Visiting Faculty Program Teaching Initiative Proposal Guidance

Revised 10/17/2022

The Visiting Faculty Program (VFP) Teaching Initiative Track provides an opportunity for faculty to collaborate directly with research staff at DOE national laboratories in order to stimulate the development of innovative teaching and learning practices in STEM education at their home institution. The experience enables visiting faculty to acquire new knowledge and skills for developing course content, certificate programs, seminars, modules, and learning resources to foster the connection between the STEM curriculum and career opportunities in key DOE science and technology mission areas.

VFP requires each faculty applicant to develop and submit a collaborative project proposal. This proposal is co-written by the faculty applicant and the collaborating staff member of the DOE host laboratory, who together serve as the project's co-Principal Investigators.

EXCLUSION: Proposals focused on survey or education research studies are outside the scope and will not be considered.

Requirements for the formatting, content, submission, and evaluation of VFP proposals are provided below.

Proposal format

Element	Requirement
File type	Adobe Acrobat PDF document with ".pdf" extension after filename
Page margins	One-inch margins on all sides
Font size	12 point
Font type	Times or Times New Roman; use symbolic font for math notation
Text spacing	Single spacing
Page headers and footers	Left-side header: Your proposal title Left-side footer: The faculty applicant's name Right-side footer: Page numbers
Figures	Proposals may contain embedded figures, but the entire proposal should be legible when printed in black and white; color figures that are not clear or understandable in black and white should be avoided. Figures must fit within the stated page limit.

Required proposal elements

1. Cover page (*one-page limit*) must include the following:

Proposal title and abstract: Provide a descriptive title of your proposed project and an abstract that concisely (no more than 250 words) summarizes the proposed project, the approach, and the expected outcomes.

Experimental team: Use a table to list the name, institution, email address, and role of each participant (including any students) in the proposed activities. This section may also briefly mention directly-relevant previous work done by the team members.

Scientific facilities: Briefly explain if any scientific user facilities will be used in your project. Please also comment if the proposed work is contingent upon winning a

user facility access proposal.

2. Proposal body (*six-page limit, not including references)* should communicate effectively the innovation and excitement of the proposed research ideas. It must include:

Background: Define the context for the proposal by relating it to other work, at the host laboratory and elsewhere, including any preliminary studies. Explain how the proposal is innovative and addresses challenges in STEM education at home institutions through collaborations with DOE national laboratories. The following information should be provided:

- One to three references to key publications by others that describe the state-of-the-art in the area of science proposed
- Identification, if possible, of connections of the proposed work to current and future programmatic activities and workforce development at the national laboratory.
- Identification of other current or recent Office of Science projects that are related to, or may have led to, the proposal
- Gaps in the current state of our knowledge.
- For proposed research building from previous work funded by VFP, a summary of the work, relevant findings, and the connection to the proposed work.

Project objectives and goals: Concisely define your research project goals and describe how accomplishment of the goals contribute to student engagement and learning in STEM at the home institution.

Project approach and expected outcomes: The detail science of the proposed research project should be described. Identify the rationale for the approach, the design of your activities and the methods you will use, and the expected results. Different from the proposal submitted to the VFP Research Collaboration Track, 1) discuss the extent which the project and approach supports, advances, or integrates content and skills on key DOE research areas into undergraduate and/or graduate education curriculum or training at home institution should be a major and clearly described, and 2) describe a plan for assessing the outcomes on STEM teaching at the home institution as a direct result of the proposed project. While it is recognized that in the most innovative research and development it is difficult to predefine concrete milestones, the authors should nonetheless describe short-term and potential long-term impacts they might expect during the project.

Key deliverables: List the key deliverable(s) you expect to accomplish. Clearly state the scientific and technical impact of this project based upon the listed deliverables.

References cited: References are not included in the 6-page limit for the proposal body.

3. Teaching Statement (*limit of two pages per investigator; teaching statements are not part of the six-page limit for the proposal body*). A one-page teaching statement by the VFP applicant must be submitted in PDF format as part of the application package. The teaching statement reflects the faculty member's current approaches and achievements to teaching at their home institution. This document should communicate the faculty member's perspectives on teaching and methods of enhancing student learning in STEM disciplines.

4. Curricula vitae *(limit of two pages per investigator; vitae are not part of the six-page limit for the proposal body).* A two-page curriculum vita (CV) for each co-investigator must be submitted in PDF format as part of the application package. **A CV must be submitted for the national laboratory co-investigator as well as for the applying faculty member.** The purpose of these vitae is to demonstrate that the people to be supported on the proposed project have the requisite talent and experience to carry out the proposed research and development effort. Vitae should include lists of:

- Example recent publications relevant to the subject of the proposal
- Investigator's current projects
- Recent collaborators.

Proposal submission

Proposals must be submitted by uploading PDF files into the VFP online application system.

Proposal review

All eligible proposals will be objectively studied by independent merit reviewers. An applicant must meet all eligibility criteria and have an application package comprising all required materials in order to be considered. The proposal materials uploaded and received through the electronic submission process will provide the sole basis for the review.

The merit review process evaluates three criteria, listed below in order of decreasing importance:

1. **Scientific and/or technical merit of the project,** including DOE mission relevancy and the influence that the results might have on the direction, progress, and thinking in relevant scientific fields of research; the likelihood of achieving valuable results; and the scientific innovation and originality indicated in the proposed research.
2. **Appropriateness of the proposed method or approach,** including the logic and feasibility of the research approaches and the soundness of the conduct of the research.
3. **Competency of the personnel and adequacy of proposed resources,** including the background, past performance, and potential of the investigator(s); and the research environment and facilities for performing the research.