Introduction to the National Science Foundation

Clint Brown, Interim Co-Director
Office of Sponsored Programs
Mission and Organization of NSF

- is the only federal agency whose mission includes support for all fields of fundamental science and engineering, except for medical sciences. In addition to research, NSF funds the procurement and development of instrumentation, conferences and workshops, dissertation research in selected areas, international travel and graduate fellowships.
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- Mission and Organization of NSF cont.
  - is organized into Directorates and Offices
  - each **directorate** is divided into **divisions**, and divisions have **specific programs** and funding opportunities; Each directorate has its own culture, priorities, procedures and budgets. It is therefore very important for researchers to identify the directorate and programs that are likely to have an interest in funding their research, and get to know the culture and priorities of those programs.
NSF Funding Priorities

- Develop intellectual capital (promote diversity in S&E, attract US students to S&E, promote public understanding of S&E, and support research on learning and teaching of S&E)

- Where to find funding opportunities:
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Extramural Funding Types

- **Solicited:** Solicitations are issued to announce NSF’s intention to fund particular types of projects and areas of research. Solicitations are usually more focused than Program Announcements and are often tied to a particular agency priority research areas or initiatives. Solicitations may be issued only once, may be issued for several years or may be issued on a regular, recurring basis. Formatting requirements may differ from those in the Grant Proposal Guide and are spelled out in the solicitation.

- **Unsolicited:** Program Descriptions and Program Announcements describe research programs that will accept “unsolicited” proposals. These programs fund the traditional, disciplinary core research projects usually involving one to three investigators. Descriptions of research areas that each program will fund are given on the program web pages, which can be found going to the Directorate web site, selecting the Division of interest and finally selecting the program web page. Programs typically accept unsolicited proposals once or twice each year at about the same time. Programs may list “due dates,” which are firm dates beyond which proposals will not be accepted, “target dates,” which are more flexible, and “target windows,” which designate a time period, usually 1 or 2 months, within which proposals will be accepted. Unsolicited proposals must follow the formatting guidelines listed in the NSF Grant Proposal Guide unless otherwise specified by the program.
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- We are ready to apply “WHAT NOW??”
  - Meet with PI to discuss responsibilities
  - Make sure you and the PI have Fastlane accounts
  - Review the guidelines/complete the NSF application in Fastlane
  - Complete Vanderbilt internal requirements
    - Coeus
    - Peer
  - Allow OSP access to review and submit in Fastlane
We are ready to apply “WHAT NOW??”

- Meet with PI to discuss responsibilities
  - Timing of submission (set up your timeline)
  - Type of application
  - Does the PI have a NSF Fastlane account?
  - Title
  - Key personnel (will need biosketchs and other support for each)
  - Budget
  - Collaborating sites (Is it a collaborative research project)
  - Decide who will do what in Fastlane
We are ready to apply “NOW WHAT??”

- Does PI have a Fastlane account?
  - If not, send email request to your OSP-Sponsored Program Specialist (SPS) containing the following information:
    - PI full name
    - PI home department
    - Email address
    - Vanderbilt phone and fax number
    - Highest degree received and sub specialty
    - Year highest degree received
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- We are ready to apply “NOW WHAT??”
  - If you help your PI build the application in Fastlane and you want your own account.....
  - Send an email request to your OSP-Sponsored Program Specialist (SPS) with the following information:
    - Administrator Full Name
    - Email address
    - Vanderbilt phone and fax number
  
