

# **SYLLABUS**

#### Introductory Biology II, Lecture & Lab, BIOL 112

Course	title	and	num	ber

Term

Meeting times and location

**Sections 510 – 521** Spring 2020 Monday / Wednesday / Friday 11:30 – 12:20 pm BSBE 115

# **Instructor Information**

Name	Dr. Amanda Adams
Email address	aadams@bio.tamu.edu
Office hours	Mon & Wed 12:30 – 1:30 pm and by appointment
Office location	HELD 320

# **Course Description**

Biology 112 is the second half of a two-semester survey of contemporary biology that covers evolution, the history of life, and form and function of organisms. It is a 4-credit hour course that consists of 150 minutes of lecture and 170 minutes of lab each week. The laboratory reinforces concepts discussed in lecture through hands-on activities. Biology 112 is intended for life-science majors and other students intending to pursue a career in biomedical sciences. It is not designed for students who only need to fulfill the required life and physical sciences component of the core curriculum. BIOL 107 and BIOL 113 are excellent alternatives for non-science majors.

Prerequisites: BIOL 111 or approval of instructor

# **Learning Outcomes**

- i. Explain key concepts of evolutionary theory.
- ii. Discuss the history of life on Earth.
- iii. Illustrate evidence for evolution.
- iv. Solve simple population genetic problems.
- v. Construct evidence-based phylogenies to describe biodiversity within an evolutionary framework.
- vi. Describe various organs and organ systems with respect to supporting the evolution and adaptation of complex organisms to different environments.

# **Course Materials**

- i. Textbook: OpenStax Biology 2e **required Available online for FREE.** You may download entire text as a pdf via OpenStax at <u>https://d3bxy9euw4e147.cloudfront.net/oscms-prodcms/media/documents/Biology2e-OP\_aHSFm3Y.pdf</u>
- Learning Catalytics (LC) required for bonus point activities in class only. You must register with your TAMU.edu email address and input your UIN to receive credit. You may purchase LC online at <u>https://www.pearson.com/us/higher-education/products-services-teaching/learning-engagement-tools/learning-catalytics.html</u>
- iii. Dissection kit
- iv. Lab Safety Goggles

#### **Course Attendance Policies**

Students are expected to attend ALL lecture and laboratory sessions. Laboratory attendance is mandatory.

#### LECTURE

- **Excused Absences:** "Authorized" excuses for absences in lecture include: serious illness or accident, religious holidays, family emergencies, and university-sponsored activities (see Student Rules 7, Attendance <a href="http://student-rules.tamu.edu/rule07">http://student-rules.tamu.edu/rule07</a>). Except for prolonged excused absence (see below) no make-up opportunities will be provided for missed lecture assessments (tests, quizzes, in-class assignments, etc.) unless the student notifies the lecture professor of the absence within **2 working days** and provides written and verified documentation of an authorized excuse **within one week of the absence**. In the event of prolonged (more than three consecutive) excused absences, the student should consult with the lecture professor.
- Unexcused Absences: At the discretion of the instructor

#### LAB

- Excused Absences: "Authorized" excuses for lab absences include: serious illness or accident, religious holidays, family emergencies, and university-sponsored activities (see Student Rules 7, Attendance http://student-rules.tamu.edu/rule07). Except for prolonged excused absence (see below) no makeup opportunities will be provided for missed material, quizzes, or exams unless the student notifies the lab instructor of the absence within 2 working days and provides written documentation of an authorized excuse within one week of the absence. Any absence without an authorized and verified excuse will be considered unexcused. If students have advance knowledge of an excused absence, they should notify their lab instructor and arrange to attend another lab section the same week, if space permits. Attending another lab section the same week requires presenting a written verifiable excuse to, and registering with, Biology Lower Division personnel in 315 HELD. If a student is unable to make up the lab during the same week that the lab is missed, then the student must make arrangements with the lab instructor to obtain and complete a make-up assignment within one week of the missed lab. If neither of the above makeup options is accomplished, a grade of zero will be assigned for the missed material. Make-up labs or assignments are not offered for more than three excused absences. In the event of prolonged (more than three) excused absences, the student should consult with the course instructor of record. The Texas A&M University Explanatory Statement of Absence Form will NOT be accepted as an adequate verification for an excused absence. Rule 7.1.6.3, "An absence for a non-acute medical service does not constitute an excused absence." A non-acute medical excuse will not be accepted as a valid reason to miss a lecture or lab exam.
- **Unexcused Absences:** Any absence without an authorized and verified excuse will be considered unexcused; no make-up opportunities will be given for any points missed as a result of an unexcused absence. There are NO make-up labs or assignments for unexcused absences. Penalties for unexcused laboratory absences are as follows:
- 1<sup>st</sup> unexcused absence: no points for the missed lab session assignment/quiz/test and deduction of 10 laboratory points.
- 2<sup>nd</sup> unexcused absence: no points for the missed lab session assignment/quiz/test, deduction of an additional 10 laboratory points, and scheduled meeting with course instructor of record.
- 3<sup>rd</sup> unexcused absence: zero lab grade for the course.

