Participating in Biology Research in an NIU Professor's Lab

How big of a time commitment is it?

Roughly 3 hours per week of work for each hour of credit in fall or spring semesters (twice as many hours per credit in summer because half as many weeks in the summer semester).

When can I start?

Most students taking research credits are seniors. Some start as juniors because by then they have a solid background through coursework, and students with a high enough BiosGPA to graduate with departmental honors need at least 3 semesters to get the required 7 credits minimum to graduate with Bios honors.

How do I pick a professor to work with?

There is currently no list of professors with openings.

Check out professors and their research for more complete information on their research and to their contact information. 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 insect 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, you may want to stop by their office to follow up. Professors are not 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 have not 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 have had them as a professor and from talking to other students.) If working with them suits both you and the professor, have the professor sign a research-course permit. Decide with the professor whether to take 1, 2 or 3 credits for the semester (depends on your needs and what project the professor has for you). If one professor does not have space or you cannot reach them, ask another. However, recognize that there are not enough faculty for every student to take some research credits, and it is not a reflection on you if you cannot find a lab.

Where do I get the necessary course permit?

from biology main office, MO 349. The professor that you will be working with will need to sign it, and then you return it to MO 349. Or ask your professor to email the following info to the main office, to ljudkins@niu.edu :

- Student name & ZID: _____
- # of credits: _____**of Bios 495**
- Semester-year: _____
- Are the credits H credits?_____
  - The answer is yes if you know that you are in the University Honors program. (You would know if you were.) Otherwise the answer is no.
- Faculty member that you will be working with: _____
- NIU IBC, IACUC or Radiation authorizations numbers or "none": _____

How many total credits of research can I do?

The maximum credits toward the bio major for BIOS 490 and 495 combined is 12, with no more than 3 of those being from BIOS 490. (Bios 490 is for doing an internship not at NIU but where you have arranged to get credit by talking to the Bios Undergraduate advisor.)

What section of Bios 495 do I sign up for?

1. **If you are in the** NIU University Honors program, regardless of whether you are in the Departmental Honors program, take BIOS 495 section H 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. **Otherwise**, 1) take the section of BIOS 495 that does not say, "Requirement Designation: Honors". 2) the permit requires signatures both from the faculty member in whose lab you will be working and from Professor Bethia King.

To graduate 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.

1) Complete at least 7 BIOS research credits (BIOS 495, or used to also be called BIOS 499 or BIOS 370).
2) Preferably prior to signing up for your 2nd semester of research, email an unofficial copy of your transcript to Professor Bethia King 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.
   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: ((number of credits of A's * 4) + (number of credits of B's *3) + (number of credits of C's *2) + (number of credits of D's *1) + (number of credits of F's *0)) / (number of credits total from those courses). There are also online GPA calculators.
3) Maintain a cumulative biosciGPA of at least 3.5 from your 2nd semester of research through graduation.
4) Present and explain the results of the honors project, e.g., at NIU's Conference on Undergraduate Research and Engagement, which is in the spring.
5) 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 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 Professor Bethia King at bking@niu.edu, either through your research advisor or with an email from your research advisor indicating s/he approved the thesis. Alternatively, your research advisor can sign a paper copy of the filled-in cover sheet, and you can scan that and use that as the first page of the PDF that you email to bking@niu.edu

Undergraduate research opportunities that provide stipends

NIU tends to include these sorts of opportunities under "Engaged learning" and "Experiential learning"

Any questions? See Professor Bethia King (pronounced BETH' ee uh), MO 446, bking@niu.edu.

Last revised: 1 September 2023 by bking@niu.edu