Last Updated: Vankeerbergen,Bernadette Chantal

10/13/2025

Term Information

Effective Term Summer 2026

General Information

Course Bulletin Listing/Subject Area Biology

Fiscal Unit/Academic Org Introductory Biology - D0326

College/Academic Group Arts and Sciences
Level/Career Undergraduate

Course Number/Catalog 3001

Course Title Jurassic Biology: Could Life Find a Way in the 21st Century?

Transcript Abbreviation Jurassic Biology

Course Description Biology 3001 delves into the biological and biotechnological concepts presented in Michael Crichton's

1990 novel Jurassic Park, examining the scientific plausibility of its themes in the 21st century. Students will analyze the novel's depiction of DNA manipulation, cloning, paleontology, and ecological restoration,

while also considering the ethical implications of these technologies.

Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week

Flexibly Scheduled Course Never Does any section of this course have a distance No

education component?

Grading Basis Letter Grade

RepeatableNoCourse ComponentsLectureGrade Roster ComponentLectureCredit Available by ExamNoAdmission Condition CourseNoOff CampusNever

Campus of Offering Columbus, Lima, Mansfield, Marion, Newark, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites A minimum of 4 credits earned in the Biological Sciences.

Exclusions

Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 26.1201

Subsidy LevelBaccalaureate CourseIntended RankSophomore, Junior, Senior

Last Updated: Vankeerbergen,Bernadette Chantal 10/13/2025

Requirement/Elective Designation

Origins and Evolution

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

- 1.1) Explain the process of DNA extraction, amplification (PCR), and sequencing as depicted in the novel and compare it to current laboratory techniques.
- 1.2) Describe the challenges and limitations of reconstructing ancient DNA from fossilized remains.
- 1.3) Analyze the genetic engineering techniques used in the novel to create dinosaurs, including gene splicing and the use of "filler" DNA.
- 1.4) Evaluate the plausibility of the novel's depiction of dinosaur physiology and behavior based on current paleontological knowledge.
- 1.5) Discuss the role of disease vectors and population dynamics in the context of the novel's ecological collapse.
- 1.6) Describe modern de-extinction projects, and compare and contrast those projects with the methods used in the novel
- 2.1) Identify and analyze the ethical dilemmas associated with genetic engineering and cloning as presented in the novel.
- 2.2) Discuss the potential risks and benefits of de-extinction technologies and their impact on biodiversity.
- 2.3) Evaluate the role of scientific responsibility and the potential consequences of unchecked technological advancement.
- 2.4) Analyze the portrayal of scientific hubris and its consequences in the novel.
- 2.5) Articulate the importance of regulatory frameworks and ethical guidelines in biological and biotechnological
- 3.1) Critically evaluate scientific information presented in popular culture and distinguish between fact and fiction.
- 3.2) Conduct independent research on relevant biological and biotechnological topics and synthesize their findings.
- 4.1) Effectively communicate complex scientific concepts through written essays, presentations, and class discussions.
- 4.2) Engage in constructive debates and discussions on ethical and scientific issues related to the novel.
- 4.3) Properly cite scientific literature.

Content Topic List

- DNA
- Genetic Engineering
- Dinosaurs
- Cloning
- Animal Behavior
- Ecology
- Ethics

Sought Concurrence

Yes

Last Updated: Vankeerbergen,Bernadette Chantal 10/13/2025

Attachments

Biology3001_syllabus.pdf

(Syllabus. Owner: Andrews, Adam Lee)

● Bio 3001 submission-origins-evolution.pdf: GE Cover Sheet

(Other Supporting Documentation. Owner: Andrews, Adam Lee)

● Bio 3001 MG Concurrence.pdf: MolGen Concurrence

(Concurrence. Owner: Andrews, Adam Lee)

• EEOB Concurrence Bio 3001.pdf: EEOB Concurrence

(Concurrence. Owner: Andrews, Adam Lee)

Biology BS Curriculum Map.pdf: Bio Major Curriculum Map

(Other Supporting Documentation. Owner: Andrews, Adam Lee)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Andrews,Adam Lee	10/13/2025 02:32 PM	Submitted for Approval
Approved	Kulesza, Amy Elizabeth	10/13/2025 04:02 PM	Unit Approval
Approved	Vankeerbergen,Bernadet te Chantal	10/13/2025 08:51 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Neff,Jennifer Vankeerbergen,Bernadet te Chantal Steele,Rachel Lea	10/13/2025 08:51 PM	ASCCAO Approval



Biology 3001

Jurassic Biology: Could Life Find a Way in the 21st Century?

