

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](mailto:gomulki@wsu.edu))
Stephen Krone ([UI; 421 Brink Hall; 208-885-6317; krone@uidaho.edu](mailto: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

COURSE CANVAS SITE: canvas.wsu.edu

WSU EMAIL (WSU STUDENTS ONLY):

Per WSU policy, we are only able to respond to emails sent from your WSU email address. We will not be able to respond to emails sent from your personal email address as of the first day of semester.

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:

A	93	C+	77
A-	90	C	70
B+	87	C-	70
B	83	D	60
B-	80	F	< 60

ZOOM INFORMATION: 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>

(Zoom information for student presentations and combined lecture-discussions will be decided at a later date.) Class meetings will be available via Zoom only during scheduled class times and will not be recorded. Unless a student lacks the technology to do so, we expect students join a class via Zoom using video as well as audio. Those who do not want their residence visible in the background should either participate from a different location or post a virtual background. Other expectations for Zoom users include:

- Mute your microphone upon entering the Zoom classroom
- Keep your video feed on during class to the extent possible
- Unmute your microphone when called upon, and mute it again once you are done speaking

COVID-19: Students are expected to abide by all current COVID-19 related university policies and public health directives, which could include proof of vaccination, wearing a face covering, physically distancing, and sanitizing common use spaces. All current COVID-19 related university policies and public health directives are located at <https://wsu.edu/covid-19/>. Students who do not comply with these directives may be required to leave the classroom; in egregious or repetitive cases, students may be referred to the Center for Community Standards for university disciplinary action.

STUDENT EFFORT: In a 15-week semester, for each 50 minutes of in-class learning, you should expect to devote 100 minutes of out-of-class time to a course. For our class of three credit-hours (150 minutes), this means you should plan to spend an average of 300 minutes (5 hours) per week on work outside of class over the course of the semester.

ELECTRONIC DEVICES: Please remember to silence your cell phone before entering the classroom. Tablets and laptops are allowed in class, but should be used only for course-related activities. Any student who repeatedly disrupts class due to their use of electronic devices will be asked to leave class for the day and their final grade may be lowered.

STUDENT CODE OF CONDUCT: Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSU's Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(3) and -404) will fail the course, will not have the option to withdraw from the course pending an appeal, and will be reported to the Office of Student Conduct.

Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26-010(3). You need to read and understand all of [the definitions of cheating](#). If you have any questions about what is and is not allowed in this course, you should ask the course instructor before proceeding.

Cheating on an exam or a writing assignment (including plagiarism) can result in a final grade of F for the entire course, will be reported to the Office of Student Affairs, and will result in additional disciplinary action by the University.

If you wish to appeal a faculty member's decision relating to academic integrity, please use the form available at conduct.wsu.edu.

STUDENTS WITH DISABILITIES: 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. Pullman or WSU Online: 509-335-3417, <http://accesscenter.wsu.edu>, Access.Center@wsu.edu

REASONABLE RELIGIOUS ACCOMMODATION: Washington State University reasonably accommodates absences allowing for students to take holidays for reasons of faith or conscience or organized religious activities conducted under the auspices of a religious denomination, church, or religious organization. Reasonable accommodation requires the student to coordinate with the instructor on scheduling examinations or other activities necessary for course completion. Students requesting accommodation must provide written notification within the first two weeks of the beginning of the course and include specific dates for absences. Approved accommodations for absences will not adversely impact student grades. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. Students who feel they have been treated unfairly in terms of this accommodation may refer to Academic Regulation 104 - Academic Complaint Procedures.

CAMPUS SAFETY AND EMERGENCY NOTIFICATION: Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the "Alert, Assess, Act," protocol for all types of emergencies and the "[Run, Hide, Fight](#)" response for an active shooter incident. Remain ALERT (through direct observation or emergency notification), ASSESS your specific situation, and ACT in the most appropriate way to assure your own safety (and the safety of others if you are able).

Please sign up for emergency alerts on your account at MyWSU. For more information on this subject, campus safety, and related topics, please view the FBI's [Run, Hide, Fight video](#) and visit the [WSU safety portal](#).