

# Participating in Research in an NIU Biology Professor's Lab

\*\*\*\*\*requires at least 3.0 [biosciGPA](#)\*\*\*\*\*

## What is a "biosciGPA"?

Your GPA in BIOS courses plus courses required for the BIOS major (CHEM 210, 211, 212, 213, 330 or 336, 331 or 337; MATH 229, 230 or MATH 211, STAT301; PHYS 210 and 211 or 253 and 273). Both NIU and transfer credits count. Compute biosci GPA calculation by including only those courses just listed:

$((\text{number of credits of A's} * 4) + (\text{number of credits of B's} * 3) + (\text{number of credits of C's} * 2) + (\text{number of credits of D's} * 1) + (\text{number of credits of F's} * 0)) / (\text{number of credits total from those courses})$

## How big of a time commitment is it?

Roughly 3 hours per week of work for each hour of credit.

## When can I start?

Most students start their junior year because by then they have a solid background through coursework.

## How do I pick a professor to work with?

There is no list of professors with openings.

Professors, their research and email addresses can be found at <http://niu.edu/biology/academics/undergraduate-studies/research.shtml>, or more complete information at <http://niu.edu/biology/about/faculty/index.shtml>

The research does not have to be in the exact field that you plan a career in. The general process of doing science is what matters. For example, the first undergraduate research that I did was on leaf decomposition, but now I work on animal behavior. I chose the professor because he had a good reputation in research and in working with students. I learned general principles of experimental design, analysis, interpretation, literature search and scientific writing.

## How do I contact a professor?

Email them an unofficial copy of your college transcripts. Say that you are interested in working in their lab for undergraduate research credits. Ask if they might have room in their lab that semester for you; ask for an appointment to meet with them. Include one or two sentences as to what career or area of biology interests you. If you do not hear from the professor in about a week, stop by their office to follow up. Professors aren't required to let undergraduates participate in their research; they do it because they enjoy working with students that are motivated, perseverant and hard working. This is important because training a student can be a big commitment of the professor's time and sometimes research money.

When you meet in person, you will want to ask things like, "What sort of research would you have me working on? Will I have set hours? How will I be evaluated?" If you haven't met them before, try to get a sense of whether their personality will work well with yours. (You can also get some sense of this if you've had them as a professor and from talking to other students.) If your working with them suits both you and the professor, have the professor sign a course permit. Decide with him/her whether to take 1, 2 or 3 credits (depends on your needs and what project the professor has for you). If one professor doesn't have space or you cannot reach them, ask another.

**Where do I get the necessary course permit?** from the biology main office, MO 349. It will need to be signed by the professor that you will be working with and then taken back to the main office. The first semester of research, everyone signs up under BIOS370. After that, again it will be BIOS370 unless you are in one or both of the Honors programs described on the next page.

## What are the requirements for graduating with Departmental Honors in BIOS?

Note that at NIU, University Honors and Departmental Honors are two separate things, but your Departmental Honors research project may double as a University Honors capstone project. For information on University Honors got to <http://www.niu.edu/honors/>.

### To graduate with Departmental Honors in BIOS:

- 1) Complete at least 1 credit of BIOS370.
- 2) Preferably prior to signing up for your 2<sup>nd</sup> semester of research, email an unofficial copy of your transcript to Dr. B. King [bking@niu.edu](mailto:bking@niu.edu) to demonstrate that you have the necessary [biosciGPA](#) of at least 3.5, along with the name of the faculty member under whom you will be engaging in research.
- 3) Complete 6 additional credits (usually 2 semesters) – typically as BIOS495 or BIOS499.
- 4) Maintain a cumulative [biosciGPA](#) of at least 3.5 from your 2<sup>nd</sup> semester of research through graduation.
- 5) Present and explain the results of the honors project at either the departmental [Phi-Sigma Research Symposium](#) or [NIU's URAD \(Undergraduate Research and Artistry Day\)](#).
- 6) At the end of your last semester, turn in a senior thesis on your research. The thesis should be in the format of a scientific paper and have the bio honors cover sheet (email [bking@niu.edu](mailto:bking@niu.edu) for a copy); but otherwise the format, length, etc., is up to your research advisor (the faculty member you did research with). A pdf of the thesis should be emailed to Dr. B. King ([bking@niu.edu](mailto:bking@niu.edu)), either through your advisor or with an email from your advisor indicating s/he approved the thesis. Alternatively, your advisor can sign a paper copy of the filled-in cover sheet, and you can scan that and use that as the 1st page of the pdf that you email to me.

### Doing more than one semester of research: what course number do I sign up under and how many credits total can I do?

The maximum credits toward the bio major for BIOS 370, 490, 499, 495 combined is 9, with no more than 3 of those being from BIOS 490.

What course you sign up for after 1 semester of BIOS 370, depends on whether you have been admitted into our biology Departmental Honors program and whether you are officially in [NIU's University Honors program](#):

1. **If you are in [NIU's University Honors program](#)**, regardless of whether you are in the Departmental Honors program, take BIOS499 because it is automatically a University Honors class. The permit requires signatures both from the faculty member in whose lab you will be working and from the University Honors Program.
2. **If you are in just the Departmental Honors program and not the University Honors program**, take BIOS495. The permit requires signatures both from the faculty member in whose lab you will be working and from Dr. B. King.
3. **If you are in neither the University Honors nor the Departmental Honors program**, take BIOS370.

### Undergraduate research opportunities that provide stipends

NIU has some programs and links at <http://www.niu.edu/engagedlearning/> (or Google niu undergraduate research) Note NIU tends to include these sorts of opportunities under “Engaged learning” and “Experiential learning”

**Any questions?** See Dr. Bethia King, MO 446, [bking@niu.edu](mailto:bking@niu.edu)