Lecture:
- Megan Schwartz; Thompson 257C, x8822; mschwartz@pugetsound.edu (e-mail is usually the fastest way to find me)
- Office Hours: Friday 10 to 12 AM, and gladly by appointment. Please call, e-mail, or ask in person if you would like to make an appointment.

Required Texts (if you took Biol 111 in fall 09, you should have these books already):
- A Short Guide to Writing about Biology by J. A. Pechenik, 2007

Course Description:
In Biology 112, we will explore the different faces of evolution and the diversity of living organisms. We will begin this course with a broad overview of the history and diversity of life. Following this whirlwind introduction, we will examine the process and mechanisms of evolution. We will then examine some fundamental aspects of life such as options for reproduction and development, life in one place, support systems, living on land, and human evolution. Thus, the course will not proceed as a parade through the kingdoms. Rather, we will emphasize different fundamental aspects of organismal biology. In lecture, I will present principles common to diverse taxonomic groups, augmenting this information with specific examples taken from different organisms. In the lab, you will have the opportunity to study the form and function of organisms face-to-face. Because of the nature of the lectures and the available textbooks, I cannot always suggest readings from your texts. In some cases you can piece together descriptions of how different phyla reproduce, feed, or move by scanning your text chapters.

By the end of this course, you should have developed:
- a conceptual framework for thinking about the diversity of life, beginning with the process of evolution,
- the background required for framing biological questions in a comparative and evolutionary context, and
- an appreciation for some of the organismal diversity that surrounds us.

Lecture: MWF, 9:00-9:50 AM, Thompson Hall Room 395
In lecture we will discuss important and difficult topics. The best way to prepare for lecture is to skim the assigned reading, concentrating on the figures and diagrams. We will cover some topics that are not in your text but may have assigned supplementary readings. Because some of the lecture material is not in your texts, taking notes during lecture is extremely important.

Throughout the course I will use the blackboard, and PowerPoint during lectures, depending on what is best for a particular topic. When we use PowerPoint, I’ll provide the figures on Moodle. I don’t however, provide copies of lecture notes, another reason to strive to attend every lecture.
- **Tip for Success:** Come to each lecture prepared by reviewing what was discussed in the previous lecture and reading or skimming the assigned reading.
Moodle:
The Moodle page will contain essential material for both lecture and lab portions of the course. Although I don’t post lecture notes on this page, you should check the page before each lecture for any important announcements and reminders. You will also use the page to print out laboratory exercises (which will be posted on the Friday before the lab week). In addition, I will occasionally post video clips, optional supplementary readings, or web links to resources that can help you to learn course material.

Lecture exams and quizzes:
There are five lecture quizzes, three mid-term exams, and one final exam in this class (see Lecture Schedule for dates). Some of the quizzes may be take-home quizzes. Exams and quizzes may include multiple choice, matching, completion, definitions, and short essays. Questions may be based on lecture or laboratory material. Some questions will require you to apply concepts to novel situations not specifically covered in lecture or lab. There are no make-up quizzes or exams in this class. However, adequate consideration will be given and adjustments may be made if there is a medical or family related emergency. Written documentation of the nature of the emergency may be required. Be on time for all lecture quizzes and exams; arriving late will mean that you will have less time to complete them.

The final exam will be given on Monday May 10th from 8-10 am. In keeping with University policy, the final exam will be given ONLY at the time indicated on the syllabus.

● **Tip for Success:** Adopt a Study-as-You-Go policy. Re-write your notes within 24 hrs after every lecture. Don’t wait until a few days before an exam or quiz to start studying. What if you have two other exams and a 10-page paper due that same week??!! If you study as you go, you will not have to cram before an exam or quiz, which will help decrease your stress level and improve your performance.

Laboratory:
As in all science classes, lab is a big part of this course. Each student must register for a lab section of the course, and attendance in lab is mandatory. Lab handouts will be available on the course web page on or before the Friday before the lab meets.

To get the most out of the lab, you must come prepared. Careful preparation before the lab will (1) allow you to get more out of the lab, (2) make it much more likely that you will enjoy the lab, and (3) increase the probability that you will finish on time. Here is how to prepare:

1. **DOWNLOAD** the appropriate lab and any associated material from our Moodle page.
2. **READ** the assigned text sections (indicated on the lab handouts) before lab.
3. **COMPLETE ANY ASSIGNED PRE-LAB PRIOR to coming to lab** (see individual lab handouts). Information from the pre-labs may appear on lecture exams and quizzes.
4. **READ** the appropriate lab exercises prior to coming to lab. Know what is coming and prepare yourself.