# **Grading Policy**

The course grade will be calculated as follows:

**450** (4 Lecture exams) + **75** (12 Problem sets) + **175** (Labs) = **700** (**Total points**) + LC bonus points (max. **30**)

A student's grade for the semester is based on the following points:

 $\begin{array}{l} A = 630 \text{ and above} \\ B = 560 - 629 \\ C = 490 - 559 \\ D = 420 - 489 \\ F \leq 419 \end{array}$ 

NOTE: These are the cutoffs for each grade distribution. There will be no exceptions made or additional points given to get to the next grade level.

# Q-Drop

Tuesday, April 14<sup>th</sup> (5:00 pm) is the deadline for dropping a course with no penalty (Q grade). If you have any question as to whether or not to Q-drop, see your instructor before this date. After this date you must take a letter grade or negotiate a W (withdrawal) or NG (no grade) through your academic dean (see Student rule 10.3).

# **Calendar of Activities and Major Assignment Dates**

#### **Lecture Exams**

There will be three 100 point lecture exams and one 150 point final exam. Each lecture exam will have  $\sim 40 - 45$  multiple-choice questions. The final exam is cumulative and will have  $\sim 55 - 60$  multiple-choice questions. Exams cover both lecture and text book material. For each exam, you are required to bring a #2 pencil and your TAMU student ID. I will provide the scantrons to you for each exam. You may bring a water bottle and/or purse to your desk, but the latter must be closed and left on the floor. No calculators, phones, backpacks, laptops or other items permitted at your desk.

Lecture Exam	Date	Exam Time	Location
Exam 1 (100 points)	Fri., Feb. 7	11:30 am – 12:20 pm	BSBE 115
Exam 2 (100 points)	Wed., Mar. 18	11:30 am – 12:20 pm	BSBE 115
Exam 3 (100 points)	Wed., Apr. 8	11:30 am – 12:20 pm	BSBE 115
Final Exam (150 points)	Tues., May 5	10:30 am – 12:30 pm	BSBE 115

#### Lecture Exam Schedule

#### Exam Challenges

After each lecture exam, a copy of the key will be posted on eCampus. If you think there is an error in the key, submit an **Exam Challenge Form** at: <u>http://www.bio.tamu.edu/index.php/undergrad/ldi/</u> within 24 hours. Give referenced support as to why an alternative answer choice should be accepted. **Note:** Final exams will not be returned or posted, and have no challenge period.

#### Scantron Grade Checks

Submit grade check requests at <u>http://www.bio.tamu.edu/index.php/undergrad/ldi/</u>. You will be notified via e-mail when the results are ready. Bring your student ID to HELD 315 to pick up your grade check.

#### **Make-up Exams**

Will be given **only** in the event of an authorized university approved absence (see Absence Policy above). The exam may be essay, short answers, multiple choice etc. and will be given **only** with the permission of the instructor. **Obtain a signed authorization form from your instructor and bring it to 315 HELD to register for a make-up exam**. You may not take a make up to improve a test score.

Lecture Make-up Exam	Date	Time	Location
Exam 1	Thurs., Feb. 27	5:30 – 6:30 pm	HELD 113
Exam 2	Thurs., Mar. 26	5:30 – 6:30 pm	HELD 113
Exam 3	Thurs., Apr. 23	5:30 – 6:30 pm	HELD 113

#### Make-up Exam Schedule

# **Online Problem Sets**

There will be 12 Problem set assignments during the semester, each worth 6 or 7 points for a total of 75 points. You will complete these assignments entirely within eCampus and can be completed at any time during the open period, **which will be noon on Wednesday to noon on Wednesday of the following week** as indicated on the Problem Set Schedule (below). You may rework an assignment up to 3 times as per instructions within the open period. **Only the highest grade will be recorded.** Once an assignment is closed, you will be able to see the correct answers. All assignments are individual projects. <u>There are **NO** make-up opportunities for missed assignments</u>.

