Introduction

Introduction:

Welcome to Biology 104, the Human Biology Laboratory. It is the goal of this course to have you start to think like a scientist while supplementing the information you are gaining in the lecture part of this course.

By the end of this lab you will:
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 novel experiments and generate, analyze and interpret data.
4. Present data and conclusions in the three modalities most commonly used by scientists.

Laboratory Coordinator: Tom Reho, ISC 113,
Phone: 245-5632
e-mail: reho@geneseo.edu

Laboratory Sections:

Section	Time	Day	ULI	E-mail
01	**8:30-10:20 AM**	**Tue**	**Erin Fien**	**ekf4**
02	**10:30-12:20 AM**	**Tue**	**Carey Murzynski**	**cjm24**
03	**12:30-2:20 PM**	**Tue**	**Shannon Murphy**	**sgm7**
04	**2:30-4:20 PM**	**Tue**	**Shaun O'Connor**	**so11**
05	**8:30-10:20 AM**	**Wed**	**Emily Papke**	**eep5**
06	**10:30-12:20 AM**	**Wed**	**Kim Movesian**	**kam47**
07	**10:30-12:20 AM**	**Thur**	**Nicole Milea**	**nam7**
08	**12:30-2:20 PM**	**Thur**	**Amanda Ciafano**	**akc6**
09	**8:30 – 10:20**	**Thur**	**Mitchel Harris**	**mah19**

**Laboratory instructors may be contacted by e-mail. Each instructor is required to hold office hours for two hour per week. The time and location of these office hours will be determined by individual instructors.

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Laboratory Operations and Grading:

This laboratory uses a mixture of group learning activities and individual performance. Your evaluation will be a combination of group performance, peer evaluation and your own personal performance. The following criteria are used in calculating your final point total and assigning your ultimate laboratory letter grade.

Performance Categories	Points Available
Quizzes	25 points
Lab Submissions	10 points
Partial Lab Reports	15 points
Independent Experiment Poster	20 points
Peer Review	5 points
Participation	5 points
Final Presentation	20 points

There will be seven quizzes: one will be given at the beginning of your lab period February 3rd , five will be taken on line over the next five weeks and the final quiz will be taken in class on April 14th . In class quizzes will begin promptly at the start of your scheduled lab time and on line quizzes will open 24 hours prior to the beginning of your lab period and close 5 minutes before your lab begins. On line quizzes will be of a set length of time and once you answer a question you will not be able to go backwards. **On line quizzes are individual efforts, if students are caught cheating they may receive a zero for that quiz, be brought up on academic dishonesty charges or both.** Weekly quiz questions will be generated from both the previous weeks' laboratory exercise and background information on that weeks laboratory exercise. The background information can be found on MyCourses under the **Biol-104-Merge** page. There may be times throughout the semester that you will need to complete part of the laboratory exercise out of class time. Under these circumstances each outside assignment will be given a point value to be added to your quiz performance to generate a quiz grade for that particular week.

At the completion of the laboratory exercises from week 4 through 8 you will be submitting material directly to your lab instructor on line. Instructors will then grade and return these submissions to you.

There will be 35 points worth of assignments that will be completed outside of your designated laboratory period. Each of these assignments builds upon the activities carried out during lab. These outside assignments are a mixture of group and individual assignments.

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 three times during the semester, February 24th, March 31st and May 5th. 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.

Peer review counts for 5 points toward your final grade.

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.

The final week of class you will be giving a formal presentation on experiments you have designed yourself. This presentation is worth 20% of your final grade and should be 5 – 10 minutes in length.

The ultimate decision on final grades will be the sole responsibility of the course coordinator. At the end of the semester, the course coordinator will sum up the points awarded by the instructors and assign letter grades.

As previously noted there are seven different performance categories that when totaled give a student's final point total. Several performance categories consist of more than one assignment. When a category has more than one assignment, the numerical average is calculated with in that particular performance category and multiplied by the total number of available points for that category.

For example: Student A. has a quiz average of 75.78%
.7578 x 25 points = 18.945
Round the number 18.945 to 18.95
This is the total number of quiz points you would receive.

Once all categories have been assigned a point total, the eight performance categories are added together to arrive at a student's final point total.

For Example:

Category	Points awarded
Quiz	18.95
Lab Submissions	6.55
Partial Lab Reports	9.85
Independent experiment poster	18.25
Peer Review	5
Participation	4.5
Final Presentation	16.85
Total	79.95

Since scores and points are rounded up prior to the final total, no alteration of point totals happen at this final stage. A point total of 79.95 is still a C+.

