

Rosen Scholar Proposal Template and Instructions

This document provides the instructions and template for a proposal for the Rosen Scholarship. Each section of the template provides important instructions as to how that section should be written. Please do not deviate from the format, font, font size, or page limits provided in the template, and please take full advantage of the guidance provided in this template.

It is strongly suggested that you first read through this entire document and take note of the various pieces of information that will be required and the order in which that information should be written. Here are a few points for immediate consideration:

Know your target audience. Realize that reviewers will fall into two classes: (1) those well versed in the general field in which they are reviewing proposals, but probably not expert in your specific sub-category, and (2) intelligent scientists and engineers from another field. The most successful proposals have been those that reach both audiences, communicating both the excitement of the project and its technical soundness.

Identify your project and yourself. The title of your proposal must be entered in the page header. The PI's name (last, first, middle) must be entered in the footer.

Complete this Full Proposal Template, observing all page limits.

- **Full proposal body (3 pages maximum).** The template suggests page limits for each section, but as long as you do not exceed the overall page limits for the proposal body, section limits are left to your discretion.
- An appendix consisting of five additional sections is not included in the page limit (Qualifications of PI, Acronyms, Citations, Computing Resources Needed).

Graphical explication of concepts is encouraged. Graphics that illustrate not only technical results and instruments, but also more abstract concepts, have great value in reaching your audience. Graphics must be sized large enough to be readable. Well-written proposals typically use at least 25% of the page area for graphics.

Proposal Title

PI: Name (Last, First, Middle Initial); Affiliation; Email

Coversheet not included in Proposal page count

Research Goals

Summarize the broad, long-term research goals (objectives) of the specific research proposed. Use this section to catch your reader's attention. Explain why the reviewer should be interested and excited about your research. Examples of research goals: test a hypothesis, create a novel design, solve a specific problem, address a critical barrier to progress, or develop new technology. Two to three relatively broad goals are reasonable for an ER proposal. The suggested section length is about half a page.

Background & Significance

Provide a brief background for the proposal (including relevant published work), critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill. Clearly state how this work will impact the field and advance our scientific knowledge. Describe the potential impact on the concepts, methods, technologies, or basic knowledge of this field. A critical component of this section is to differentiate the proposed work from ongoing work – at Los Alamos or elsewhere. Set the stage for the proposed work; convince the reviewer of the technical importance of the problem being addressed and of the tremendous impact and significance of the expected outcome(s). The suggested section length is about one page.

Subsections may be added

Subsections are not required but you may wish to divide this section into sub-sections. One possible subsection may describe novelty of work in light of other on-going work.

R&D Approach

After convincing the reader of the importance and impact of your proposed work, this section explains *how* you will conduct your research. Explain the specific approach that will be used to meet the research goals. The suggested length for this entire section is one to two pages.

Preliminary studies

Use this subsection if preliminary studies have been performed. Outline the current state of this work at the Laboratory or at collaborative institutions. Preliminary studies are any work pertinent to this proposal that will help establish the efficacy of the ideas and the experience and competence of the investigator to pursue the proposed project.

Methods, Technical Challenges & Alternatives

Describe the research design concepts, procedures, and analyses to be used to accomplish the research goals of the project. Include how the data will be collected, analyzed, and interpreted. Describe any new methodology and its advantage over existing methodologies. Describe any novel concepts, approaches, tools, or technologies for the proposed studies.

Successful PIs recognize the most significant and most likely technical challenges they will face and plan for those eventualities. An important component of a good proposal is to convey a clear understanding of the highest risk aspects of the proposed approach and describe alternate approaches. A proposal will be less competitive if it does not address the most important technical challenges.

The purpose of this section is to convince the reviewer that the challenges underlying each research goal are well understood and that there is a well-conceived plan for addressing those

challenges. The PI should communicate that the most difficult technical challenges have been carefully analyzed and alternative approaches have been considered (*e.g.*, If plan A fails, what is plan B?)

A final purpose for this section pertains to those proposals with *exceptionally high-risk* research challenges or unknowns and commensurate high-value benefits. In the past, reviewers have been reluctant to positively review high-risk/high-payoff proposals that may experience an insurmountable technical obstacle in the project's early stages. In order to improve the chance of success for such high-risk/high-payoff proposals, this section should be used to clearly define the highest-risk component(s) of the work, explain mitigating approaches, and describe go/no-go decision points in the project that will enable a reviewer to assess the prospects for a successful project outcome at the one- and two-year milestones.

Expected results

This section should describe the expected results of a successful project. A critical aspect of this section is to consider the challenges and alternatives discussed above and explain how the results may be used to assess whether the research effort has been successful.

Budget Request Justification

Provide a *justification* that the budget requested is reasonable and sufficient for the proposed work. The budget should cover your salary at your home institution, including the appropriate benefits and overhead, and travel. Any request for supplemental materials and services (M&S) must be justified here. No more than \$15K of M&S may be requested. Describe how all significant M&S costs are crucial to the proposed project goals.

***** END OF PAGE-LIMITED SECTION *****

Qualifications of PI

Explain why the proposed PI is qualified to conduct the work. This section should include a brief description of past work carried out by the PI. Also describe why this work should be conducted at Los Alamos and how it furthers the goals of LANSCE, what Laboratory resources enable this work, and what unique capabilities and resources at Los Alamos are important for this work. The suggested length for this section is one page.

List of Acronyms

Please include a list of acronyms used in the proposal.

Citations

Pages used to list references will not be included in the proposal page count. List all references you may have used throughout the body of your proposal and number them accurately so that they match the in-text reference numbering.

Investigators CV

The CV should not exceed two pages. CV's do not count in the proposal length.