

Foundations of Science Lab

BIOL 1436 – Spring 2018

Lab Instructor:	Lab Instructor Info	Lab Coordinator:	Mr. Koether
Office Location:	LDB 303	Office Location:	LDB 308
Office Hours:	Fri (1:00-2:00pm) in LDB 303	Office Hours:	Tues (9:30 – 11:00 am) Wed (8:30 – 11:00 am) or by appointment
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Welcome to Foundations of Science Lab!

Please read this syllabus carefully. Understanding the grading and attendance policies will help you this semester.

The Foundations of Science Lab is a required component of the Foundations of Science Lecture course. **The lab and lecture must be taken concurrently (same semester)**. You will not receive credit for this lab course if you are not also enrolled in the lecture during the same semester.

This Syllabus is Subject to Change for Logistical and/or Pedagogical Reasons at the Discretion of the Foundations of Science Lab Coordinator.

Grading Policy

The lab grade will consist of both **individual scores** and **group-derived scores**. Most of the labs will be based on case studies that will involve instructor-led discussions in which members of groups/teams work together to develop responses, propose hypotheses and experimental designs, or offer explanations for what has been reported or observed.

At the beginning of the lab, each student will be given a short, **Individual Lab Quiz** (ILQ) over the information provided in the lab readings and relevant readings assigned in lecture. This is intended to ensure that everyone reads the lab exercise and textbook background readings (listed on the lecture syllabus) before coming to class so they will be prepared for the lab discussion. The quiz will include information from the lab manual readings, vocabulary terms listed at the end of the lab exercises, and information from lecture notes and readings. These quizzes are comprehensive in nature as well, as the course continually builds on prior learning/knowledge. It is important to maintain a working knowledge of prior content. Questions will be multiple-choice and short answer essay.

At the end of the lab, each group will be given a **Group Lab Quiz** (GLQ) regarding the information covered in lab. The group will work together as a team to complete it. Groups will be created by the lab instructor at the beginning of the semester. The purpose for group work is to enhance understanding of the material by having group members help teach each other the material and reinforce the key concepts covered in the lab. The group scores obtained over the semester will be adjusted by the peer evaluation score the student receives from his/her peers using the procedures outlined below. Peer evaluation scores may also be influenced by the instructor, should it be deemed necessary. Further information about the peer evaluation process will be discussed in class and posted on BlackBoard.

Students will drop their lowest peer evaluation, individual lab quiz (ILO), and group lab quiz (GLO) grades. The lab quizzes, both individual and group, total 1000 points. Students can earn 600 *individual* points and 400 *group* points. These points will account for **25%** of your overall course grade.

Keep up with your grades, peer evaluations, and point deductions. **Students have a maximum of 2 Weeks to contest their grade (or point deduction) after the grade (or point deduction) has been posted.** We will not post a total number of points in Blackboard until the end of the semester. Occasionally, the Blackboard program or “app” posts a total column. Disregard this column unless instructed otherwise.

If you belong to an organization that requires a grade-check, please present your TA with a complete Lab Score Sheet. Without the Lab Score Sheet, students must submit a grade request 48 hours in advance.

Peer Evaluation

You will evaluate your peers on a scale from 0 to 10. If a student is present and participates **fully**, please award them the full 10 points. You must be fair in your assessments, but if someone in your group did not contribute adequately, then you should give them fewer points. If they were not present or did not contribute to an assignment, they should receive zero points.

At the end of the semester, your peer evaluation score is equal to the average of the amount of peer evaluation points you received from the members of your group - converted to a percent. Accordingly, an average of 10 points equals 100%; an average of 9 equals 90%, and so on. This score is then used to determine the number of *group* points that you will receive at the end of the semester. If you receive an average of 10, you will receive 100% of the points earned by your group on the group assignments. If you receive an average of 9.2, then you will receive 92% of the group points, and so on.

Anyone receiving an average of less than 7.0 (<70%) on his or her peer evaluation at the end of the semester will automatically lose his or her group-based points. So, for example, if a student receives an average of less than 7.0 in lab, the student will lose all of the group-based points earned by the group in lab.

It is the last rule that normally ensures everyone will contribute to the group’s efforts! Also, the fact that the score is an average prevents anyone who might be unfair in the awarding of points from single-handedly undermining the final grade of a group member. And, if one student gives a score that is much less than those of other students (which implies that it is unfair), ***your lab instructor has the option of ignoring/changing that score.*** In fact, your lab instructor can override a low average score if there is evidence that the grade was unfairly assigned by the group. ***This serves as a safety net for each student.*** Also note that the lab instructor has the right to peer evaluate students as well.