Autumn 2026 / 3 credit hours Course Syllabus

General Course Structure

Teaching Team

Instructor:

Department:

Office:
Email:
Hours:

Course Coordinator:
Department:
Office:
Email:
Email:

(Note that emails to the course staff sent to @buckeyemail.osu.edu are undeliverable.)

Meeting Schedule

Lecture: Twice weekly for 80 minutes each.

Prerequisites

A minimum of 4 credits earned in the Biological Sciences.

Course Materials

Required: Chrichton, M. (1990). Jurassic Park. Random House. ISBN: 9781784752224

Recommended: Clark, D. P., & Pazdernik, N. J. (2016). Biotechnology (2nd ed.). Amsterdam: Elsevier/Academic

Cell Press. ISBN: 9780123850164

Copies are on reserve at the campus library.

Welcome

WELCOME TO BIOLOGY 3001 - we are excited to have you here! By the end of the semester, we hope you'll gain (or grow) an appreciation for the integral role biology plays in our everyday lives. Our teaching team is deeply committed to supporting you as you navigate the course. You are valued and you belong. Thank you for being here, and we sincerely hope you enjoy the course!

Course Description

Biology 3001 delves into the biological and biotechnological concepts presented in Michael Crichton's 1990 novel *Jurassic Park*, examining the scientific plausibility of its themes in the 21st century. Students will analyze the novel's depiction of DNA manipulation, cloning, paleontology, and ecological restoration, while also considering the ethical implications of these technologies.

(Note that the focus of the course is on the novel and not the 1993 film adaptation. As there are notable omissions in the film compared to the novel, it is our expectation that students participate in the course with that understanding.)

Credit Hours and Work Expectation

This is a lecture- and discussion-based course worth 3 credit hours. According to the Ohio Department of Higher Education and Ohio State policy, students should expect approximately 3 hours per week spent on direct instruction (e.g., instructor content, in-class activities, Carmen activities), in addition to 6 hours per week spent completing out-of-class work (e.g., readings, homework) to receive a grade of C average.

Outcomes

General Education Goals and Expected Learning Outcomes

Upon successful completion of Biology 3001, students will have met the General Education goals and expected learning outcomes for the Origins and Evolution theme as outlined in the table below. More information about the structure of the General Education pathway at Ohio State can be found HERE.

GE Theme: Origins and Evolution		
Goals	Expected Learning Outcomes	
Successful students will	Successful students are able to	
1) Analyze origins and evolution at a more advanced and in-depth level than in the foundations component.	1.1) Engage in critical and logical thinking about the topic or idea of origins and evolution.	
	1.2) Conduct an advanced, in-depth, scholarly exploration of the topic or idea of origins and evolution.	
2) Integrate approaches to understanding the issues involved in origins and evolution by making connections	2.1) Identify, describe, and synthesize approaches or experiences as they apply to origins and evolution.	
to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in the future.	2.2) Demonstrate a developing sense of self as a learner through reflection, self-assessment and creative work, building on prior experiences to respond to new and challenging contexts.	
3) Appreciate the time depth of the origins and evolution of natural systems, life, humanity, or human culture, and the factors that have shaped them over time.	3.1) Illustrate their knowledge of the time depth of the universe, physical systems, life on earth, humanity or human culture by providing examples or models.	
	3.2) Explain scientific methods used to reconstruct the history of the universe, physical systems, life on earth, humanity or human culture and specify their domains of validity.	
	3.3) Engage with current controversies and problems related to origins and evolution questions.	
4) Understand the origins and evolution of natural systems, life, humanity, or human culture, and the factors that have shaped them over time.	4.1) Describe their knowledge of how the universe, physical systems, life on Earth, humanity or human culture have evolved over time.	
	4.2) Summarize current theories of the origins and evolution of the universe, physical systems, life on earth, humanity or human culture.	

