

Attachment F1

**Scholarships in Science, Technology, Engineering, and Mathematics
(S-STEM)
Monitoring System**

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S-STEM: Crosswalk

Common Collection Categories	Staff and Project Participant Characteristics¹	Project Implementation Characteristics²	Project Outputs³
Questions			
Award Details and Program Activities			
Award Details from FastLane			
Award ID Number ⁴		X	
Principal Investigator (PI) Name ⁴	X		
PI E-mail Address ⁴	X		
PI Phone Number ⁴	X		
Institution Name ⁴	X		
Award Title ⁴		X	
Award Start Date ⁴		X	
Award Expiration Date ⁴		X	
Alternate Contact Information			
Alternate Contact Name	X		
Alternate Contact E-mail Address	X		
Alternate Contact Phone Number	X		
Academic Schedule			
Academic Term Select one. -Semesters -Quarters -Trimesters	X		
Program Schedule			
Expected/Actual First Scholarship Year		X	
Expected/Actual First Scholarship Semester/Quarter Select one. -Winter -Spring -Summer -Fall		X	
Expected/Actual Final Scholarship Year		X	
Expected/Actual Final Scholarship Semester/Quarter Select one. -Winter -Spring -Summer -Fall		X	

¹ Elements of these characteristics include name, address, date of birth, gender, ethnicity, race, disability status, class, major, grade point average, and project role.

² Elements of these characteristics include sources and amount of funds, fellowships, scholarships, traineeships, partnerships, training, and research methods.

³ Elements of these characteristics include research findings, publications, presentations, degrees granted, and educational materials.

⁴ These details are drawn directly from FastLane.

<p style="text-align: center;">Common Collection Categories</p> <p>Questions</p>	<p style="text-align: center;">Staff and Project Participant Characteristics</p>	<p style="text-align: center;">Project Implementation Characteristics</p>	<p style="text-align: center;">Project Outputs</p>
Program Activities			
Program Activities Select one or more. -Academic Support Services -Career Counseling/Job Placement -Community Building -Field Trips -Internships -Meetings/Conferences -Mentoring -Recruitment -Research Opportunities -Seminars -Other (please describe) -None		X	
Student Demographics			
Student Details			
Name: First, Middle Initial, Last	X		
E-mail Address	X		
Degree Program Select one. -Associate's -Bachelor's -Concurrent Bachelor's/Master's -Master's -Doctorate	X		
First S-STEM Year		X	
First S-STEM Semester/Quarter Select one. -Winter -Spring -Summer -Fall		X	
Career Goal			X
Student Demographics			
Date of Birth: mm/dd/yyyy	X		
Gender Select one. -Male -Female -Not Reported or Unknown	X		

<p style="text-align: center;">Common Collection Categories</p> <p>Questions</p>	<p style="text-align: center;">Staff and Project Participant Characteristics</p>	<p style="text-align: center;">Project Implementation Characteristics</p>	<p style="text-align: center;">Project Outputs</p>
Race Select one or more. -American Indian or Alaska Native -Asian -Black or African American -Native Hawaiian or other Pacific Islander -White -Not Reported or Unknown	X		
Ethnicity Select one. -Hispanic or Latino -Not Hispanic or Latino -Not Reported or Unknown	X		
Disability Select “Yes” if any of the following apply: <ul style="list-style-type: none"> • Deaf or serious difficulty hearing • Blind or serious difficulty seeing even when wearing glasses • Serious difficulty walking or climbing stairs • Other serious disability related to a physical, mental, or emotional condition -Yes -No -Do not wish to provide	X		
Student Address – Permanent Residence Address Line 1 Address Line 2 City State Zip Code/Postal Code	X		
Student Address – School Residence Address Line 1 Address Line 2 City State Zip Code/Postal Code	X		
Semester/Quarter Details			
Cumulative GPA	X		X
S-STEM Scholarship Amount		X	

