**General Biology: BI 101 [Marine Biology] Instructor:** Diana Wheat

**LBCC, Spring 2019** Office: WOH 207

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**Section: 06**

**Credits:** 4 credits

**Office Hours: 1:00 –1:50 pm M, W’s and 12:30-1 pm T & R’s.**

Appointments outside of these office hours are also possible;

24 hour notice required via by email or by direct phone contact.

**Introduction:**

General Biology 101 is a course designed to introduce the student to basic concepts of biology and ecology, including the process of science and hypothesis testing. The course aims to increase the student’s level of ecological literacy, their understanding and appreciation of the diversity of life that shares our planet, and their capacity to understand and react to the environmental challenges encountered in daily life. This course is designed for students at Linn-Benton Community College who are *non-science majors*. Students typically have little to no science background, yet are enrolled in this course to fulfill requirements needed for a degree and who desire to expand their knowledge and appreciation of the biological sciences. Students are not permitted to take two different BI 101 courses to fulfill graduation or transfer requirements. If a student has taken a different BI 101 course e.g. environmental issues, Oregon Ecology etc. then this general biology class will not gain the student credit – talk with the instructor for any necessary clarification.

**Schedule:**

Lecture Lab

10:00 – 12:20 **T** (WOH-217) 10:00 – 12:20 **R** (WOH-218)

**Outcomes**

1. Discuss community interactions
2. Explain how changes in human population and/or actions impact natural ecosystems
3. Describe the movement of energy & nutrients through trophic levels
4. Recognize the appropriate taxonomic level of an organism based on key characteristics or traits

**Specific Course Themes:**

* Importance of diversity
* Energy & nutrient movement through ecosystems
* Human impacts on marine ecosystems
* Organism &/or community interactions
* Population dynamics
* Life cycles and basic terminology for the major groups of organisms

**Prerequisite:** Math 75 is recommended.

**Required Textbooks & Materials:**

Intro Biology of Marine Life, Morrissey & Sumich, Jones & Bartlett Learning 11th ed.

The Marine Biology Coloring Book, T.M. Niesen, Harper-Collins, 2nd edition

2 Scantron forms for testing (required). Available in the bookstore. Colored pencils

**Recommended Materials:**

 3 ring notebook, calculator.

**Grading**: Final grades for the course will be determined by each student’s cumulative point total by the end of the term. This is an approximation of points for each category, and it is subject to changed, as deemed appropriate by the instructor.

**Assessments**:

 Midterm = 60 pts

 Quizzes 2 @ 15 pts each = 30 pts

 Coloring Pages 10 @ 4 pts each = 40 pts Due on Tuesdays

 Group Quizzes on Coloring 5 @3 = 15 pts occur at start of Tuesday’s class

 Lab Activities 10 @ 10 pts each = 100 pts (includes 2 pts prelab)

 Field Trip – Hatfield (solo) = 10 pts

 Coral Reef Poster Project = 20 pts

 In-class activities & videos = 5-10 pts

 Final Comprehensive exam = 70-75 points

 ~350 points total (Approximation)

**I. General Policies**

**Attendance**: Students are required and expected to attend all lectures. No grade will be assigned for attendance but to do well in this course it is expected that you will attend ALL lectures and labs. Periodically, I will send around a sign-up roster to monitor participation or a small activity will be worth points to show attendance e.g. on film days or during in-class activities. If a situation arises that makes it necessary to miss class it is the student’s responsibility to obtain notes from a peer. No quizzes or lab work will be accepted for credit if you were not in attendance for the class when the work was performed. This course is a lab science course, so ***it is expected that you will attend at least 70% of the labs to gain a passing grade***. If a student misses more than **TWO** lab periods+ this will result in automatically failing the course, regardless of the overall percentage for the remainder of the course. **+**assuming a regular 10 week lab progression.

**\*Children are not allowed in the classroom while students are attending class this is in consideration of your peers to maintain a professional learning environment; as well as consideration of safety to children because of potential exposure to lab materials.**

**Quizzes:** As noted on the syllabus there will be 2 quizzes primarily over reading & lecture material. It should be assumed unless your instructor tells you otherwise that the quiz will be primarily over the reading material covered in the chapter readings prior to the quiz day supplemented by the respective lectures for that unit. The quizzes will be closed book and closed note. You will be given 15 minutes at the **START** of the lecture day for taking the quiz. Be on time – no late takes!