How Students Will Meet These GE Goals

Overview

In Biology 3001, students will meet the goals and expected learning outcomes of the Origins and Evolution theme in multiple ways. The course will engage students through a rigorous and interdisciplinary exploration of the origins and evolution of biotechnology and genetic engineering, as well as the bioethics associated with these rapidly changing fields, with the course content and discussions framed by the scientific and ethical questions raised in Michael Crichton's 1990 novel Jurassic Park. By demanding critical analysis, the synthesis of complex concepts, and evaluations of real-world applications and their downstream implications, students will gain an appreciation of the scale of time from the life of dinosaurs, to the life and stability of nucleic acids, to how far the biotechnological disciplines have come since the origins of scientific understanding. Building upon the students' foundational knowledge, the course will address whether the science presented in the novel is a realistic application of biotechnology, and if not, what modifications and/or considerations must be entertained. In other words, how these ideas and ways of thinking have and must continue to evolve in order to be successful. Through active learning and reflection pedagogical strategies, students will be challenged at a high level to:

- critically evaluate the scientific plausibility of the fictional biotechnological scenarios;
- trace the historical development and evolution of genetic technologies from early discoveries to cutting-edge innovations;
- debate the ethical and ecological consequences of genetic manipulation and de-extinction; and
- integrate paleontological, molecular, ecological, and societal perspectives into a cohesive understanding of biotechnology's role in shaping the future.

While there is some basic paleontology and dinosaur anatomy and physiology, the course focuses primarily on the origins and evolution of the modern-day applications of biological engineering techniques.

General Course Progression

As they begin the course, students will review the fundamental concepts of DNA structure, the central dogma, and gene expression, followed by an exploration of the basics of paleontology. Moving further, the students will then begin to appreciate the emergence and evolution of genetic engineering as a discipline over time, including discoveries, research breakthroughs, and modern-day applications. Advanced topics such as cloning, DNA repair mechanisms, gene editing technologies including CRISPR, vector design and gene delivery systems, in vitro fertilization, and synthetic biology will be explored. These topics are not only studied in their isolation but will be contextualized within broader ethical, ecological, and societal frameworks. Students will analyze the fictional de-extinction efforts in the novel and compare them to real-world initiatives, taking into consideration ecological ramifications of introducing extinct species into extant ecosystems, and the stability and degradation of genetic material over evolutionary time. Finally, the course concludes by exploring both the moral and ethical dilemmas of genetic engineering in society, the role of corporate interests in shaping scientific agendas, the public's perception of scientific study in light of corporate greed, and the proposed future of all of these technologies discussed.

Assessment Strategies

Throughout the semester, students will engage in formative assessments such as weekly analytical reflections, case study discussions, and in-class activities, as well as summative assessments including two midterm exams, a final exam, and a capstone research project. These assessments are designed to measure not just content mastery, but the ability to think critically, argue ethically, and apply scientific reasoning to complex, interdisciplinary problems. By the end of the course, students will have developed a deep and nuanced understanding of how biotechnology has evolved, how it is portrayed in popular media, and how it intersects with ethics, ecology, and society, skills and insights that are essential for advanced study and responsible scientific citizenship.

Specifically Meeting Each Goal

- 1. Analyze origins and evolution at a more advanced and in-depth level than in the foundations component.
 - 1.1 Engage in critical and logical thinking about the topic or idea of origins and evolution.
 - 1.2 Conduct an advanced, in-depth, scholarly exploration of the topic or idea of origins and evolution.

Goal 1 Summary Achieving GE goal 1 is a consistent theme throughout the term as these expected learning outcomes are mapped to every course outcome. Through lecture, discussion, and critical analysis of the novel, students will build upon baseline knowledge from their foundations and lower-level courses by recognizing how these technologies originated and evolved over time, while also exploring the intricacies of them in detail. Students will be regularly challenged through both formative and summative assessment to expand their knowledge base, and the capstone research project will give students the opportunity to explore an aspect of biotechnology that is of interest to them at an even more in-depth level.