# eCampus Problem Set Schedule

Date	Problem Set
Wed., Jan. 22	Problem Set #1 OPENS
Wed., Jan. 29	Problem Set #1 Due @ Noon
	Problem Set #2 Opens
Wed., Feb. 5	Problem Set #2 Due @ Noon
	Problem Set #3 Opens
Wed., Feb. 12	Problem Set #3 Due @ Noon
	Problem Set #4 Opens
Wed., Feb. 19	Problem Set #4 Due @ Noon
	Problem Set #5 Opens
Wed., Feb. 26	Problem Set #5 Due @ Noon
	Problem Set #6 Opens
Wed., Mar. 4	Problem Set #6 Due @ Noon
	Problem Set #7 Opens
Wed., Mar. 18	Problem Set #7 Due @ Noon
	Problem Set #8 Opens
Wed., Mar. 25	Problem Set #8 Due @ Noon
	Problem Set #9 Opens
Wed., Apr. 1	Problem Set #9 Due @ Noon
	Problem Set #10 Opens
Wed., Apr. 8	Problem Set #10 Due @ Noon
	Problem Set 11 Opens
Wed., Apr. 22	Problem Set #11 Due @ Noon
	Problem Set #12 Opens
<b>TUES</b> ., Apr. 28	Problem Set #12 Due @ Noon

**Bonus points:** You may earn extra credit by participating in short quizzes that will be administered with the *Learning Catalytics* (LC) system **during class periods only.** Learning Catalytics can be accesses on a smart phone, laptop, or tablet connected to the internet. These quizzes are **unannounced.** A maximum of 30 bonus points will be given over the course of the semester. **The LC bonus points earned by each student will be entered/updated in eCampus prior to mid-term grades and prior to the final exam.** There are **NO** make-up opportunities for missed LC activities. To register for LC, please visit <a href="https://www.pearson.com/us/higher-education/products-services-teaching/learning-engagement-tools/learning-catalytics.html">https://www.pearson.com/us/higher-education/products-services-teaching/learning-engagement-tools/learning-catalytics.html</a>, or follow the instructions posted on eCampus under "Course Content".

Week of	Chapter(s)	Topics	
Jan. 13		Syllabus	
Jan. 20		No Class on Mon., Jan. 20	
	18	Evolution, & Origin of Species	
Jan. 27	19	Evolution of Populations & Population Genetics	
Feb. 3	20	Phylogenies & History of Life on Earth	
Fri., Feb. 7	Exam 1	planned to cover Chapters 18 – 20	
Feb. 10	21 & 22	Viruses & Prokaryotes	
Feb. 17	23	Protists	
Feb. 24	24	Fungi	
Mar. 2	25 & 26	Seedless Plants, & Seed Plants	
Mar. 9		Spring Break	
Wed., Mar. 18	Exam 2	planned to cover Chapters 21 – 26	
Mar. 20	27	Introduction to Animal Diversity	
	33	Animal Form and Function	
Mar. 23	28	Invertebrates	
Mar. 30	28	Invertebrates	
Apr. 6		No Class on Fri., April 10	
Wed., Apr. 8	Exam 3	planned to cover Chapters 27 – 28 & 33	
Apr. 13	35	Nervous System	
	29	Vertebrates	
Apr. 20	29	Vertebrates	
		+ Respiratory, Excretory, Circulatory, Digestive Systems	
Apr. 27	29	Vertebrates	
		Redefined Day: Class on Tues., Apr. 28	
		No Classes on Apr. 29 & May 1	
Tues, May. 5	Final Exam	Comprehensive Exam over Chapters 18 – 29, 33, 35	
	(10:30 am – 12:30 pm)		

Lecture schedule (tentative\*)

\*Instructor reserves right to modify this schedule at any time

#### Americans with Disabilities Act (ADA)

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a disability, please contact Disability Resources in the Student Services Building or at (979) 845-1637 or visit <u>http://disability.tamu.edu</u>. Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

