

Biocore 486 Syllabus Fall 2016

Week	Date	Lab Activity OR Discussion Activity	Assignment Type	Weight (%)
1 (LAB)	9/6 - 9	Intro to Unit 1: Animal Physiology Intro to Biocore 486 lab course: course info, teamwork & experimental design expectations Intro to human model system <i>Statistics assignment: paired vs. unpaired experimental designs</i>		
2	9/12 - 16	Paired vs. unpaired design stats assignment due beginning of discussion Stats mini workshop Experimental design practice: "learnin' with urine"	Individual	1
2		"Data Management Plans (DMP's)" - Brianna Marshall & Cameron Cook, Research Data Services Intro to Animal Physiology model systems; collect urine data <i>Unit 1 detailed weekly outline assigned</i>		
3 (Disc)	9/19 - 23	Refining Unit 1 project; prepare PPT proposal slides Unit 1 Detailed weekly methods outline due by end of discussion	Team	1
3		Informal PPT feedback presentation of Unit 1 research plan uTAs: "Peer Review Do's and Don'ts" <i>Unit 1 Intro w/BR figure + Methods w/ DMP assigned, choose peer review partners*</i>	Team	√ √*
4 (Disc)	9/26- 30	Biorationale flowchart exercise <i>(485 mini exam 1 Sept. 26th)</i>		
4		Peer review Unit 1 Intro w/ BR figure + Methods w/ DMP Unit 1 pilot studies Unit 1 Introduction w/ BR figure + Methods (w/DMP) (6%) + peer review (2%) + author's response + GEA due 96 hours after lab	Individual	8
5 (Disc)	10/3-10/7	Writing Exercise: teams work on consensus diagram/figure of BR w/ references + revise their weekly plan Schedule week 6 individual conference with TA		
5		UTA's: "PPT Presentation Do's and Don'ts" Unit 1 data collection Team consensus diagram/figure of biorationale w/ references + revised weekly plan- due 72 hours after lab	Team	2
6 (Disc)	10/10-10/14	Refining Unit 1 project; prepare PPT proposal slides Practice presentation with uTAs Graded Unit 1 Intro w/ BR + Methods w/DMP returned	Team	√
6		Formal PPT <i>practice</i> presentations: preliminary results	Team	√
7 (Disc)	10/17 -21	Writing exercise: Symmetry of Introduction & Discussion sections <i>(485 mini exam 2 Oct. 17th)</i>		
7		Unit 1 data collection Statistics workshop Team – instructor meetings to discuss estimated PPT presentation grades <i>Unit 1 Proposal paper assigned, students choose peer review partners</i>		
8 (Disc)	10/24 - 28	Peer review Unit 1 proposal paper Mid-semester feedback evaluation		

8		Unit 1 data collection Team - instructor statistics consultations Pig/sheet heart, kidney, lung dissections (optional) Unit 1 proposal paper (10%) + peer review (2%) + author's response due 96 hours after lab	Individual	12
9 (Disc)	10/31 – 11/4	Teams finalize PPT slides Practice Unit 1 formal presentations with uTAs	Team	√
9		Team formal PPT presentations of Unit 1 projects <i>Unit 1 final paper/proposal assigned; peer review optional but recommended</i>	Team	14
10 (Disc)	11/7- 11/11	Graded Unit 1 proposal papers returned (485 mini exam 3 Nov. 7 th)		
10		Intro to Unit 2: Plant Physiology Unit 1 paper OR proposal (16%) + response to TA + GEA evaluation due 96 hours after lab	Individual	16
11 (Disc)	11/14 - 18	Refining Unit 2 project; prepare PPT proposal slides		
11		Informal PPT feedback presentation of Unit 2 research plan	Team	√
12 (Disc)	11/21 - 23	Unit 2 pilot studies/data collection <i>Unit 2 Proposal paper assigned; students choose peer review partners</i> (485 mini exam 4 Nov. 21 st)		
		No labs meet - Happy Thanksgiving!		
13 (Disc)	11/28 - 12/2	Peer review of Unit 2 proposal papers		
13		Unit 2 data collection/analysis Unit 2 proposal paper (8%) + peer review (3%) + author's response due 96 hours after lab	Individual	11
14 (Disc)	12/5 - 12/9	Unit 2 data collection/analysis		
14		Complete Unit 2 data collection/analysis <i>Unit 2 formal poster presentation assigned</i>		
15 (Disc)	12/12 – 12/15	Teams finalize Unit 2 POSTER Practice poster presentations with uTAs Graded Unit 2 proposal papers returned	Team	√
15		Team formal POSTER presentations of Unit 2 projects <i>Unit 2 formal poster OR revised paper assigned</i>	Team	13
Finals week		Unit 2 final paper/poster OR revised proposal paper/poster + GEA form Due Monday Dec. 19 at noon	Team or Individual	15
	All	Team & Class Participation	Individual	7

*Each student will have a paper peer reviewed by an undergraduate TA at least once during the semester. This is a check assignment.