Your SPS will set you up as an “Other Authorized User”
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- We are ready to apply “NOW WHAT??”
  - Review the NSF guidelines
    - Application receipt date
    - Document formatting
    - Page limitations
    - Budgetary
    - Information for collaborative research proposals
      - Vanderbilt is prime site vs. not the prime site
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Application receipt date
    - Target Dates
    - Submission Windows
    - Deadline Dates
      - Special Exceptions to Deadline Dates
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Document formatting
    - Font
    - Text limit within one inch vertical space
    - Margins
    - Line spacing
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Page formatting
    - Project Summary
    - Project Description
    - Results from NSF Support
    - Unfunded Collaboration
    - Proposals for Renewed Support
    - References
    - Biosketch
    - Current and Pending Support
    - Facilities, Equipment and Other Resources
    - Research Mentoring Plan
    - Data Management and Sharing Plan
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- We are ready to apply “NOW WHAT??”
  - Review the NSF guidelines
    - Project Summary
      - The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Project Description
    - The Project Description should provide a clear statement of the work to be undertaken and must include: objectives for the period of the proposed work and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere. The Project Description (including Results from Prior NSF Support, which is limited to five pages) **may not exceed 15 pages.** Visual materials, including charts, graphs, maps, photographs and other pictorial presentations are included.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

- Results from Prior NSF Support
  - If any PI or co-PI identified on the project has received NSF funding in the past five years, information on the award(s) is required. Each PI and co-PI who has received more than one award (excluding amendments) must report on the award most closely related to the proposal.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Unfunded Collaboration
    - Any substantial collaboration with individuals not included in the budget should be described and documented with a letter from each collaborator, which should be provided in the supplementary documentation section of the FastLane Proposal Preparation Module.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

- Proposals for Renewed Support
  - A proposal for renewed support may be either a “traditional” proposal in which the proposed work is documented and described as fully as though the proposer were applying for the first time; or, an “Accomplishment-Based Renewal” (ABR) proposal, in which the Project Description is replaced by copies of no more than six reprints of publications resulting from the research supported by NSF during the preceding three to five year period, plus a brief summary of plans for the proposed support period.
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- We are ready to apply “NOW WHAT??”
  - Review the NSF guidelines
    - References
      - Each reference 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. Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. While there is no established page limitation for the references, this section must include bibliographic citations only.
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We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Biosketch
    - A biographical sketch (limited to two pages) is required for each individual identified as senior project personnel. See the attached handout for information and formatting instructions.
  - Current and Pending Support
    - Current and Pending Support is required for each individual identified as senior project personnel. See the attached handout for information and formatting instructions.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Facilities, Equipment and other Resources
    - This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the resources that the organization will provide to the project, should it be funded.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Mentoring Plan
    - Each proposal that requests funding to support postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. In no more than one page, the mentoring plan must describe the mentoring that will be provided to all postdoctoral researchers supported by the project, irrespective of whether they reside at the submitting organization, any subawardee organization, or at any organization participating in a simultaneously submitted collaborative project.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Data Sharing and Management Plan
    - Proposals must include a supplementary document of no more than two pages labeled “Data Management Plan”. This supplement should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results.
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We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

  - Budget

    - Each proposal must contain a budget for each year of support requested, unless a particular program solicitation stipulates otherwise. The amounts requested for each budget line item should be documented and justified in the budget justification. The budget justification should be no more than three pages.
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We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

  - Budget
    - Major categories used by NSF
      - Salary and Wages
      - Fringe Benefits
      - Equipment
      - Travel
      - Participant Support Costs
      - Other Direct Costs
      - Indirect Costs
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Budget
    - Senior Project Personnel Salaries & Wages Policy
      - As a general policy, NSF limits salary compensation for senior project personnel to no more than two months of their regular salary in any one year. This limit includes salary compensation received from all NSF-funded grants. If anticipated, any compensation for such personnel in excess of two months must be disclosed in the proposal budget, justified in the budget justification, and must be specifically approved by NSF in the award.
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We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

  - Budget
    - Administrative and Clerical Salaries & Wages Policy
      - Salaries of administrative or clerical staff may be requested as direct costs for a project requiring an extensive amount of administrative or clerical support and where these costs can be readily and specifically identified with the project with a high degree of accuracy. The circumstances for requiring direct charging of these services must be clearly described in the budget justification.
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We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