- 2. Integrate approaches to understanding the issues involved in origins and evolution by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in the future.
 - 2.1 Identify, describe, and synthesize approaches or experiences as they apply to origins and evolution.
 - 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment and creative work, building on prior experiences to respond to new and challenging contexts.

Goal 2 Summary Avoiding topic "silos" and integrating concepts across disciplines is a key aspect of both GE goal 2 and the course as a whole. The biotechnology concepts are discussed in a lecture setting supported by active learning and discussion, and framing these discussions through the lens of the issues raised in the novel will allow students to prove their mastery in this component. For example, week 2 explores molecular genetics basics and these concepts are revisited in different ways: week 4 applies these concepts to the novel's depiction of biotechnology, week 5 introduces ethics to the cloning strategies and directs the discussion to include current events, week 10 revisits ethics and biotechnologies as a whole, and the final weeks tie these concepts with public perceptions and their faith in science. This scaffolded and multi-faceted approach allows students to bring their own perspectives and experiences to each of the topics discussed, while the capstone project allows them to showcase their own knowledge growth and hone communication skills pertinent for their future careers.

- 3. Appreciate the time depth of the origins and evolution of natural systems, life, humanity, or human culture, and the factors that have shaped them over time.
 - 3.1 Illustrate their knowledge of the time depth of the universe, physical systems, life on earth, humanity or human culture by providing examples or models.
 - 3.2 Explain scientific methods used to reconstruct the history of the universe, physical systems, life on earth, humanity or human culture and specify their domains of validity.
 - 3.3 Engage with current controversies and problems related to origins and evolution questions.

Goal 3 Summary Students will begin exploring GE goal 3 early in the term. As the course progresses through molecular genetics concepts and an in-depth investigation of DNA and relevant biotechnologies, students will evaluate the feasibility of de-extinction efforts, as well as what assumptions and concessions must be made in this arena. Through these discussions they will appreciate the sheer time scale of the universe on an organismal, societal, and technological level. Organismally, students will analyze the life and stability of nucleic acids over time, how likely it is to recover adequate amounts of DNA of a particular species to recreate it, and what problems may arise when doing so. Societally, students reflect on how public perceptions of scientific research and the general faith in science can fluctuate over time. Technologically, students explore how these genetic technologies were inspired, modified, and deployed over the course of history. They investigate their validity and how they are being used in modern time. Ultimately, students will develop an appreciation for the sheer amount of time that passes in each of these avenues as they begin to tease out the differences between science and science fiction.

- 4. Understand the origins and evolution of natural systems, life, humanity, or human culture, and the factors that have shaped them over time.
 - 4.1 Describe their knowledge of how the universe, physical systems, life on Earth, humanity or human culture have evolved over time.
 - 4.2 Summarize current theories of the origins and evolution of the universe, physical systems, life on earth, humanity or human culture.

Goal 4 Summary Students will revisit baseline knowledge of the process of science as they master this goal. They will be reminded of the interdependence of scientific and technological developments, the social and philosophical implications of scientific discoveries and methods of addressing problems of the contemporary world, and that science is an expanding and self-correcting body of knowledge. They will use this framework to expand upon the concepts presented in this course to recognize how these biotechnologies presented have been critically scrutinized and modified to meet the needs of today's society.



Course Goals And Expected Learning Outcomes

Upon successful completion of Biology 3001, students will have met the course-specific goals and expected learning outcomes as outlined in the table below.

