

Guidelines for 2018 PREM Final Report

These guidelines were developed to provide a uniform reporting structure for the Partnerships in Research and Education in Materials (PREM) final reports and to provide the NSF with useful data to monitor the health and success of the program.

The purpose of the Final Report is to communicate the advances made in science as well as the number of underrepresented groups trained in materials research. Please focus on the accomplishments in the research, the development of students, numbers of students graduating, and new opportunities for both students and faculty. Be as quantitative as possible. This Final Report covers the period from the last annual report and includes cumulative information for the full period of the award.

Please prepare the report using the headings, instructions, and the table templates provided, in the order indicated in the following guide. The Final Report must be submitted through the annual report option of NSF FastLane.

Please submit the entire report as a single pdf file including the budget pages and tables. If the pdf file exceeds the file size limit, the file may be broken into several pdfs. In addition, report only those publications/patents that acknowledge PREM support in the acknowledgement section.

Checklist for PREM Final Reports

1. Executive Summary
2. List of Participants
3. Research Accomplishments
4. Education and Outreach Accomplishments
5. Postdoctoral Mentoring
6. List of students (K-12, undergraduate, graduate, and Post-Docs)
7. List of Publications and Patents
8. List of Presentations
9. Highlights
10. Budget Allocations
11. Successful Proposals as a Direct Result of PREM Funding
12. Miscellaneous

PREM Program Final Report Guidelines

1. Executive Summary (maximum 5 pages)

- Vision statement (1-2 sentences)
- Key Accomplishments
 - A) Intellectual Merit – (What were the significant science outcomes?)
 - B) Broader Impacts
- Impact of Award on PREM Institution
- Impact of Partnership
- Sustained PREM effort beyond this award

The Executive Summary should give a high level account of what was accomplished during the PREM award. If there were changes in direction from the original proposal, please mention them in this section. This section should be as quantitative and demonstrative as possible.

The following are items to consider when writing the Executive Summary. How has the “pipeline” issue been addressed? How did this award impact the research capability of the Institution? What was the growth in the number of participants over the course of the award? What was the percentage of undergraduates applying and going on to graduate school? Can you estimate the percentage increase as compared to before the PREM award? Where have your graduates gone on to? Were there any new faculty members supported through this award? How were the PREM and Partner Centers impacted by this partnership? Were there any new collaborations formed as a result of this PREM? What are the continuity plans with respect to funding the research efforts in addition to re-competing for another PREM award?

2. Lists of PREM Participants since the start including their academic department in the following categories

- All Faculty that received support over the period of the award (faculty salary, student or post-doc support). Indicate **current** participants in **bold**.
- All Affiliated Faculty that participated in PREM, but did not receive support over the period of the award (faculty salary, student or post-doc support). Indicate **current** participants in **bold**.
- Faculty at partner institution over the period of the award (faculty salary, student or post-doc support). Indicate **current** participants in **bold**.
- All post-docs that participated over the period of the award. Indicate **current** Post-docs in **bold**.
- All Graduate students that participated over the period of the award. Indicate **current** Graduate students in **bold**.
- All Undergraduates that participated over the period of the award. Indicate **current** Undergraduates in **bold**. indicate with an * undergraduate students that will graduate by Spring 2017
- Others, please specify

Indicate at the end of each participant list the total number of women, and underrepresented minorities in science in the following categories: Hispanic, African American, Native American, and Pacific Islanders. **Except for undergraduates**, please report two sets of numbers following each participant list:

- (1) All URM* (irrespective of Visa / Citizenship status), and
- (2) US URM (Those who are US citizens or Permanent Resident Aliens).
- (3) Persons with disabilities

To protect the privacy of individuals we collect aggregate data on under represented minorities as well as the disability status. *Please do not indicate the gender, minority or disability status of individuals.*

* URM = Under-Represented Minorities in Science Technology Engineering and Mathematics (STEM). For information on which ethnic and minority groups constitute URMs, see for example: http://www.nsf.gov/od/broadeningparticipation/nsf_frameworkforaction_0808.pdf

3. Research Accomplishments (5 page limit)

Discuss the results of the research accomplished since the last annual report and then during the course of the award. Organize the projects under the major tasks or research thrusts originally proposed or added. Be as quantitative as possible. Include:

- a statement of the objective of the research project
- the names of the faculty and students involved in each project
- a description of the role of the partner institution
- a description of the research performed and the most significant results obtained

4. Education (5 page limit)

Discuss the education projects (course development, outreach, etc.). Discuss the most recent reporting period, then those achieved during the life of the PREM award. Include:

- a statement of the objective of the education project
- the names of the faculty and students involved in each project
- a description of the role of the partner institution
- a description of the significant results obtained

5. Postdoctoral Mentoring (1 page limit)

For PREMs that support Postdoctoral Researchers, describe the PREM-wide Postdoctoral mentoring activities including career mentoring, see NSF Proposal & Award Policies & Procedures Guide (PAPPG), NSF 10-1. Include a description of their interactions with the Partner Institution.

http://www.nsf.gov/pubs/policydocs/pappguide/nsf10_1/nsf10_1.pdf

6. Tables of PREM Graduates

Please provide **cumulative** Tables of students that have ‘graduated’ from the PREM program with the format below. Create one Table for each academic level of your PREM program (post-doc, graduate student, undergraduate), as appropriate. Order entries by the year of graduation with the latest year at the top. Indicate graduates in this reporting period in **bold**

face and graduates in previous reporting periods in regular type. Update the career path of graduates from previous years if known.

Cumulative Table of Undergraduates who were part of the 5+ year PREM award

| Year Left the PREM | Name | Major/ Depart. | Number of years in PREM | Graduated (Yes/No?) | Part of the PREM when they Graduated (Yes/No?) | Did they have a research experience at the Partner Institution (Yes/No?) | Where are they today? |
|--------------------|---------------|-------------------------|-------------------------|---------------------|--|--|--|
| 2011 | Anne Student | Chemistry | 2 | Yes | Yes | No | Graduate School, ChemE, Univ. of Wisconsin - Madison |
| 2011 | John Grad | Physics | 1 | Yes | Yes | Yes | Industry |
| 2010 | Joan Teacher | Physics | 1 | Yes | No | No | Grad School, Mech. Eng., Carnegie Mellon |
| 2009 | Tom Smith | Materials Science & Eng | 1 | No | No | Yes | Left the University |
| NA | Shirley Smith | Chemistry | 2 | No | No | Yes | Anticipated graduation 2013 |

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Cumulative Table of Undergraduate Students who participated ONLY in NSF REU at the Partner Institution or conducted summer research at the PREM during the 5+ year PREM award

| Name | Major/ Depart. | Number of REU Experiences | Number of summers conducting research | Graduated (Yes/No?) | Where are they today? |
|--------------|-------------------------|---------------------------|---------------------------------------|---------------------|--|
| Anne Student | Chemistry | 2 | 0 | Yes | Graduate School, ChemE, Univ. of Wisconsin - Madison |
| John Grad | Physics | 0 | 2 | Yes | Industry |
| Joan Teacher | Physics | 0 | 1 | No | High School Teacher |
| Tom Smith | Materials Science & Eng | 1 | 1 | Yes | Grad School, Mech. Eng., Carnegie Mellon |

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Cumulative Table of Graduate Students who were part of the 5+ year PREM award

| Year Left the PREM | Name | Major/ Depart. | Number of years in PREM | Graduated (Yes/No?) | Part of the PREM when they Graduated (Yes/No?) | Did they have a research experience at the Partner Institution (Yes/No?) | Where are they today? |
|--------------------|------|----------------|-------------------------|---------------------|--|--|-----------------------|
|--------------------|------|----------------|-------------------------|---------------------|--|--|-----------------------|

| | | | | | | | |
|------|--------------|-------------------------|---|-----|-----|-----|--|
| 2011 | Anne Student | Chemistry | 2 | Yes | Yes | Yes | Graduate School, ChemE, Univ. of Wisconsin - Madison |
| 2011 | John Grad | Physics | 1 | Yes | Yes | No | Industry |
| 2010 | Joan Teacher | Physics | 1 | No | No | No | High School Teacher |
| 2009 | Tom Smith | Materials Science & Eng | 1 | Yes | Yes | No | Grad School, Mech. Eng., Carnegie Mellon |

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Cumulative Table of Post-docs who were part of the 5+ year PREM award

| Year Left the PREM | Name | Major/ Depart. | Number of years in PREM | Part of the PREM when they left (Yes/No?) | Did they have a research experience at the Partner Institution (Yes/No?) | Where are they today? |
|--------------------|-------------------|-------------------------|-------------------------|---|--|----------------------------|
| 2011 | Dr. John Smith | Chemistry | 2 | Yes | Yes | Second Postdoc at Berkeley |
| 2011 | Dr. Jane Johnson | Physics | 1 | Yes | No | Industry |
| 2010 | Dr. Debra Feynman | Physics | 1 | No | No | High School Teacher |
| 2009 | Dr. Leon Nobel | Materials Science & Eng | 1 | Yes | No | Faculty at Carnegie Mellon |

Complete the following **Diversity Statistics Table**. Indicate the total number of graduates over the life of the PREM award. Note that you should report two numbers for each category: All URM and US URM as defined in Item 2 above.

