

Biology 104: The Human Biology Laboratory
Course Syllabus: Fall 2022
Sections 01 and 02
ISC 147

Laboratory Coordinator

Tom Reho
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Instructional team:

Section	Time	Day	ULI	E-mail
01	8:00 AM-9:50 AM	Tue	Levi Miller	lm38
02	11:00 AM-12:50 PM	Tue	Paige Duffy	pld2
03	8:00 AM-9:50 AM	Wed	Becca Fuller	raf13
04	11:00 AM-12:50 PM	Wed	Morgan Stublely	mls29
05	11:00 AM-12:50 PM	Thur	Ashleigh Cummings	amc62

**Laboratory instructors may be contacted by e-mail. Each instructor is required to hold office hours each week. Office hours will be determined at a later date by your instructor.

Required Materials.

There are no textbooks for the human biology lab. All material should be found in the modules on your sections Canvas page. You may choose to download and print out materials or keep them on your laptop.

You will be required to sign up and pay for the SimBio: How Diseases Spread lab tutorial. Access to this simulation will need to be purchased directly through SimBio. There are detailed instructions found on the Canvas page for your lab section. You will need to have a SimBio account ready to go by the week starting October 11th.

Laptop Computer

You will be required to have a laptop computer for the human biology lab. We will utilize lab computers this semester to collect data, but you may need to have your laptop present to analyze data or complete lab submissions.

You may choose to download the Logger Pro software from the Vernier Software and Technology company so you can run analyze any data you may need to after your normal laboratory time.

Introduction and Course Structure

It is the goal of this course to have you begin to think like a scientist while supplementing information you are learning in the Human Biology lecture.

Learning outcomes

By the end of this course you should be able to do the following:

1. Have an understanding of the scientific method and the way it is used in a scientific venue and your everyday life.
2. Observe changes in several physiologic parameters and utilize these observations to generate novel questions. Generate experimental designs to answer these novel questions.
3. Run experiments and generate, analyze and interpret data.
4. Present data and conclusions.

Statement on Health and Wellbeing in the COVID-19 era.

COVID-19 has impacted our learning environment in many ways, and it will continue to do so during the fall 2022 semester. It is important that you take care of yourself and those around you. The health and wellbeing of those around us are of the utmost importance and if you are feeling unwell (physically or mentally) and it is impacting your coursework please reach out to the health center or a member of your instructional team.

The instructional team will do its best to keep up to date on emails and grading but the ongoing pandemic has created demands that are not present during an ordinary semester. There may be times where the instructional team may ask for a little patience in dealing with these unforeseen issues and will ask for a little flexibility or patience on your part.

Face-to-Face in person lab.

Laboratories are interactive learning environments that have great value in your active participation in the learning process. It is the hope of the instructional team you will be an active participant in this process. It is important you attend when not ill and students who miss more than three labs will fail unless they withdraw and take the lab again the next time it is offered.

In the context of public health and the COVID-19 pandemic it is important that we do what we can to protect both yourself and those around you. **If you are feeling unwell the day of your lab, please do not attend.** It is better to remain at home when not feeling well rather than to attend class and risk spreading illness to others. If you need to miss a lab due to a COVID related requirement please contact both your ULI and the Course Coordinator, preferably prior to the start of your lab. You are allowed to miss a total of three labs prior to being unsuccessful in lab which should allow you to remain at home if feeling ill. The instructional team will monitor attendance and note when

students are nearing the 3-absence threshold and attempt to come up with a solution for a positive outcome.

It is important that during our in-person classes we all adhere to some basic processes to help keep each other safe. These processes may be inconvenient but are the latest public health guidance we have.

Be proactive in contacting your instructional team about your absences and be certain you contact the Dean of Students if you expect to be out for an extended period of time.

Face masks and other Behavior in the Laboratory

Face masks are currently not required in all instructional spaces (including lecture halls, classrooms, and laboratories) and all common spaces in the ISC. This policy may change during the course of the academic semester and we will follow the guidelines set forth by the College's Administration.

