

NSF OUTLINE: If you are making an application to the National Science Foundation, the following suggestions will help you. If you would be doing an actual grant, you would either use the Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)/FastLane or the Grants.gov Application Guide (<http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf>)/Grants.gov. *For the class, you may skip sections: 3 and 6.*

C. PROJECT DESCRIPTION (Limited to 15 pages)

1. Overview and Objectives:

- a. Opening sentence (specifically targeting NSF's mission)
- b. Current knowledge (3-to-4 sentence overview)
- c. Gap in the knowledge base to be addressed (a very specific entity)
- d. Why the gap is an important problem (next step in field prevented)
----- paragraph
- e. Long-term goal
- f. Overall objective for the application (which is to fill the gap, above)
- g. Central hypothesis and how formulated
- h. Rationale (with new knowledge, can take the step that is being prevented)
- i. Why research team is well prepared (why your team has a running start: focus provided by preliminary data plus attributes of researchers and their research environment that make you the best ones to do the work)
----- paragraph
- j. Specific aims of the proposed research, with a working hypothesis for each
----- paragraph
- k. Why the proposed research is creative and original
- l. Expected outcomes (at least one for each specific objective)
- m. Generality regarding positive impact (usually pertains to vertical advance)

2. Expected Significance:

- a. First part of paragraph details existence of gap and details why it is an important problem
- b. Statement of why the proposed work is expected to be significant (sentence should be highlighted in Italics)
- c. List of benefits that could credibly be expected to accrue to application of new knowledge that will be obtained

3. Relation to the Principal Investigator's Longer-Term Goals

4. Background:

- a. Review of literature relevant to this application
- b. Results of prior NSF support
- c. Preliminary studies

5. Experimental Plan:

- a. Specific objective #1 (verbatim restatement from section #1, above)
- b. Specific objective #2 (verbatim restatement from section #1, above)
- c. Etc. for additional objectives
- d. Future directions

6. Relation to Other Work in Progress:

- a. By the Principal Investigator under auspices of other support
- b. Elsewhere

7. Broader Impact:

- a. Integration of research and education
- b. Participation of underrepresented groups
- c. Enhancement of infrastructure for research and/or education
- d. How results will be disseminated broadly
- e. Benefits to society at large