<p style="text-align: center;">Common Collection Categories</p> <p>Questions</p>	<p style="text-align: center;">Staff and Project Participant Characteristics</p>	<p style="text-align: center;">Project Implementation Characteristics</p>	<p style="text-align: center;">Project Outputs</p>
<p>Intended Major Select one.</p> <ul style="list-style-type: none"> -Astronomy -Biological Sciences -Biology -Biotechnology -Chemistry -Computer Information Science -Computer Science -Computer -Engineering–Aerospace -Engineering–Biological -Engineering–Biomedical -Engineering–Chemical -Engineering–Civil -Engineering–Computer -Engineering–Electrical -Engineering–Environmental -Engineering–Industrial -Engineering–Mechanical -Engineering–Nuclear -Engineering–Petroleum -Engineering–Technology -Engineering -Environmental Sciences -Geosciences -Materials Science -Mathematical Sciences -Mathematics -Physical Sciences -Physics -Technology–Chemical -Technology–Computer -Technology–Information -Technology–Manufacturing -Technology -Other (Please describe) 	<p>X</p>		
<p>Class Select one.</p> <ul style="list-style-type: none"> -Freshman -Sophomore -Junior -Senior -Graduate Student 	<p>X</p>		

<p style="text-align: center;">Common Collection Categories</p> <p>Questions</p>	<p style="text-align: center;">Staff and Project Participant Characteristics</p>	<p style="text-align: center;">Project Implementation Characteristics</p>	<p style="text-align: center;">Project Outputs</p>
STEM-Related Internship Select one. -Paid -Unpaid -None		X	X
Employment Hours/Week	X	X	
Activities Select one or more. -Academic Support Services -Career Counseling/Job Placement -Community Building -Field Trips -Internships -Meetings/Conferences -Mentoring -Recruitment -Research Opportunities -Seminars -Other (please describe) -None		X	X
Student Status: Select one. -Active -Graduated -Transferred -Leave of Absence -Left Program -Left Program – Switched to a non-STEM major -Left Program – No longer full-time -Left Program – No longer financially eligible -Left Program – Poor academic performance -Left Program – Received maximum scholarship funding -Left Program – Transferred to a different S-STEM award -Left Program – Completed the S-STEM program	X		X
Follow-Up Questions			

<p style="text-align: center;">Common Collection Categories</p> <p>Questions</p>	<p style="text-align: center;">Staff and Project Participant Characteristics</p>	<p style="text-align: center;">Project Implementation Characteristics</p>	<p style="text-align: center;">Project Outputs</p>
<p>Student is Pursuing Further STEM Education:</p> <p>-Yes</p> <p>Intended Major Select one.</p> <ul style="list-style-type: none"> -Astronomy -Biological Sciences -Biology -Biotechnology -Chemistry -Computer Information Science -Computer Science -Computer -Engineering–Aerospace -Engineering–Biological -Engineering–Biomedical -Engineering–Chemical -Engineering–Civil -Engineering–Computer -Engineering–Electrical -Engineering–Environmental -Engineering–Industrial -Engineering–Mechanical -Engineering–Nuclear -Engineering–Petroleum -Engineering–Technology -Engineering -Environmental Sciences -Geosciences -Materials Science -Mathematical Sciences -Mathematics -Physical Sciences -Physics -Technology–Chemical -Technology–Computer -Technology–Information -Technology–Manufacturing -Technology -Other (Please describe) <p>-No</p>			<p>X</p>

<p style="text-align: center;">Common Collection Categories</p> <p>Questions</p>	<p style="text-align: center;">Staff and Project Participant Characteristics</p>	<p style="text-align: center;">Project Implementation Characteristics</p>	<p style="text-align: center;">Project Outputs</p>
<p>Student is Working in STEM Field: -Yes Company Name Nature of Job -No</p>			<p style="text-align: center;">X</p>

S-STEM: Number of Respondents, Frequency of Response, and Annual Hour Burden

The estimated average number of annual respondents is 700, with an estimated average annual response burden of 4,900 hours. The frequency of response is an average of two times per year.

Respondents are award PIs. There is an average of 700 active awards each year, with 700 total PIs (1 per award) and an average of 20 scholars per award. PIs must report on each student receiving S-STEM scholarship support for each academic term, for an average of two responses per year per PI. Because of the nature of the project, PIs will have most of the data on scholars readily available and will need to spend an average of only 10 minutes per academic term entering data on each scholar, for a total annual burden of approximately 3.5 hours per PI.

