Instructor:
- Alexa Tullis; Thompson 257E, x2857; atullis@pugetsound.edu.
- Office Hours: I will have office hours by appointment this term. Please call, e-mail, or ask in person if you would like to set up a time to meet. The lack of set office hours doesn't mean that I don't want to meet with you!! Please do not hesitate to make an appointment.

Required Texts (if you took Biol 111 in fall 2018, you should already have these books):
- A Student Handbook for Writing in Biology, Knisely 3rd ed (other editions are fine but any assigned page numbers may be off)

Canvas: https://pugetsound.instructure.com/courses/2388

Course Description:
In Biology 112, we will explore the different faces of evolution and the diversity of living organisms. This course will emphasize different fundamental aspects of organismal biology, including evolution, form and function, and reproduction. 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.

Student Learning Outcomes: By the end of this course, students should have:
- developed a conceptual framework for thinking about the diversity of life, beginning with the process of evolution;
- acquired the background required for framing biological questions in a comparative and evolutionary context;
- acquired the ability to recognize members of the major kingdoms and phyla;
- developed more skills required to write effective laboratory research papers, including writing clear and precisely and analyzing data with basic statistics.

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 any assigned reading before class, concentrating on the figures and diagrams. During lecture you’ll learn which parts of the chapter we’ll focus on. 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 PowerPoint and the blackboard to help convey information. I’ll provide the figures used in the PowerPoint presentation as a handout and on Moodle. I do not provide copies of lecture notes, another reason to strive to attend every lecture.

It’s your responsibility to obtain the lecture notes from another student if you miss class, and check the lecture schedule and Canvas to determine if anything is due in your absence.

Exams and quizzes:
Quizzes and exams will be given on the day indicated in the schedule; there are no make-up quizzes or exams, nor are students allowed to take quizzes and exams early. 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. In keeping with University policy, the final exam will be given ONLY on the date and time indicated on the schedule.
There is one planned lab quiz in this course (see Lecture Schedule). The lab quiz must be taken during your scheduled lab time. Be on time for the lab quiz; because of the nature of this quiz, arriving late will mean missing the quiz.

**Laboratory:** Harned Hall, room 245
As in most other science classes, lab is a big part of this course. Each student must register for a lab section of the course, **attendance in lab is mandatory**, and failure to attend and/or complete a lab will negatively impact your course grade. Lab handouts will be available on Canvas.

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. **PRINT OUT** and **READ** the appropriate lab. Know what is coming and prepare yourself.
2. **READ** the assigned sections in your text (indicated on the lab handouts) before lab.
3. **COMPLETE** ANY **ASSIGNED PRE-LAB QUESTIONS PRIOR** to coming to lab (see individual lab handouts).

If you have a legitimate reason, you may be able to attend a different lab section, provided there is space available in the lab and you obtain advanced confirmation in person or by 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 may require written evidence. Repeatedly arriving late to lab or missing lab for a non-excused reason will decrease your final course grade.

**IMPORTANT:** Long pants, long sleeved shirt, and closed shoes are required to attend the lab. Hair longer than shoulder length must be tied back. **If you arrive to lab without the proper attire you will be asked to leave and come back appropriately dressed and you will be considered late to lab.**

**Canvas**
The Canvas page for this class will contain essential material for both lecture and lab portions of the course, as well as important announcements and reminders. Although I don’t post lecture notes, I will post the slides/figures we use in lecture. You will also obtain laboratory exercises from Canvas (posted by the Friday before the lab week).

**Late Policy**
Assignments are due at the start of lecture or lab as indicated on the individual assignments and lecture schedule. How the assignment is turned in (e.g., through Moodle or as a hard copy) may vary with the assignment.

- Pre-labs and assignments meant to prepare you for a specific lecture topic will not be accepted late. For other assignments, the maximum credit available will be reduced by 10% per day (including weekends) until there are no points remaining, or after one week, whichever comes first. No assignments will be accepted after 5 pm on the last day of reading period. Work turned in late on the same day that it is due will be considered ½ day late and 5% of the points possible will be deducted from your earned grade.
- Extra-curricular activities, travel, getting a cold, or work in other courses are not valid excuses for late work.

**TO BE FAIR TO ALL STUDENTS, I WILL STRICTLY ENFORCE THIS LATE POLICY.** I may waive this penalty only if there is a medical or family related emergency. Written documentation of the nature of the emergency may be required.

**Class Conduct**
**Put away cell phones during lecture and lab.** If you feel you must use a computer to take notes in lecture, please sit in the back row so as not to distract other students. Using your computer for reasons other than taking notes will reduce your participation grade. Using your cell phone during lecture and/or lab will reduce your participation grade. Repeated violations of this policy will result in a zero for participation.
Valuing Diversity. Lack of respect for diversity will not be tolerated in the class. Diversity includes age, life experiences, profession, race, religion, gender, nationality, lifestyle, social class, learning style, philosophy of life, sexual orientation, personality, and mental and physical challenges.