Diversity Statistics for all students and post-docs that have graduated:

Cumulative

| | Total | Women | Men | <u>All</u> Under represented Minorities (US and Non-Us Citizenship) | | | | | <u>US Citizens and Permanent Residents</u> Under represented Minorities | | | | | Disabled | |
|----------------|-------|-------|-----|---|-----|----|----|---|---|-----|----|----|---|----------|--|
| | | | | AA | His | NA | PI | O | AA | His | NA | PI | O | | |
| Post-docs | | | | | | | | | | | | | | | |
| Grad Students | | | | | | | | | | | | | | | |
| Undergraduates | | | | | | | | | | | | | | | |
| K-12 | | | | | | | | | | | | | | | |
| RET | | | | | | | | | | | | | | | |

Race Codes:

AA: African American

- His: Hispanic
- NA: Native American
- PI: Pacific Islander
- O: Other

7. List of Publications

- List work that acknowledges PREM support. Indicate PREM **faculty** in **bold face** and students/post-docs with underline. Those publications acknowledging multiple sources of funding should state the contribution of the PREM funding to the published work. Do not include submitted or accepted papers. List patents, if appropriate, and indicate whether a patent is pending, granted or licensed.

8. List of Presentations

- List oral presentations and posters resulting from PREM support. Indicate PREM **faculty** in **bold face** and students/post-docs with underline.

Complete the following tables showing the numbers of Publications, Presentations and Patents (if any).

OUTPUT TABLE: Cumulative

| <i>Designation</i> | <i>Number Current Year</i> | <i>Cumulative Totals for this Award</i> |
|---|----------------------------|---|
| <i>All Publications from PREM support</i> | | |
| Publications with students/post-docs as co-authors | | |
| | | |
| <i>All Presentations from PREM support</i> | | |
| Presentations with students/post-docs as co-authors | | |
| | | |
| <i>Patents from PREM support</i> | | |
| Awarded | | |
| Pending | | |
| Licensed | | |

- 9. Highlights:** Include 2-3 Highlights in the Final Report. Research and Education Highlights are a crisp one-page summary of **recent activities or significant achievements of the PREM** 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 PREM supports. They might be used in NSF documents and presentations or posted on NSF and MRSEC.org 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*.

PREM Highlights will be made available to the public on the Division of Materials Research website and in CD format. By sending us a Highlight 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.

- Prepare **all** highlights in MS PowerPoint format and send them to the program director. One highlight per file, using the following file name: ‘University’ PREM ‘award number’ ‘highlight title.’ Please include a technical description of the work in the notes section of the PowerPoint slide.
- Add Highlights to your website.

10. Budget Allocation

Complete the following tables showing the allocation of funds during the PREM award.

Note: Support for undergraduate student/ graduate student / postdoc involved in research are reported 100% in Research Category.

BUDGET: Since Last Annual Reporting Period.

| Designation | \$K Current award period | % of total budget | \$K Cumulative award period | % of total budget |
|--|---------------------------------|--------------------------|------------------------------------|--------------------------|
| Research (which includes undergraduate, graduate and Post-doctoral students doing research): | | | | |
| Education Activities: | | | | |
| Equipment: | | | | |
| PREM Administration: | | | | |
| Total | | 100 | | 100 |

BUDGET: Cumulative

| Designation | \$K Current award period | % of total budget | \$K Cumulative award period | % of total budget |
|--|---------------------------------|--------------------------|------------------------------------|--------------------------|
| Research (which includes undergraduate, graduate and Post-doctoral students doing research): | | | | |
| Education Activities: | | | | |

| | | | | |
|----------------------|--|------------|--|------------|
| Equipment: | | | | |
| PREM Administration: | | | | |
| Total | | 100 | | 100 |

11. Successful Proposals as a Direct Result of PREM Funding (> \$50K/year).

| <i>Proposal Title</i> | <i>Agency or Institution (incl. NSF)</i> | <i>Award Duration</i> | <i>Award Start Date</i> | <i>\$K Total award amount</i> |
|------------------------------|---|------------------------------|--------------------------------|--------------------------------------|
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12. Miscellaneous

- Include any significant additional information that isn't captured in the sections above.
Honors and Awards
Assessments or Reports
Etc.