#### **Academic Integrity**

# For additional information please visit: <u>http://aggiehonor.tamu.edu</u>

#### "An Aggie does not lie, cheat, or steal, or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

Academic misconduct involves any of the following offenses: cheating, fabrication, falsification, multiple submissions, plagiarism, and complicity in any of these offenses. All incidents of academic dishonesty will be referred to the Biology Lower Division Program, are subject to academic penalties, and will be reported to the Texas A&M Honor System Office <a href="http://aggiehonor.tamu.edu">http://aggiehonor.tamu.edu</a>

#### **Technology in the Classroom**

I encourage the use of technology in and out of the class. You will occasionally be using your computer or cell phone for participation in class exercises (*e.g.*, Learning Catalytics). Please let me know if you do not have access to the internet while in class. You are **not** allowed to record audio or video in class without specific permission from me. Please keep your phone on silent/do not disturb (vibrate is not silent).

You may take notes on your laptop, but <u>I encourage you to take hand-written notes</u>. Research shows that you will have better retention and perform better on exams if you take hand written notes.

Computer equipment failure or problems with internet access will not be considered valid excuses for missed or late exams and/or assignments. All students have access to campus-based computer labs or public library computers. It is your responsibility to arrange for alternate means of accessing the course materials in the event of technical difficulties. Do not contact your instructor, contact Help Desk Central by chat, email, or phone 24/7: <a href="https://it.tamu.edu/help/">https://it.tamu.edu/help/</a>

#### Diversity

Respect for diversity: It is my goal to create an inclusive learning environment where students from all backgrounds and perspectives be well served by this course; that students' learning needs be addressed both in and out of class; and that the diversity that students bring to this class be viewed as a resource, strength, and benefit. I intend to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

# Title IX and Statement on Limits to Confidentiality

Texas A&M University and the College of Science are committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws provide guidance for achieving such an environment. Although class materials are generally considered confidential pursuant to student record policies and laws, University employees, including instructors, cannot maintain confidentiality when it conflicts with their responsibility to report certain issues that jeopardize the health and safety of our community. As the instructor, I must report (per Texas A&M System Regulation 08.01.01) the following information to other University offices if you share it with me, even if you do not want the disclosed information to be shared: allegations of sexual assault, sexual discrimination, or sexual harassment when they involve TAMU students, faculty, or staff, or third parties visiting campus.

These reports may trigger contact from a campus official who will want to talk with you about the incident that you have shared. In many cases, it will be your decision whether or not you wish to speak with that individual. If you would like to talk about these events in a more confidential setting, you are encouraged to make an appointment with Counseling and Psychological Services (<u>https://caps.tamu.edu/</u>). The CAPS office is located on the 4<sup>th</sup> floor of the Student Services Building (SSB)

Students and faculty can always report non-emergency behavior that causes them to be concerned at <u>http://tellsomebody.tamu.edu</u>.

# Lab Information

Teaching Assistant (TA): \_\_\_\_\_\_ E-mail: \_\_\_\_\_

Section #: \_\_\_\_\_ Office: <u>HELD 317E</u> Office Hours: \_\_\_\_\_ Phone: <u>979-845-4653</u>

# PLEASE DOWNLOAD, PRINT AND BRING THE LAB PROTOCOL AND DATA SHEET TO EACH LAB EVERY WEEK.

# Lab Safety

- You will be required to sign a Safety Agreement indicating that you have read, understood, and agree to follow the safety regulations required for this course.
- Eating, drinking, and use of tobacco products are prohibited in the laboratory.
- University safety regulations require closed shoes in the laboratory. You will be refused admittance to the lab if you wear sandals or open-toed shoes.
- Safety goggles are required. Bring safety goggles to all labs.

# **Pre-Lab Quizzes**

There will be **10** online quizzes worth a total of 50 points administered through eCampus. These quizzes will be open one week beginning at Monday at 8 am, the week before the lab will be conducted, and are due at 7:59 am the **Monday** of the current lab week (**see table below**). The quizzes will cover important concepts, procedures and safety information for that week's lab. **The quizzes MUST BE completed before you will be admitted to each week's lab**. If you do not have the quiz completed before the deadline, you **SHOULD still take the quiz and attend the lab**, **but you will receive a grade of zero for that week's quiz. Missing lab because you did not complete the quiz constitutes an unexcused absence.** You are highly encouraged to review the pre-lab again immediately before attending your lab period.

#### Assignments

There will be **8** homework assignments worth a total of 70 points **as shown in the table below.** Two points are automatically deducted for late assignments, and an additional point is deducted for each additional day overdue. Late homework may be logged in at HELD 317E. If HELD 317E is closed, late homework may be logged in at HELD 315.

