



Welcome to IB 204!

## IB 204: GENETICS Lecture Syllabus

### Professors:

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### TEACHING ASSISTANTS

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Lecture TA and coordinator: Jennifer Quebedeaux  
Merit TA: Lincoln Taylor

Moodle Q&A forum is the GREATLY preferred method of contact. For students enrolled in laboratory, your laboratory TA is your first point of contact for questions about lecture and laboratory, including questions about your grade. For students enrolled in only the lecture section, your first point of contact will be the lecture coordinator (see above). Students should try to attend the in-person or online office hours of their own TA (or Lecture TA in the case of lecture-only students), but are welcome to attend office hours of ANY course instructor.

### COURSE INFORMATION

**Course Moodle can be found at:** <https://learn.illinois.edu/>  
**Credit:** 4 hours (3 hours for students who are only enrolled in lecture)  
**Prerequisites:** IB 150 and MCB 150

### REQUIRED TEXTS and MATERIALS (online only)

MacMillan Achieve for reading quizzes and eBook. See Moodle site for instructions: <https://learn.illinois.edu/>

eBook is included with purchase of Achieve. eBook Pierce, B. 2020. *Genetics: A conceptual approach*. W.H. Freeman & Co., 7<sup>th</sup> edition.

Note: THERE IS NO HARD COVER BOOK FOR THIS COURSE. You must purchase access for Achieve/eBook online ONLY through MacMillan Publishing:

<https://iam.macmillanlearning.com/login?retURL=https://achieve.macmillanlearning.com/courses>

## **INTRODUCTION TO IB 204**

Welcome to Genetics! Genetics is a fundamental discipline within biology, and as you might know from reading the news, genetic techniques and genetics research are exciting, fast-moving, and critical for solving many of the grand challenges facing society. Genetics is a “core” course required for all Integrative Biology (IB) majors. Many students with majors in MCB and in other fields also enroll in this course. Our lectures and labs are designed for students with career interests in a diversity of areas, including medicine and other health sciences, biological research, science writing, or education. We assume that you have mastered all the genetic material covered in IB 150 and MCB 150, and we will not revisit most of this information. This course will emphasize genetic data analysis throughout and will introduce you to the topics of molecular genetics, gene mapping, genetics of complex traits, genomics, and population and evolutionary genetics. This course is aimed at building a solid foundation for biology students, developing students’ abilities in critical thinking, sorting through many possible explanations for genetic data, and applying the knowledge of genetics to many areas of endeavor even outside the field of genetics itself.

### **Learning outcomes: After succeeding in IB 204, students will be better able to:**

- Know what genetics is, how geneticists do their work, and what sorts of questions geneticists ask.
- Think like geneticists, using “genetic logic” based on an intuitive understanding of genetic mechanisms operating both at the level of individuals and populations.
- Synthesize facts and concepts to think critically and reason through problems.
- Draw and interpret graphical representations of data.
- Apply abstract/mathematical models to biological processes.

## **COURSE POINT BREAKDOWN**

Lecture: 70% of total for students enrolled in lecture and lab  
100% of total for students enrolled in lecture only

Exams (4 non-cumulative)	50% of your total lecture grade
Achieve online reading quizzes	20% of your total lecture grade
Activities	20% of your total lecture grade
Quizzes	10% of your total lecture grade
Total	100% of lecture grade

## **COURSE POLICIES**

### **Attendance:**

Student attendance is defined as active participation in the course as described in the course syllabus. This course will have weekly mechanisms for student participation, which can be documented by any or all of the following methods:

- Completion of exams
- Submission/completion of assignments and/or quizzes
- Communication with the instructor
- Or other course participation

If you fail to submit an assignment/quiz/exam/etc. when due, you will be marked absent for that week. As a component of attendance, student email, course announcements and discussion forums should be checked frequently (daily is recommended). The student is solely responsible for checking updates related to the course. In the case of an anticipated absence, such as military deployment, the student should contact the instructor in advance and make arrangements to complete the required assignments. In case of an emergency

(illness/accident or death in family), a student should contact the instructor as soon as possible providing documentation supporting the need for any late submission of a graded event. Any documentation must be submitted no later than two weeks after the absence. If there is a chronic illness or multiple missed online assignments/labs/exams, the student should work with the office of the Dean of Students to verify and document their absences. If a student misses many major assignments, then they may have to withdraw from the class. Note: nonattendance may affect financial aid. If you have any questions regarding these policies, please see the lecture coordinator. If you foresee having any long-term problems, please contact us immediately to make arrangements at the beginning of the semester; such accommodations cannot be made after the fact.

**Exams:** Exams will cover lecture material, assigned readings, and material covered in activities and quizzes. Format of exams will be a combination of multiple choice and short answer/essay questions. Calculators (not phones or smart watches) may be used to perform calculations. Storing formulae or notes in a calculator is a violation of course policy.