Biology 3001		
Goals	Expected Learning Outcomes	GE Alignment
Successful students will	Successful students are able to	GE Angiment
1) Analyze the scientific concepts presented in the novel within the context of	1.1) Explain the process of DNA extraction, amplification (PCR), and sequencing as depicted in the novel and compare it to current laboratory techniques.	1.1, 1.2, 2.1, 4.1, 4.2
contemporary biological and biotechnological understanding, while also	1.2) Describe the challenges and limitations of reconstructing ancient DNA from fossilized remains.	1.1, 1.2, 2.1, 3.1, 3.2, 4.1, 4.2
exploring the historical origins and development of such technologies.	1.3) Analyze the genetic engineering techniques used in the novel to create dinosaurs, including gene splicing and the use of "filler" DNA.	1.1, 1.2, 2.1, 3.1, 3.2
	1.4) Evaluate the plausibility of the novel's depiction of dinosaur physiology and behavior based on current paleontological knowledge.	1.1, 1.2, 2.1, 3.1, 3.2, 4.2
	1.5) Discuss the role of disease vectors and population dynamics in the context of the novel's ecological collapse.	1.1, 1.2, 2.1
	1.6) Describe modern de-extinction projects, and compare and contrast those projects with the methods used in the novel.	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 4.1, 4.2
2) Evaluate the ethical implications of genetic engineering, de-extinction,	2.1) Identify and analyze the ethical dilemmas associated with genetic engineering and cloning as presented in the novel.	1.1, 1.2, 2.1, 2.2, 3.3, 4.1, 4.2
and related technologies as depicted in the novel.	2.2) Discuss the potential risks and benefits of de-extinction technologies and their impact on biodiversity.	1.1, 1.2, 2.1, 2.2, 3.3, 4.1, 4.2
	2.3) Evaluate the role of scientific responsibility and the potential consequences of unchecked technological advancement.	1.1, 1.2, 2.2
	2.4) Analyze the portrayal of scientific hubris and its consequences in the novel.	1.1, 1.2, 2.2, 3.3
	2.5) Articulate the importance of regulatory frameworks and ethical guidelines in biological and biotechnological research.	1.1, 1.2, 2.2, 3.3
3) Develop critical thinking skills to assess the plausibility	3.1) Critically evaluate scientific information presented in popular culture and distinguish between fact and fiction.	1.1, 1.2, 2.1, 2.2, 3.3, 4.1, 4.2
of scientific claims in fiction and popular culture.	3.2) Conduct independent research on relevant biological and biotechnological topics and synthesize their findings.	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 4.1, 4.2
4) Foster interdisciplinary connections between biology,	4.1) Effectively communicate complex scientific concepts through written essays, presentations, and class discussions.	1.1, 1.2, 2.1, 2.2
biotechnology, literature, and ethics, and enhance students' ability to communicate	4.2) Engage in constructive debates and discussions on ethical and scientific issues related to the novel.	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 4.1, 4.2
complex scientific ideas through written and oral presentations.	4.3) Properly cite scientific literature.	1.1, 1.2

Grading and Evaluation

Points Table

Graded assignments will come in three forms, and students should note the expectations for each in the descriptions of our class assignments below.

- Independent Work (♣): Strictly non-collaborative, original, individual work. You may discuss this assignment only
 with your instructor. Discussions with other individuals, either in person or electronically, are strictly prohibited
 and constitute academic misconduct.
- Collaboration Required (An explicit expectation for collaboration among students either in-class or outside (i.e., group work).
- Collaboration Optional (2): Students are permitted, but not required, to discuss the assignment or ideas with each other. However, all submitted work must be one's original and individual creation.

${\bf Assignment}$	Points	Type
Metacognition Activities $(3 \times 10 \text{ pts})$	30	.
Course Engagement	200	4 4 9
In-Class Activities $(4 \times 15 \text{ pts})$	60	2 22 3
Exams $(2 \times 100 \text{ pts})$	200	.
Final Exam	150	.
Term Project	150	2:
SALG (survey)	5	.
Total Points Possible	795	

Assignment Descriptions

A brief description of each assignment category is included below.

Metacognition Activities (30 points)

Over the course of the semester, students will complete three reflections of themselves as learners, with specific prompts at the beginning, midpoint, and end of the semester so that both the instructor and students themselves can reflect on the student's growth as a self-motivated learner. Each reflection will be worth 10 points.

