

UNDERGRADUATE HONORS IN BIOPHYSICS

Students who have met the requirements for the Biophysics major and who satisfy the following requirements are eligible for departmental honors at graduation:

- Overall GPA 3.5 or better
- Research paper in biophysics approved by the student's research supervisor and sponsor.

To determine if you are eligible, determine your overall GPA and complete the Honors Checklist (available on the Academic Advising website) . You do not need to complete the GPA Worksheet. Consult with your research advisor about writing a paper describing your research project.

When complete, the paper must be approved by your faculty research supervisor (and faculty sponsor if applicable). The approved paper and completed Honors Checklist should be forwarded to Dr. Woodson (DUS) *before* the deadline for Honors applications.

For May 2008 graduation, the following deadlines apply:

- **Monday, March 24** Honors papers due to faculty research supervisor
- **Thursday, March 27** Approved paper and checklist due to Dr. Woodson
- **Tuesday, April 1** Honors Clearance Form due in Academic Advising Office

See Academic advising web page <http://www.jhu.edu/~advising/honors.html> for further information on university policies.

See the attached guidelines for preparing the Honors Research paper.

GUIDELINES FOR PREPARING HONORS RESEARCH PAPER

Paper must describe independent research carried out by student as part of biophysics research requirement (250.521-522). Library research is not acceptable for this purpose. The paper should be ~10 pages in length, plus figures and literature citations as appropriate. The format should follow the layout of a research paper:

Abstract (1 paragraph)

A typical abstract might begin with 1 sentence describing the problem and its significance, 1 sentence describing the approach, and 2-3 sentences stating the results and conclusions.

Introduction (2-3 pages)

Provide background information necessary to understand what was done, why the problem is important, and how your work relates to previous work. Assume that your reader is another undergraduate biophysics major, who is smart but who doesn't work in the same lab that you do. Try to provide sufficient information for such a reader to understand and appreciate your project, but nothing extraneous.

Results (3-6 pages)

Provide a narrative that describes the experiments performed and the results obtained. You can either describe the experimental methods as you go along, or place them in a separate Methods section. Figures documenting the results should be accompanied by legends that enable the reader to understand what is in the figure. It is nice if the figures are imbedded in the text, but they can also be placed together at the end of the paper.

Discussion (~2 pages)

Discuss what was learned, the reliability of the results, any limitations to the interpretation, significance of your conclusions, future directions.

Literature references

These must follow the format of a standard journal in the field, such as *Biophysical Journal*, *Protein Science*, *Nature Structural Biology*, *Nucleic Acids Research*, etc. Take care to include references to the primary literature, not just review articles or text books. Your paper should represent a scholarly effort. In general, anytime you report a specific scientific finding or restate a specific idea or thesis, the author of the experiments or the idea should be cited. General statements that refer to a collection of phenomena can be supported by referring to a review article. Your research advisor can direct you to the best literature sources in the area of your research project. The citations should be placed in a list at the end of the paper (endnotes rather than footnotes). Citations can either be numbered in order of appeared in the main text, or marked by Author, year in the main text and listed alphabetically in the reference section.