*Any requests to regrade exam questions must be submitted in writing by email to the instructors **within one day** after the rubric is posted online. Afterwards, all regrade requests will be denied.*

This course includes four, non-cummulative 50-minute exams and NO FINAL EXAM. We do not drop exams. Exams will be in-person during the designated class time (12:00 PM – 12:50 PM Central Time Zone, on a M, W, or F). If you are not on campus this semester, we will make accommodations for you to take the exam.

**Reading quizzes on Achieve:** Reading quizzes cover the assigned readings for each lesson within a module. Assigned readings and due dates are listed in the table for each lesson. Unlimited attempts are allowed; however, there is a penalty for each incorrect attempt. The student is responsible for pressing the 'submit' button each time they have completed the quiz. If the page indicating that the quiz has been submitted does not appear, then the assignment has not been submitted.

**Activities and quizzes:** Within each module there will be several opportunities to test your knowledge of course material. Some of these will be graded (“quizzes”) and some will be worth participation points (“activities”). The student is responsible for pressing the 'submit' button each time they have completed the quiz or assignment. If the page indicating that the quiz or assignment has been submitted does not appear, then the assignment has not been submitted.

**Final Grades:** Periodically check the Moodle gradebook. If you see an error, then you have until the day of the last exam at noon to notify your TA of any errors. The faculty **roughly** set the grading scale at 100-90% (A+/A/A-), 89-80 (Bs), and so forth. We typically do not curve the class. Any curve up is only applied after looking at the entire class distribution at the end of the semester and is at the discretion of the instructors. Plus and minus are only applied after looking at the entire class distribution at the end of the semester and is at the discretion of the instructors.

#### **General policies:**

This course will follow all policies in the Student Code: <http://studentcode.illinois.edu>

#### **Academic Integrity:**

This course will follow the Student Code. The code defines infractions of academic integrity, which include but are not limited to cheating, fabrication, and plagiarism. To learn about possible penalties for such a violation, see <http://studentcode.illinois.edu>. You are responsible for being knowledgeable of what these infractions are, and for following these guidelines. **Plagiarism in the lecture and laboratory portions of the course will be carefully monitored.** If you do not feel you fully understand what constitutes plagiarism, please ask the instructors, your TA, or lab coordinator Nick Morphew. Posting of course content to online

study help sites (e.g. CourseHero) is a violation of the Student Code and will be treated accordingly. **All course material is copyright protected. Copyright is held by the instructors of this course.**

### **Accommodations:**

If you require special accommodations, please tell faculty or the lecture coordinator within the first two weeks of class. All accommodations will follow the procedures as stated in Article 1-110 of the Student Code at <http://studentcode.illinois.edu>. To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 333-4603, e-mail: [disability@illinois.edu](mailto:disability@illinois.edu) or go to the DRES website. If you are concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available on campus that can help diagnosis a previously undiagnosed disability by visiting the DRES website and selecting "Sign-Up for an Academic Screening" at the bottom of that page.

### **Emergency Response:**

Emergency response recommendations can be found at the following website:

<http://police.illinois.edu/emergency-preparedness/>. I encourage you to review this website and the campus building floor plans website within the first 10 days of class. <http://police.illinois.edu/emergency-preparedness/building-emergency-action-plans/>

### **Family Educational Rights and Privacy Act (FERPA) Statement:**

Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See <https://registrar.illinois.edu/academic-records/ferpa/> for more information on FERPA.

### **Sexual Misconduct Policy and Reporting Statement:**

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: <https://wecare.illinois.edu/resources/students/#confidential>. Other information about resources and reporting is available here: <https://wecare.illinois.edu>

### **Inclusivity Statement:**

The effectiveness of this course is dependent upon the creation of an encouraging and safe classroom environment. Exclusionary, offensive or harmful speech (such as racism, sexism, homophobia, transphobia, etc.) will not be tolerated and in some cases subject to University of Illinois harassment procedures. We are all responsible for creating a positive and safe environment that allows all students equal respect and comfort. We expect each of you to help establish and maintain an environment where you and your peers can contribute without fear of ridicule or intolerant or offensive language.

### **Netiquette:**

In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. The following are tips for interacting online via e-mail or discussion board messages, adapted from guidelines originally compiled by ChuqVon Rospach and Gene Spafford (1995):

- Remember that the person receiving your message is someone like you, deserving and appreciating courtesy and respect.
- Avoid typing whole sentences or phrases in Caps Lock.

- Be brief; succinct, thoughtful messages have the greatest effect.
- Your messages reflect on you personally; take time to make sure that you are proud of their form and content.
- Use descriptive subject headings in your e-mails.
- Think about your audience and the relevance of your messages.
- Be careful when you use humor and sarcasm; absent the voice inflections and body language that aid face-to-face communication, Internet messages are easy to misinterpret.
- When making follow-up comments, summarize the parts of the message to which you are responding.
- Avoid repeating what has already been said; needless repetition is ineffective communication.
- Cite appropriate references whenever using someone else's ideas, thoughts, or words.