

BIOL 1114 Laboratory

Spring 2022

Section: _____

Instructor: _____
Office/hours by appointment only through Zoom

Lab Time: _____
E-mail: _____

Personal Protection

Equipment: Students are must, for their own safety, to wear a lab coat, goggles or face shield, gloves, following [NSTA Safety Guidelines](#). Students can purchase goggles and lab coats through the OSU bookstore. We will supply 1 pair of nitrile gloves/student/lab period. Students may supply additional gloves.

Face Masks: OSU encourages you to wear a mask indoors in public settings regardless of whether you are fully vaccinated, consistent with the current CDC recommendations. This is especially important **in this laboratory because people are close together for up to 3 hours**. Wearing a mask during lab not only protects you but also helps protect those around you who may be more vulnerable. This is a simple way we can look out for all members of the Cowboy family.

If we are informed of a positive case in BIOL 1114 lecture or lab, we will inform you and masks will be **required** for entry into lab for the following 2 weeks. Students without masks will NOT be allowed to enter and will be considered absent for the time that they are missing (see absence policy).

We will supply you with ONE mask if needed ONCE. You should NOT throw that away. It is the only one we will provide you this semester!

COVID-19: We will follow OSU's instructions and policies. These may change with changes in CDC guidelines. As of January 1 (<https://go.okstate.edu/coronavirus/latest-announcements/21-22-spring-return.html>):

- **If you feel sick, do not attend class.** Contact University Health Services at 405-744-7665 immediately and communicate with me as soon as possible to arrange remote participation (if possible). Otherwise, you are to follow the procedure outlined under attendance. We have a limited number of masks available if you wish one but have forgotten yours.
- **IF fully vaccinated** and in close contact with someone who has COVID-19,
 - you are **not required** to quarantine **if you show no symptoms**. You should **get tested on day 5 after your exposure**, even if you don't have symptoms. You should also **wear a mask indoors in public for 10 days** following exposure or until your test result is negative.
 - You should isolate for 10 days if your test result is positive.
- **IF NOT vaccinated** you should quarantine for five days if exposed to someone with COVID-19, as well as provide proof of a negative test, which should be taken after day five from point of exposure. **Wear a mask indoors in public for 5 days** following quarantine.

Labs during the first 2 weeks of classes will be conducted on-line via Canvas Conference (Big Blue Button). Subsequent labs may be conducted on-line, in-person, or hybrid (half of each team on-line and half in-person) with masks required for those in person if we are informed of a positive case in BIOL 1114 lecture or lab. You will be informed before your lab begins. **You should be prepared to attend in-person or on-line at any time.** We understand the challenges this poses, but under the everchanging Covid-19 situation we must all endure together.

Textbooks: French, D. 2021. *Investigating Biology: A Laboratory Resource Manual*. 2021 Edition. Fountainhead Press: Fort Worth, TX (**Required**)
Journal of Introductory Biology Investigations (JIBI) (you will receive a free subscription to this).
Pechenik, J.A. 2016. *A Short Guide to Writing about Biology*. 9th Edition. Pearson Longman Publishers: NY. (**Recommended**)

The **Guide to Success** in your laboratory manual provides substantially more information about the goals and structure of lab, and the following policies and requirements. You are responsible for learning and adhering to what is stated there.

Special Needs: This includes **allergies!** - See the lecture syllabus & BIOL 1114 webpage for details and required actions

Teamwork: You will work in teams of 2-4 at finalizing plans for, conducting, and reporting the results of experiments. Teams will divide responsibilities, develop rules to guide their interactions (see recommendations later), and be accountable to each other. Teammates help each other succeed!

Grading policy: Points earned in lab (maximum of 400) are added to the points earned in lecture. The total points are then used to determine your final grade for the course. The lab counts for 40% of the final grade.

Component	Point Value	Total
Lab reports	100	400
Lab Final	50	<u>50</u>
Available		450*

***Peer Evaluation:** The scores you receive from your team will affect your grade – see your lab manual for details.

Lab Reports: Each week your lab team of 2-4 students will submit a lab report. We refer to them as **manuscripts** (prior to publishing) **or articles** (after they are published). For each of the four investigations, you will receive comments on the first two drafts. The manuscript you submit at the end of each investigation will be scored by three experts and you will receive the average of the highest two scores for each. Your team may continue to author the manuscript using Canvas Collaborations between lab periods, but each draft or final manuscript must be submitted correctly to your lab instructor (Week 1) or to JIBI (Week 2 and 3) by the **end of each** lab period

Publishing: Manuscripts of sufficient quality will be published in the *Journal of Introductory Biology Investigations* (JIBI). This is an accomplishment you can use to demonstrate your skills and work quality to others and will contribute permanently to current and future students and scientists.

