

## Tips for writing a good Undergraduate Research Fellowship Proposal

**Start early.** It takes time to develop a research idea. As you start to work out the details, you will often find that there is additional information that you will need to gather. Also, sometimes you will find stepping away from the proposal writing for some time helps the ideas to gel in your mind.

Talk to faculty members that might serve as research mentors.

**Start early.** It may take time to schedule a time to meet with potential faculty mentors. Also, you may find that the first person you meet with is not the best match and/or it may take multiple meetings to refine your idea.

Find a topic that interests you or that you are curious about. You will be spending a lot of time working on the research and there will likely be pitfalls and frustrations along the way, but if you are interested in the topic, you can make it through these problems and have fun with the project.

Your proposal should answer three questions.

*Why is the research important?* Provide some background on the application relevant to the proposed research.

*What will you learn from the research?* A research proposal should have specific research questions it aims to answer, or hypotheses it aims to prove, together with a plan for doing so. Engineering proposals often focus on improving performance of some type, which is certainly important. However, understanding the reasons for the improvements is important, so you should clearly articulate the objectives of the research in terms of the scientific question you are answering or hypothesis you are proving.

*How will you accomplish the objectives?* Describe the approach you will take to accomplish the research objectives, with a focus on the scientific question or hypothesis. While improving engineering performance is valuable, a strong research project will provide the understanding that will lead to those improvements. The research plan should be designed to not only evaluate performance but understand the reasons for those improvements.

Your application will be reviewed on its technical merits, but it will be reviewed on other criteria as well. Ultimately, it will be ranked relative to other College of Engineering proposals. So, why should *you* be funded, rather than someone else? Pay attention to factors like the following.

- *URFP provides research opportunities for students, not free labor for professors.* Your proposal is less likely to be funded if it is simply contributing to an existing research project (e.g., collecting data). In contrast, a proposal to autonomously

develop and evaluate your own idea—one that is interesting to you and potentially beneficial to a wider audience—will tend to be evaluated more positively.

- *Convey why you are a good investment.* Do you have the academic qualifications and experience necessary to pursue your research idea? How will your research experience benefit you after graduation? Will your research results impact others, inside or outside Auburn?
- *Remember that your proposal will be reviewed by faculty outside your field.* Someone without expertise in your subject matter should be able to understand (1) why your research is worthwhile, (2) what research questions or hypotheses you will address, (3) how you will address them, and (4) how you will evaluate, or measure the quality of, your results.

**Start early.** The proposals are not very long, which may make you think you do not need much time. However, effectively articulating the importance of the research, your research hypothesis and your approach for proving your hypothesis concisely is not easy.

Ben Franklin once ended a paper with the statement,

“I have already made this paper too long, for which I must crave pardon, not having now time to make it shorter.”

Similarly, Woodrow Wilson when asked how long it takes him to write a speech answered,

“That depends on the length of the speech. If it is a ten-minute speech it takes me all of two weeks to prepare it; if it is a half-hour speech it takes me a week; if I can talk as long as I want to it requires no preparation at all. I am ready now.”

Ask a friend to read a draft of the proposal to see if the objectives and approach are clear. A good proposal will be accessible to someone not familiar with the topic.

Finally, remember to **start early**.