#### Lab Exams

There will be two in-class exams worth a total of 50 points.

# **Participation Points**

Each teaching assistant (TA) will award a maximum of 5 points based upon cooperation, class participation, attendance, and cleanup.

There are no bonus point opportunities in lab!

#### Lab Make up Exam

At the discretion of the instructor and TA.

#### Regrading

Is at the discretion of the lab instructor. Requests for re-grading must be initiated within two weeks of the assignment being returned to the student and must be completed before the last official day of classes. Evidence of academic dishonesty constitutes grounds to initiate an honors system violation proceeding (see Academic Integrity).

Mon, Jan. 20 <sup>th</sup>	Population Genetics 1 Pre-Labs open
Mon, Jan. 27 <sup>th</sup>	Population Genetics 1 Quiz Due @ 7:59 am
	Population Genetics 2 Pre-Lab Opens
Mon, Feb. 3 <sup>rd</sup>	Population Genetics 2 Quiz Due @ 7:59 am Phylogenetics 1
	Pre-Lab Opens
Mon, Feb. 10 <sup>th</sup>	Phylogenetics 1 Quiz Due @ 7:59 am
	Phylogenetics 2 Pre-Lab Opens
Mon, Feb. 17 <sup>th</sup>	Phylogenetics 2 Quiz Due @ 7:59 am
	Prokaryotes and Protists Pre-Lab Opens
Mon, Feb. 24 <sup>th</sup>	Prokaryotes & Protists Quiz Due @ 7:59 am
Mon, Mar. 2 – Thurs, Mar. 5	Lab Cumulative Exam I
Mon, Mar. 2	Archeplastida and Fungi Pre-lab Opens
Mar. $9 - 12^{th}$	SPRING BREAK—No Labs
Mon, Mar. 16 <sup>th</sup>	Archeplastida & Fungi Quiz Due @ 7:59 am
	Porifera, Cnidaria, and Protostomes Pre-Lab Opens
Mon, Mar. 23 <sup>st</sup>	Porifera, Cnidaria, & Protostomes Quiz Due @ 7:59 am
	Deuterostomes Pre-Lab Opens
Mon, Mar. 30 <sup>th</sup>	Deuterostomes Quiz Due @ 7:59 am
	Dive Response Pre-Lab Opens
Mon, Apr. 6 <sup>th</sup>	Dive Response Quiz Due @ 7:59 am
<u> </u>	Osmoregulation Pre-Lab Opens
Mon, Apr. 13 <sup>th</sup>	Osmoregulation Quiz Due @ 7:59 am
Mon, Apr 20 – Thurs, Apr. 23	Lab Cumulative Exam II

Pre-Lab Quiz & Exam Schedule

• Goggles are required every week.

• Open shoes are prohibited in lab. You must wear closed-toe shoes to all labs.

# Laboratory and Assignment Schedule

Laboratory Session	Date	Assignment Due
Lab 1: Week of Jan. 27 <sup>th</sup> , Population Genetics 1	Jan. 27 – 30	Safety Agreement (in class)
Lab 2: Week of Feb. 3, Population Genetics 2	Feb. 3 – 6	Assignment 1
Lab 3: Week of Feb. 10 <sup>th</sup> , Phylogenetics 1	Feb. 10 – 13	Assignment 2
Lab 4: Week of Feb. 17th, Phylogenetics 2	Feb. 17 – 20	
Lab 5: Week of Feb. 24 <sup>th</sup> , Prokaryotes & Protists	Feb. 24 – 27	Assignment 3
Lab 6: Week of Mar. 2nd LAB EXAM 1	Mar. 2 – 5th	LAB EXAM 1
Mar. 9-12—SPRING BREAK—No Labs		
Lab 7: Week of Mar.16 <sup>th</sup> , Plants & Fungi	Mar. 16 – 19	Assignment 4 (turnitin.com)
Lab 8: Week of Mar. 23 <sup>rd</sup> , Porifera, Cnidaria, & Protostomes	Mar. 23 – 26	Assignment 5
Lab 9: Week of Mar. 30th, Deuterostomes	Mar. 30 – Apr. 2	Assignment 6

Lab 10: Week of Apr. 6 <sup>th</sup> , Dive Response	Apr. 6 – 9	Assignment 7
Lab 11: Week of Apr. 13 <sup>th</sup> , Osmoregulation	Apr. 13 – 16	Assignment 8 Assignment 9 (at end of lab)
Lab 12: Week of Apr. 20th, LAB EXAM II	Apr. 20 – 23	

**Work individually:** All laboratory assignments are individual projects. You may not work together on written assignments without the permission of your lab instructor.