Absence: **What do you do if you miss any part of any lab for ANY reason?** This includes arriving late, leaving early, or leaving the lab for an extended period and returning. Your coauthors (team members + Lab instructor/mentor) will determine the contributions you will make to compensate your team for the time missed. Your lab instructor is the final arbitrator of what work must be done. This will be posted on your personal page. **It is your responsibility to check with your lab instructor (within 24 hours after the lab) about what work needs to be done and by when.** Check also that it is done and recorded.

Each team must submit an **Authorship form** with each final manuscript describing the **extra contribution** you made **to compensate for each absence**. If it is not sufficient, you will lose 1/3 of the manuscript grade for each unsatisfactory absence. We are not judging the legitimacy or nature of the absence, just whether you have contributed appropriately to the final products.

Lab Final: There will be a 50 point assessment during the last lab period. We want to offer you a final chance to demonstrate the scientific reasoning skills you have learned. It will also allow you to compensate for a less than perfect manuscript score or an absence for which you could not contribute sufficiently to the research to make up for it. This will be conducted on-line.

Planning Forms: are **required** each week of each investigation and **due online by 5:00p the day before lab**. On each, you write a brief plan of action for the lab that week including such items as experimental designs and manuscript revisions. If submitted on time, you will receive valuable feedback. Late planning forms will be accepted, but you will not be allowed into lab until you submit your planning form. **Failure to submit a planning form will be treated as an “unsatisfactory” absence, until it is submitted** (see absence policy).

More Help: The **Lab Resources and Institution Pages** on <http://biol1114.okstate.edu> contain materials and guidance for the lab in general and for each investigation.

Lab Schedule Spring 2022

Week	Starting date	Lab Topic
1	Jan 10	Introduction to Lab --- On-line via Canvas Conference (Big Blue Button) -----
2	Jan 17	Planning Form and Manuscript writing --- On-line via Canvas Conference (Big Blue Button) -----
3	Jan 24	Research in the Institute of Comparative Respiratory Research – Week 1 (Draft manuscript to lab instructor)
4	Jan 31	Research in the Institute of Comparative Respiratory Research – Continued research (Draft manuscript to JIBI)
5	Feb 07	Research in the Institute of Comparative Respiratory Research – Final analysis & Submission to JIBI
6	Feb 14	Research in the Biofuels Research and Aquatic Quality Collaborative Biofuels Division ONLY – Week 1 (Draft manuscript to lab instructor)
7	Feb 21	Research in the Biofuels Research and Aquatic Quality Collaborative Biofuels Division ONLY - Continued research (Draft manuscript to JIBI)
8	Feb 28	Research in the Biofuels Research and Aquatic Quality Collaborative Biofuels Division ONLY - Final analysis & Submission to JIBI
9	Mar 7	Research in the Acme Brewing and Baking Company – Week 1 (Draft manuscript to lab instructor)
10	Mar 14	Spring Break – No Lab
11	Mar 21	Research in the Acme Brewing and Baking Company - Continued research (Draft manuscript to JIBI)
12	Mar 28	Research in the Acme Brewing and Baking Company - Final analysis & Submission to JIBI
13	April 4	Research in the Center for the Study of Sexual Selection in Fishes – Week 1 (Draft manuscript to lab instructor)
14	April 11	Research in the Center for the Study of Sexual Selection in Fishes – Continued research (Draft manuscript to JIBI)
15	April 18	Research in the Center for the Study of Sexual Selection in Fishes – Final analysis & Submission to JIBI
16	April 25	Laboratory Final

Team Etiquette

Work in this class (and in your future workplaces) depend on teamwork. Working in a team can be terrific and beneficial (and we receive positive comments from the vast majority of our students) and is found to improve learning and grades by many research studies. It can also be miserable. The latter happens when team members show no respect for one another - they ignore, speak over, speak rudely, shirk responsibilities, come unprepared because they expect others to carry them, etc. Here are some guidelines and expectations for team interactions:

- Come prepared – use your planning form to prepare ideas; read instructions so you know what you can do
- If you are late or absent, ask your teammates “What I can do to make up for the time I missed?”
- Respect others’ rights to hold opinions and beliefs that differ from yours.
- When you disagree, challenge or criticize the idea, not the person. (see table below)
- Support your statements. Use evidence and provide a rationale for your points.
- Listen carefully to what others are saying even when you disagree with what is being said. Comments that you make (asking for clarification, sharing critiques, expanding on a point, etc.) should reflect that you have paid attention to the speaker’s comments (see table below)
- Be courteous. Do not interrupt or engage in private conversations while others are speaking. Be aware of messages you may be communicating with your body language.
- Assume people are speaking with the best intentions.
- If you are offended by something or think someone else might be, speak up.
- Share responsibility for including all voices in the discussion. If you have much to say, try to hold back a bit; if you are hesitant to speak, look for opportunities to contribute to the discussion.
- If you think something is missing from the conversation, do not wait for someone else to say it; say it yourself.
- Be careful about how you use humor or irony in class. We do not all find the same things funny.
- Encourage respectful, informed disagreement with one another and with the instructor.
- Be aware of different communication styles– we communicate differently based on our backgrounds and current contexts
- Recognize that we are all still learning!