Academic Integrity and Plagiarism
Several forms of academic misconduct 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.

The following pages on the Puget Sound web site are your sources for information on Academic Integrity:
• What constitutes plagiarism?: To help prevent you from accidentally plagiarizing during this and other classes, you are all required to study the information about plagiarism on the Collins Library web site and take the Academic Integrity Quiz associated with this page (link on the right side of the page). When you sign the Student Contract for this course, you are stating that you have read the information on this page, and completed the accompanying Academic Integrity Quiz, and that you fully understand what constitutes plagiarism.

• What happens if a student plagiarizes or otherwise violates the rules of academic integrity? This page contains general information on academic integrity and the policy for dealing with violations of academic integrity. Please note the university requires every incident of academic dishonesty to be reported to the Registrar. When you sign the Student Contract for this course, you are stating that you have read the information on this page and that you fully understand what the penalties for violations of academic integrity. If you have any questions, please ask before signing the document.
• 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. Please 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. If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Peggy Perno, Director of the Office of Accessibility and Accommodations, 105 Howarth, 253-879-3395. She will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. I request that students with disabilities contact me early in the term (preferably within the first week of class) to discuss accommodation. 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 so that I can adequately accommodate your needs; 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 CWLT requires advance notice for some accommodations (such as taking exams in the center).

Classroom Emergency Response Guidance
• Please review university emergency preparedness and response procedures posted at <http://www.pugetsound.edu/emergency/>. There is a link on the university home page. Familiarize yourself with hall exit doors and the designated gathering area for your class and laboratory buildings.
• If building evacuation becomes necessary (e.g. earthquake), meet your instructor at the designated gathering area so she/he can account for your presence. Then wait for further instructions. Do not return to the building or classroom until advised by a university emergency response representative.
• If confronted by an act of violence, be prepared to make quick decisions to protect your safety. Flee the area by running away from the source of danger if you can safely do so. If this is not possible, shelter in place by securing classroom or lab doors and windows, closing blinds, and turning off room lights. Stay low, away from doors and windows, and as close to the interior hallway walls as possible. Wait for further instructions.
Grading:
Final grades will be determined based on the total points accumulated by each student. The maximum number of points possible is shown below (there may be slight modifications to the scheme below because of unforeseen events).

<table>
<thead>
<tr>
<th>ASSIGNMENT</th>
<th>POINTS POSSIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Exercises, Total</td>
<td>165</td>
</tr>
<tr>
<td>Diversity of Puget Sound I</td>
<td>15</td>
</tr>
<tr>
<td>Diversity of Puget Sound II</td>
<td>10</td>
</tr>
<tr>
<td>Microevolution Lab</td>
<td>20</td>
</tr>
<tr>
<td>Slater Museum of Natural History</td>
<td>10</td>
</tr>
<tr>
<td>Phylogenetics</td>
<td>15</td>
</tr>
<tr>
<td>Microbial Diversity</td>
<td>20</td>
</tr>
<tr>
<td>Wing Lift Preparation</td>
<td>5</td>
</tr>
<tr>
<td>Motile Animals</td>
<td>15</td>
</tr>
<tr>
<td>Planktonic Diversity</td>
<td>15</td>
</tr>
<tr>
<td>Spore producers</td>
<td>20</td>
</tr>
<tr>
<td>Seed producers</td>
<td>20</td>
</tr>
<tr>
<td>Lab Quiz</td>
<td>40</td>
</tr>
<tr>
<td>Wing Lift Lab Report (total)</td>
<td>75</td>
</tr>
<tr>
<td>Lecture Quizzes (5 @ 15pts each)*</td>
<td>75</td>
</tr>
<tr>
<td>Lecture Exams (3 @ 75 pts each)</td>
<td>225</td>
</tr>
<tr>
<td>Final Exam (cumulative)</td>
<td>150</td>
</tr>
<tr>
<td>Lecture Participation**</td>
<td>15</td>
</tr>
<tr>
<td>Lab Participation^</td>
<td>15</td>
</tr>
<tr>
<td><strong>COURSE TOTAL</strong></td>
<td>= 760</td>
</tr>
</tbody>
</table>

*GRADING SCALE*

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93 – 100</td>
<td>A</td>
</tr>
<tr>
<td>90 – 92.9</td>
<td>A-</td>
</tr>
<tr>
<td>87 – 89.9</td>
<td>B+</td>
</tr>
<tr>
<td>83 – 86.9</td>
<td>B</td>
</tr>
<tr>
<td>80 – 82.9</td>
<td>B-</td>
</tr>
<tr>
<td>77 – 79.9</td>
<td>C+</td>
</tr>
<tr>
<td>73 – 76.9</td>
<td>C</td>
</tr>
<tr>
<td>70 – 72.9</td>
<td>C-</td>
</tr>
<tr>
<td>67 – 69.9</td>
<td>D+</td>
</tr>
<tr>
<td>63 – 66.9</td>
<td>D</td>
</tr>
<tr>
<td>60 – 62.9</td>
<td>D-</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>F</td>
</tr>
</tbody>
</table>

* It may be necessary to adjust this table slightly to account for unforeseen events (e.g., if an exam was harder than I thought, etc.). In that case a curve may be applied.