**Exams**: Objective tests consisting of multiple choices, matching, short answer, binary decision, labeling, true/false, data analysis and graphing. Please bring a Scantron form to each exam.

**Make up exams:**

There will be **NO** make-up exams unless I am informed**, in writing**, PRIOR to the exam that you will need to miss it for a “documentable” reason. You need to talk with me directly for approval to make up an exam, exceptions are rare, but I do understand complications that can make it impossible to meet an exam date. Exams may NOT be taken early. Approved late takes must be made up before the next class session following an exam. I do not drop any exam or quiz grades. If you miss an exam, the grade is a zero. On the exam day if you have a life situation come up you must call me and leave a message on my voice mail or send me an immediate email, and only then with your instructor’s approval will you be eligible to take an exam. You will then need to come into the next scheduled office hour period to take that exam (or I will arrange to have your test placed into the test center). Regardless of administration location, it must be taken before exams are returned to the rest of the class, usually this will be within two days of when the exam was issued). Early exams will not be allowed for any reason (including the booking of airline or event tickets) – so please plan accordingly.

**Poster Project:** This term students will have an opportunity to investigate a research topic (working in pairs) related to an issue specifically affecting coral reefs. To gain a variety of perspectives, students will sign up for this project after the midterm and work collaboratively to develop an informational tool that will be shared with your classmates in a casual gallery tour approach; where your peers will have an opportunity to provide you feedback about your poster presentation. This project should be creative, informative and sufficiently detailed for a college- level, science class. A rubric of expectations will be provided in week 5 of the course and the project is ***due in week 8***, no extensions will be allowed, since week 9 is a holiday weekend. You must be in class the day of the gallery tour to gain credit for your project, if you cannot be there only half credit maximum will be awarded i.e. if you don’t attend the poster gallery tour & feedback session, even though your poster was turned in by your partner.

**II. Special Circumstances:**

**Late Adds:** No student will be added to the course after the second day of classes. All material covered the first week, including labs, is subject to being on the unit quizzes and exams. Missing more than one week is very detrimental to a student’s grade. No student will be added after the first lab, regardless of room available.

**Incomplete Policy**: An incomplete (IN) will only be issued when a student is unable to complete the last exam by the end of the term, and each incomplete grade will be accompanied by a signed contract specifying the conditions necessary to complete the course. Deadline to drop a course is the end of the 7th week of the course.

**Special Accommodations**: Students who may need accommodations due to documented disabilities, or who have medical information which the instructor should know about, or who need special arrangements in an emergency, should speak with the instructor during the first week of class. If you have not accessed services and think you may need them, please contact CFAR, 917-4789. If you have documented your disability, remember that you must **complete a "Request for Accommodations"** **form** every term in order to receive accommodations. It is the student’s responsibility to make any needs known to me within the first week of the semester, *in writing*, so that I can give appropriate accommodation. This includes but is not limited to disabilities of visual, hearing, learning, dates needed for religious holidays, court dates etc. Student athletes and students who have *school sponsored events* that may conflict with class, e.g. missing labs or exams must make your needs known to me at least one week in advance for accommodations, this will also require instructor/coach letters explaining your situation and respective dates of missing regular scheduled class.

**Inclement Weather Policy:** If the campus is open class will be given (including lab days) and scheduled exams/quizzes will be administered. Only if the campus is closed will an exam be postponed, and this will occur on the next scheduled class date following the closure. If a late start is announced classes will resume on their usual scheduled times. Listen to local media coverage for notice of closures e.g. radio stations and/or information posted on the LB website.

**III. Behavioral Expectations:**

**Cell Phones**: As a courtesy to your fellow students and instructor, please turn off all cell phones and pagers during the instructional period. Cell phones are not to be used in class. It must be put away while class is in session. ***If you leave class to answer/place a call/text message, you will be expected to leave for the rest of the day. Break times are the only exception.*** Anyone who needs to have a phone connected (e.g., spouse close to labor, a child sick at home) must clear it with the instructor at the beginning of the class period. Cell phones may not be used for calculators during class, labs, or exams - you must use the calculators provided or bring your own – no exceptions to this rule. During an exam using a phone will result as a zero for that exam.