Very important note: Although points are not given for completing peer evaluations, **points will be deducted if the rules are not followed** and/or if you do not submit a peer evaluation for your group members. Specifically, **25 points will be deducted** for each of the following:

- * not submitting a weekly peer evaluation (when present)
- * not submitting the same day the lab was conducted (when present)
- * evaluating your group on a day you were absent
- * submitting duplicate peer evaluations
- * awarding points to absent group members
- * an inconsistent evaluation (i.e. awarding a member 4 points, but remarking that they “fully participated”)
- * openly bartering/asking for better/worse peer evaluation points
- * evaluating an incorrect section, group, or listing one’s self using an incorrect member designation
- * other such actions that undermine the peer evaluation process at the instructor’s/coordinator’s discretion

Drop Grade Policy

As previously stated, students will be allowed to drop their lowest average peer evaluation, lowest individual lab quiz, and lowest group lab quiz grades. This policy is to help students who have an unavoidable absence during the semester. ***Reserve the drop grades for a truly unavoidable emergency/absence.***

Make-up labs/exams/extra-credit: Make-up labs/exams/extra-credits are only allowed based on the Lab Coordinator's approval. **In order for a lab, exam, or extra-credit to be made up, appropriate documentation MUST be provided.** The Lab Coordinator will decide if documentation is appropriate or not. Examples of appropriate documentation are: a **doctor's note, a legal notice, a note from the SHSU athletic/orchestra/choir/band director, stating that the absence was necessary and unavoidable.** ***You must present documentation, and have it approved, before or during the SAME WEEK as Your ABSENCE! This*** is because it is not possible to make up a missed lab the following week given that labs are based on group work, as well as information presented at the time the lab is conducted. So, if you try to wait until the week following the absence, it will be too late for any sort of "make-up."

School Related Absences: Students involved in school related events and activities will be allowed to reschedule their lab when conflicts arise (the absence must be necessary/unavoidable), if possible and with prior approval. ***Prior to the absence,*** the student must bring a written confirmation of participation in the activity from the faculty sponsor to the Laboratory Coordinator in LDB 308. Arrangements will be made for the student to make up the absence. ***Please understand that you MUST Do This BEFORE your absence!***

Please be aware that your group members do notice when you are tardy and/or absent. They typically consider punctual attendance and participation in the peer evaluation process.

Make-up Policy

As stated above, for logistical reasons, it is almost impossible to "make-up" a lab. **This means that the drop grades (lowest peer evaluation, one ILQ, and one GLQ) are your only reliable means for covering an absence when you miss a lab.** In the event that you have a University excused (and Lab Coordinator approved) absence and wish to attend a different lab session *during the week* in which you will miss your regularly scheduled lab, we will do our best to accommodate your request. In the event that you wish to attend a different lab during the week in which you will miss your regularly scheduled lab, please do the following:

- 1) Contact the FoS Lab Coordinator to request approval for the make-up (*before your absence*)
 - Only the FoS Lab Coordinator can approve an absence
 - Approval is contingent upon documentation of the University/Lab Coordinator approved absence (doctor's note, funeral pamphlet, court documentation, etc.) Verbal explanations and letters from parents or guardians do not constitute documentation.
 - Again, the absence MUST be made up the week of the regularly scheduled lab
- 2) If the absence and make-up are approved, you will receive a **blue absence form** to bring with you to the make-up lab. Hand it to the lab instructor during your make-up session.
- 3) **Inform your regularly scheduled lab instructor that you made up a lab and that they will be receiving a blue absence form.** Please keep in mind, it may take a little longer for these grades to be input into BlackBoard.

Proper Course Behavior

All of these rules are standard and are based on common courtesy, respect, and honesty.

- 1) Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones, pagers and ALL other electronic equipment must be **turned off** before class begins. **Students are prohibited from eating or drinking in class, using tobacco products**, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.
- 2) Come to class on time—**If you arrive after attendance is recorded, you will be counted absent.**
- 3) Student are required to purchase a brand new, current, unused edition lab manual and turn in the Foundations of Science Laboratory Student Acknowledgement sheet by the 2nd week of lab. Students who do not bring their lab manual to class, and/or who do not turn in the Acknowledgement sheet will be asked to leave lab and will receive a zero for the day's assignments.
- 4) Remain in lab until it is finished. **Leaving early will count as an absence and result in a zero on both the Individual and Group Lab Quizzes (ILQ and GLQ).** Emergencies will be assessed by the Lab Coordinator on a case-by-case basis. Students who take their quizzes at the Service for Students with Disabilities Center (SSD) must complete their Individual lab quizzes before lab begins. If a student takes their Individual lab quiz at the SSD center and then does not attend lab, the Individual lab quiz grade will not be recorded.-
- 5) ***Due to Safety Requirements:*** *Do not* bring food or drink into the lab. *Do not* apply makeup in lab. We do have outdoor labs; please wear appropriate clothing.
- 6) **Treat each other and the Lab Instructor with respect, dignity and courtesy.**
- 7) Cheating or any other form of academic dishonesty will be handled in accordance with the student handbook.
- 8) During lab and especially during quizzes and exams, **cell phones** and any other equipment capable of receiving, recording and/or transmitting information, must be put away in a book bag or purse. In short, it must not be readily accessible or accessed. Hats must be turned backward or put away during quizzes and exams. ***Failure to follow these rules will result in the student being asked to leave the lab room. A zero will be recorded for the lab (ILQ/GLQ/Peer Evaluation) in which these rules were broken.***
- 9) **DO NOT LEAVE THE ROOM DURING A QUIZ OR TEST!** If this happens, the quiz/test will be taken up; a grade of zero (0) will be recorded.
- 10) **Visitors in the Classroom:** Please check with the Lab Coordinator, before bringing visitors to lab. If approved, the visitor must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. It is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom. This policy is not intended to discourage occasional visiting of classes by responsible persons.