  - Budget
    - Fringe Benefits
      - NSF grant funds may be requested to fund fringe benefits as a direct cost. These are typically determined by application of a calculated fringe benefit rate for a particular class of employee (full time or part-time) applied to the salaries and wages requested.
    - For Vanderbilt’s current Federally approved fringe benefit rates please visit: [http://www.vanderbilt.edu/ocga/fringebenefit/fringebenefit.htm](http://www.vanderbilt.edu/ocga/fringebenefit/fringebenefit.htm)
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Budget
    - Equipment
      - Equipment is defined as an item of property that has an acquisition cost of $3,000 or more and an expected service life of more than one year. It is important to note that the acquisition cost of equipment includes modifications, attachments, and accessories necessary to make the property usable for the purpose for which it was purchased. Items of needed equipment must be adequately justified, listed individually by description and estimated cost.
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- We are ready to apply “NOW WHAT??”
  - Review the NSF guidelines
    - Budget
      - Travel
        - Travel and its relation to the proposed activities must be specified and itemized by destination and cost. Funds may be requested for field work, attendance at meetings and conferences, and other travel associated with the proposed work, including subsistence. In order to qualify for support, however, attendance at meetings or conferences must be necessary to accomplish proposal objectives, or disseminate its results. Allowance for air travel normally will not exceed the cost of round-trip, economy airfares. Persons traveling under NSF grants must travel by U.S.-Flag Air carriers, if available.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Budget
    - Participant Support Costs
      - This budget category refers to costs of transportation, per diem, stipends and other related costs for participants or trainees (but not employees) in connection with NSF-sponsored conferences, meetings, symposia, training activities and workshops.
      - Generally, indirect costs (F&A) are not allowed on participant support costs. These costs also must be justified in the budget justification section of the proposal. Some programs, such as Research Experiences for Undergraduates, have special instructions for treatment of participant support.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Budget
    - Other Direct Costs
      - The budget must identify and itemize other anticipated direct costs not included under the other headings discussed, including materials and supplies, publication costs, computer services and consultant services.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

- **Budget**
  - **Indirect Costs**
    - The applicable indirect cost rate(s) negotiated with HHS must be used in computing indirect costs (F&A) for a proposal. The amount for indirect costs should be calculated by applying the current negotiated indirect cost rate(s) to the approved base(s).
    - For Vanderbilt’s current F&A rate agreement please visit: http://www.vanderbilt.edu/ocga/indirect/F&ARateAgreement02112011.pdf
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We are ready to apply “NOW WHAT??”

- Review the NSF guidelines
  - Budget
    - Indirect costs
      - Exceptions to Basic Policy: In some cases, NSF program solicitations may indicate no or limited reimbursement for indirect costs. In addition, NSF generally provides no amounts for indirect costs for the following: grants to individuals; grants solely for the support of travel, equipment, construction of facilities, or doctoral dissertation research; grants in which NSF support is exclusively in the form of fellowships, traineeships or other fixed amounts such as cost-of-education allowances; participant support costs.
We are ready to apply “NOW WHAT??”

- Review the NSF guidelines

Collaborative Research Proposals

- A collaborative proposal is one in which investigators from two or more organizations wish to collaborate on a unified research project. Collaborative proposals may be submitted to NSF in one of two methods: as a single proposal, in which a single award is being requested (with subawards administered by the lead organization); or by simultaneous submission of proposals from different organizations, with each organization requesting a separate award. In either case, the lead organization’s proposal must contain all of the requisite sections as a single package to be provided to reviewers. All collaborative proposals must clearly describe the roles to be played by the other organizations, specify the managerial arrangements, and explain the advantages of the multi-organizational effort within the Project Description.
We are ready to apply “NOW WHAT??”