The burden estimate is outlined below:

Respondent Type	Estimated Average Annual No. of Respondents	Estimated Average Annual Burden Hours Per Respondent	Responses Per Year	Estimated Annual Burden Hour Total
PIs	700	3.5	2	4,900
Total	700			4,900

S-STEM: Hour Burden Estimates by Each Form and Aggregate Hour Burdens

There is only one form. As mentioned above, respondents will be project PIs. The estimated total annual response burden is 4,900 hours. Burden is minimized by the fact that the Web-based screens request data in simple data entry fields, including radio buttons, dropdown menus, and text boxes, so little if any time is required for familiarization with the system. In addition, respondents can use an offline version of the survey to upload their data, allowing them to sort their data by student or academic term and cut and paste repeating data. The annual burden by form was calculated as follows:

Form Type	Respondent Type	No. of Respondents	Burden Hours Per Respondent	Responses Per Year	Total Burden Hours
S-STEM data collection form	PIs	700	3.5	2	4,900
Total		700			4,900

S-STEM: Estimates of Annualized Cost to Respondents for the Hour Burdens

The overall annualized cost to the respondents is estimated to be \$225,400. The following table shows the annualized estimates of costs to PI respondents, who are generally university professors. The estimated hourly rate is based on a report from the American Association of University Professors, “The Annual Report on the Economic Status of the Profession, 2017–18,” Survey Report Table 1. According to this [report](#), the average salary across all academic ranks and across all types of doctoral-granting institutions (public, private-independent, religiously affiliated) was \$95,176. When divided by the number of standard annual work hours (2,080), this calculates to approximately \$46 per hour.

Type of Respondent	No. of Respondents	Burden Hours Per Respondent	Responses Per Year	Average Hourly Rate	Estimated Annual Cost
PIs	700	3.5	2	\$46	\$225,400
Total	700				\$225,400

S-STEM: Estimates of Costs to the Federal Government

Computing the annualized cost to NSF for the S-STEM data collection was done by taking the projected budget for the next three years and calculating the cost for each of the following operational activities involved in producing, maintaining, and conducting the data collection:

Operational Activities	Cost Over Three Years
System Development (includes initial development of the database and Web-based application, and later changes requested by the program, e.g., increased reporting tools, additional validations)	\$144,159
System Maintenance, Updates, and Technical Support (the system requires updates each year before opening the collection; maintenance is required to keep the system current with technology, e.g., database servers, operating systems)	\$259,486
Data Collection Opening and Support (e.g., online and telephone support to respondents and contacting respondents to encourage completion of the questions), Reporting (as defined by DUE), and Follow-up Activities (e.g., providing data to other consultants)	\$172,991
Three-Year Total for All Operational Activities	\$576,637

The annualized cost was computed as one-third of the total three-year cost; thus, the annualized cost to NSF for the S-STEM data collection is \$192,212.

S-STEM: Questions

Award Details and Program Activities
Award Details from FastLane
Award ID Number ⁵
Principal Investigator (PI) Name ⁴
PI E-mail Address ⁴
PI Phone Number ⁴
Institution Name ⁴
Award Title ⁴
Award Start Date ⁴
Award Expiration Date ⁴
Alternate Contact Information
Alternate Contact Name
Alternate Contact E-mail Address
Alternate Contact Phone Number
Academic Schedule
Academic Term Select one. -Semesters -Quarters -Trimesters
Program Schedule
Expected/Actual First Scholarship Year
Expected/Actual First Scholarship Semester/Quarter Select one. -Winter -Spring -Summer -Fall
Expected/Actual Final Scholarship Year
Expected/Actual Final Scholarship Semester/Quarter Select one. -Winter -Spring -Summer -Fall
Program Activities

⁵ These details are drawn directly from FastLane.

