

MATHEMATICAL GENETICS Fall 2021

Washington State University: BIOLOGY 566/MATH 563

University of Idaho: Math 563/Bio 563

INSTRUCTORS:

Richard Gomulkiewicz (WSU; 391 Eastlick Hall 391; 509-335-2527; gomulki@wsu.edu)

Stephen Krone (UI; 421 Brink Hall; 208-885-6317; krone@uidaho.edu)

OFFICE HOURS: by appointment (please email to schedule meeting)

CLASS MEETING DAYS/TIMES/LOCATIONS:

Mondays 5:10-6:25 PM, 1002 ADBF, WSU

Wednesdays, 5:10-6:25 PM, 047 TLC, UI

TEXT BOOK: Population Genetics: A Concise Guide, 2nd Edition by John H. Gillespie

LEARNING OBJECTIVES: (1) Gain exposure to, and experience with, major topics and methods in mathematical genetics (2) Survey classical, contemporary, and cutting edge literature in mathematical genetics

COURSE FORMAT: We plan to achieve the goals of the course through a series of discussion-lectures on topics in mathematical genetics and student-led final presentations. Readings will usually be assigned for each topic. For the discussion-lectures, an instructor will briefly motivate the topic, outline the analyses, and summarize the main results. Discussions will involve students stopping to clarify steps, methods, or concepts that are ambiguous. Ideally, students who understand a step/method/concept will do the clarifying. Of course, the instructors will help regulate the flow of discussion and contribute lucid explanations as necessary! The instructors will also assign homework exercises that all students are expected to attempt. For this format to succeed, it is critical that every student works to understand the readings prior to class. If, in the course of reading the material, you don't understand something (e.g., a term, concept, manipulation, or technique) make a note of it and go through the remaining material as best you can. Be sure to bring your notes to class. The student-led final presentations will cover topics chosen by students (topics—which may involve original research—must be pre-approved by the instructors). Presenters are encouraged to prepare handouts and readings that their fellow students can read prior to the presentation.

GRADING: Homework 60% Final Presentation 40% Class participation grade boundaries 40% of the grade in this course will be based on the quality of a student planned and executed solo or group final presentation. 60% of the grade will be based on attempting and solving assigned homework problems. Class participation, including attendance and contributions made during class discussion (such as asking and answering questions, and making thoughtful comments) will not be graded explicitly but may be used to decide final grades for scores on the boundaries of grade cutoffs.

Because of COVID-19, all class meetings will be available remotely via Zoom as follows:

Gomulkiewicz discussion-lectures(see schedule): Meeting ID: 992 5427 5955 Passcode: 683020

Link: <https://wsu.zoom.us/j/99254275955>

Krone discussion-lectures(see schedule): Meeting ID: 998 7453 8933

Link: <https://uidaho.zoom.us/j/99874538933>