- Prompt 1: Welcome to our course! Reflect on your experience with your first GE Bookends course (*Launch*, *Connections*). What learning skills do you bring into the course? How do you view yourself as "scholarly" at this moment?
- Prompt 2: Now that the course is at the midpoint, how are your learning skills supporting you? What changes are you going to make for the second half of the term? What skills are serving you well? How are your attitudes towards learning changing?
- Prompt 3: How have your learning skills changed over the course? What skills supported you consistently? What do you think will serve you going forward? Which skills were least effective?

Course Engagement (200 points)

Students earn points in this category by engaging with the course in a variety ways. It is up to the students' discretion as to which "buckets" of activities they complete. It is not possible to earn full points for this engagement category by working entirely from any one or two buckets, so students must diversify their efforts. Due to the flexibility allowed for earning points in this category, there are no makeups.

Bucket	Description	Due	Expected Points Available
Top Hat Questions	Polling quiz-style questions. Registration is required; see the "Start Here" page in Carmen.	During alogg	≈ 70 (1 each)
Minute Papers ♣	After each lecture, a brief writing activity exploring what topics were covered that day and elaborating on unclear and "big picture" concepts.	During class -	56 (up to 2 each)
Three Whats	After each week, a three-paragraph reflection paper exploring deeper concepts of the week in the form of "What? What for? and What next?"	Sundays,	75 (up to 5 each)
Weekly Reviews ♣	Traditional homework problem sets to help assimilate concepts and prepare for quizzes and exams.	11:59pm (1	75 (up to 5 each)

In-Class Activities (60 points)

Periodically, class time will be dedicated to an in-class activity, discussion, reflection, or case study which relates to the current course material. Answers to these unannounced activities will be submitted through Carmen. The highest 4 scores will be counted, while the others dropped. Due to the dropped activity policy, no makeups are available.

Exams (350 points)

There will be three exams during the course: two midterm exams (100 points each) and one partially comprehensive final exam (150 points). All exams will consist of various question types (e.g., multiple choice, true/false, select all that apply, true/false, fill-in-the-blank, short answer). Exams will be delivered electronically through Carmen and require the Respondus Lockdown browser (see Carmen for details). Midterm exams will take place during the regular lecture period on the dates indicated on the course schedule. The final exam will take place in the regular lecture location at a date and time prescribed by the Registrar according to the final exam scheduling matrix. The first 100 points of the final exam will cover class material since midterm II. The remaining 50 points will focus on comprehensive topics.

Term Project (150 points)

Since one of the main objectives is to determine the scientific plausibility of the engineering techniques in the novel, students will propose a topic they would like to explore in more depth throughout the course. After their proposal is accepted by the instructor, students will research the primary literature for appropriate material, produce an annotated bibliography, and submit a poster elaborating on their chosen topic. This project will be completed in pairs over the course of the term, with several checkpoints to help keep students on pace.

SALG (5 points)

At the end of the course, 5 points will be assigned based on participation in a survey, the Student Assessment of Learning Gains (SALG). Grades on the SALG will be based solely on completion.

Grade Scale

Your final grade will be based on the percentage of the **795** points that you earn during the semester as described above. Please note that we do not grade the course on a curve, and Carmen does not round averages up to the next nearest percentage point; so 92.11% and 92.97% both earn the grade of A-. Final letter grades will be determined by the university-approved grade scale below:

Grade Posting

All grades will be posted on Carmen. After grades are posted you have <u>10 business days</u> to challenge any grade or inquire regarding an unposted or missing grade. **After that time, grades are final.** To challenge or inquire about a missing grade, contact either the lecturer or the Course Coordinator.

A	100 - 93.0%
A-	92.9 - 90.0%
B+	89.9 - 87.0%
В	86.9 - 83.0%
В-	82.9 - 80.0%

C+	79.9 - 77.0%
C	76.9 - 73.0%
C-	72.9 - 70.0%
D+	69.9 - 67.0%
D	66.9 - 60.0%
E	< 60.0%

Regrades

Students are permitted to request up to two assignments to be regraded throughout the semester. Such requests must meet the following criteria. The request:

- 1. shall be submitted to the Course Coordinator in writing (via email) within the 10 business days window since the assignment grade was posted to Carmen, AND
- 2. shall include an explanation:
 - 2.1 why or how the assignment was graded inaccurately, AND
 - 2.2 a justified explanation as to how it should have been scored properly.