- Route Coeus/NSF application for approval
  - Items needed for routing
    - Proper announcement guidelines uploaded as a narrative
    - All Coeus “tabs” completed as required
    - Narrative place holder for “Final submitted Application” OSP will upload final copy “as submitted”
    - Final Budget Detail
    - Final Budget Justification
    - Draft Science
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We are ready to apply “NOW WHAT??”

- Complete PEER log
  - PI Assurance-
    - Policy: One assurance will accompany each individual application for all new, renewal, resubmission or continuation proposals.
    - PI’s are certifying:
      - application is true, complete and accurate to the best of their knowledge.
      - she/he accepts the responsibility for the scientific conduct of the project and will fulfill all reporting requirements.
      - that false, fictitious or fraudulent statements or claims made may subject them to criminal, civil or administrative penalties
      - and she/he will observe all sponsor and VU policies, including but not limited to: IRB, IACUC and VEHS policies
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We are ready to apply “NOW WHAT??”

- Complete PEER log
  - COI-
    - Policy: For PHS and NSF grant applications, a COI must be provided by any Vanderbilt internal Investigator (Key Personnel) responsible for the design, conduct or reporting of PHS funded or NSF funded research before an application is submitted.
    - KP certifies either she/he has or has no significant financial interest. If a potential conflict has been identified in PEER, you will be notified by an OSP representative with instructions on how to proceed. In the event a FCOI has been identified, this will not prevent the submission of the application.
We are ready to apply “NOW WHAT??”

- Upload final documents into Fastlane
  - Review final documents in conformance with announcement and proposal guidelines
  - Covert to PDF
  - Review again….Upload to Fastlane

Link to instructions on how to use Fastlane:
https://www.fastlane.nsf.gov/NSFHelp/flashhelp/fastlane/FastLane_Help/fastlane_help.htm#fastlane_help_for_proposal_functions.htm
We are ready to apply “NOW WHAT??”

- Submit Application
  - Approve and Submit. Submitting in Fastlane will give OSP access to review proposal, check for errors and submit on behalf of the PI and Vanderbilt University.

**If you want OSP to review the application in Fastlane prior to completing the full application, set your OSP representative up as a “reviewer” see the below link for details

https://www.fastlane.nsf.gov/NSFHelp/flashhelp/fastlane/FastLane_Help/fastlane_help.htm#fastlane_help_for_proposal_functions.htm
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We have applied “NOW WHAT??”

- Proposal Review and Processing:
  - Upon receipt of a proposal, Program Officers conduct a preliminary review to ensure completeness and conformance with NSF requirements, which are outlined in GPG, Chapter II.A. Conformance with Instructions for Proposal Preparation and in GPG, Chapter II.B. Format of the Proposal. Adherence to these requirements is strictly enforced (unless the proposal has an approved deviation). If the proposal does not adhere to the instructions in the GPG (or the program solicitation, if applicable), NSF may return the proposal without review. There are nine reasons for which a proposal may be returned without review. (See handout of 9 reasons)
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We have applied “NOW WHAT??”

Proposal Review and Processing Cont:

- Reviewers evaluate all NSF proposals through the use of two National Science Board approved merit review criteria: Intellectual Merit and Broader Impacts.

- The NSF Program Officer reviews the proposal and analyzes the input received from the external reviewers. In addition to the external reviews, Program Officers consider several factors in developing a portfolio of funded projects.

- Final programmatic approval for a proposal is generally completed at the Division level. Funding recommendation is submitted to the Division of Grants and Agreements for award processing.
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We have applied “NOW WHAT??”

- Peer Review Process (Recommended “not funded”):
  - A declined proposal may be resubmitted, but only after it has undergone substantial revision. A resubmitted proposal that has not clearly taken into account the major comments or concerns resulting from the prior NSF review may be returned without review. NSF will treat the revised proposal as a new proposal, subject to the standard review procedures.
We have applied “NOW WHAT??”