Grades will be assigned according to the following scale:

A	94-100 points	C+	77-79 points
A-	90-93 points	C	74-76 points
B+	87-89 points	C-	70-73 points
B	84-86 points	D	60-69 points
B-	80-83 points	E	0-59 points

Laboratory Rules:

1. Human Biology laboratory is an active learning environment that you must be present to complete. **If you miss more than two lab periods for any purpose you will fail the lab.**

2. You are expected to attend the lab period you are registered for. Due to past abuses, students are not allowed to switch lab sections. Due to the nature of the laboratory experience there are no makeup labs.

3. If you miss lab you will receive no points for either participation or the submission of any lab exercises resulting from the lab. You may still take any on line quiz for that week if you take the quiz during the designated time period.

4. You are expected to be on time. If you are late to lab you will lose participation points for that particular lab exercise. **If you are more than 30 minutes late to lab it will be considered a missed lab** and you will receive a zero for participation points. A student who is more than 30 minutes late may remain in lab to receive the points for any laboratory exercises that will be submitted on behalf of his/her lab group if such exercises are not completed.

5. Quizzes that are given on line will appear in your sections MyCourses page. Each quiz will open 24 hours prior to the start of your lab period and close 5 minutes before your designated lab period. There are no makeup quizzes and failure to complete a quiz during the designated time frame will result in a quiz score of zero. **Quizzes are individual efforts, students caught cheating may receive a zero for that quiz, be brought up on academic dishonesty charges or both**.

6. Unless noted, all assignments are due at the beginning of your laboratory period.

7. Place coats on the hooks to the left of the door as you enter the lab, unused books should be placed out of the way.

8. The laboratory is an academic setting where many different exercises are going on simultaneously. It is therefore important for students to work in an environment free of distractions. For this reason you are required to turn your cell phones off when you enter the laboratory. Students and staff are not allowed to either talk on cell phones or text while the laboratory is going on. Students found to be either talking or texting while in lab will be given a warning for the first offense during the semester. A second offense during the semester (not necessarily during the same week) will warrant the student being asked to leave the laboratory and receive a zero for participation for that particular lab and will not receive any points resulting from a group submission for that particular lab period. A third offense during the semester will warrant the student being asked to leave the laboratory again, receiving a zero for

participation and zero for lab submissions and will also have the matter forwarded to the Dean of Students. If for some reason you need to be able to be contacted during a lab for emergency purposes inform you lab instructor so he or she is aware of the situation.

9. Students who require modifications due to a College recognized disability must bring their letter outlining approved accommodations to the Laboratory Coordinator no later than the beginning of the second week of lab

10. There is absolutely **NO EATING OR DRINKING** in the laboratory at any time, unless it is part of the actual laboratory experience and in those instances only the food/drink provided by the laboratory shall be consumed.

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2014 Laboratory Schedule for Biology 104
Human Biology Laboratory
Sections 01, 02, 03, 04

Date	Lab Exercise	Assessment Exercise
January 20	Introduction/Graphing Tutorial	none
January 27	Hypothesis Testing	none
February 3	Calorimetry	Quiz
February 10	Intro to PowerLab/EKG	Quiz Lab Submission
February 17	Exercise Lab/Muscle Lab	Quiz Lab Submission's
February 24##	Dive Response	Quiz Lab Submission
March 3	Reaction Rate	Quiz Lab Submission Writing Assignment 1
March 10	Spirometry	Quiz Lab Submission
March 17	SPRING BREAK	
March 24	Experimental Design I	Writing Assignment 2
March 31##	Independent Experiment	none
April 7	Poster Presentation of Independent Experiment #1	
April 14	Experimental Design II	Quiz
April 21	No Labs: Great Day	
April 28	Independent Experiment II	none
May 5##	Final Presentation	

Weeks in which we will conduct peer review

Biol 104 – Human Biology – Spring 2015

Writing Assignment 1: Materials/Methods and Results sections for either the Exercise Lab or Muscle Lab or Spirometry exercise.

Writing Assignment 2: Discussion and Introduction sections for either the Dive Response Lab or Reaction Rate Lab exercise.

Most scientists do not work alone, but in collaboration with others interested in solving the same questions and problems. Think about trying to find a friend lost in the woods. It is a much better strategy to enlist the help of others instead of going it alone, as the greater the number of sets of eyes, the better the chance of finding your lost friend. The scientific community does this as well, through the publication of scholarly papers, publication of posters and scientific meetings. Through exposing scientists with differing backgrounds to the same data, novel ideas may emerge that result in significant advances in theory and practice.

This is the basis for having you work in groups this semester. It is important that you respect the ideas and thoughts of those around you as you inquire into the problems set before you. It will also be important for you to be able to reach those in your group as you prepare several quick presentations and prepare for the final presentation at the end of the semester. Please use the lines below to record the members of your group and their contact information.

Group Number_____

Name	e-mail	phone
1.		
2.		
3.		