

Ribble Undergraduate Research Scholar Application

NAME

Student ID # without the 9

UKY E-MAIL

By signing here,

- a. I certify that I am a Kentucky resident and therefore eligible for a Ribble Scholarship.
- b. I give the Department of Biology permission to post my name, picture, and a description of my project on the department website.

Student's signature:

Date:

FOR FACULTY RESEARCH MENTOR

Faculty mentor:

Faculty Mentor's E-mail Address:

By signing here, I certify that...

- a. **I approve of this student's research as described in the proposal.**
- b. **I believe that the student and their project are promising and have the potential to continue in my laboratory next semester.**

Faculty Mentor's Signature:

Date:

ACADEMIC INFORMATION

Current Overall GPA:

Credit Hours earned (completed):

Expected Graduation Date:

Indicate how this award will help you (financially, career-wise, educationally, etc.). You are not expected to spend the award on laboratory supplies.

RESEARCH PROPOSAL

Type your research proposal as outlined below in a separate document and attach it to this file.

RESEARCH PROPOSAL GUIDELINES

Organize your writing in sections with subheadings as listed below. Brevity and clarity are essential features of good scientific writing. The entire write-up must not exceed two single-spaced pages. Review of the proposal will analyze the student's grasp of the research project, the study design in relation to the hypotheses, its rationales, and implications. **The student, in consultation with the research mentor, must author this proposal.**

1. **Background:** Provide a brief background that (1) explains the study system, and (2) explains why the central research question of your study is important. You will need to support statements with references.
2. **Specific objectives:** What is the specific research question or hypothesis you are testing?
3. **Overarching Goals** (to be included ONLY if your project is part of a bigger project in the lab): What are the overall goals of the bigger project that you are a part of? What is your specific role in the project and how will your research contribute to this larger goal?
4. **Methods:** Describe the experiments that you have performed until now, and will be continuing, and the purpose of these methods in relation to your aims. Make sure to spell out any abbreviations or acronyms.
5. **Presentation:** Explain where this research will be presented.
6. **Literature cited:** List all cited references including author names, year, title, journal, volume, and page numbers. You should cite at least two peer-reviewed references.

SUGGESTED REFERENCE CITING FORMAT (any other format used in a typical biological journal is acceptable)

Within text: Use only last names of authors.

The sky is blue (Shenoy, 2012). Researchers (Osterhage and Mirabito, 2020) have shown that the sky appears blue under certain conditions. It is known that the scattering of light causes the sky to appear blue (Mirabito et al, 2017).

Reference list:

Authors. Year. Title. Journal, volume: start page-end page.

Examples (completely made up!):

Shenoy K. 2012. The color of the sky. Journal of Sky Colors, 22: 17-23.

Osterhage JL, Mirabito PM. 2020. What color do you see? Journal of Sky Colors, 22: 17-23.

Mirabito PM, Osterhage JL, Shenoy K. 2017. Effect of light on the color of the sky. Journal of Sky Colors, 22: 17-23.

(See Scoring Rubric on next page)

SCORING RUBRIC

Proposals will be scored according to the following points, on a scale of 0-3, where:

0 = absent/ incorrect/ not understandable

1 = vague/ poor attempt/ poor understanding

2 = decent understanding/ explanation

3 = good to excellent understanding/ well explained

1. Background = 2.5 pts

1.1. Background explains the science behind the research question and study system (1 pt)

1.2. Background laid out in the context of scientific literature (0.5 pt)

1.3. Background clearly leads to the research questions and hypothesis (1 pt)

2. Specific objectives = 1 pt

2.1. Research is based on a research question and not data collection for a bigger project in the lab (1 pt)

3. Overarching Goals (to be included ONLY if your project is part of a bigger project in the lab) = 1 pt

3.1. There is an understanding of the project in the context of the lab's larger work (0.5 pt)

3.2. Clear explanation of what part of the bigger picture is covered by this project (0.5 pt)

4. Methods = 2 pts

4.1. Variables in the experiment relate to the research question/ hypothesis (0.5 pt)

4.2. Explanation of methods/ techniques to measure variables is understandable (0.5 pt)

4.3. Methods show an understanding of why certain techniques are being used (1 pt)

5. Presentation = 1 pt

5.1. There is a plan to present the research (1 pt)

6. Literature cited = 1 pt

6.1. At least two peer-reviewed literature sources are provided (0.5 pt)

6.2. References are relevant and provide context for the research (0.5 pt)

7. Overall writing quality and organization = 0.5 pt

7.1. Proposal is easy to understand, organized clearly, and written well (0.5 pt)

**Total = 9 points (if your project is part of a bigger project in the lab)
or 8 points (if you are conducting an independent project)**

Points earned will be standardized to a percentage to account for differences due to presence/ absence of point #3.