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National Science Foundation 4201 Wilson Boulevard Arlington, Virginia 22230

NSF 10-005

Frequently Asked Questions Regarding the Science Master's Program

- The Solicitation [SMP RFP 09-607] reads as if this is solely for the creation of new MS programs. Is that the case, or are existing programs that meet the criteria but are in need of funding within the scope of this RFP?
- <u>What is the difference between the Science Master's program (SMP) and the Professional</u> <u>Science Master's Program (PSM)?</u>
- Which institutions may submit a proposal?
- Would a Distance-Learning MS program be acceptable?
- Will the program fund new or existing master's programs?
- What additional details can you share about what constitutes a "hands on research experience for each student" that can be completed in a typical summer work experience timeframe (2-3 months)?

For instance, what about

- Focused clinical studies of biomedical devices (e.g. bioengineering), a form of generic
- prototype development (efforts to develop applications from basic discoveries)?
- Development of "translational research" (or plan for) basic discoveries?
- Team-based projects that involve students from several STEM disciplines?
- What direct support/development costs other than student stipends can be covered?
- What level of commitment from industry partners are you expecting at this early stage? While they can agree to be "host companies", they may not be able to commit to hiring a specific number of SMP graduates.
- We have several STEM departments on campus that have well-established Master's programs (both thesis and non-thesis). To meet the stated goals of speedy implementation and graduating two cohort MS classes over the 3-year funding period we are considering the idea of making our SMP project the creation of a mutually-shared platform whose function is to develop the industry-based hands-on research component and the specialized curriculum. Individual departments can then augment their existing MS programs by leveraging this shared platform. Is this in line with the spirit/letter of the proposal?
- How will a statewide proposal serve individual public institutions? What will be their role?
- As part of a larger proposal, would careers in high school teaching be considered within the SMP guidelines of "careers in... nonprofit organizations, and government agencies"?
- Our PSM tuition is about \$30,000 annually. Can the NSF cost of education allowance of \$10.500 be counted toward that, and the balance paid by the student?

- When might we expect a letter of award, and when would we be expected to start the program?
- Where can I find out more information about Professional Science Master's degrees?
- Does the proposed program have to be approved by the Council of Graduate Schools?

1. The Solicitation [SMP RFP 09-607] reads as if this is solely for the creation of new MS programs. Is that the case, or are existing programs that meet the criteria but are in need of funding within the scope of this RFP?

Answer: A proposal to just augment an existing program will not be competitive. However if you want to take this opportunity to add innovative new dimensions or start a new "strand" of SMP, that would be potentially competitive.

2. What is the difference between the Science Master's program (SMP) and the Professional Science Master's Program (PSM)?

Answer: They are very similar; the main difference is that the SM program requires a research component and also highlights student financial aid. Applicants who are funded under this NSF program can apply at the Council of Graduate Schools (CGS) for PSM status and the right to use the PSM logo.

3. Which institutions may submit a proposal?

Answer: Proposals may only be submitted by the following:

 U.S. academic institutions in the United States, its territories or possessions that grant the Master's degree in one or more STEM disciplines and have the capacity to provide education in additional skill areas, for example, by creating specially tailored courses in business, management, or public administration, may submit proposals. Academic institutions are defined as universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Projects may involve more than one institution, but a single lead institution must accept overall management responsibility. Non-graduate degree granting institutions, non-academic and international organizations may serve as collaborating organizations.

4. Would a Distance-Learning MS program be acceptable?

Answer: Distance learning programs are acceptable. This might create special challenges for some of the program requirements, but none of these is insurmountable.

5. Will the program fund new or existing master's programs?

Answer: A challenging issue to contend with in constructing a proposal is how "new" a proposed program needs to be to be competitive. We want to support new developments and features, but also support programs that are ready to run, or that will be soon. There is definitely some tension between these two goals in the Program Solicitation:

In our introductory statement we state: "The program is intended to catalyze the creation of institution-based efforts that can be sustained without additional federal funding."

We also state within the solicitation: "Proposals that demonstrate a readiness to start the new program expeditiously will be given priority. Proposals must demonstrate that the proposed program is ready to award the new Master's

degree. Letters from senior administrators will be required to justify that the program has been approved by the various internal and external approval boards and groups prior to an award." It is still possible to apply and be competitive if you can provide evidence in the proposal that the program is highly likely to be in place by the fall, 2010 (or the winter, 2011) and the Master's degree approved by the time the first cohort graduates in 2012 (or early 2013).

