the NSEC. Such a diversity plan should be tailored to the particular conditions of each individual center.

11. Education

Summarize current and planned education activities. Include new NSE course titles, modified NSE course titles, NSE degree programs, NSE minors, and NSE Certificates. If applicable, provide a narrative of REU activities, including student selection process, the range of student activities; minority programs; outreach to K-12 institutions; web based educational activities; others as appropriate. For NSECs that support Postdoctoral Researchers, describe the current Center wide Postdoctoral mentoring plan and planned activities for future years, see NSF Proposal & Award Policies & Procedures Guide (PAPPG), Part I, Grant Proposal Guide, Chapter II.C.2.j http://www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_2.jsp#IIC2j

Insert Tables 3A and 3B here.

12. Outreach and Knowledge Transfer

State the strategy that guides the Center's outreach program. Describe current and planned collaboration and interaction with industry and other sectors; workshops; web based outreach activities; and others as appropriate. Describe spin-off of companies and other tech transfer activities.

13. Shared and other Experimental Facilities

Describe major shared and other major experimental facilities or laboratories, how they contribute to the research of the Center.

14. Personnel

Describe the faculty and leadership teams, management team, various committees, and any major changes. Provide an organization chart.

Insert Tables 4A and 4B here.

15. Publications and Patents

List of NSEC-supported publications and patents (current award period). List invention disclosures, patents applied for and, patents granted, as well as any licensed patents. Enter numbers in Table 1. For each Thrust distinguish among publications and patents with primary NSEC support (>50%) that acknowledge the NSF NSEC award, partial NSEC support (<50%) that acknowledge the NSF NSEC award, and those that do not acknowledge the NSF NSEC award. List publications and patents arising from the use of shared facilities (optional). Underline or boldface all faculty level participants.

16. Biographical Information

Provide a brief biographical information for each new investigator (faculty member or equivalent) using the format specified in the Grant Proposal Guide, <u>http://www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_2.jsp#IIC2f</u>

17. Honors and Awards

List and briefly describe honors and awards given to Center participants during the last funding period.

18. Fiscal Sections:

- a. Statement of Residual Unobligated Funds.
- b. Budget: Provide separate budget in the format used in FastLane for:
 - 1. **The current year** showing actual expenditures for the latest increment to a convenient cut-off date.* Please list the dates on the budget page. Following renewal, the NSEC may be funded by two awards. <u>This budget page must be signed by an Authorized Organization Representative (AOR) of the primary institution</u>. In such cases, include a budget page for each of the two award numbers to the same cut-off date.
 - 2. **The requested year** if an increment is due, and if the requested budget amount or allocations differ from what was submitted at the time of the award. <u>This budget page must be signed by an AOR of the primary institution.</u> <u>Include separate budgets for each sub-award signed by the subawardee AOR.</u>

* The NSF Office of Inspector General requests that all NSF center program collect data on how NSF funds were actually spent.

19. Cost Sharing

The cumulative cost sharing is specified in your Cooperative Agreement. No Federal funds may be used to meet the University's cost sharing obligation. Submit a cost sharing statement detailing cost sharing expenditures in the notifications and requests module in FastLane.

20. Leverage

NSEC effort can be augmented by other sources, which may include cash contributions, sponsored projects to the Center, and equipment donation, etc. <u>Note</u>: Do not include sponsored projects to the individual faculty member, even if they are related to the core mission. These can be discussed in the narrative section with proper acknowledgements.

Insert Table 5 and Table 6 here.

21. Current and Pending Support

Use the format specified in the Grant Proposal Guide for submission of Current and Pending Support Information for the PI and Thrust Leaders at http://www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_2.jsp#IIC2h.

22. Business Plan for Class of 2003, and Class of 2004 NSECs

Include a concise strategic business plan for sustaining the center (or portions of the center) after NSF program funds cease. The business plan should include the envisioned features of the post-graduation NSEC, cost and income projections, plans for obtaining sources of support and plans for expenditures. All centers should discuss their strategy and any actions associated with obtaining increased support from industry and other sources. Also, the long-term commitments from lead and core partner institutions to support the continuation of the center's administrative, industrial, and education components and retention of the research and office space should be presented.

Table 1: Quantifiable Outputs

The quantifiable outputs table will include data on the research, technology transfer, and education outputs of the center from the start of the cooperative agreement. This table should include data for the current reporting year, each of the preceding reporting years, and a cumulative total.

