

**ASSIGNMENT 1, GENERAL ECOLOGY: CAREER OPPORTUNITIES IN BIOLOGY** Due February 14  
(14<sup>th</sup> turns out to be a Saturday. Turn in during class on 12<sup>th</sup>, or Fri. 13 to my office or mailbox, Dept. isn't open on Sat)

As part of your education you should think some about what you'll do once you graduate. Since most workers in the 21<sup>st</sup> century are likely to have several different careers over time, it's important to know about as many options as possible. This assignment will help you begin this exploration.

- 1) Investigate **two** career opportunities in biology that interest you. These careers should be **distinctly different** from each other (ask if you're not sure if they are). Learn more about these careers (suggestions for sources are at the end of the assignment), then write a **brief summary of your findings for EACH of them IN OUTLINE OR BULLET-POINT FORMAT**, covering the following topics:
  - a) **Career title** and a **one sentence summary** of what it involves, including **duties** that are typical for the job (Evaluating environmental hazards? Supervising others? Managing a lab or business? Interacting with people? ...)
  - b) **Skills and Aptitudes** needed to be successful
    - i. Biological (identification, anatomy, etc.)
    - ii. Nonbiological (e.g., writing, statistics, computers, people skills, drawing, etc.)
  - c) **Work conditions** (Outdoor? Lab? Weekend work? Travel? Hours?...)
  - d) **Salary** (e.g., Typical starting salary, range, etc.)
  - e) **Education** needed
    - i. **Required coursework**, other coursework that would be helpful
    - ii. **Major**. Which majors would best prepare someone for this career?
    - iii. **Level of education** required (Is a BS degree sufficient? Is a graduate degree needed, and if so, what sort (MS, PhD, MD, etc.)?)
    - iv. **How long** does it take to complete this education?
    - v. For careers that **require graduate studies or professional school** (this means most careers in biology):
      1. Find a **suitable University and Department/Program** through which to get a graduate degree to prepare you for this career – one that would fulfill your needs, has a good reputation, and is interesting to you. You can find listings for graduate programs in the *Peterson's Guide to Graduate Programs in the Biological Sciences*, available in the library. Also, most graduate programs have more detailed information listed online.
      2. For that program, determine:
        - a. **Entrance requirements**. For example--do you need to take the GRE exam? Is there a minimum GPA?
        - b. What type of **financial aid and support** is available? (TA-ships often are available to allow you to earn a salary as well as cover tuition while getting your degree)
        - c. How much does the program **cost**?
        - d. **Where** is the University located? Is it in an urban, suburban, or rural setting? Would you like to live here for the 2-7 years it usually takes to complete a graduate degree?
        - e. What are the **degree requirements** (e.g., coursework, written thesis or dissertation, comprehensive exams, etc.)?

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- f. Find a potential faculty mentor. Look up the faculty in the program, and find one that you think is studying something interesting, and in a couple of sentences, briefly describe what type of work you would like to do in that person's lab. For example, if I were to briefly describe what a graduate student would study in my lab, I would describe it as "My students study the evolutionary ecology of plant-animal interactions, especially pollination, using experiments and observations in the field."
- f) **Job ad** relevant to each career choice. Please find a real job ad involving this career (provide a copy of the ad; there are many places to look for such ads, and some are listed at the end of this assignment). Why is this job a good match for this career? What would you like and not like about this job?
- g) What are some of the things you would need to do or change in your current education to **better prepare for this career?** e.g., volunteering, course choices, internships, research, writing, etc...). Are you currently doing any of those activities?

2) **Sources of information.** Please list sources you used to get the information reported above. In your citations, **include at least the following:**

- For Books: author, year, title, publisher
- For job ads or other information in newspapers and magazines: newspaper or magazine title, date, page
- For Internet resources: author, title, year, url, date accessed

For internet references, you must also evaluate the reliability of the site by answering the following questions for each of them (as part of the citation)

- 1) Who prepared the site? Are they qualified?
- 2) Is the information biased?
- 3) Is the site up to date?

Note that internet authors may often be institutions or organizations, and often the author and year is difficult to discern. More information on this topic can be found at:

<http://www.uvm.edu/~ncrane/estyles/> and <http://www.quinion.com/words/articles/citation.htm>  
and also at the science and technology library

3) **Sharing your findings.** At the bottom of your assignment, please answer the following:

- i. Would you like to see some of reports other students have developed for this assignment?
- ii. Would you be willing to give permission for me to post your career reports on the web for other students to see? If so, would you prefer them to be posted on the web, or on springboard? This is completely voluntary!

Please organize your findings in an outline or bullet-point report separately for EACH career, addressing all of the topics above. If you can't find information on some of the topics in the list, say so, and indicate where you've looked. **After reading your description, the reader should have a good idea of what this career entails and what must be done to prepare for it.** In total, your assignment should be approximately 3 pages (4 pages maximum, not including job ads). Although you can work with another student brainstorming ideas, all written work must be done individually.

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Your writeup must be **IN YOUR OWN WORDS** (except the job ad). Do not cut and paste from your sources without attribution! When a quote is needed, put it in quotation marks and give a citation to a source. See the syllabus (or me) for more on how to avoid plagiarism.

**Grading**

|                                                                                                                                                                             |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Description of two specializations or career opportunities:<br>(follows guidelines, careers distinctly different from each other, information sufficient to evaluate, etc.) | 20 points                            |
| Subjective (organization, clarity, spelling, citations, etc.):                                                                                                              | 10 points                            |
|                                                                                                                                                                             | <hr/>                                |
|                                                                                                                                                                             | <b>30 points</b>                     |
|                                                                                                                                                                             | × 2 careers = <b>60 points total</b> |

**RESOURCES:** You can get a lot of good information from books and from talking with professors and with people who now hold the career you are investigating.

The University's Career counseling center (Simmons Hall rooms 304-306) has books and counselors available to help you with career search info (330-972-7082). Online help from the career counseling center (<http://www.uakron.edu/counseling/career.php>) includes: SIGI3 and OCIS. These services allow you to explore the types of jobs suited to your interests and skills.

And, of course the web has a lot of resources about career opportunities in the biological sciences. I have included some web links below to help get you started. And don't forget to look at actual Job Ads (local, national, etc). They often include much of the information that you will need.

[http://biology.unm.edu/undergrad/advising\\_careers\\_links.htm](http://biology.unm.edu/undergrad/advising_careers_links.htm)  
<http://www.uakron.edu/counseling/career.php>  
<http://www.uakron.edu/colleges/artsci/depts/biology/ecologyjobs.php>  
[http://www.esa.org/education\\_diversity/explore.php](http://www.esa.org/education_diversity/explore.php)  
[http://sciencecareers.sciencemag.org/career\\_development/tools\\_resources](http://sciencecareers.sciencemag.org/career_development/tools_resources)  
<http://www.aibs.org/careers/>  
<http://www.biology.duke.edu/jackson/ecophys/>  
<http://www.botany.org/bsa/careers/>  
<http://www.emporia.edu/biosci/carebiol.htm>  
<http://swfsc.noaa.gov/textblock.aspx?id=54&ParentMenuId=33>

For Job ads (out of many possible sources):

<http://www.usajobs.gov/>  
<http://ohio.monster.com/>  
<http://careers.ohio.gov/>  
<http://ohio.gov/working/>  
<http://science-biotech.careerbuilder.com/>  
<http://sciencecareers.sciencemag.org/>  
<http://chronicle.com/cgi2-bin/tehis/jobs/search>

Local newspaper, regional newspaper