The entire item will be regraded by the Course Coordinator according to the grading rubric. Regardless of if the new score is higher, equal, or lower to the original score, the resulting score from the regrade will be the final grade for the item. Requests to regrade an already-regraded item will not be approved.

Regrade requests will be denied for any student having already requested two during the semester. Rather, consideration of extraordinary circumstances will be taken into account at the end of the semester during final course grade determination.

Course Policies

Late Work and Makeups

All assignments are due on the date and time prescribed in the course schedule. Late work will not be accepted except in rare (and documentable) circumstances.

Attendance

Attendance is expected at all class periods and students are expected to help facilitate discussion when appropriate. If you are unable to take an exam at the regularly scheduled time, you must contact the Course Coordinator within 24 hours to schedule a makeup. If your absence is excused for a university-sanctioned event, if you are ill and have been seen by a medical practitioner on the day of the exam, or have other documentable reasons for missing, you may be offered a makeup exam without penalty. If you have no documentation to support your absence, or your absence from the exam is not for an excused reason, you will still be offered the opportunity for a makeup exam, with a 25% overall deduction on your exam score. Lack of transportation, loss of electricity, travel plans, etc. will not be considered as valid excuses. Arrivals to the exam after the first student has turned in an exam will be considered an unexcused absence, and the policy above will apply. The format for makeup assignments is at the discretion of the instructor.

Course Technology

- Self-Service and Chat Support
 - For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk.
 - * Website: 8help.osu.edu
 - * Phone: 614-688-HELP (4357) / TTD: 614-688-8743
 - * Email: 8help@osu.edu
- Carmen

- Carmen, Ohio State's learning management system, will be used to host materials and activities throughout this course. To access Carmen, visit carmen.osu.edu. Log into Carmen using your name.# and password. If you have not setup a name.# and password, visit my.osu.edu.
- Help guides on the use of Carmen can be found HERE.
- This course requires use of Carmen and other online communication and multimedia tools. If you need additional
 services to use these technologies, please request accommodations with your instructor.
- Carmen accessibility information.

• CarmenZoom

- Office hours may be held through Ohio State's conferencing platform, CarmenZoom. A separate guide to accessing CarmenZoom is posted on the course Carmen page.
- Students may use the audio and video functions if a webcam and microphone are available. If not, there is still a chat function within CarmenZoom for the student to live chat with the instructor.
- CarmenZoom help guide.

• TurnItIn

- Students at The Ohio State University are accountable for the integrity of the work they submit. Therefore, you should be familiar with the guidelines provided by the Committee on Academic Misconduct (COAM) and Section A of OSU's Code of Student Conduct in order to meet the academic expectations concerning appropriate documentation of sources. In addition, OSU has made TurnItIn, a learning tool and plagiarism prevention system, available to instructors. For this class, you will submit your papers to TurnItIn from Carmen. When grading your work, I will interpret the originality report, following Section A of OSU's Code of Student Conduct as appropriate. For more information about TurnItIn, please see the vendor's guide for students. Note that submitted final papers become part of the OSU database.
- Please know that I view TurnItIn first and foremost as a teaching tool to make you a better writer. You will see in your individual originality reports exactly what the instructors see. We WANT you to look at this report as soon as you submit your assignments. If you see an issue, please correct it right away, before we start grading the assignment. You can resubmit without penalty as many times as you want prior to the established due date for any assignment. After the due date, the late policy is in effect.

• Top Hat

- Top Hat is a web-based response system that allows students to use their own devices to provide responses in the classroom. This course uses Top Hat to promote active engagement, allow for synchronous feedback, and monitor attendance.
- Top Hat help guide.