Table 1: Quantifiable Outputs

Outputs	Reporting <u>Year - 4</u>	Reporting <u>Year –3</u>	Reporting <u>Year – 2</u>	Reporting <u>Year - 1</u>	Reporting <u>Year</u>	<u>Total</u>
Publications that acknowledge NSF NSEC Support in Peer Reviewed Technical Journals in Peer Reviewed Conference Proceedings in Trade Journals With Multiple Authors With Multiple Authors co-authored with NSEC faculty						
Publications that do not acknowledge NSF NSEC Suppor in Peer Reviewed Technical Journals	ť					
NSEC Technology Transfer Inventions Disclosed Patents Filed Patents Awarded Patents Licensed Software Licensed Spin-off Companies Started						
Degrees to NSEC Students Bachelors Degrees Granted Masters Degrees Granted Doctoral Degrees Granted						
NSEC Graduates Hired By Industry NSEC participating Firms Other US Firms Government Academic Institutions Other Unknown						
NSEC Influence on Curriculum New Courses Based on NSEC Research Courses Modified to Include NSEC Research New Textbooks Based On NSEC Research Free-standing Course Modules or Instructional CDs New Full Degree Programs (specify name of program a New Degree Minors or Minor Emphases (specify in nam New Certificate (specify name of program and where in	ne of program	n and where i		in footnote)		
Information Dissemination/Educational Outreach Workshops, Short Courses to Industry Workshops, Short Courses to Others Seminars, Colloquia, etc. World Wide Work courses						

World Wide Web courses

Table 2: NSEC Program Support

The information presented in this table should represent the entire NSEC research and education expenditures, regardless of whether performed at lead or partner institutions. The information is for the major thrusts or interdisciplinary research groups within the center and not for individual projects within the thrusts. The budget information covers the period of the award indicated in the cooperative agreement.

Note that information on thrust titles and personnel is to be provided in the narrative of Section 9.

The table distinguishes activities supported by NSF funds, cost sharing contributions, and other contributions as defined in Table 5. The entry "Current Year Budget (NSF)" refers to the base NSF/NSEC award. Supplements and other pertinent awards directly relating the NSEC research and education effort should be included as "Other Support" in Table 5.

Also included in Table 2 are budgets for Education, Outreach to industry and other sectors, Center Administration, and Equipment (separate from thrust or seed expenditures). The total for "Current Year Budget (Cost Share)" should correspond to the total cost share for the current year as stated in Section 18; <u>the total for "Current Year Budget (Other Support)" should correspond to the total "Other Support" amount for the current year provided in Table 5.</u>

<u>The signature of an Authorized Organization Representative is required on</u> <u>Table 2.</u>

	(1) Current Year <u>Budget (NSF)</u>	(2) Current Year <u>Budget (Cost Share)</u>	(3) Current Year <u>Budget (Other Support)</u>	(Sum 1 – 3) Current Year <u>Total Budget</u>	Next Year <u>Proposed Budget (NSF)</u>
Thrust 1 Thrust 2 etc	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
Seed Projects	_\$	\$	\$	\$	\$
Subtotal: Thrusts and Seed Project	s \$	\$	\$	\$	\$
Education	\$	\$	\$	\$	\$
Administration	\$	\$	\$	\$	\$
Equipment (if not part of thrusts	s) \$	\$	\$	\$	\$
Knowledge Transfer (industry and other sectors)	\$	\$	\$	\$	\$
TOTAL BUDGET	\$	\$	\$	\$	\$

Table 2: NSEC Program Support

Table 3: Education Program Participants

Include those individuals who have been impacted by the education programs of the center during the <u>Reporting Year</u>, either through (1) participation in academic programs that were created by the NSEC, e.g., new full degree programs, degree minors, or certificate programs; (2) practitioners enrolled in NSEC-developed life-long learning courses/workshops; or (3) pre-college educational outreach.

Include in this table pre-college teachers and students involved in NSEC's <u>educational</u> activities. Put those involved in NSEC <u>research</u> in Table 4: NSEC Personnel.

Table 3A: Education Program Participants – All, irrespective of citizenship

				Rac	e data		NC 1	N T /	ψΠ.1 · ·.	
Student <u>Type</u>	<u>Total</u>	<u> </u>	AI/AN NH/	PI B/AA W	A AI/AN, I	Mixed— incl. 3/AA, NH/PI , W/A	Mixed <u>W, A</u>	Not <u>Provided</u>	*Ethnicity <u>Hispanic</u>	Disabled
Enrolled in full degree progr Undergraduates Masters Doctoral	rams									
Enrolled in NSEC Degree M Undergraduates Masters Doctoral	inors									
Enrolled in NSEC Certificate Undergraduates Masters Doctoral Practitioners taking course										
K-12 (Pre-college) Education Teachers Students	I									
Total										
* See Definitions										