● **Tip for success:** After reading a lab, make a flow-chart or outline of what you will be doing in lab that week. Visualize the process to get mentally prepared for the lab.

In extenuating circumstances, you may attend a different lab section (including the other Biol. 112 section), provided there is space available in the lab and you obtain advanced confirmation via e-mail from me and the other lab instructor involved. Labs cannot be made up after the last lab section of the week has met. Non-attendance of a lab for a **bona fide** medical or family emergency will require written evidence. Missing a lab for any other non-excused reason will decrease your final course grade.

Be on time to lab. If a field trip is scheduled, we will leave at the start of the lab. If you miss the van, you will need to get yourself to the field site without delay. Missing a lab because of missing the van is not a legitimate excuse for missing lab.
Laboratory Quiz:
There will be one lab quiz in this course (see Lecture Schedule). This quiz will consist of numerous "stations" set up around the lab room, each exhibiting organisms that you will need to identify, and for which you will need to know taxonomic information. The format of the lab quiz is very different from lecture exams. As with lecture exams and quizzes, make-up lab quizzes will not be given and these must be taken during your scheduled lab time. Be on time for the lab quiz; arriving late will mean that you will have less time to complete them.

Turning in Assignments:
Hard copies of assignments are due at the start of lecture or lab as indicated on the individual assignments and lecture schedule. Please don’t e-mail me your completed assignments unless we have made prior arrangements for you to do so. If you are turning in a late assignment, you may e-mail it to me to show me when it was actually completed and receive a “time-stamp”. For this time-stamp to be honored, you’ll need to give me a hard copy by 9am on the next available work day; if this is not done, I will have to proceed as if the assignment was not e-mailed.

Late Policy:
Turning in an assignment late will reduce the maximum credit available by 20%. Turn in the assignment within 5 days of the day date, including weekends, and you can receive up to 80% of the assignment grade. After 5 days, you will not receive credit for the work. Work turned in late on the same day that it is due will be considered ½ day late and 10% of the points possible will be deducted from your earned grade.

TO BE FAIR TO ALL STUDENTS, PLEASE NOTE THAT THIS LATE POLICY WILL BE STRICTLY ENFORCED. I will waive this penalty only if there is a medical or family related emergency. Written documentation of the nature of the emergency may be required. Only under extenuating circumstances or if I specifically ask will assignments be accepted electronically. However, as stated above, you may e-mail it to me to show me when it was actually completed and receive a “time-stamp”. For this time-stamp to be honored, you’ll need to give me a matching hard copy by 9am on the next available work day; if this is not done, I will have to proceed as if the assignment was not e-mailed.

Extra-curricular activities, travel, or work in other courses are not valid excuses for late work. If you are going to have to miss class for one of these reasons, it’s your responsibility to check the lecture schedule and assignment guidelines to determine if anything is due in your absence. Please check with me if you are unsure. Absences for a bona fide medical reason will require written evidence.

Academic Honesty, Plagiarism, and Scientific Integrity
Academic honesty, which includes the topics of plagiarism and scientific integrity, is a fundamental principle of higher education and its institutions. Policies on academic honesty, established to protect honest students and researchers, should guide all your actions in all courses you take at UPS. As you learned when you started at UPS, academic dishonesty is not tolerated at this university. You also learned that it is your responsibility to read and understand the University of Puget Sound policies on Academic Dishonesty and Plagiarism.

The following pages on the UPS web site are your sources for information on Academic Honesty:

- Policies Academic Honesty: [http://www.ups.edu/x4718.xml](http://www.ups.edu/x4718.xml). This page contains general information on academic honesty, definitions of plagiarism, and the policy for dealing with incidences of academic dishonesty. Please note the university requires every incident of academic dishonesty to be reported to the Registrar. It’s not only useful to visit this site, it’s required. When you sign the student contract for this course, you are stating that you have read the information on this web page and that you fully understand what constitutes plagiarism and the penalty for academic dishonesty. Therefore, if you have any questions, you need to ask before you sign the document.
- **Plagiarism**: [http://www.ups.edu/x15212.xml](http://www.ups.edu/x15212.xml). This is a great page for learning exactly what counts as plagiarism. I encourage you to study the material on this site carefully because some forms of plagiarism are quite subtle.

- **Student Integrity Code**: [http://www.ups.edu/x4785.xml](http://www.ups.edu/x4785.xml).

