Introduction to Population Genetics

WSU – BIOL 519, UI – GENE 505

Fall 2016

Instructor: Richard Gomulkiewicz (Eastlick 391; 335-2527; gomulki@wsu.edu)

Office Hours: By appointment (please email)

Learning Outcomes: Understand, communicate, and apply fundamental concepts of population genetics. Develop a critical appreciation for the significance and use of population genetics in the life sciences.

Lectures: Tuesdays and Thursdays from 10:35am to 11:50am in CUE 216

Text: An Introduction to Population Genetics: Theory and Applications, by Nielsen & Slatkin

Course Home Page: http://www.wsu.edu/~gomulki/biol519/

Grading Criteria:	Exercise Sets	40%
	Seminar synopses	15%
	Final Presentation	30%
	Class Participation	15%

Exercise Sets: Exercises based on lecture material and readings will be assigned during most lectures. Exercises from the two weeks prior will be due (approximately) every other Thursday; assignements must be turned in **during or before class**. Current information about assigned exercises and due dates will be posted on the course home page. Exercises may have several parts. Each part will be scored as follows: five points for an answer that is, on the whole, correct; two points for a reasonable, but incorrect or incomplete answer; zero points otherwise. (Depending on course enrollment, only a subset of exercises may be graded.) I encourage working together but your write-ups must be done in your own words. The success of this course depends on your keeping current with the material so...**late assignments will not be accepted!**

Seminar Synopses: Many seminars at WSU and U Idaho deal with issues and applications of population genetics. Moreover, giving, attending, and critiquing professional seminars are important parts of graduate training. For this component of the course, you will be expected to attend **two** ~~"appropriate"~~ seminars and write a *critical synopsis* of each. Each synopsis should be less than one page in length, and must include (1) a summary of the essential points and (2) a thoughtful evaluation of the talk ~~that *focuses on its population genetics aspects*~~. (See the course website for an example.) ~~"Appropriate" means that the seminar should include a substantial amount of material related to population genetics.~~ There are a number of such talks already scheduled at WSU and U Idaho this semester; some talks can also be found on YouTube~~, and I will try to keep an updated list on the course web site. There may be additional appropriate talks, *but be sure to contact me for verification*~~. Each synopsis will graded on a 10-point scale and will be **due during the next class meeting one week after the seminar**. (For example, synopses of talks on Friday, Oct 5, Monday Oct 8, or Tuesday Oct 9 would all be due in class on Tuesday, Oct 16.) **Late synopses will not be accepted!**

Final Presentation: Students will give final presentations at the end of the semester. Depending on our class size, you will probably have to work with one or two others on a presentation. Each presentation will critically review an extension or application of population genetics. I encourage you

to choose your own topic however the topic must be approved by me in advance. I am more than happy to discuss possible topics with you. All presentation topics must be approved and scheduled by no later than **Thursday, November 3**. Time slots will be assigned on a first-come first-serve basis. You will be required to provide the class with a one-page handout that lists the relevant literature and summarizes the key points of your talk. *Attendance at all final presentations is required*; *each absence will directly reduce the Class Participation component of your grade*.

Class Participation: From time to time, readings from the text or the literature will be assigned for "mini discussions" in class. You are expected to read the assignment and participate in discussing the material. To structure sessions and encourage active participation by all, a student will be chosen at random to lead discussion of the scheduled reading. A student chosen to facilitate a discussion will be excused from leading the next discussion. Attendance of all final student presentations (see above) is also required to receive full credit for Class Participation.

Students with Disabilities: I am committed to providing assistance to help you be successful in this course. Reasonable accommodations are available for students with documented disabilities or chronic medical conditions. If you have a disability and need accommodations to fully participate in this class, please visit the Access Center website to follow published procedures to request accommodations: http://www.accesscenter.wsu.edu. Students may also either call or visit the Access Center in person to schedule an appointment with an Access Advisor. Location: Washington Building 217; Phone: 509-335-3417. All disability related accommodations MUST be approved through the Access Center. Students with approved accommodations are strongly encouraged to visit with instructors early in the semester during office hours to discuss logistics.

Campus Safety/Emergency Information:

In the interest of campus safety and emergency procedures, please become familiar with the information available on the WSU-provided websites. Also, please register your emergency contact information at *myWSU*.

- http://safetyplan.wsu.edu, Campus Safety Plan
- http://oem.wsu.edu/emergencies, Emergency management web site
- http://alert.wsu.edu, WSU Alert site.

Academic Integrity Statement: As an institution of higher education, Washington State University is committed to principles of truth and academic honesty. All members of the University community share the responsibility for maintaining and supporting these principles. When a student enrolls in Washington State University, the student assumes an obligation to pursue academic endeavors in a manner consistent with the standards of academic integrity adopted by the University. To maintain the academic integrity of the community, the University cannot tolerate acts of academic dishonesty including any forms of cheating, plagiarism, or fabrication. Washington State University reserves the right and the power to discipline or to exclude students who engage in academic dishonesty.

Students found responsible for academic integrity violations may receive an F on the particular assignment or exam, as well as an F for the course. Repeated and/or serious offenses may result in referral to the conduct board and expulsion from WSU. For graduate students, academic integrity violations may also result in the loss of teaching and/or research assistantships.

Academic Integrity Statement and link to WSU's policy:

http://www.wsulibs.wsu.edu/plagiarism/main.html

http://conduct.wsu.edu/academic-integrity-policies-and-resources/