Table 3B: Education Program Participants – US Citizens and Permanent Residents

			Race data		
Student	Gender		Mixed- incl.	Mixed Not	*Ethnicity
<u>Туре</u>	<u>Fotal</u> <u>Male</u> <u>Female</u>	<u>AI/AN NH/PI</u>	B/AA W A AI/AN, B/AA, NH/PI , V	V/A W, A Provided	<u>Hispanic</u> <u>Disabled</u>
Enrolled in full degree programs Undergraduates Masters Doctoral	s				
Enrolled in NSEC Degree Minor Undergraduates Masters Doctoral	rs				
Enrolled in NSEC Certificate Pr Undergraduates Masters Doctoral Practitioners taking courses	ograms				
Total					
* See Definitions					
* See Definitions					

***Definitions:**

Citizenship Status: Contains two groups: (1) Table 3A - All and (2) Table 3B - US citizens or permanent residents

<u>Race</u> -- All participants must be reported as: (1) belonging to one of six separate racial groups; (2) belonging to more than one group; or (3) data not provided. Note – The sum of (1), (2), and (3) for any line should equal the total listed in the first column.

(1)-- Individuals belonging to <u>only one group</u> should be classified as one of the following:

 $\begin{array}{l} \textbf{AI/AN} = \underline{A} \text{merican Indian/Alaska Native} \\ \textbf{B/AA} = \text{Black} \underline{A} \text{frican } \underline{A} \text{merican} \\ \textbf{NH/PI} = \text{Native Hawaiian or } \underline{P} \text{acific } \underline{I} \text{slanders, e.g., Guamanian or Chamorro, Samoan,} \\ \textbf{A} = \underline{A} \text{sian, e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, , Other Asian} \\ \textbf{W} = \underline{W} \text{hite} \end{array}$

(2)-- An individual belonging to <u>more than one group</u> may be counted in one of two categories:

Mixed – **incl. AI/AN, NH/PI, or B/AA** = Individuals with two or more racial origins including one or more of the following: NA, PI, or AA. This mixed category also includes people with at least one of these racial origins as well as Asian and/or White ancestry.

Mixed – Asian and White= Individuals with two or more racial origins that include Asian or Caucasian but not NA, PI, or AA

(3) Not Provided -- An individual who has not provided the center with his/her racial identification should be counted under Not Provided.

Hispanics comprise an ethnic, not a racial group. Hispanic ethnicity refers whether a person is or is not of Hispanic / Latino heritage.

<u>Disabled</u> – A person with an impairment that affects substantially one or more activities of daily living and is not correctable with assistive devices. Include in this column the total number of people who have one or more disabilities.

For additional information on groups underrepresented in Science Technology Engineering and Mathematics (STEM), please see Broadening Participation at the NSF, A Framework for Action, http://www.nsf.gov/od/broadeningparticipation/nsf_frameworkforaction_0808.pdf

Table 4: NSEC Personnel

<u>Overview</u>

In this table provide a count of those members of the NSEC team during the <u>Reporting Year</u> are considered to be NSEC Personnel by virtue of managing, leading, and carrying out the NSEC's research, education, technology transfer, and outreach activities. All people working on research projects reported in Table 2: NSEC Program Support should be reported in this table, as well all others working with activities other than the research program.

Indirect Sources of Support if the involvement was for the **equivalent of one summer semester** or more. This includes personnel from lead, core partner, and outreach institutions whose projects received NSEC funds. Support received from the NSEC includes funds specified as cost-sharing in the center's cooperative agreement. Students receiving tuition remission funds provided through the NSEC funds and the university cost sharing should be included.

Graduate students included in this table should be involved in NSEC activities for at least the **equivalent of one summer semester** (three months) on a full-time basis. The same is true for faculty from the center's lead or core institutions, or outreach institutions receiving NSEC funds to conduct project-level work. Undergraduate students and visiting researchers from other institutions or industry should be counted in this table if they are involved in NSEC research for a minimum of a month on a full-time basis, or the equivalent on a part time basis.

Include also: personnel at the lead and partner institutions involved in NSEC projects (i.e., reported in Table 2: NSEC Program Support) for the minimum amount of time who were paid directly with funds <u>not</u> controlled by the center. Research Experiences for Undergraduates (REU) students should be included in this table, as should other outreach university students working on NSEC research and any pre-college students or teachers working on NSEC research projects, as opposed to being involved in outreach projects designed to stimulate interest in nanoscale science.