In many states and institutions a proposed SMP cannot be spanking brand new and meet the readiness criterion. This suggests that connecting a new strand to pre-existing strands or modifying an existing program will often be necessary to satisfy both conditions.

6. What additional details can you share about what constitutes a "hands on research experience for each student" that can be completed in a typical summer work experience timeframe (2-3 months)? For instance, what about

- Focused clinical studies of biomedical devices (e.g. bioengineering), a form of generic prototype development (efforts to develop applications from basic discoveries)?
- Development of "translational research" (or plan for) basic discoveries?
- Team-based projects that involve students from several STEM disciplines?

Answer: Yes, these seem to all to be within the range. We are interested in making sure that the students have the opportunity to experience science at the Master's level by doing some research either in the field or at the university. In some cases it would be possible to meet both the internship requirement and the research requirement with the same activity.

7. What direct support/development costs other than student stipends can be covered?

Answer: A limited amount of funds may be budgeted for necessary administrative support (including personnel for management/administration), and to partially defray the costs of research and publication by students. No funds for faculty salaries will be provided, except for one month per year of salary support for the Principal Investigator for management purposes. Full or partial salary for a project manager may be budgeted for three years.

Faculty travel for one person for one trip to the Washington, D.C. area for the purpose of a new PI orientation meeting should be budgeted for year 1 of the project. Faculty travel for the PI to attend a national meeting highly relevant to the program once per year may be budgeted. No international travel should be budgeted for faculty or students.

Funds for facility renovation or for equipment installation or maintenance are not allowed. Awards will carry an 8% allowance for indirect costs based on modified total direct cost, excluding the cost of education.

8. What level of commitment from industry partners are you expecting at this early stage? While they can agree to be "host companies", they may not be able to commit to hiring a specific number of SMP graduates.

Answer: We understand that this it is not likely in these times for industry to make a commitment to hire two to three years from now, but we do want to see in writing that they are on board in terms of program development, internships and the like.

9. We have several STEM departments on campus that have well-established Master's programs (both thesis and non-thesis). To meet the stated goals of speedy implementation and graduating two cohort MS classes over the 3-year funding period we are considering the idea of making our SMP project the creation of a

mutually-shared platform whose function is to develop the industry-based hands-on research component and the specialized curriculum. Individual departments can then augment their existing MS programs by leveraging this shared platform. Is this in line with the spirit/letter of the proposal?

Answer: Yes, we think that would work and would expedite matters.

10. How will a statewide proposal serve individual public institutions? What will be their role?

Answer: We know that there are some state systems that are interested in taking on the coordinating role for the state. Because this competition is funded by stimulus money, most of the money is to be directed toward student aid. Therefore, there is not much money available for pure coordination; it will be up to the state and institutions to figure out a genuinely attractive proposal for the state system.

11. As part of a larger proposal, would careers in high school teaching be considered within the SMP guidelines of "careers in... nonprofit organizations, and government agencies"?

Answer: The Science Master's program is geared toward students who wish to go to industry, business, the non-profit sector or government. The NSF already has a program - The Robert Noyce Teacher scholarship program - that is directed toward careers in teaching and producing master's level teachers. However, preparation for STEM education -related, non-teaching careers in industry, business, etc. would be allowable.

12. Our PSM tuition is about \$30,000 annually. Can the NSF cost of education allowance of \$10.500 be counted toward that, and the balance paid by the student?

Answer: We have assumed that the cost-of-education would cover all costs of education for a student as it does with our three programs: GRF, IGERT, and GK-12.

The difference can count toward meeting the 2/3 contribution from non-federal sources to the program. These contributions should be described in the body of the proposal but not put on line M of the budget.

13. When might we expect a letter of award, and when would we be expected to start the program?

Answer: At this time, we hope make the awards in late March or early April, 2010. We expect that projects will begin in the fall of 2010 or at the latest in January, 2011.

14. Where can I find out more information about Professional Science Master's degrees?

Answer: There are at least two other places:

The web site of the National Professional Science Master's Association http://www.npsma.org/ and the Council of Graduate Schools (CGS) site is dedicated to the Professional Science Master's degree program http://www.sciencemaster.com. Both groups sponsor meetings also.

15. Does the proposed program have to be approved by the Council of Graduate Schools?

Answer: No, this NSF competition is separate from CGS approval. However, proposed programs that are awarded under the NSF program may, if they wish, apply to CGS for approval to use the PSM logo.