**Personal Computers (Notebook/Laptop/PDA):** To use a computer such as a Tablet, Laptop or PDA for class notes please make an appointment to speak with the instructor outside of class time to fully understand the limitations and responsibilities for their use. Computers in the labs are only to be used for class or lab activities, not for personal reasons and under no circumstances should downloads of software be attempted, this may lead to disciplinary action, due to a need to protect our class computers from viruses.

**Academic Misconduct**: Will not be tolerated and includes any form of cheating or plagiarism. The student is encouraged to read the student code of conduct for further details at: http://www.linnbenton.edu/admissions/academic-regulations. If a student is found to have cheated on an exam, after due process the resulting grade may be a zero on the given exam or quiz. ***All group work should still be written in the students own handwriting and language.*** You must turn in your own interpretation and work even if doing team work projects or labs.

**Extra Credit:** On a few occasions such as on exams there may be extra credit, which will be high-challenge questions that can aid your score. Even if you do not know the answer you are encouraged to try. This credit will generally not influence a grade more than 2% for the overall grade, but it could make a big difference in borderline grade situations. Extra Credit will NOT be issued or allowed for missed work – there are no exceptions to this rule. My general policy for all students is that “I cannot do for one student what I cannot do for all.” Extra Credit will also be built into the coloring pages HW, with sufficient options 1 pt per E.C. page to make up for a missed group quiz. Please do not ask for exceptions due to poor performance, no extra credit work will be granted by individual negotiation.

**Timing of Assignments:** Unless the instructor indicates otherwise, assume that all pre-labs will be turned in within the first five minutes of the lab period. This document indicates preparation to start the lab. All lab reports will be turned in at the end of the lab period on the day of the lab, unless your instructor should advise differently because of follow up extension assignments or labs that continue into subsequent weeks i.e. ongoing experiments or activities.

**Late Work:** **Will NOT be accepted without supporting documentation** to show your inability to meet deadlines e.g. a doctor’s note or hospital admission form.

**Statement of Non-discrimination:** LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information: <http://po.linnbenton.edu/BPsandARs/>

**Statement of Respect:** Your instructor will make every attempt to create an environment free of distraction and one open to free discourse. The college environment is one of exploring ideas, but also in a context of mutual respect for your peers and instructors. If a pattern of disrespect develops the instructor reserves the right to discuss appropriate behavioral expectations with individuals that may not fully understand this responsibility. At no time will a hostile or condescending classroom environment or discussion be allowed. Civil discourse is an honored value at LBCC, those individuals that do not maintain a professional and civil learning environment will be referred to the dean of students if necessary.

**Field Trip:** We will have a half day optional field trip on a Sunday, May 19th to meet an extremely low tide at a location to be explained in class. Students will be responsible for arranging their own transportation to the site. Each student attending must sign a release waiver the week prior to the field trip. On the field trip day it will also be possible to go to the Hatfield Marine Science Center following the low tide to fulfill the otherwise solo trip, wherein you could work together in groups – which is often far more enjoyable. If a student cannot make the field trip then the Hatfield component is still required but arranged individually by the student. The Hatfield assignment is due 5/28/2019 at the latest.

