Term Information

Effective Term	Spring 2026

General Information

Course Bulletin Listing/Subject Area	Evol, Ecology & Organismal Bio
Fiscal Unit/Academic Org	Evolution, Ecology & Org Bio - D0390
College/Academic Group	Arts and Sciences
Level/Career	Undergraduate
Course Number/Catalog	3610
Course Title	Evolutionary Genomics
Transcript Abbreviation	Evol Genomics
Course Description	An introduction to core principles of the modeling and investigation of biological data using quantitative models applied to genomic and other data. The course focuses on applications of quantitative modeling methods to study of the evolution and ecology to natural populations of animals, plants, and fungi.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	No specific course is required as a formal prerequisite. This course is designed to be accessible to students from many degree paths, including both biology students interested in learning genomic quantitative analysis and informatics/statistics students interested in learning biological applications. We will discuss all statistical models in this course from the ground up and review core genetics principles as we go.
Exclusions	
Electronically Enforced	No

Cross-Listings

Cross-Listings	

Subject/CIP Code

Subject/CIP Code	26.0701
Subsidy Level	Baccalaureate Course

Intended Rank Sophomore, Junior, Senior

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- (1) understand the conceptual foundations, quantitative models, and experimental approaches in genomic analysis of questions related to evolution, ecology, and biodiversity, (2) be able to read and understand evolutionary genomics journal articles.

Content Topic List

- DNA/RNA sequencing and genome assembly; alignment; genome-wide association studies; homology and sequence databases; BLAST; population genetic diversity; phylogenetic inference; biodiversity databases and trait reconstruction; AI/machine learning.

Sought Concurrence Yes

Attachments

- MolGen concurrence.pdf: Molecular Genetics Concurrence
  (Concurrence. Owner: Freudenstein,John Vincent)
- Biomedical Informatics concurrence.pdf: Biomedical Informatics Concurrence
  (Concurrence. Owner: Freudenstein,John Vincent)
- Microbiology concurrence.pdf: Microbiology Concurrence
  (Concurrence. Owner: Freudenstein,John Vincent)
- Evolutionary_Genomics_Spring2026_Syllabus_updated Nov.docx: Syllabus
  (Syllabus. Owner: Freudenstein,John Vincent)
- EEOB Curriculum Maps 2025.xlsx: Curriculum maps
  (Other Supporting Documentation. Owner: Freudenstein,John Vincent)
- Instructor responses to subcomittee comments on EEOB 3610.docx: Instructor responses
  (Other Supporting Documentation. Owner: Freudenstein,John Vincent)

Comments

- Please see Subcommittee feedback email sent 11/13/25. *(by Neff,Jennifer on 11/13/2025 01:09 PM)*
- Hi John, please seek concurrence now. This proposal will need to wait until the committees reconvene in AU anyway. *(by Vankeerbergen,Bernadette Chantal on 05/06/2025 02:46 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Freudenstein,John Vincent	05/06/2025 02:40 PM	Submitted for Approval
Approved	Freudenstein,John Vincent	05/06/2025 02:40 PM	Unit Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	05/06/2025 02:46 PM	College Approval
Submitted	Freudenstein,John Vincent	10/16/2025 02:46 PM	Submitted for Approval
Approved	Freudenstein,John Vincent	10/16/2025 02:47 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	10/21/2025 09:30 AM	College Approval
Revision Requested	Neff,Jennifer	11/13/2025 01:09 PM	ASCCAO Approval
Submitted	Freudenstein,John Vincent	11/21/2025 03:01 PM	Submitted for Approval
Approved	Freudenstein,John Vincent	11/21/2025 03:01 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	12/01/2025 03:00 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Neff,Jennifer Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	12/01/2025 03:00 PM	ASCCAO Approval

The Subcommittee declined to vote on the request at this time and asks that the following feedback be addressed in a revision:

- The Subcommittee asks that the department provide additional information about the course's readings in the syllabus. Specifically, they ask that full citations of the readings be included in the Course Schedule so that they can get an idea of the course's workload, the pace of the course, and how the course's readings overlay with the listed topics. Additionally, they note the paragraph that describes the course readings on p. 2 of the syllabus is incomplete, ending with "The readings will be…".