- Peer Review Process (Recommended for Funding):
  - NSF program staff will contact PI and Grantee Signing Official requesting additional information, such as a revised budget, or will issue the award based on the submitted proposal. If updates are requested, documents are to be uploaded into Fastlane using the “update” feature.
We were funded “NOW WHAT??”

- Notice of Grant Award (NGA) is emailed to central email depository in OSP.
- Email notification with award attached is sent from OSP to lead departmental administrator, PI and post award central office contact
- A restricted budget/1275 should be submitted to set up a center number...
- If a center number is required prior to receiving a NGA, an interim center can be established. NSF allows grantees to authorize 90 day pre-award spending without their prior approval.
National Institute of Health (NIH)

Oh no, progress report due “NOW WHAT??”

- All NSF awards require an annual progress report
- Unless otherwise specified in the award, annual project reports should be submitted at least 90 days prior to the end of the current budget period to allow adequate time for the Program Officer to review and approve the report. As reflected in the Fastlane Project Report System, the report is considered due during the 90 day period. The report becomes overdue the day after the 90 day period ends.
- These progress reports are submitted through Fastlane by the PI. No approval is required by OSP in Fastlane regarding progress reports, however internal approval maybe required.
Oh no, progress report due “NOW WHAT??”

To determine if internal approval is required…..first review the notice of grant award.

- For “standard grants” all funding was given in year 1 of the award for a multi year project….no internal approval is needed for the annual progress report submission.

- For “continuing grants” each year increment of funding is subject to NSF’s judgment of satisfactory progress, availability of funds, and receipt and approval of the required annual report. If the award authorizes funding in yearly installments than YES…
Oh no, progress report due “NOW WHAT??”

- If Yes…than a new Coeus record and Peer log is required.
  - Detailed one year budget for up coming budget period matching proposed award amount for upcoming year
  - Copy of most recent IRB approval, as applicable
  - Copy of most recent IACUC approval, as applicable
  - Copy of Fastlane progress report
  - PEER
    - COI’s for all key personnel
    - PI assurance for all PI’s
Oh no, project end date is approaching and we are NOT finished “NOW WHAT??”

Grantee-Approved Extension. Grantees may authorize a one-time extension of the expiration date of the grant of up to 12 months if additional time beyond the established expiration date is required to assure adequate completion of the original scope of work within the funds already made available. This one-time extension may not be exercised merely for the purpose of using the unliquidated balances. Grantees are not authorized to extend an award that contains a zero balance. The grantee shall notify NSF, providing supporting reasons for the extension and the revised expiration date, at least ten days prior to the expiration date specified in the grant to ensure accuracy of NSF’s grant data. All grantee-approved extension notifications must be submitted via the FastLane system. For grantee-approved extensions, no amendment will be issued.

See handout for PI instructions
Oh no, we received a NCE and we are still NOT finished “NOW WHAT??”

- If additional time beyond the extension provided by the grantee is required and exceptional circumstances warrant, a formal request must be submitted to NSF via FastLane. The request must be submitted to NSF at least 45 days prior to the expiration date of the grant. The request must explain the need for the extension and include an estimate of the unobligated funds remaining and a plan for their use. Unobligated funds may remain at the expiration of the grant is not in itself sufficient justification for an extension. The plan must adhere to the previously approved objectives of the project. All requests for NSF approved extensions must be submitted via the FastLane system.
The project is finally finished “NOW WHAT??”

……..hold on… not quite finished…..

NSF has a 90 day close-out period where the following documents are due….

- Final technical/scientific progress report
- Federal financial report or (FFR)
- Project outcome report submitted electronically to Research.gov

These documents are uploaded into Fastlane and submitted by either OCGA/Finance (Final Financial Report) and PI (final technical report). The Project Outcome report is required and filed by the PI in Research.gov

Once all 3 have been accepted by NSF, then the project is officially CLOSED!!! Data retention, 3 years from accepted close by NSF.
Questions???
and
Thank you!!