Tips for Submitting Doctoral Dissertation Improvement Grants in the Directorate for Biological Sciences (DDIG) to NSF

Written originally: staff in Office of Research Administration (ORA), Indiana University, 2011
Update: Spencer Hall, EEB Graduate Program Director, Department of Biology, IUB, with notes from Elly Clinton, Grants Specialist, ORA
Update date: 10 September 2015

We have tried our best to ensure accuracy of the information provided. Please double check grant deadlines and guidelines, however.


**Deadlines:**

<table>
<thead>
<tr>
<th>Deadline Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Submit draft budget to ORA</td>
<td>Thursday, 24 September 2015</td>
</tr>
<tr>
<td>Upload drafts of most sections</td>
<td>Thursday, 1 October 2015</td>
</tr>
<tr>
<td>Final application complete</td>
<td>Tuesday, 6 October 2015</td>
</tr>
<tr>
<td>Proposal deadline to NSF</td>
<td>Thursday, 8 October 2015</td>
</tr>
</tbody>
</table>

**Per guidelines:** A student must have advanced to candidacy for a Ph.D. degree before the submission deadline to be eligible to submit a proposal. A statement that the student has advanced to candidacy for a Ph.D., signed and dated by the department chairperson, graduate dean, or similar administrative official is required (see "Proposal Preparation and Submission Instructions" below).

**FORMAT:**

- Use one of the following typefaces identified below:
  - Arial<sup>10</sup>, Courier New, or Palatino Linotype at a font size of 10 points or larger
  - Times New Roman at a font size of 11 points or larger
  - Computer Modern family of fonts at a font size of 11 points or larger
  - A font size of less than 10 points may be used for mathematical formulas or equations, figure, table or diagram captions and when using a Symbol font to insert Greek letters or special characters. PIs are cautioned, however, that the text must still be readable.
- No more than 6 lines of text within a vertical space of 1 inch.
- Margins, in all directions, must be at least one inch.

**COVER SHEET:**

- Make sure you select the correct program announcement number (NSF 13-568).
- The Project Title must begin with “Dissertation Research:”

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10/21/11
• You must indicate whether human subjects (Human Subjects Assurance # is FWA00003544) or animals (PHS # A4094-01) are involved.
• The faculty advisor should be listed as the PI and the doctoral student should be listed as the Co-PI. (“Change PI” button to switch from student to advisor after adding advisor into Cover Sheet.) The faculty advisor must log in.
• Double-check the contact information for the PI and Co-PIs and confirm that it is correct. If it is not, the PI and Co-PIs must change their personal profiles in FastLane so it will correctly appear on the cover sheet.

PROJECT SUMMARY:
• Limited to one page in length.
• It must include three separate paragraph headings: Overview, Intellectual Merit, and Broader Impacts. (Note: Previous DDIGs available to grads to use as templates may only have two sections: three are now required).

PROJECT DESCRIPTION:
• Limited to 8 single-spaced pages including figures and tables.
• The proposal should include a brief description of the overall dissertation project including its design and scientific significance. It should then provide a detailed description of the question(s) to be addressed by the DDIG, what new data would be collected, and details on experimental design, analysis and interpretation.
• Describe, as an integral part of the narrative, the Broader Impacts resulting from the proposed activities.

REFERENCES CITED:
• All authors’ names must be listed. (No “et al” or “and others.”)
• Use whatever citation format is acceptable for your field.

BIOGRAPHICAL SKETCHES (sample attached):
• Both the student and the faculty advisor need a Biosketch uploaded.
• Limited to two pages per person.
• Do NOT add additional sections (ex. Awards, Grants, etc.).
• The name of the city in which any university listed in the professional preparation section will need to be added (i.e. Indiana University, Bloomington)
• In the section for publications, there needs to be two lists of five papers, rather than one list of ten.
• In the section for collaborators and other affiliations, add the total number of names listed in each subheading in parenthesis - so if they have four collaborators add (4) after the subheading collaborators.

BUDGET:
• It is smart to use the budget template provided by ORA; the current template is “NSF sample budget 25 July 2015.xls”.

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10/21/11
• Make sure this matches the budget previously approved by the Office of Research Administration. (See below for deadlines).
• Limited to a total of $13,000 in direct costs for up to 24 months.
• Delete yourself from the Budget. Only the PI/academic advisor in section A. Senior Personnel should be displayed (for $0).
• Per guidelines: “These awards are intended to provide supplemental funds for items not normally available from the student's university or other sources. They are not intended to provide the total costs of a student's dissertation research. Allowable items include travel to specialized facilities or field research locations and professional meetings, use of specialized research equipment, purchase of supplies and services not otherwise available, the hiring of field or laboratory assistants, fees for computerized or other forms of data, and rental of environmental chambers or other research facilities. Funds may not be used for stipends, tuition, textbooks, journals, allowances for dependents, publication costs, or dissertation preparation or reproduction.”
• The Budget Justification should not exceed three pages. But the more detail, the better. Explain the need for each budget item requested in the context of the proposed research project. For instance, a request for per diem allowance for time away from a home base to conduct research should be carefully justified in terms of only those living costs in excess of those in the vicinity of the home campus or institution.