Student with Disabilities Policy: It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD

936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see: <http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

Any student seeking accommodations should go to the *Services for Students with Disabilities* (SSD) office, in the Lee Drain Annex, at the very beginning of the semester and complete a form that will grant permission to receive accommodations. Please do not wait until test day to do this. Accommodations cannot be made retroactively.

Religious Holy Days: Any student that will miss lab due to Religious Holy Day(s) must notify the Laboratory Coordinator in writing by the twelfth semester class day during a regular semester and the fifth semester class day during the summer session, so that appropriate arrangements can be made! Any missed work **MUST** be made up **BEFORE** the absence occurs.

Special Circumstances: If unusual circumstances arise during the semester, such as a medical problem, death in the family, etc., which adversely affects your attendance **PLEASE** discuss this with the Lab Coordinator **immediately** and provide documentation. Under these conditions, we will gladly do our best to accommodate your situation. However, if you wait until after-the-fact, at the end of the semester, or after make-ups are possible to let the Lab Coordinator know that you were experiencing these adverse circumstances, there is nothing that can be done about it at that time. *We cannot retroactively make accommodations and do not give extra extra-credit assignments to make up for grade deficiencies.*

It is extremely important that YOU READ YOUR LECTURE SYLLABUS! Weekly Textbook Reading Assignments and other course policies can be found in the lecture syllabus!

Lab Topics - Tentative Schedule for Spring 2018:

17 th - 19 th January	NO LABS
22 nd – 26 th January	NO LABS
26 th January – 2 nd February	Introduction, Form Groups, Group Norms
5 th – 9 th February	Lab Chapter 1. The Checks Lab: Exploring What Science IS <i>*You must have a new/unused/current lab manual from this point forward in order to attend lab</i>
12 th – 16 th February	Lab Chapter 2. Salem's Secrets: A Case Study on Hypothesis Testing and Data Analysis

19 th – 23 rd February	Lab Chapter 3. The Fast and the Forgetful: Limits to Perception and Memory
26 th February – 2 nd March	Lab Chapter 4. I'm a Libra. What's Your Sign? The Stars of Astrology Meet the Stars of Astronomy
5 th - 9 th March	Lab Chapter 5. <i>Star Trek</i> and the Laws of Nature: Can We Boldly Go Where No One Has Gone Before?
12 th – 16 th March	<i>SPRING BREAK</i>
19 th – 23 rd March	Lab Chapter 6. The Haunting: Do the Laws of Nature Apply to Paranormal Phenomena?
26 th – 30 th March	Lab Chapter 7. A Cuppa Day Keeps the Doctor Away? Complementary and Alternative Medicines
2 nd – 6 th April	Lab Chapter 7. CAM Presentations
9 th – 13 th April	Lab Chapter 8. The Present Is the Key to the Past (Geology)
16 th – 20 th April	Lab Chapter 9. Natural Selection
23 rd – 27 th April	Lab Chapter 10. Evolution Lab: Why don't whales have legs?

Course Materials

The course materials should be the same for both lecture and lab.

- 1) *Foundations of Science* (A custom edition of *Conceptual Integrated Science*), by Hewitt, Lyons, Suchocki, and Yeh, 2012, Pearson/Addison-Wesley, San Francisco. ISBN 978-1-2696-8553-5
- 2) *How to Think About Weird Things: Critical Thinking for a New Age* – 7e, 2013, by Theodore Schick and Lewis Vaughn, McGraw-Hill. ISBN 978-0-0780-3836-5 (paperback).
- 4) **Lab manual: *Foundations of Science Lab Manual* ISBN 978-0-7380-9190-7**
- 5) **Scantrons: You will need approximately 10 of the "short" Scantron test forms (15 question "Quizzstrip"; form #815-E); you will occasionally need a simple calculator for lab.**

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