Several forms of academic dishonesty are especially relevant to this class and deserve highlighting:

- Cheating on exams or quizzes.
- Alteration, fabrication or misrepresentation of data.
- Plagiarism on any assignment, including lab exercises. This includes written work and laboratory drawings.

**Plagiarism includes direct copying of or paraphrasing of a source. It also includes using another person’s ideas (content) or organization (format) without adequate credit to the source.**

**Plagiarism applies both to taking information / ideas from someone you know (i.e. a fellow student) AND to using information / ideas from someone you don’t know (i.e. the author of a book, scientific paper, or web page).**

**Even when lab work is performed in groups, you must complete all written work individually unless the assignment specifically states otherwise.** To avoid potential problems, never collaborate with classmates when you are actively writing your labs, papers, or answers to reading questions. Feel free to discuss ideas with friends, but do not take notes during these discussions, as this frequently leads to answers that are suspiciously similar between individuals.

**As stated above, any incident of academic dishonesty must be reported to the Registrar. Any penalty applied with respect to this course will depend on the severity of the violation.** Again, it is your responsibility to make sure that you understand this issue. I encourage you to ask me if you have any questions.

**Students with Disabilities:**

I will make every effort to accommodate students with disabilities in both lecture and lab. I request that students with disabilities contact me early in the term (preferably within the first week of class) to discuss accommodation. Students with disabilities have the responsibility to self-identify to the Coordinator of Disabilities Services, Ivey West, in the Center for Writing and Learning. It is university policy that students who have not registered with the Disabilities Office are not eligible for accommodation. All requests for accommodation must be made in a timely manner; if you cannot meet with me early in the term, please give me at least one week’s notice for any event. Be aware that the Center for Writing and Learning requires advance notice for some things (such as taking exams in the center).
Grading:
Final grades will be determined based on the total points accumulated by each student. The maximum number of points possible is shown below

<table>
<thead>
<tr>
<th>ASSIGNMENT</th>
<th>POINTS POSSIBLE</th>
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<tbody>
<tr>
<td><strong>LABORATORY</strong></td>
<td></td>
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<tr>
<td>Labs</td>
<td>= 155</td>
</tr>
<tr>
<td>Diversity of Puget Sound</td>
<td>20</td>
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<tr>
<td>Microevolution Pre Lab</td>
<td>5</td>
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<tr>
<td>Phylogenetics</td>
<td>20</td>
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<tr>
<td>Planktonic Diversity Pre Lab</td>
<td>5</td>
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<tr>
<td>Sessile Animals</td>
<td>20</td>
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<tr>
<td>Motile Animals</td>
<td>20</td>
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<tr>
<td>Bird Flight Pre Lab</td>
<td>5</td>
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<tr>
<td>Fungi, Lichen, Algae, Bryophytes</td>
<td>20</td>
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<tr>
<td>Gymnos and Angiosperms</td>
<td>20</td>
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<tr>
<td>Microbial Diversity</td>
<td>20</td>
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<tr>
<td>Lab Reports</td>
<td>= 80</td>
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<tr>
<td>Microevolution: Lab Report I</td>
<td>40</td>
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<tr>
<td>Bird Flight: Lab Report II</td>
<td>40</td>
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<tr>
<td>Lab Quiz</td>
<td>= 40</td>
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<tr>
<td><strong>LECTURE</strong></td>
<td></td>
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<tr>
<td>Case Study I: Seeing Natural Selection</td>
<td>= 15</td>
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<tr>
<td>Case Study II: Jetting Squid</td>
<td>= 15</td>
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<tr>
<td>Case Study III: Are Humans Evolving?</td>
<td>= 15</td>
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<tr>
<td>Lecture Quizzes (5 @ 15pts each)*</td>
<td>= 75</td>
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<tr>
<td>Lecture Exams (3 @ 75pts each)</td>
<td>= 225</td>
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<tr>
<td>Final Exam (cumulative)</td>
<td>= 150</td>
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<tr>
<td>Participation**</td>
<td>= 30</td>
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<tr>
<td><strong>COURSE TOTAL</strong></td>
<td>= 800</td>
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* If you have taken all six lecture quizzes, I will drop your lowest score. A quiz missed for any reason (e.g., illness, school-related activity, or unexcused absence) will be considered your lowest score and will be dropped. It is still a good idea to have documentation for all absences due to illness, athletic events, etc., as I may consider them in assigning your final grade.