The syllabus now includes a list of readings and videos. The original draft neglected to mention that this is a lecture-driven course. The readings are supplementary except in a small number of cases which I will warn then well in advance of. Particuarly the student-selected readings. I prepare summary points from the student readings as a study guide for the final test. I have clarified on the Syllabus that the readings are supplementary unless otherwise specified.

- The Subcommittee has several concerns with the information provided regarding student assessment and grading in the course.
    - The Subcommittee asks that the department clarify the role of attendance and participation in students' grades. P. 3 of the syllabus states that attendance will be recorded, but participation is "not required or assessed". This seems to be borne out by the Course Grade chart on p. 4 that implies that only students' test scores will influence their final grade in the course. However, the Assessment component weightings (syllabus, p. 4), state that participation is 7% of the grade.

I have clarified the original wording, which makes clear that attendance is graded, but actually participating in the form of contributing verbally to the discussion is optional.

    - The Subcommittee notes that it is unusual for course components (in this case, attendance/participation and the short assignments) to count against students if they are *not* successfully completed, and yet not earn any points/credit toward the final grade if they *are* completed.

This is a grading policy I have used for 6 years and have never had a student not achieve it. My belief as an instructor is that attendance is expected, especially since I am not specifically grading for participation quality. Excused absences also do not count against, as described in the draft.

    - The Subcommittee is concerned that failing to successfully complete only one of the weekly Short Assignments (syllabus, p. 3-4) will result in the student earning a

"E" in the course. They ask that the department provide additional information in the syllabus for students about the support that is available if they are struggling with these assignments, how many chances students will get to redo assignments that are not completed satisfactorily, and what happens if a student is ill or otherwise unable to attend a full week of the lecture discussions upon which these assignments are at least partially based.

I have clarified that these can be submitted at any time prior to the end of the class, and allowed for one missing. These will not be onerous assignments, merely short reflections. Easy checkpoints to keep everyone moving together. Again, having the course assignments complete and attendance be regular feel like they should be givens and I have never had a student fail to achieve them unless they were other wise also failing the course on tests.

- The Subcommittee asks that both charts on p. 4 of the syllabus be expanded to include all available marks (A, A-, B+, B, B-, C+, C, C-, D+, D, and E) or that the department include in this section of the syllabus a statement noting for students that these marks will not be utilized. They emphasize that it will be especially important to differentiate between the grades of "C" and "D" (including C-/D+), because students earning a course grade of "C-" or higher *can* use the course toward major requirements, while those earning a D+ or below cannot.

Done, and I have paid special attention to making the standard for a C- be all three tests are passing grades.

- The Subcommittee asks that the Course Grade chart on p. 4 of the syllabus be augmented or replaced with clearer information for students. They note that there are many combinations of exam grades that are not present on the chart, making it quite difficult for students to understand what is expected of them to earn a particular grade. For example, if a student earns an "A" on the first exam, a "B" on the second exam, and a "D" on the third exam, would they receive a B- or a C?

I have clarified what was originally written, which is that those represent minimum standards. So a student gets the grade for the minimum standard they achieve on the chart going from top-to-bottom. I have verified that there are no ambiguities if the chart is read from top-to-bottom in this manner.

- The Subcommittee asks that the department provide a more specific prerequisite(s) for the course (curriculum.osu.edu under "Prerequisites and Exclusions" and syllabus, p. 1), as the stated prerequisite does not provide enough detail for students to decide if they have the requisite skills to be successful in the course. Additionally, the Subcommittee notes that many of the course's statistical topics are quite advanced, and they strongly recommend that the department include a mathematics and/or statistics prerequisite.

I feel strongly that adding formal prerequisites from math and statistics is not in the spirit of the course. The course is meant as an intuitive ground-up introduction to modeling in evolution and genomics. Each lecture starts with simple concepts and builds from them, assuming nothing. I have clarified the text and assure the committee the lecture level and expectations will be properly calibrated. Despite the advanced topics as listed on the course, we are going to break them down to the ground level where anyone could understand them. That is the goal of this course.

- The Subcommittee asks that the department clarify whether the course is a part of the EEOB or Zoology majors, as the submitted curriculum map does not list the new course. If the course is intended to be a part of one or both of those majors (either as a required course or as an elective), it should be included on the submitted curriculum map. If the course is not intended to be a part of either of these majors, the Subcommittee asks that the curriculum maps be removed from the submission in curriculum.osu.edu.

This course is appropriate for both the EEOB and Zoology Majors and is intended for student from both programs.