**IV. Specific Course Proficiencies:**

* The student will be able to ***extract***, ***interpret***, ***critically evaluate*** and ***apply*** biological information from various media, such as books, articles, lectures and the Internet.
* The student will be able to safely and skillfully use basic biological equipment and techniques to ***collect and evaluate data***. This includes but is not limited to microscopes, ph meters, pipettes, computer spreadsheets and models.
* The student will be able to ***organize data*** into tables and graphs, to extract information and find patterns to ***draw sound conclusions***.
* The student will be expected to ***apply*** the scientific method, by using ***experiments*** that test a proposed hypothesis and then draw conclusions based on ***data acquisition***.
* The learner will discover and ***appreciate*** the unity, diversity, complexity and interdependence of life.
* ***Describe*** where common organisms fit in the species-domain taxonomic scheme, and key features that differentiate these organisms from organisms in other taxa.
* ***Apply*** the species concept to common organisms, and ***describe*** biodiversity in terms of number of species and list the criteria by which a species might be classified.
* ***Explain*** the factors that affect the reasons that ecosystems might occur in a particular place, and then relate adaptive traits of organisms that exist in such ecosystems.
* The learner will be able to ***list and describe*** the overall trophic structure (producers, consumers, decomposers) of a given ecosystem, and ***outline*** how energy and nutrients flow and cycle through the system.
* ***Identify*** key parameters that affect populations of organisms e.g. dispersion, growth rate, carrying capacity, competition and resource availability.
* The student will be able to ***report*** how humans interact with and depend upon the environment, and be able to ***identify*** major impacts of human population and technology on the environment, and then be able to relate how humans can minimize detrimental impacts on ecosystems and the organisms that are within them.



**Spring 2019 Schedule –*Tentative***

**General Biology 101: Marine Biology**

 **Week Lecture Topics Chapter Readings Tuesday Thursday**

 **Start Date Coloring Pages Lab topics**

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| **4/2** | Ocean ChemistryZones of the oceanGeography | Ch 1 & 2Sec 1.1, 1.2, 1.3Sec 2.2 | Read Coloring Instructions**Set 1 & 2** | Marine Geography IPhysical Properties of Water: Halo/Thermo |
| **4/9** | Spatial AssociationsCommunity DynamicsTrophic levels | Ch 2 (cont)Ch 3 sec 3.1 & 3.3& pg 62-64 | **14, 63,64,& 66****EC 69***Group Quiz # 1* | Effects of Light |
| **4/16** | **Quiz 1 – Tuesday (15)**Marine MicrobesProductivity | Ch 4 & 5, Sec 6.1 | **11, 19, 20 & 21****EC 75**No Group Quiz | Microbes/PlanktonSea Weeds |
| **4/23** | TaxonomyThe Benthos Life between the sand grains | Sec 3.2, Ch 6Sec 6.3, 6.5Pg 159-162Sec 10.1 & 10.2 | **9,10, 36 & 37****EC 35***Group Quiz #2* | Invertz I:CrustaceansAssign mollusk poster |
| **4/30** | **MIDTERM (60)**PhylogenyIntertidal | Ch 6 154-157Ch 10 (cont) Sec 1.4 & 10.4 | **29,30,31,34****EC 33 or 78** | Invertz II:MollusksMollusk Poster due |
| **5/7** | Life of the spinyEstuaries | Ch 6 (cont)Ch 9Sec 10.3 | **27, 28,39,40****EC 41***Group Quiz #3* | Invertz III – Worms & EchinodermsOsmoregulation |
| **5/14** | Distribution within communities.Tide pools | Ch 12 & 10.4 281-286 | **4,5,6,81****97 required before lab**Group Quiz #4 | Barnacle ZoneColoring Page 97Field Trip May 19 |
| **5/21** | Coral reefsFish I**Poster project Due (T)** | Ch 6, Sec 6.4Ch 11, Ch 7, sec 7.1-7.4 | **12,13,23,24****EC 47** | Cnidarians – coral samplesFish Adaptations |
| **5/28** | **QUIZ 2 (15)**Fish & Sea TurtlesDeep SeaArticle on Telemetry**Hatfield Field Trip DUE** | Ch 7 (cont),Sec 7.6 Ch 13 | **43,49,50,51****EC 53** | Fish Dissection 1 & 2***Film - Mission Blue*** |
| **6/4** | Marine Birds & Mammals | Ch 8 & 14 | **60,61,62, 71***Group Quiz #5* | Cetacean AcousticsStart on Tues. |

 **Final Exam Tuesday 9:30-11:20 June 11**

 **Field Trip: Sunday May 19 7:47 am Seal Rock followed by Hatfield & lunch option.**

Strongly encouraged to attend this date but the Seal Rock low tide is optional.

 Sylvia Earl Talk: Arrange your own transport – Portland

***lab replacement option***. Details TBA Also May 19th

**EC – These are extra credit options** Designed to replace a missed assignment such as a group quiz 5 pts maximum.

1 pt per page completed by the same due date as others in the set (Tuesday)