Attendance

Each week you will attend a 50 minute discussion section and a 3-hour lab. You should also plan to spend time outside of regular class hours to work on literature searches, project development, data analysis, PowerPoint preparation, paper/poster writing, and peer review.

Collaboration on assignments

All of your in-class work this semester will be done in permanent research teams. We expect you to discuss ideas and work through problems and analyses with your classmates, especially your teammates. You will do two formal team presentations, one using PowerPoint slides and the other using a Poster, but you must write proposal and final papers on your own. Your final Unit 2 project can be summarized either within a team poster or as an individually prepared final paper. You and your teammates will decide.

Note that because of the team assignments and the possible Unit 2 team poster, somewhere between **30- 45%** of your final semester grade results from "Team" efforts. Your Team & Class Participation grade will be determined by a variety of inputs such as your attendance, participation in class discussions (e.g., the Q&A following feedback and formal presentations), interactions with your instructors and teammates, completion of check assignments, and feedback from your GEA (Group Effort Analysis) forms. This grade will be weighted as **7%** of your final semester grade.

Papers

Final unit papers are to be written in the form of a scientific research paper or grant proposal and are graded using Biocore rubric criteria. Collaborators must be listed on documents submitted by a research team.

Statistics

You and your team are expected to use appropriate statistical tests given your experimental design and hypothesis. The Biocore Statistics Primer is available on Learn@UW. Other statistical resources should be appropriately cited.

Presentations

You and your team will give 2 formal presentations to summarize your respective research projects. One presentation will use PowerPoint slides, while the second presentation will use a research poster format. (See the 2016 Biocore Writing Manual and the Presentation rubric in the appendix of this lab manual for our expectations.) Each presentation should be 15 minutes long, followed by about 5 minutes of answering questions from your audience. Each member of the team is expected to make an equivalent contribution to the presentation and to the Q&A following the presentation. You will be given a team grade for these presentations.

Your team will also prepare and present three PowerPoint proposal presentations as you plan your Unit projects. These presentations are not graded, but will allow you to receive valuable feedback from your instructors and peers.

Peer review grade

You will have 3 opportunities to be a peer reviewer (and have your papers reviewed) this semester. You will turn in a copy of the review you received with each paper along with an author's response form that briefly explains major revisions as well as what advice you took and did not take from your reviewer, and why. Your peer review grades will be based on your efforts in filling out *both the peer review and author's response sheets*. Collectively the peer reviews are worth **7%** of your total semester grade. Even when not required, we strongly encourage you to use the peer review process before turning in papers.

Check Assignments

Check (✓) assignments are scored simply adequate or inadequate. These include at least one peer reviewed paper by an undergraduate TA and scheduled practice run-throughs of PowerPoint/ poster team presentations with undergraduate TAs. Completion of check assignments will be taken into account as part of your Team & Class Participation grade.

Logbook

You will keep a logbook of your research activities throughout the semester (see logbook content expectations handout in this 486 lab manual for further details). You may use an electronic logbook or any bound notebook; a used carbonless chemistry notebook with plenty of empty pages will work. We reserve the right to look at your logbook at any point this semester.

Late Assignment Policy

Papers & assignments must be handed in on time unless you have contacted your TA or Michelle *ahead of time* to request an extension due to emergency or extenuating circumstances. Otherwise, we will deduct one grade per weekday it is late from the grade you would have received (e.g., A→AB for one day late). Note that even an F paper (one week late) counts more than 0 (not handed in at all) when we total the final grades at the end of the semester. Late papers should be given directly to your TA or Michelle Harris or submitted electronically.

If you know of a religious observance or other commitment this semester that will keep you from attending class, let your TA and Michelle Harris know by **September 20th**.

How you earn your final grade

We use an absolute grading scale in 486 lab (no curves!). All assignments will be evaluated and given a letter grade. Each assignment is weighted as stated in the syllabus above and converted to a percentage score. Your final grade will be determined from the sum of your letter grade assignments.

Your final percentage score is converted to a final letter grade as follows:

<u>Final Assignment %</u>	<u>Letter Grade</u>
90-100	A
80-89.9	B
70-79.9	C
60-69.9	D