- The Subcommittee recommends that the department include in the syllabus a clearly labeled "course description". This can be the same as the course description outlined in curriculum.osu.edu under "General Information", an expanded version of the curriculum.osu.edu text that explains in more detail what students will learn in the course, or even a renaming/reworking of the "Course Objectives" section found on p. 2 of the syllabus.

Course Objectives has been moved to Course Description and lightly edited.

- The Subcommittee recommends using the correct course number (3610) on p. 2 of the syllabus under "Course Objectives". Currently, the course is referred to as EEOB 3194.

Corrected.

- The Subcommittee asks that the department include in the Religious Accommodations statement a link to the Civil Rights Compliance Office. The statement, including the required links, is available in an easy-to-copy/paste on the Office of Undergraduate Education's website.

I believe this statement was already included on the first draft. I have verified the text is current and matches the website.

EEOB 3610: Evolutionary Genomics

Department of Evolution, Ecology, and Organismal Biology
The Ohio State University
In-person Course
3 Credit Hours
Two 80-minute meetings

Course Description

Evolutionary Genomics (EEOB 3610) will introduce students to core principles of the modeling and investigation of biological data using quantitative models. The course will cover DNA sequencing, various applications of sequencing analysis, population genetic and phylogenetic analysis of genomic data, analysis of gene expression, integration of genomic data will collection, traits, and environmental databases, and machine learning and artificial intelligence approaches to analysis of biological data and images. The focus of this course will be applications of quantitative modeling methods to study of the evolution and ecology to natural populations of animals, plants, and fungi. For each topic, we will determine how biological data are encoded for quantitative analysis, how the analyses are conducted, and then how to interpret the results in a biological context.

Meetings for this course will be interactive lecture-discussions. Assessments will consist of short assignments to practice conceptual thinking, experimental design, data interpretation, which will reinforce readings and meeting discussions and practice for the tests. Three non-cumulative tests will each test topics from one-third of the course. The third test will be taken during the final exam period, but is not cumulative.

Instructor

Dr. James B. Pease (he/him)
Associate Professor
Department of Evolution, Ecology, and Organismal Biology
pease.25@osu.edu
Office: Aronoff 420
Office hours will be set within the first two weeks of class meetings.
For individual meetings, please email ahead of time.

Dr. James Pease conducts his research in evolutionary genomics exploring the evolution genomes in a variety of plant and animal systems. His research focuses on the integration of genomic sequence data and gene expression profiles to study complex traits in natural populations to further understand the evolutionary history of various plant and animal groups and the trait and environmental contexts of their evolution.

Prerequisites

No specific course is required as a formal prerequisite. This course is designed to be accessible to students from many degree paths, including both biology students interested in learning genomic quantitative analysis and informatics/statistics students interested in learning biological applications. We will discuss all statistical models in this course from the ground up and review core genetics principles as we go.

Note: This is a conceptual course and does not assume, nor will students be expected to learn, computer programming or terminal-based command line applications.

Learning Objectives

By the end of this course students are expected to be able to: (1) demonstrate understanding of the conceptual foundations, quantitative models, and experimental approaches in genomic analysis of questions related to evolution, ecology, and biodiversity, (2) demonstrate an ability to read evolutionary genomics journal articles and determine the primary goals of the study, evaluate experimental outcomes, and identify potential errors and assumptions, and (3) propose experimental designs conceptually that will address practical questions in research in evolution, population biology, and biodiversity. Hands-on exercises will emphasize conceptual understanding, practical data acquisition, and analysis techniques. *Note: Computer programming or scripting will not be expected in this course.*

Materials Needed

Most lectures will be drawn on the board, with some slides to supplement. Slides will be provided on Carmen LMS after the lecture. A notebook is recommended over a laptop for taking notes. However, students should also bring a laptop computer or tablet device capable of internet browsing for the hands-on tutorials.

Readings

Readings will consist of journal articles accessed through the OSU Libraries, or other texts provided by the instructor. A review journal article, short reading, and/or enrichment videos will be provided as opportunities to enhance understanding of the lectures. Readings or video content will not be tested unless specifically mentioned by the instructor (this will be rare). Readings will be provided through links or posted files on Carmen LMS.

Course Schedule

Course Schedule: Supply schedule of events; include discussion topics, exam dates, assignments, and readings to be completed for each day.