Personnel <u>Type</u> Director(s) Thrust Leaders Administrative Direc	<u>Total</u> tor and Sup	<u>Gender</u> <u>Male Female</u> port Staff	<u>AI/AN</u> NH	<u>PI</u> B/ <u>A</u>	AV	<u>N</u> A	<u>AI/AN</u>	- Mixed– incl. , NH/PI, B/AA,	Mixed W, A	Not Provided	Ethnicity <u>Hispanic</u>	<u>Disabled</u>	<u>% NSEC Dollars</u>
Research Senior Faculty Junior Faculty Research Staff Visiting Faculty Industry Researche Post Docs Doctoral Students Masters Students Undergraduate Stu- High School Studen	dents (non-F	REU)											
Curriculum Developr Senior Faculty Junior Faculty Research Staff Visiting Faculty Industry Researche Post Docs Doctoral Students Masters Students Undergraduate Stu- High School Studen	rs dent s (non F												
SubTotals													
REU Student REU students parti NSEC Funded REU		NSEC research											
Pre-college (K-12) Students (Total colu Teachers – RET Teachers – non-RE	-	o gender or race data co	ollected for mi	ors)									
Totals													

Table 4B: NSEC Personnel – US Citizens and Permanent Residents _____

Race Data_____

Personnel <u>Type</u> Director(s) Thrust Leaders Administrative Directo		<u>Gender</u> <u>Male Female</u> ort Staff	<u>AI/AN</u>	NH/ <u>PI</u>	B/ <u>AA</u>	W A	<u>A AI</u>	- Mixed- <u>//AN, NH/PI</u>	_W, A_	Mixed <u>Provided</u>	Not <u>Hispanic</u>	Ethnicity <u>Disabled</u>	<u>% NSEC Dollars</u>
Research Senior Faculty Junior Faculty Research Staff Visiting Faculty Industry Researchers Post Docs Doctoral Students Masters Students Undergraduate Stude													
Curriculum Developm Senior Faculty Junior Faculty Research Staff Visiting Faculty Industry Researchers Post Docs Doctoral Students Masters Students Undergraduate Stude High School Students	s ents (non-RE												

Totals

Table 5: Other Support (in addition to already specified cost sharing)

Provide information for all years up to the current year.

NOTE: The total amount for the current year must be equal to the amount for "other support" reported in Table 2.

Designation	Current Year	Current Year - 1	Current Year -2	Current-3	Current Year -4	Current Year -5
Other NSF						
Other Federal						
State						
Industry						
University						
Foreign						
Other						
Totals						

Note: The NSEC effort can be augmented by other sources, which may include cash contributions, sponsored projects to the Center, equipment donation, etc. They can be in the form of distinct awards or supplements such as for education or societal impact activities. Do not include sponsored projects to the individual faculty member, even if they are related to the core mission. These can be discussed in the narrative section with proper acknowledgements. In-kind contributions should be clearly described.

Definitions:

Equipment- The equipment must be donated to the NSEC not to individual faculty member. Include only the fair market value.

Industry- Awards from private-sector firm, consortium of private-sector firms, trade associations for sponsored projects, may be proprietary.

<u>Other NSF-</u> Awards from any NSF program other than the NSF's NSE Program. Examples may be a Research Experience for Undergraduates Site award, which specifically targets the NSEC community.

Other US Government- Awards from any Federal agency or department other than NSF which directly benefit the NSEC.

<u>Foreign-</u> May be from a foreign government or foreign research council or foreign industry. Intellectual Property Rights issues should be agreed upon and documented.

Table 6: Partnering Institutions

Many NSECs have associations with a number of universities in the US and abroad, as well as with other types of research, education, and industrial organizations. These center level partnerships may or may not involve financial arrangements between the center and the partner. Partnerships generally imply a significant participation in the planning and execution of activities of the center. They can include minority-serving institutions that have substantial research and / or educational interactions with the center. Do not include one-on-one collaborations.

Partnering institutions may be associated with NSF awardees under the programs designed to enhance minority participation such as the Louis Stokes Alliances for Minority Participation (LSAMP), Alliances for Graduate Education Program (AGEP), Centers for Research Excellence in Science and Technology (CREST), and the Tribal Colleges and Universities Program (TCUP). List for each of these programs the lead institution of each awardee with which the center has formal relationships.

The table distinguishes between partnerships with academic institutions and non-academic institutions. Academic partners generally include domestic and foreign universities. Generally, K-12 institutions are not included in this list unless they are have significant input into the education outreach activities of the center. Non-academic partners include those from industry, National Laboratories or other federal government agencies, State supported institutions, Museums, etc.

Table 6: Partnering Institutions (with examples shown)

Indicate nature of financial support and type of partnering institution (more than one box may be checked)

Institution Type	Name of Institution	Receives Financial Support <u>from</u> center	Contributes financial support <u>to</u> the center	Minority Serving institution Partner	Female Serving Institution Partner	National Lab/other govt Partner	Industry Partner	Museum Partner	International Partner
I. Academic Partnering Institutions	University A								
	University B	x		х					
	University C								Х
Total Number Academic Partners	3	1		1					1
II. Non-academic Partnering Institutions	Company C		x				Х		
	National Lab D		х			х			
	Museum E	x						х	
	International Company F								х
Total Number Non-academic Partners	4	1	2	0	0	1	1	1	1
4									