What is my current grade in the class?
To help you track your progress, I encourage you to use the information to the left to calculate your current grade.

* If you have taken all six lecture quizzes, I will drop your lowest score. A quiz missed for any reason (including 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 lecture participation grade will be based on attendance, level of apparent general preparation, your willingness to contribute to class discussions, and completion of any assigned preparatory work. Attendance in lecture may be evaluated by unannounced mini-quizzes given at the start of a lecture. Use of cell phones and/or use of computers for reasons other than taking notes will reduce your participation grade. Repeated violations will result in a zero for participation.

^ Your lab participation grade will be primarily based on your level of apparent preparation for lab, your ability to work independently and purposefully, the respect with which you treat all laboratory organisms, and your general lab citizenship. Use of cell phones and/or use of computers for reasons unrelated to the lab will reduce your participation grade. Repeated violations will result in a zero for participation.
STRATEGIES FOR SUCCEEDING IN BIOLOGY 112

GET THE MOST OUT OF LECTURE

• **ATTEND EVERY LECTURE:** This should be obvious. The most successful students in Biology 112 attend every lecture. If you must miss a lecture, get the notes from a fellow student asap, read any material related to the lecture, and then come to me if you have specific questions.

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

• **DURING LECTURE:** Take copious notes about what is said and written in class. I generally write in an abbreviated outline form on the board so writing only what I write on the board is only a beginning. Use the handouts to help organize your 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 confused so you can ask after class. But remember, if you don't understand, chances are that there are others in class who also don't understand, so ask.

STUDY EFFECTIVELY

• **STUDY A BIT EVERY DAY:** *I believe that this is a key to success in this course and in science courses*, in general. 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. Not only will you forget things if you wait this long, but you also may be bombarded at the same time with exams and assignments in other courses. 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 in this course and you other courses.

• **STUDY ACTIVELY:** Don’t just “go over” your notes (what does “go over” mean, anyway?). Instead, re-write your notes to force yourself to engage with the material. When students simply “go over” their notes, they don’t always engage with the material, meaning that the studying time is not well spent.

• **MEMORIZING IS A START BUT NOT THE END-POINT OF STUDYING:** You cannot do well in this course if you only memorize the material. Strive for the ability to answer questions that are phrased differently than when presented in lecture. Work on applying the material to novel situations. To this end, making up exam questions and answering them is a good way to study. The questions should be application-based when possible.

• **STUDY LIKE YOU ARE TESTED:** In tests and quizzes, you are asked to answer questions *in writing*, not by thinking or talking. *Therefore, a large part of your studying should be spent practicing writing answers to questions.* We can be sloppy when we think or talk things through; we cannot be sloppy when we write answers. Writing answers to questions will show you fairly quickly where there are holes in your knowledge. I cannot emphasize enough the value of studying like you are tested.

• **WORK WITH OTHERS:** Some people find it very effective to study with others. If this is true for you, apply the study strategies above to your study groups. Come up with exam questions, exchange them, and answer them. Work together to craft good exam questions and be constructively critical of each other’s answers.

USE ALL AVAILABLE RESOURCES

• **ASK FOR HELP EARLY & OFTEN:** Come to my office hours, make appointments, send me e-mails. Don’t wait until the day before an exam to come for help.

• **USE YOUR INSTRUCTOR ASSISTANTS FOR LECTURE HELP:** The instructor assistants have all been successful in this course and were specifically chosen to help you succeed.
Please read the syllabus and sign the contract and return it to your professor by Friday, January 25th. Signed contracts are required to receive grades in this course.

I have read the syllabus and know the correct answers to all of the questions on the Course Self-Test, I understand the content of the syllabus.

- I am aware of quiz, exam, and final exam dates. I understand that no make-up quizzes or exams will be given, and that I will not be able to take quizzes or exams early.
- As per University policy, I understand the final exam will be given only at the date and time indicated.
- I am aware of the assignment schedule, and I understand that assignments are due on the date and time stated. I understand that preparation assignments are not accepted late and that there is a penalty for any other assignment turned in late.
- 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 and will follow the dress code for the lab

I have read the University’s policy on violations of academic integrity and the penalties associated with such violations.

- I understand these policies and penalties.

I have read the material about academic integrity and plagiarism contained on the Collin’s Library website as outlined in the syllabus.

- I have taken the Academic Integrity Quiz associated with the Library’s page on Academic Integrity (Link to Academic Integrity page provided on our course Moodle page).
- I understand what constitutes plagiarism.
- I pledge to refrain from any act of academic dishonesty, plagiarism or scientific misconduct.
- 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  ___________________________