Lecture(s)	Topic
1	**Introduction: Pattern to Process in Biological Modeling** *No required pre-reading*
2	**DNA/RNA Extraction and High-throughput Sequencing** • Hu, et al. 2021 J. Immunology https://doi.org/10.1016/j.humimm.2021.02.012 • How does Sanger Sequencing work? (Thermo Fisher) https://www.youtube.com/watch?v=e2G5zx-OJIw • Overview of Illumina Sequencing by Synthesis Workflow (Illumina) https://www.youtube.com/watch?v=fCd6B5HRaZ8 • Introduction to Highly Accurate Long-Read Sequencing (HiFi Sequencing) (PacBio): https://www.youtube.com/watch?v=xbpYvki4U64
3 & 4	**Genome Assembly and Quality Assessment**

	• Sohn and Nam 2018. https://academic.oup.com/bib/article/19/1/23/2339783 • Genome assembly (Genomedotca) https://www.youtube.com/watch?v=5wvGapmA5zM
5	**Genome Alignment and Allele Calling** • Pfeifer. 2016. From next-generation resequencing reads to a high-quality variant data set. Heredity 118:111–124. https://www.doi.org/10.1038/hdy.2016.102. • Broad Institute MPG Primer: https://www.youtube.com/watch?v=_f8Rlxi4_ow
6	**Heritability and Gene-Trait-Environment connections and interactions** • Peter M. Visscher, William G. Hill, and Naomi R. Wray. 2008. Heritability in the genomics era: Concepts and misconceptions. Nature Reviews Genetics 9:255–266. https://www.doi.org/10.1038/nrg2322.
7 & 8	**Genome-wide Association Studies** • Case of the Missing Heritability: https://www.nature.com/articles/456018a
9	**TEST 1 (covers topics 1-8, 8 lectures)**
10	**Homology and Sequence Databases** • https://www.ncbi.nlm.nih.gov/books/NBK1734/ • https://www.youtube.com/watch?v=QIZ8QH6JcC8 • https://www.youtube.com/watch?v=Ahrix9JsaIU
11	**Sequence Alignment and BLAST** • Instructor-Written Short Reading on BLAST and Alignment
12	**Population Genetic Diversity and Eco-Evolutionary Processes** • Instructor-Written Short Reading
13	**Phylogenetic Inference** • Instructor-Written Short Reading
14	**Collections and Environmental Databases and Trait Reconstruction** • Instructor-Written Short Reading
15	**AI/Machine Learning 1: Quantitative Data and Classifiers** • https://www.youtube.com/watch?v=0YdpwSYMY6I
16	**AI/Machine Learning 2: Imageomics and Neural Networks** • https://www.youtube.com/watch?v=0PP38Z0CNMI • https://www.youtube.com/watch?v=aircAruvnKk • https://www.youtube.com/watch?v=IHZwWFHWa-w
17	**AI/Machine Learning 3: Paper Discussion** • https://www.cell.com/iscience/fulltext/S2589-0042(24)02128-X
18	**TEST 2 (covers topics 10-17, 8 lectures)**
19	**RNA-Seq and Differential Gene Expression** • A survey of best practices for RNA-seq data analysis. Genome Biology 17. https://www.doi.org/10.1186/s13059-016-0881-8
20	**Pathways and Gene Functional Analysis** • Instructor-Written Short Reading
21	**Student-Selected Journal Article Discussion**
22	**Protein Structure** • Instructor-Written Short Reading

23	**Peak Finding, Protein Binding Sites, and Epigenetic Markers** • Instructor-Written Short Reading
24	**Metabolomics**
25	Student-Selected Journal Article Discussion • Example: https://www.nature.com/articles/nature10532
26	Student-Selected Journal Article Discussion • Example: https://www.annualreviews.org/content/journals/10.1146/annurev-pharmtox-022723-113921
27	Student-Selected Journal Article Discussion • Example: https://www.cell.com/current-biology/fulltext/S0960-9822(22)00249-4
28	Student-Selected Journal Article Discussion • Example: https://pmc.ncbi.nlm.nih.gov/articles/PMC10457656/
FE	**TEST 3 (covers topics 19-28, 10 lectures)**