<p>Program Activities Select one or more.</p> <ul style="list-style-type: none"> -Academic Support Services -Career Counseling/Job Placement -Community Building -Field Trips -Internships -Meetings/Conferences -Mentoring -Recruitment -Research Opportunities -Seminars -Other (please describe) -None
Student Demographics
Student Details
Name: First, Middle Initial, Last
E-mail Address
Degree Program Select one. <ul style="list-style-type: none"> -Associate's -Bachelor's -Concurrent Bachelor's/Master's -Master's -Doctorate
First S-STEM Year
First S-STEM Semester/Quarter Select one. <ul style="list-style-type: none"> -Winter -Spring -Summer -Fall
Career Goal
Student Demographics
Date of Birth: mm/dd/yyyy
Gender Select one. <ul style="list-style-type: none"> -Male -Female -Not Reported or Unknown
Race Select one or more. <ul style="list-style-type: none"> -American Indian or Alaska Native -Asian -Black or African American -Native Hawaiian or other Pacific Islander -White -Not Reported or Unknown

<p>Ethnicity Select one. -Hispanic or Latino -Not Hispanic or Latino -Not Reported or Unknown</p>
<p>Disability Select “Yes” if any of the following apply:</p> <ul style="list-style-type: none"> • Deaf or serious difficulty hearing • Blind or serious difficulty seeing even when wearing glasses • Serious difficulty walking or climbing stairs • Other serious disability related to a physical, mental, or emotional condition <p>-Yes -No -Do not wish to provide</p>
<p>Student Address – Permanent Residence Address Line 1 Address Line 2 City State Zip Code/Postal Code</p>
<p>Student Address – School Residence Address Line 1 Address Line 2 City State Zip Code/Postal Code</p>
<p>Semester/Quarter Details</p>
<p>Cumulative GPA</p>
<p>S-STEM Scholarship Amount</p>

Intended Major

Select one.

- Astronomy
- Biological Sciences
- Biology
- Biotechnology
- Chemistry
- Computer Information Science
- Computer Science
- Computer
- Engineering–Aerospace
- Engineering–Biological
- Engineering–Biomedical
- Engineering–Chemical
- Engineering–Civil
- Engineering–Computer
- Engineering–Electrical
- Engineering–Environmental
- Engineering–Industrial
- Engineering–Mechanical
- Engineering–Nuclear
- Engineering–Petroleum
- Engineering–Technology
- Engineering
- Environmental Sciences
- Geosciences
- Materials Science
- Mathematical Sciences
- Mathematics
- Physical Sciences
- Physics
- Technology–Chemical
- Technology–Computer
- Technology–Information
- Technology–Manufacturing
- Technology
- Other (Please describe)

Class

Select one.

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

STEM-Related Internship

Select one.

- Paid
- Unpaid
- None

Employment Hours/Week

Activities

Select one or more.

- Academic Support Services
- Career Counseling/Job Placement
- Community Building
- Field Trips
- Internships
- Meetings/Conferences
- Mentoring
- Recruitment
- Research Opportunities
- Seminars
- Other (please describe)
- None

Student Status:

Select one.

- Active
- Graduated
- Transferred
- Leave of Absence
- Left Program
- Left Program – Switched to a non-STEM major
- Left Program – No longer full-time
- Left Program – No longer financially eligible
- Left Program – Poor academic performance
- Left Program – Received maximum scholarship funding
- Left Program – Transferred to a different S-STEM award
- Left Program – Completed the S-STEM program

Follow-Up Questions

Student is Pursuing Further STEM Education:

-Yes

Intended Major

Select one.

- Astronomy
- Biological Sciences
- Biology
- Biotechnology
- Chemistry
- Computer Information Science
- Computer Science
- Computer
- Engineering–Aerospace
- Engineering–Biological
- Engineering–Biomedical
- Engineering–Chemical
- Engineering–Civil
- Engineering–Computer
- Engineering–Electrical
- Engineering–Environmental
- Engineering–Industrial
- Engineering–Mechanical
- Engineering–Nuclear
- Engineering–Petroleum
- Engineering–Technology
- Engineering
- Environmental Sciences
- Geosciences
- Materials Science
- Mathematical Sciences
- Mathematics
- Physical Sciences
- Physics
- Technology–Chemical
- Technology–Computer
- Technology–Information
- Technology–Manufacturing
- Technology
- Other (Please describe)

-No

Student is Working in STEM Field:

-Yes

Company Name

Nature of Job

-No