If your communication goal is to...	Start your sentence with ...
better understand	One point that was not clear to me was... Are you saying that... Can you please clarify...
share an idea	Another idea is to... What if we tried... I have an idea...
disagree	I see your point, but what about... Another way of looking at it is... I am still not convinced that...
challenge	How did you reach the conclusion that... What makes you think that... How does it explain...
look for feedback	What would help me improve... Does it make sense what I said about...
provide positive feedback	One strength of your idea is... Your idea is good because...
provide constructive feedback	The argument would be stronger if... Another way to do it would be... What if you said it like this...

Adapted from <https://www.lab-aids.com/sites/default/files/2017-12/Facilitating%20Group%20Interaction%20from%20SEPUP.pdf>

ACADEMIC INTEGRITY: Be sure that you have read and understand this policy as the penalties for violations of Academic Integrity can be very serious. We follow the OSU policies on (<http://academicintegrity.okstate.edu/>) and adhere to OSU values of Honesty, Trust, Respect, Fairness, and Responsibility.



Plagiarism, fabrication of data, falsification of results, copyright violations, fraudulent authorship and similar actions are taken very seriously in the professional world and can result in the loss of jobs and careers. Because we are treating you as professionals-to-be, we will act on violations of academic integrity accordingly. Although reviewers will warn you if they suspect a violation on an initial manuscript, no sanctions will be applied. If a violation is identified on a final manuscript, all authors will receive a “0” for that investigation. Second violations (in lecture or lab) will merit application of a Level 2 (F!) sanction. ALL violations and sanctions become a part of a permanent educational record. Some examples of violations of Academic Integrity more specific to this **LAB** include:

- Using information from **ANY** source without properly **paraphrasing** (writing in your own words) **and citing**.
Refer to the Cheating & Plagiarism section (pp.G6 – G10) of your lab resource manual for further details, explanations, and advice on how to avoid
- Using any part of an unpublished manuscript without properly paraphrasing and citing, the permission of the original authors, and the permission of your mentor. This is **unauthorized collaboration or plagiarism**.
- Falsifying authorship**, i.e. including as an author a student who did not adequately contribute to the production of a manuscript submitted for credit OR failing to include an author who did is considered **fabricating information** by all authors on a manuscript. All authors who miss a part of a lab must have their contributions explained truthfully on the authorship form.
Please see your lecture syllabus for more information on Academic Integrity violations in this course.

You must sign the agreement for BOTH sections by the end of the 2nd week of lab.

BIOL 1114 Team Contract

I, _____, understand that I am part of Team _____ and as such I am responsible for contributing to my group's success as are the rest of my Team's members.

I understand that...

- lab reports and most in-class exercises will be a team effort (pre-labs and planning forms are not)
- my peers will evaluate my contribution to the group (according to the procedure in the laboratory manual) and their evaluation of me will directly affect my total lab score
- I am responsible for checking my peer evaluations when they are released online
- if I receive an average peer review score below 7 (out of 10), I will fail the course
- I am responsible for accurately describing the contributions of each author on authorship forms submitted with final manuscripts and holding my co-authors accountable for making expected contributions when they are absent.
- if I am dissatisfied with my partners, the instructor will not act unless I express this through the peer evaluation process.
- I may not use personal cell phones, laptops, tablets or other electronic devices in lab.

I promise my teammates that I will...

- come to class prepared.
- participate and express my opinions, respectfully.
- allow others to participate by offering them the opportunity to do so.

☆☆

BIOL 1114 Academic Integrity Contract

I, _____, understand that in addition to the expectations stated in OSU's Academic Integrity Policy (see: <http://academicintegrity.okstate.edu/>), this course has specific requirements for academic integrity to which I must adhere. These are listed website (<http://biol1114.okstate.edu/schedule/syllabus/AIP-Pete.pdf>) and in the course syllabi, with an extensive explanation of plagiarism in my laboratory manual.

I understand that...

- in accordance to OSU's policy, neither intention nor ignorance is considered when identifying violations of academic integrity.
- it is the action and/or the result, not the person, that will be judged.
- I am responsible for adhering to the course policy as written.

I promise to maintain the level of academic integrity expected of me by my BIOL 1114 instructors and Oklahoma State University.

[CLICK TO SIGN](#)