Assessment

Attendance: Attendance is expected at all course meetings and attendance will be recorded. While attendance is assessed, participation in discussions is not specifically assessed, though it is strongly encouraged. *Note: Attendance no lower than 80% is expected and earns full participation credit. Not earning participation credit means the final grade is reduced by one step on the letter scale (e.g., A- to B+).*

Short Assignments: Students will complete short assignments answering questions relating to assigned readings and the lecture discussions. These will be due weekly and cover the previous week's material. The short assignments will be graded Completed/Redo. "Redo" graded assignments need to be completed and resubmitted. Note: *Having more than one Short Assignment not marked Completed may lead to a course grade of E. All Short assignment should be turned in, even if completed late. Short assignments can be turned in at any time prior to the final test day. Turning in more than 3 Short Assignments late will cause your final grade to be reduced one step on the letter scale (e.g., A- to B+).*

Tests: Tests will consist of questions in a variety of formats (mostly short answer reflections) and test the learning objectives of data and analysis interpretation and experimental design. **Tests will only cover topics discussed in the lecture or those from the readings specifically mentioned by the instructor.** Tests will be taken in-class on paper. The tests will not be cumulative for the specific topics discussed in previous course sections, but concepts will build and integrate throughout the semester.

Tests will be graded on the following holistic scale (not a points-based scale)

Test Grade	Standard of Achievement
A	Consistently strong understanding and synthesis of ideas demonstrated.
A-	Clear understanding demonstrated in most areas and strong synthesis
B+	Strong understanding demonstrated with consistency.
B	Satisfactory understanding demonstrated in all areas.
C	Unsatisfactory understanding demonstrated in several areas.
D	Unsatisfactory understanding demonstrated in most areas.

E	Consistently unsatisfactory understanding demonstrated.

Course Grade

Course grades are determined using the rubric below. Note that not all combinations are shown because each level represents the minimum standard. You earn the highest grade for which your test grades meet the standard.

Course Grade	Minimum Required Test Grades
A	Two Tests are A and a third test Test is B or better
A-	Two Tests are A- or better and a third Test is B or better
B+	Two Tests are B+ or better and a third Test is C or better
B	Three Test are B or better
B-	Two Tests are B or better and a third Test is C or better
C+	Two Tests are C or better and a third Test is B or better
C	Three Tests are C or better
C-	Two Tests are C or better and a third Test is D or better
D+	One Test is C or better and a third Test is D or better
D	Two Tests are D or better
E	Tests do not meet any of the above minimum standards

A non-passing course grade of "E" may also be earned due to (1) more than one Short Assignment not marked "Completed," or (2) substantial unexplained non-attendance.

Course Policies

Absences: Attendance of greater than 80% is expected. If a student expects to be or is unexpectedly going to be absent for more than 20% of course meetings, please consult with the instructor. If you are sick with an airborne transmissible illness, please take appropriate precautions to protect your fellow students or do not attend the class meeting. Absences for tests are only allowed for emergencies or other situations as described by Faculty Rule 3335-9-21.

University Policies

Academic Misconduct

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so please review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If an instructor suspects that a student has committed academic misconduct in this course, the instructor is obligated by University Rules to report those suspicions to the Committee on Academic Misconduct. If COAM determines that a student violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in the course and suspension or dismissal from the University.

If students have questions about the above policy or what constitutes academic misconduct in this course, they should contact the instructor.

Artificial Intelligence and Academic Integrity

There has been a significant increase in the popularity and availability of a variety of generative artificial intelligence (AI) tools, including ChatGPT, Sudowrite, and others. These tools will help shape the future of work, research and technology, but when used in the wrong way, they can stand in conflict with academic integrity at Ohio State.

All students have important obligations under the Code of Student Conduct to complete all academic and scholarly activities with fairness and honesty. Our professional students also have the responsibility to uphold the professional and ethical standards found in their respective academic honor codes. Specifically, students are not to use unauthorized assistance in the laboratory, on field work, in scholarship, or on a course assignment unless such assistance has been authorized specifically by the course instructor. In addition, students are not to submit their work without acknowledging any word-for-word use and/or paraphrasing of writing, ideas or other work that is not your own. These requirements apply to all students undergraduate, graduate, and professional.

To maintain a culture of integrity and respect, these generative AI tools should not be used in the completion of course assignments unless an instructor for a given course specifically authorizes their use. Some instructors may approve of using generative AI tools in the academic setting for specific goals. However, these tools should be used only with the explicit and clear permission of each individual instructor, and then only in the ways allowed by the instructor.

Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Civil Rights Compliance Office.

Policy: Religious Holidays, Holy Days and Observances (https://oaa.osu.edu/resources/policies-and-procedures/religious-holidays-holy-days-and-observances)

Disability Statement (with Accommodations for Illness)

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If students anticipate or experience academic barriers based on a disability (including mental health and medical conditions, whether chronic or temporary), they should let their instructor know immediately so that they can privately discuss options. Students do not need to disclose specific information about a disability to faculty. To establish reasonable accommodations, students may be asked to register with Student Life Disability Services (see below for campus-specific contact information). After registration, students should make arrangements with their instructors as soon as possible to discuss your accommodations so that accommodations may be implemented in a timely fashion.

If students are ill and need to miss class, including if they are staying home and away from others while experiencing symptoms of viral infection or fever, they should let their instructor know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations.
slds@osu.edu
https://slds.osu.edu/
098 Baker Hall, 113 W. 12th Ave
614-292-3307 phone

Intellectual Diversity

Ohio State is committed to fostering a culture of open inquiry and intellectual diversity within the classroom. This course will cover a range of information and may include discussions or debates about controversial issues, beliefs, or policies. Any such discussions and debates are intended to support understanding of the approved curriculum and relevant course objectives rather than promote any specific

point of view. Students will be assessed on principles applicable to the field of study and the content covered in the course. Preparing students for citizenship includes helping them develop critical thinking skills that will allow them to reach their own conclusions regarding complex or controversial matters.

Grievances and Solving Problems

According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, take your case to the department chairperson, college dean or associate dean, and to the provost, in that order. Specific procedures are outlined in Faculty Rule 3335-8-23. Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a welcoming community. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office (CRCO):
Online reporting form: http://civilrights.osu.edu/
Call 614-247-5838 or TTY 614-688-8605
civilrights@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Civil Rights Compliance Office to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Copyright

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Counseling and Consultation Services / Mental Health Statement

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24-hour emergency help is also available through the 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Content Warning Language

Some content in this course may involve media that may elicit a traumatic response in some students due to descriptions of and/or scenes depicting acts of violence, acts of war, or sexual violence and its aftermath. If needed, please take care of yourself while watching/reading this material (leaving classroom to take a water/bathroom break, debriefing with a friend, contacting a confidential Sexual Violence Advocate 614-267-7020, or Counseling and Consultation Services at 614-292-5766 and contacting the instructor if needed). Expectations are that we all will be respectful of our classmates while consuming this media and that we will create a safe space for each other. Failure to show respect to each other may result in dismissal from the class.

Military-Connected Students

The Military and Veterans Services (MVS) Office offers a wide range of resources for military-connected students. Whether using educational benefits or not, all military-connected students are encouraged to learn more about how the university supports military-connected students (i.e., information about tutoring, transition services, access to the veteran's lounge, etc.). For service members, should you receive military orders during the semester or know of classes that will be missed due to service commitments, please speak with your instructor as soon as possible on possible accommodations. MVS contact information: milvets@osu.edu; 614-247-VETS; veterans.osu.edu/; 185 Student Academic Services Building, 281 W. Lane Avenue.

From:	Zhang, Ping
To:	Freudenstein, John
Cc:	Li, Lang (OSUMC); Kokanos, Gabrielle (OSUMC); Pease, James
Subject:	Re: Concurrence request for new course in EEOB
Date:	Monday, September 15, 2025 6:16:21 AM
Attachments:	image001.png image002.png image001.png

Many thanks John for the clarification.

I discussed this concurrence request with BMI education committee again - BMI will concur on this new course in EEOB as

- The new course will be at the 3000-level and titled "Evolutionary and Ecological Genomics".
- The course will not teach any programming language.
- EEOB will promote BMI 5730 as a follow-up to the 3000-level course, which is targeted at Sophomores/Juniors.

Have a great week!