Instructional Team

The human biology laboratory is a large non-majors class that serves over 100 students during a normal semester. The large nature of the class requires the use of an instructional team to function. As seen on the first page of this document the team is led by the laboratory coordinator and individual sections are led by student Undergraduate Laboratory Instructors.

Laboratory Coordinator: Tom Reho is the laboratory coordinator for Biol 104. The Laboratory coordinator is responsible for overseeing all labs and working closely with the Undergraduate Laboratory Instructors in the delivery of each week's exercise. The laboratory coordinator is ultimately responsible for all decisions relating to the laboratory, including grades and any other unforeseen issues/modifications that may manifest themselves during the semester. The easiest way to contact the Laboratory Coordinator is by email and when contacting him please include your lab section in any correspondences.

Undergraduate Laboratory Instructor (ULI): ULI's are upper-level Biology/Biochemistry or related major who are responsible for the day-to-day operation of the lab including pre-exercise introductions, running the lab, answering questions, and grading all assignments. Each ULI is required to have office hours to answer questions related to the lab. It is highly recommended you utilize these office hours to answer any questions you may have.

Undergraduate Laboratory Assistant (ULA): ULA's are secondary instructional personnel in your lab who are Biology/biochemistry or related major with an interest in teaching laboratories. These students are a second source of information that you can utilize when the ULI is working with other groups. The ULA is a valuable resource to

utilize during the lab period, but they cannot address any questions or issues dealing with Canvas or grades.

The primary contact in the human biology laboratory should be the ULI assigned to your lab section. This ULI should be your initial contact for all lab related questions. If you are unsatisfied with the ULI's response or answer, please reach out to the laboratory coordinator.

Lab groups

Each lab section will be split into lab groups of 2, 3 or 4 students depending on enrollment. Students will be randomly assigned a lab group first day of lab. Lab groups do not generally change during the semester.

Laboratory Operations and Grading

There is a mixture of both individual and group learning activities in this lab that determine a student's performance. Individual assignments, group assignments, peer review and participation all play a role in determining a student's final grade.

There are nine different performance categories that will be totaled to determine a student's final point total. Several performance categories consist of more than one assignment. It should be noted that within a performance category the assignments may be weighted equally or not. Below you will find the performance categories and the total points available for each category.

<u>Performance Category</u>	<u>Points Available</u>
Quizzes	15 points
Capstone Quiz	5 points
Lab submissions	25 points
Homework/Graphing exercises	5 points
Peer Review	5 points
Participation	5 points
Writing Science Assignment	10 points
Poster Presentation	10 points
Final Presentation	20 points

Assignments

Unless arranged differently with your ULI, all assignments are to be uploaded into your sections Canvas page. There will be at least one assignment due every week. This is done for two reasons, 1) to keep you on track and 2) to not inundate your ULI with so much grading at one point as to over burden them. Unless noted, assignments are due at

the beginning of your lab period. Late assignments will be accepted and graded according to the following penalties.

Days Late	0	1	2	3	4	5	6	7
Penalty	0	5%	9.75%	14.25%	18.5%	22.65%	26.5%	50%
Total % Possible	100%	95%	90.25%	85.75%	81.5%	77.35%	73.5%	50%

Assignments from missed labs: Students who miss a lab due to a documented illness or other Geneseo credit bearing activities will be allowed to get the data from their ULI and hand in a lab submission without penalty. Students who miss lab due to a reason other than those outlined above may also get the data from their ULI to complete a lab submission, but this submission will be graded starting at 50% of the original total. Unless arranged with a member of your instructional team, all work due that results from a missed lab will be subject to the late penalties above if not submitted on the original due date. The missed three lab rule still applies for either excused or non-excused labs.

There may several times during the semester when a deadline is imposed for past work. If such a deadline is necessary, you will be notified a week ahead of the deadline date so you may complete late work. Once a deadline has passed you will receive a zero for that assignment. It is important to hand in work even if that work is late. Every point is important and any points on a given assignment are better than no points at all.

