Principles of Genetics ±BIOL 230 ±A01

Course Outline, Spring 2023

General Course Information

Welcome! A fundamental truth in the world is that offspring look like their parents but are not perfect copies. Why is this the case? This course explores how traits are inherited, focusing on the quantitative and molecular basis of inheritance. : H ¶ O O n a d d i t i o n homes, genes and how they make us who we are. 7 K H F R X U V H Z L O O E H W D X J K W - to-V I D Q F H K ¶ U R Q R X Z L O O \ O D C be complemented by a lab section.

Lecture Contact Hours & Delivery of Course Materials

Tuesday, Wednesday & Friday @ Bob Wright Centre B150

10:30am-11:20am

NOTE: Enrolment/attendance in a laboratory section is mandatory

Prerequisite: BIOL225

Pre- or corequisite: CHEM231

If in doubt, contact grego@uvic.ca.

Instructors:

Dr. Greg Owens (grego@uvic.ca)

Dr. Lan Tran (biologylabs@uvic.ca)

About the Instructors

This course is co-taught by Dr. Greg Owens (Lectures and Course Coordination), and Dr. Lan Tran (Senior Lab Instructor). Greg is a Vancouver local who did his undergrad education at UVic in the old days. He returned to UVic in 2020 and has been researching evolutionary genomics in a variety of systems. Greg keeps shrimp in his office aquarium. Lan is a local and is a plant biologist with research interests in how plants produce natural chemicals and pollinator interactions. She previously studied at UVic and at UBC. You can find out more about the-11(a)-11(r)-7(y

Weekly Quizzes

Each week you will have a quiz on the material from the previous week worth 0.5%. Quizzes will be 2-5 questions, multiple-choice, open book on Brightspace and **must be completed individually**. Quizzes may be started anytime from Friday at 5 pm to the following Monday at Noon. Once started you will have one hour (60 minutes) to complete the quiz, although we do not expect it to take the full hour. **At the end of the semester, the lowest two quiz marks will be dropped from your record**. Consequently, we will not be allowing deferred quizzes. If you have a long-term issue that forces you to miss more than two quizzes, please contact the course coordinator (grego@uvic.ca).

Writing Tests and Exams in Biology 230

All lecture tests and exams will be administered online using Brightspace. These assessments Z L O O E H R S H Q E R R N D Q G P X V W E H Z U L W W H Q L Q G L Y L G X D O O \ X V computer, or on computer on campus (a limited number will be reserved for this purpose). The lecture midterm is on February 8th during the scheduled lecture timeslot (10:30 am to 11:20 pm). Deferred tests are scheduled for the Saturday following the original date (Feb 11th), at 9:00am, but be sure to contact the course coordinator (grego@uvic.ca) in advance. **As an open book exam, you are allowed to use your notes, the lectures or the internet. You are not allowed to communicate with others, or use AI software in the exam.**

Required Materials and Technology

1. The Brightspace (BRS) course website: https://bright.uvic.ca/d2l/home/265794 will serve as the primary means of sharing learning resources, so please check this page regularly for important information and announcements.
2. Suggested textbook: - * H Q H W L F V $ Q D O \ V L V D Q G 3 U L Q F L S O H V ¶ E \ 5 R E (2021) edition, McGraw- Hill Ed. It is available through the UVic Bookstore. The textbook is not required but can supplement your learning. Previous editions of the textbook are

Frequently Asked Questions

Detailed policies are outlined in this syllabus, as well as the lab manual ² please read those carefully. For ease, a selection of questions and answers are depicted in the graphic, below.

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Tentative lectures schedule:

1. Introduction,
2. Mendelian inheritance
3. Mitosis and meiosis
4. Transcription
5. Translation
6. Gene expression
7. Biotechnology
8. Genomics
9. Genetic Mapping
10. Extension of Mendelian inheritance
11. Population genetics
12. Quantitative genetics
13. Evolutionary genetics

Lab Manual

This semester, we will be using the Top Hat digital learning platform which hosts this semester's **Biology 230 Genetics Laboratory Manual**. To gain access to your Top Hat course, where the Ebook will be located, click on this link: **https://app-ca.tophat.com/e/**. Your unique course code is: **048703**.

If you have a pre-existing Top Hat account, log-in with your credentials. If you are new to Top Hat and do not have an account, we have a great orientation video created just for you: https://success.tophat.com/s/article/Student-Getting-Started-with-Top-Hat. Please register with your **UVIC** email. You will find information on how to purchase your Top Hat Subscription, 0 D Q D J H \ R X U D F F R X Q W V H W W L Q J V D Q G O H D U Q D E R X W 7 R S checkout, you will be prompted to pay with a credit card. If you have purchased the Top Hat $ F F H V V . H \ G L U H F W O \ I U R P \ R X U E R R N V W R U H F O L F N R Q ³ U H G H H the 13- G L J L W F R G H ' R Q ¶ W Z R U U \ L Q R X G R Q ¶ W Z D L W L W Q D F R Q W it available to you as we progress through the semester. You should now have access to Top Hat Ebook!

As a note, if you are using a computer or laptop, Google Chrome or Firefox are the recommended browsers. If you are using a smartphone, you will need to download the Top Hat app from the IOS or Android App store. If you are using a tablet, it is recommended that you use the Google Chrome browser to access Top Hat, and not the app.

If you have any i V V X H V S O H D V H F R Q W D F W 7 R S + D W V X S S R U W D W W R S + D W F R P Response times can take up to 24 hours. For faster response, you can chat with support at https://success.tophat.com/s/contact-main.

In order to get the best help please provide:

- Email you have used to register or will use to register
- Top Hat Course Link
- Top Hat Join Code
- Detailed Explanation of your issue with screenshots

How do we connect?

- Brightspace will be used to post lecture slides, pre-recorded lectures, assignments, Q&A I R U X P V T X L]] H V D Q Q R X Q F H P H Q W V D Q G P R U H «

- Administrative questions: If you have any administrative related questions, please post \ R X U T X H V W L R Q R Q % U L J K W V S D F H X Q G H U µ $ I R U X P ¶ 7 K R V H F R X µ : K H Q G R Z H Z U L W H T X L] " ¶ + L Q W R I W H Q \ R X I L Q G W K H D Q V Z outline or on Brightspace)

- Scientific questions: if you have any topic related question, please post your question on % U L J K W V S D F H X Q G H U µ 6 F L H Q W L I L F 4 $ I R U X P ¶ a d k e v E H O R Q J W R W K H O D F R S H U R Q " ¶ 7 K L V L V D J U H D W V W X G \ W R O

- Lab-specific questions: if you have any questions related to the laboratory content, please S R V W \ R X U T X H V W L R Q R Q % U L J K W V S D F H X Q G H U µ / D E 4 $ I R U X P

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include the percentile grade and a letter grade plus the class average and the number of students registered in the course at the time of the final exam. Percentiles will be rounded to the nearest whole number; a grade of xx.5 will be rounded up. Percentile grades will be converted WR OHWWHU JUDGHV RQ WKH VWXGHQW¶V DFDGHPLF WUDQVFULS

A+ 90-100%; A 85-89%; A- 80-84%; B+ 77-79%; B 73-76%;
B- 70-72%; C+ 65-69%; C 60-64%; D 50-59%; F <49%

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