

Biology 192, Phage Bioinformatics, Spring 2015

General Course Information

Course meeting times: Tuesday 1-4 and Thursday 1-3. Class will meet in Eads 016, the large computer lab in the basement. The Bio 192 websites: Biology Dept web site (<http://www.nslc.wustl.edu/courses/Bio192/bio192.html>); WU Blackboard; the SEA wiki (www.hhmi.org/seawiki). All readings, problem sets, etc will be posted on both the Biology site and Blackboard. The lab manual is on the SEA wiki.

I. Instructor information

Sarah CR Elgin	McDonnell 131	935-5348	selgin@biology.wustl.edu
Chris Shaffer	McDonnell 112	935-5078	shaffer@biology.wustl.edu
Kathy Hafer	Life Science 102	935-4424	hafer@wustl.edu

Course TA's

Nathan Kopp	ndkopp@wustl.edu
Ruchik Patel	ruchik.patel@go.wustl.edu
Rohan Khazanchi	rkhazanchiwustl.edu

Dr. Elgin and Dr. Shaffer will have office hours by appointment. Most weeks there will be time for discussion and questions during the regularly scheduled lab time, but questions outside of class are welcome.

II. Required Materials:

The Howard Hughes Medical Institute Science Education Alliance (HHMI SEA) lab manual will be available on-line. Assigned readings will be distributed as paper copies and will be available on-line.

Students will be asked to use a proper backup policy for all data. Server space will be available as one location where files may be copied. Students may also bring their own hardware (i.e. laptop, portable hard drive or thumb drive) for use as a secondary backup. Appropriate computers will be available in Eads. If you prefer, we can load the needed software onto your computer. Consult with Dr. Shaffer for assistance in this regard.

III. Course Grading

The most important part of doing well in this course is attending all scheduled (and any necessary additional) class meetings, and having a good attitude while performing your analysis and participating in course discussions. This phase of our phage analysis is computer-based. Some of you will have more computer

experience than others; if you can help your lab partners with computer issues, please do so! As before, this analytical work requires that you to be attentive to detail, careful in the execution of your work, thoughtful in discussion - and reasonably cheerful while doing the repetitive work necessary for success! Our goal is publication-ready analysis of our phage genomes. Your grade will be determined as follows:

- 20% course participation and attitude
- 15% five reading responses
- 10% two quizzes
- 10% quality of lab notebook (kept in blackboard student journal)
- 2.5% presentation on positional annotation February 19 (oral PPT team reports; submit PPT)
- 5% written report on positional annotation (written individually, due Feb.24)
- 2.5% presentation on functional annotation March 24 (oral PPT team reports; submit PPT)
- 2.5% presentation on individual exploration (oral, submit 1-3 pages), March 31.
- 2.5% presentation on group poster (oral, submit PPT), April 9.
- 10% final poster presentation on phage (poster presentation at WU Undergraduate Research Symposium the afternoon of April 17)
- 20% written report on the project as a whole [written individually; final paper covering isolation, physical annotation, functional annotation, evolutionary comparisons, genome analysis, and individual exploration due April 23].

Attendance is expected. If you are ill, please send an email to Drs. Elgin and Shaffer and let them know your circumstances prior to the class meeting. Be sure to communicate with us if a problem arises that prevents you from attending class. This should happen only in a genuine emergency - plan ahead!

IV. Cell Phone Usage

Cell phone usage in class/lab is distracting to instructors and fellow students. While in class/lab you should keep your phone turned off and stowed in your backpack; do not use it at all (not as a phone, timer, camera or calculator).

V. Academic Integrity

By its nature, science is a collaborative endeavor. You will be assigned to a group of lab partners, and you and your partners, other class members and instructors will need and want to discuss experimental protocols and results. You should assume however, that any assignments in this course are meant to be your independent work, unless the instructor explicitly tells you otherwise. Lab groups will give the poster presentation as a team, and all members are expected to participate equally. Please make sure you are familiar with the Washington University Undergraduate Student Academic Integrity Policy.