** Your participation grade will be based largely on lecture attendance and lab citizenship. Your TA and I will evaluate your willingness to help others in the lab, how well you care for the plants and animals you will be observing, how well you prepare for each lab, and how clean you leave your lab area when you leave. Attendance in lecture may be evaluated by unannounced mini-quizzes given at the start of a lecture. I will also take into account your willingness to speak up and ask and answer questions in both lab and lecture. If you have any questions or concerns about this part of your grade, please do not hesitate to ask.
HOW TO SUCCEED IN THIS COURSE
(in ten easy and time-consuming steps)

1) **ATTEND EVERY LECTURE** --- awake or asleep, alive or dead, caffeinated or non-caffeinated. Given the large amount of course material, some of which is not covered in your text, this step is crucial.

2) **BEFORE LECTURE**: Read or skim the required text, focusing on the figures and tables to familiarize yourself with the material we will cover.

3) **DURING LECTURE**: Take copious notes; you are welcome to record lectures, too. Handouts are NOT meant to substitute for complete notes. Mark the spots where you have questions. If you don't feel comfortable asking questions in lecture, at least you'll know where you were befuddled so you can ask after class. But remember, if you don't understand, chances are great that there are others in class who also don't understand, so ask.

4) **AFTER LECTURE**: I recommend that you recopy your notes after lecture. At least, read over your notes multiple times and write comments and questions in the margins as you read. Refer to your text (where possible) to correct mistakes. If you are unsure about something, come to office hours as soon as possible. Read the assigned chapters thoroughly.

5) **STUDY YOUR NOTES FREQUENTLY**: Some hints on how to do this are:
   - Recopy your notes
   - Create exam questions and answer them
   - Study with a friend, asking questions and making up quizzes
   - Ask how the material in class and lab relate to each other

6) **STUDY ACTIVELY**: Ask yourself questions and be constructively critical of your answers. Push your mind. Once you have finished studying, try teaching the material to someone or something else like a movie cutout of Lassie, your shoe, or even a wall.

7) **ASK QUESTIONS**: I cannot overemphasize this point. Do not be afraid to ask questions at any time, before, during, or after lecture/lab. Asking questions will let us know where you need help and where we may have been unclear. Remember that the Center for Writing and Learning is a valuable resource for all courses (Howarth 105, X3395).

8) **SPEND TIME IN LAB** outside your normal lab hours. Watch the organisms move and eat. Quiz yourself constantly. You all have after hours access to the lab room, except on the lab quiz and exam week.

9) **QUESTION ASSIGNMENT**: Take this assignment seriously! Thoughtfully construct exam questions, and take me up on my offer to read and comment on your answers to these questions. I honestly believe that crafting and answering, with feedback, your own exam questions is the best way to determine if you really know the material.

10) **EXPERIENCE THE LIFE ALL AROUND YOU**: Open your eyes, ears, and nostrils to the many different types of life that surround you, from fungi to birds, worms to flowers, pond scum to slugs, jellyfish to kinorhynchs. What do these organisms have in common, how are they different? How do they gather energy, move, and reproduce? You are surrounded by the subject of this course. Let yourself be amazed!
Biology 112A  
Student Contract 2009

Please sign the contract and return it to Dr. Schwartz by 
Friday January 22nd in order to receive a course grade.

I have read and understand the syllabus.

- I am aware of quiz, exam, and final exam dates. I understand that no make-up quizzes or exams will be given.
- I am aware of the assignment schedule, and I understand that assignments are due at the date and time stated. I understand that late assignments will be penalized.
- I understand that labs are mandatory and that failure to attend lab for something other than a documented medical or family emergency will lead to a lower final course grade.

I understand that it is my responsibility to make sure that I understand the definitions of academic dishonesty and plagiarism.

I know that I can learn about what exactly constitutes plagiarism at the following site: http://www.ups.edu/x15212.xml.

I have read and understand both the course statement on academic honesty and scientific misconduct and the university policy on academic honesty (http://www.ups.edu/x4718.xml). I understand the penalties associated with violations of this policy.

I pledge to refrain from any act of academic dishonesty, plagiarism or scientific misconduct, including:

- Cheating on exams or quizzes
- Copying or paraphrasing any part of another student’s work
- Using the ideas, language, or organization of any other person or source without appropriate citation
- Fabrication or falsification of data or research results
- Misuse of library or laboratory materials (including the unauthorized removal of library or laboratory materials or the intentional damage of any library or laboratory material)

I understand that all written work must be completed individually by me unless the assignment specifically states otherwise. I understand that if I violate this policy, penalties will be applied.

NAME (PRINT) ________________________________________________

SIGNATURE ___________________________________________________

DATE __________________________