Please pay attention to the type of file you are to submit as an assignment. Most of the files you will download will be in a word (.docx) format and will require you to submit them as either a word (.docx) or PDF (.pdf) extension. There may also be times when you will be submitting files in a spreadsheet version (.xlsx)

Quizzes

Notes about quizzes:

1. Unless noted, all quizzes will be on line and will open 24 hours prior to the start of your lab and close at the start of your lab.
2. Quizzes are individual efforts and you will not be able to preview questions prior to starting the quiz.
3. Quizzes will be timed
4. Questions are displayed one at a time and must be answered before you move on to the next question. **Once you answer a question you will not be able to return to that question.** Please be careful as you navigate a quiz as you will receive no credit for skipped questions.
5. Quiz answers will be available for review starting at 12 am the Friday following the day the quiz was taken and continue to the following Tuesday at 12 am. You will have this time (4days) to ask for a quiz to be regraded. **After this 4 day period no quiz grades will be changed.**

Peer Review

Since much of the time you will be working in groups, part of your lab grade will be dependent on peer review. We will conduct peer review several times during the semester. Students absent the day peer review is done may complete this review but need to contact the course coordinator within a week to do so. Calculation of peer review percentage points for each instance of peer review uses the following rubric: Each member of the group will have 90 points to distribute to the other members of the group. A person may distribute from 0 to 90 points to any one person but may not distribute the same number of points to any of the members of the group. An individual's peer review percentage is calculated from the total number of points given to that person divided by the total number of points an individual may distribute to the members of his or her group.

For Example: In a group of 4 people each person may distribute 90 points
An individual receives 87 points from his/her group members
Calculate $87/90$ to get percentage

To get your individual final peer review total you simply average each instance of peer review percentage. This average is then used to calculate your peer review points.

Participation

Your instructors will also assign points to you based on your participation during the semester and this evaluation will be worth 5 points toward your final grade. This evaluation will depend on how you work within the context of the laboratory, how

prepared you are for class and your participation during class periods. You run the risk of losing participation points if you are consistently late for lab.

Final Grades

Grades will be determined by the total percentage of points available. Letter grades will be determined according to the following point distribution.

Grade	Percentage	Grade	Percentage
A	≥ 94%	C+	77-79%
A-	90-93%	C	74-76%
B+	87-89%	C-	70-73%
B	84-86%	D	60-69%
B-	80-83%	E	0-59%

There is rarely an adjustment to final grades. Your grade is independent of your lab partners and the others in your lab section and there is no quota for a particular grade level. Helping others, not cheating, being successful will not affect your grade and usually leads to a student scoring higher.

Final grade totals will be rounded to the nearest whole percentage point when final grades are tabulated (83.4% → 83%, 79.52% → 80%). Individual assignment grades will not be rounded.

Communication

Check for course announcements daily to look for clarifications and reminders regarding the human biology laboratory. E-mail is usually the quickest way to get in touch of a member of the instructional team, especially the course coordinator. Since the course coordinator has multiple lab sections, please include the section number of your lab section in the E-mail.

Laboratory Conduct

The laboratory setting is an active learning environment where multiple activities may be happening at the same time. The choices you make have an impact on the learning environment and learning experience of your lab mates. Please follow the following rules when participating in the human biology lab.

1. Arrive on time and remain in lab until a member of your instructional team indicates that it is permissible to leave. It is possible that you may be late for lab. The amount of flexibility due to tardiness is dependent on the instructor leading your lab section. If you are more than 20 minutes late for lab that will be considered a missed lab and all associated penalties will be applied. Repeated failure on your part to be on time for lab may result in lost points for participation.
2. You are expected to attend the lab section you have signed up for. Due to COVID-19 restrictions it is difficult to alter the number of students attending labs so switching labs is not allowed. If you need to miss or switch a lab for a school related credit bearing activity we will do our best to allow you to attend a different lab but this request for such an accommodation should be well in advance of the missed lab.
3. Use of laptops and other related technology for class related activities such as note taking, running experiments and viewing class materials is acceptable. Unacceptable classroom technology use would include, but not limited to, checking email, social media web sites and using your phone for non-class related photos.
4. Turn your phone off during lab period. Students should not be checking texts or other social media during lab. If you need to be in contact with someone during lab via your phone let your instructor know otherwise please turn your phone off for the 110 minutes of your scheduled lab period.
5. Place coats on the hooks to the left of the door and unused books should be placed out of the way.
6. There is **NO EATING** in the lab.