**Plagiarism and Proper Citation:** Copying from texts, lab manuals, internet sources, other students, or **your own previously-submitted assignments** without proper credit is plagiarism and will be considered cheating. If you quote from another source, you must credit that source in your text and properly cite a reference in the literature cited section. The following is an example of a proper citation:

Reese et al. 2011. Biology 9th ed., Pearson/Benjamin Cummings Publ. Co., pg. 146.

#### Lab Assignment Descriptions

**Assignment 1—Population Genetics 1 (5 pts)** Work independently. Write detailed responses to the prompts and questions in the datasheet package. Submit your responses to your laboratory instructor.

Assignment 2—Population Genetics 2 (5 pts) Work independently. Write thorough and detailed responses (a paragraph each) to the prompts and questions in the datasheet package. Submit your responses to turnitin.com, print the receipt and turn the receipt and responses in to your laboratory instructor.

Assignment 3—Phylogenetics 1 & 2 (10 pts) Work individually. Turn in the 7 trees you generated in class and your trait matrix. Submit your responses to the Review Questions at the end of Phylogenetics 2 to Turnitin.com, print the receipt and attach it to your responses to hand in to your lab instructor.

Assignment 4—Prokaryotes & Protists (10 pts) Work independently. Sketch and label each of the organisms provided for observation in class and note two distinguishing features of each. Write a one page summary describing the experiment you designed and include a paragraph explaining your conclusions and submit the text to turnitin.com, print the receipt and attach it to your summary to turn in to your lab instructor.

Assignment 5—Plants & Fungi (10 pts) Work individually. Sketch and label each of the organisms provided for observation in class and note two distinguishing features of each. Use the phylogenetic tree provided in eCampus to submit your annotated phylogeny to your instructor. Write a one page description of the major evolutionary changes present in the phylogeny and list the 5 additional traits you've added to the phylogeny, and submit the text to turnitin.com. Print the receipt and attach a hard copy of your description to your phylogeny to turn in to your lab instructor.

Assignment 6—Porifera, Cnidaria, and Protostomes (5 pts) Work independently. Sketch and label each of the organisms provided for observation in class and note two distinguishing features of each. Use the phylogenetic tree provided in eCampus to submit your annotated phylogeny to your instructor. Write a one page description of the major evolutionary changes present in the phylogeny, list the two additional features you added to each branch, and submit the text to turnitin.com. Print the receipt and attach a hard copy of your description to your phylogeny to turn in to your lab instructor.

Assignment 7—Deuterostomes (5 pts) Work individually. Use the phylogenetic tree provided in eCampus to submit your annotated phylogeny to your instructor. Write a one page description of the major evolutionary changes present in the phylogeny, list the two additional features you added to each

branch, and submit the text to turnitin.com. Print the receipt and attach a hard copy of your description to your phylogeny to turn in to your lab instructor.

Assignment 8—Dive Response (10 pts) Work independently. Write a two page report summarizing your experiments on the dive response. You should include the baseline data from your group, your assigned dive parameter data, and class data for the other class parameters tested. Follow the lab report guidelines posted on eCampus. Submit your report to turnitin.com and print the receipt. Attach the receipt to a printed copy of your report and turn in the report to your lab instructor.

**Assignment 9—Osmoregulation (10 pts)** Work individually. Complete Table 1 before attending lab. Complete the urinalysis in Lab Activity 3 and complete Table 2. Write a summary of your findings and explain your diagnosis. Turn in your completed Table 1, Table 2, and your diagnosis paragraph to your lab instructor at the conclusion of the lab period.

#### **Student Support**

**Help desk:** Students needing individual assistance will find a Teaching Assistant in HELD 317E, phone 979-845-4653. Check the schedule posted outside of HELD 315.

**Problems:** Courtesy dictates that you first discuss any problem with your laboratory instructor. If the problem has not been resolved, please contact Dr. Christopher Lee (Teaching Coordinator) at 979-458-3399 or by e-mail at <u>clee@bio.tamu.edu</u> to make an appointment to discuss the situation.