CURRENT & PENDING SUPPORT:
• Both the student and the faculty advisor need a Current & Pending Support document uploaded.
• This proposal must be included and listed as “Pending,” plus any additional current or pending projects.

FACILITIES:
• Describe only those resources that are directly applicable.
• Include an aggregated description of the resources that the organization will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., budget justification, project description). The description should be narrative in nature and must not include any quantifiable financial information.

OTHER SUPPLEMENTARY DOCS:
• Scan all Special Information and Supplementary Documentation and transfer as PDF in the "Supplementary Docs" form of FastLane.
• YOU MUST INCLUDE A STATEMENT LIMITED TO THE FOLLOWING WORDING: "[STUDENT NAME] HAS ADVANCED TO CANDIDACY FOR A Ph.D. DEGREE". This statement must be signed and dated by the department chairperson, graduate dean, or similar administration official; be sure to include that person’s title in the letter. Candidacy must be achieved before the submission deadline. If the institution does not grant candidacy or where candidacy is conferred near the
completion of the degree period, an explanation, signed by one of the officials noted above, must be provided.

- A statement labeled **Context for Improvement** is required as a Supplementary Document, not to exceed one page. This statement from the student should detail:
  
  1. how the NSF funding will substantially improve the overall dissertation project, and how it represents an enhancement to, rather than the core of, the student's dissertation research,
  2. an explanation of how the proposed research is intellectually independent of the student's advisor, and
  3. how the research cannot be supported through any research awards that support the advisor's own research.

- If you will use the award for travel expenses to work with a specialist, then a letter from the specialist agreeing to work with you should be included. The proposal should provide justification for this choice.

- Supplementary Documents may include letters of collaboration from individuals or organizations that are integral parts of the proposed project. Such involvement may include subsidiary involvement in some aspect of the project, cooperation on outreach efforts, or documentation of permission to access materials or data. Letters of collaboration should focus solely on affirming that the individual or organization is willing to collaborate on the project as specified in the project description. No additional text, especially elaboration of the nature of activities to be undertaken by the collaborator and endorsements of the potential value or significance of the project for the collaborator, may be included. The template that **must** be used for the preparation of letters of collaboration is provided below.

**DATA MANAGEMENT PLAN:**

- No longer than 2 pages.
[Sample Biographical Sketch]

PI Name
PI Office Address
PI Office Phone Number
PI e-mail

Professional Preparation

A list of the individual's undergraduate and graduate education and postdoctoral training as indicated below:

<table>
<thead>
<tr>
<th>Undergraduate Institution(s)</th>
<th>Major</th>
<th>Degree &amp; Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Institution(s)</td>
<td>Major</td>
<td>Degree &amp; Year</td>
</tr>
<tr>
<td>Postdoctoral Institution(s)</td>
<td>Area</td>
<td>Inclusive Dates (years)</td>
</tr>
</tbody>
</table>

Appointments

A list, in reverse chronological order, of all the individual's academic/professional appointments beginning with the current appointment.

Publications

A list of: (i) up to 5 publications most closely related to the proposed project; and (ii) up to 5 other significant publications, whether or not related to the proposed project. Each publication identified must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified.

For unpublished manuscripts, list only those submitted or accepted for publication (along with most likely date of publication). Patents, copyrights and software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., must not be included. Only the list of 10 will be used in the review of the proposal.

Synergistic Activities

A list of up to five examples that demonstrate the broader impact of the individual’s professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

Collaborators & Other Affiliations
• Collaborators and Co-Editors. A list of all persons in alphabetical order (including their current organizational affiliations) who are currently, or who have been collaborators or co-authors with the individual on a project, book, article, report, abstract or paper during the 48 months preceding the submission of the proposal. Also include those individuals who are currently or have been co-editors of a journal, compendium, or conference proceedings during the 24 months preceding the submission of the proposal. If there are no collaborators or co-editors to report, this should be so indicated.

• Graduate Advisors and Postdoctoral Sponsors. A list of the names of the individual’s own graduate advisor(s) and principal postdoctoral sponsor(s), and their current organizational affiliations.

• Thesis Advisor and Postgraduate-Scholar Sponsor. A list of all persons (including their organizational affiliations), with whom the individual has had an association as thesis advisor, or with whom the individual has had an association within the last five years as a postgraduate-scholar sponsor. The total number of graduate students advised and postdoctoral scholars sponsored also must be identified.
Each letter of collaboration **must** be signed by the designated collaborator. Requests to collaborators for letters of collaboration should be made by the PI well in advance of the proposal submission deadline, because they **must** be included at the time of the proposal submission. **Letters deviating from this template will not be accepted and may be grounds for returning the proposal without review.**

**[Letter of Collaboration template]**

To: NSF _________(Program Title)___________ Program  
From: ____________________________________

(Printed name of the individual collaborator or name of the organization and name and position of the official submitting this memo)

By signing below (or transmitting electronically), I acknowledge that I am listed as a collaborator on this proposal, entitled "_____ (proposal title)_______," with _____(PI name)_____ as the Principal Investigator. I agree to undertake the tasks assigned to me or my organization, as described in the project description of the proposal, and I commit to provide or make available the resources specified therein.

Signed: _______________________
Organization: ________________________________
Date: _________________________