Important College Policies

Student Accommodations

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility will coordinate reasonable accommodations for persons with physical, emotional, or cognitive disabilities to ensure equal access to academic programs, activities, and services at Geneseo. Students with letters of accommodation should submit a letter to each faculty member and discuss their needs at the beginning of each semester. Please contact the Office of Accessibility Services for questions related to access and accommodations.

www.geneseo.edu/accessability-office

Erin Hall 22

(585)245-5112

Note: Students who receive accommodations should give their letters to the course coordinator as early in the semester as possible to discuss individual needs. Delay in handing in the accommodation letter may lead to a delay in implementation and accommodations cannot be implemented retroactively.

Academic integrity

Academic dishonesty includes cheating, knowingly providing false information, plagiarizing and any other form of academic misrepresentation. College policies and procedures regarding academic dishonesty are available at:

www.geneseo.edu/handbook/academic-dishonesty-policy

It is our goal for you to be successful in the human biology laboratory. When problems arise in completing your work, please make an appointment to talk to a member of your instructional team. There are times when it is possible to identify additional options to solve problems that do not appear here. It is up to you to be proactive in this regard.

Lab Schedule and Quiz Dates for Tuesday Sections			
Week Number	Date	Lab Exercise	Quiz
1	8/30	Introduction and Tools Used in Biology	
2	9/6	Hypothesis Testing	Practice Quiz
3	9/13	Skin Temperature Recovery	Quiz I
4	9/20	Heart Rate and Blood Pressure as Vital Signs	Quiz II
5	9/27	Monitoring the Neural Reflex	Quiz III
6	10/4	Grip Strength and Muscle Fatigue	Quiz IV
7	10/11	Fall Break: no in-person labs Complete SimBio web tutorial	Quiv V***
8	10/18	Dive Reflex	Quiz VI
9	10/25	Independent Experiment I introduction	
10	11/1	Independent Experiment I work week	
11	11/8	Poster Presentation	
12	11/15	Independent Experiment II introduction	Poster Quiz
13	11/22	No Labs Thanksgiving break	
14	11/29	Independent Experiment II work week	
15	12/6	Final Presentations	Capstone Quiz Due by 12/13

*Quizzes open 24 hours prior to your labs start time and close at the start of your lab.

*Quizzes are timed individual efforts. As you go through your quiz be certain of your answer as you will not be able to return to the question once you move forward.

***Quiz V will open Sunday October 9th at 12 am and remain open until Friday October 14th at 11:59 pm due to fall break.

Due Dates for Assignments for Tuesday Sections		
Week Number	Date	Assignment(s) Due
1	8/30	
2	9/6	1. Introduction Survey
3	9/13	1. Lab Submission: Hypothesis Testing 2. Figure Legend Worksheet 3. Tools Exercise-Graph
4	9/20	1. Lab Submission: Skin Temperature recovery 2. Cranial Length Graph and Analysis
5	9/27	1. Lab Submission: Heart Rate and Blood Pressure as Vital Signs
6	10/4	1. Lab Submission: Monitoring the Neural Reflex
7	10/14	1. Lab Submission: Grip Strength and Muscle Fatigue ##
8	10/18	1. Lab Submission: SimBio-How Diseases Spread
9	10/25	1. Lab Submission: The Dive Reflex
10	11/1	1. Writing Science Assignment
11	11/8	1. Poster Presentation
12	11/15	
13	11/22	No labs-Thanksgiving break
14	11/29	
15	12/6	1. Final Presentation
	12/13	Capstone Data Analysis-Graph

Unless noted and arranged by a member of your instructional team, all assignments are to be submitted online in your canvas page. Be certain to pay attention to the type of file you are submitting as Canvas has been instructed to only accept certain types of files.

Lab Submission Due by Friday October 14th at 11:59 pm