THE OHIO STATE UNIVERSITY

Ping Zhang, PhD, FAMIA, FIAHSI
Director, Artificial Intelligence in Medicine (AIMed) Lab
Director, Artificial Intelligence in Digital Health Collaboration Core
Associate Professor and Vice Chair of Biomedical Informatics
Associate Professor of Computer Science & Engineering

Lincoln Tower 310G, 1800 Cannon Drive, Columbus, OH 43210
614-293-9286 Office
zhang.10631@osu.edu / pingzhang.net

From: Freudenstein, John <freudenstein.1@osu.edu>
Date: Friday, September 5, 2025 at 9:33 AM
To: Zhang, Ping <zhang.10631@osu.edu>
Cc: Li, Lang (OSUMC) <lang.li@osumc.edu>, Kokanos, Gabrielle (OSUMC) <gabrielle.kokanos@osumc.edu>, Pease, James <pease.25@osu.edu>
Subject: RE: Concurrence request for new course in EEOB

Ping:

From: Ruiz, Natividad
To: Freudenstein, John
Subject: RE: Concurrence request for EEOB
Date: Wednesday, August 6, 2025 9:55:26 AM
Attachments: image001.png

Dear John,

We have looked at the syllabus and are happy to grant concurrence. We did not see any significant overlap with our courses including MICRBIOL 5161 (Introduction to Computational Genomics).

Good luck with your proposed course!

Natacha

Natividad Ruiz, PhD
Professor
Vice Chair for Teaching & Undergraduate Affairs
Department of Microbiology
The Ohio State University

From: Freudenstein, John <freudenstein.1@osu.edu>
Sent: Tuesday, August 5, 2025 12:42 PM
To: Ruiz, Natividad <ruiz.82@osu.edu>
Subject: Concurrence request for EEOB

Dear Dr. Ruiz:

Please find attached the syllabus for a new undergraduate course in the Department of Evolution, Ecology and Organismal Biology entitled “Genomics and Bioinformatics”.

We are seeking concurrence for the new course. Please respond to me with your **response/concurrence by August 19.** Concurrence will be assumed if no response is received by that date.

Thanks very much,

John Freudenstein

THE OHIO STATE UNIVERSITY

John V. Freudenstein, PhD
Professor
Vice Chair for Undergraduate Studies
Director of the Herbarium (OS)
Dept. of Evolution, Ecology and Organismal Biology
1315 Kinnear Road
Columbus, OH 43212
614-688-0363
freudenstein.1@osu.edu eeob.osu.edu

From: Dobritsa, Anna
To: Freudenstein, John
Cc: Cole, Susan; McWhorter, Michelle; Hollick, Jay
Subject: Re: Concurrence request
Date: Wednesday, October 15, 2025 11:23:22 AM
Attachments: image001.png
5795 Fall 2025 syllabus_posted_v2.pdf

Dear Dr. Freudenstein,

MolGen gives its concurrence to the EEOB course "Evolutionary Genomics".

I would like in turn to ask you for concurrence on the recently developed MolGen course 'Genomic data analysis'. It is currently being offered as a Special Topics course but we would like to make it a permanent course. Its syllabus is attached.

I would like to note that while both EEOB and MolGen courses focus on genomics, there are clear differences in their structures, learning goals, and target audiences. While the EEOB 3000-level course is targeted for an introductory student population, with no formal prerequisites and no possibility for graduate credit, the MolGen course is at the 5000 level, requires courses in General or Molecular Genetics as prerequisites, and targets senior undergraduates and/or graduate students. Our course also focuses on hands-on analysis of genomic data with students learning to use command line tools and R scripting languages, while the EEOB course is conceptual.

Please respond to me by **October 31**. Concurrence will be assumed if no response is received by that date. Please let me know if you have any questions.

Thank you,

Anna

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Anna Dobritsa
Associate Professor, Department of Molecular Genetics
and Center for Applied Plant Sciences
The Ohio State University
Aronoff Laboratory, Rm. 570
318 W. 12th Ave, Columbus, OH 43210
(614) 688-2197

From: Freudenstein, John <freudenstein.1@osu.edu>
Sent: Wednesday, October 1, 2025 1:31 PM

To: Dobritsa, Anna <dobritsa.1@osu.edu>
Subject: Concurrence request

Dear Dr. Dobritsa:

Please find attached the syllabus for a new undergraduate course in the Department of Evolution, Ecology and Organismal Biology entitled “Evolutionary Genomics”.

We are seeking concurrence for the new course. Please respond to me with your **response/concurrence by October 15.** Concurrence will be assumed if no response is received by that date. Please let me know if you have any questions.

Thanks very much,

John Freudenstein

THE OHIO STATE UNIVERSITY

John V. Freudenstein, PhD
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