AI Usage



Given that the learning goals of this class include developing your ability to use writing to articulate your scientific findings, and building your awareness of issues related to publishing and scientific writing (see the *Outcomes* section for more), the use of generative artificial intelligence (GenAI) tools and writing aids such as Microsoft Copilot, ChatGPT, Google Gemini, Grammarly, etc. is not permitted in this course. Any use of GenAI tools for work in this class may therefore be considered a violation of Ohio State's Academic Integrity policy and Code of Student Conduct because the work is not your own. The use of unauthorized GenAI tools will result in referral to the Committee on Academic Misconduct (see the *Academic Misconduct*

section for more). If I suspect that you have used GenAI on an assignment for this course, I will ask you to communicate with me to explain your process for completing the assignment in question.

If you feel you need to use GenAI for language translation, please contact me first. If you have any other questions regarding this course policy, please contact me.

CLSE Policies

Section Changes

All section changes and late adds are completed by the Course Coordinator. Due to the need to keep up-to-the-minute availability of seats in each section, the instructors are unable to sign any permission forms.

Instructor Feedback

- Email response: The CLSE's expectation of instructors is that emails will be responded to within one business day. If your email is sent during the evening or over the weekend, you may not receive a response until the next business day. Please remember that emails to the course staff sent to @buckeyemail.osu.edu are undeliverable.
- Class announcements: I will send important class-wide messages through the Announcements tool in Carmen. Please check your notification preferences to ensure you receive these messages.
- Graded assignments will be graded and returned to you within one week after they were due. All scores are posted on Carmen no later than the day the graded assignment is returned.

Copyright

© The Instructor's lectures and all course materials, including power point presentations, tests, outlines, labs, assignments, and similar materials, are protected by copyright. You may take notes and make copies of course materials for your own use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly whether or not a fee is charged without the express written consent of the course instructor.

Etiquette

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- Tone and civility: Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online and is not always appreciated inperson. The instructional team works very hard to provide a positive learning experience. Please keep this in mind and remain civilized and respectful in your class communications.
- Citing your sources: When we have academic discussions, please cite your sources to back up what you say.
- Treat your colleagues and instructors with respect.
- Please come with a good attitude we are here to learn and have a good time!

Issue Resolution

The CLSE believes that student concerns are usually most effectively addressed by the staff closest to the situation. Therefore, students are ordinarily expected to address issues or concerns first with their instructors. If the issue cannot be resolved by your instructor, or for some reason you feel that you absolutely cannot address your concern with your instructor, please feel free to contact the CLSE Assistant Director Adam Andrews.

University Policies

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.

Mental Health Support

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 by dialing 988 to reach the Suicide and Crisis Lifeline.

Safe Environments

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. 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:

- Online reporting form at http://civilrights.osu.edu/,
- Call 614-247-5838 or TTY 614-688-8605,
- Or email 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.

Disability Services

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. This will help us ensure that your individual needs will be met appropriately and fairly.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let your instructor know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at slds@osu.edu, 614-292-3307, or slds.osu.edu.

Building Emergency Action Plan

Each building on campus has a Building Emergency Action Plan (BEAP) outlining that specific building's specific procedures to be followed in the event of a range of emergency situations, including fire, weather, terrorism, chemical spills, etc. It is the role of every Buckeye to help keep each other safe and to be aware of these procedures. You can find all of the campus BEAPs here.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed, illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct. We will adhere to this policy.

- Unless otherwise specified for a particular assignment, all submitted work should be a student's own unique effort. Collaborative efforts are not permitted unless expressly sanctioned for a particular assignment.
- Unless otherwise specified for a particular assignment, use of AI-generated materials for course submissions is not permitted.
- Reusing past work: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- Using others' verbatim words without the use of quotation marks <u>and</u> citation is plagiarism. Paraphrased work requires citation to denote the use of others' ideas. Copying other's words without quotation while using citations is still considered plagiarism.
- Use of any technology during a quiz or exam (including but not limited to cell phones, smart watches, headphones, electronic dictionaries, etc.) is strictly prohibited.

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 or course coordinator, 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

Weather or Other Short-Term Closing

Should in-person classes be canceled, students will be notified as to which alternative methods of teaching will be offered to ensure continuity of instruction for this class. Communication will be via Carmen announcements and course-wide email.

Lyft Ride Smart

Lyft Ride Smart at Ohio State offers eligible students discounted rides, inside the university-designated service area, from 7pm to 7am. Prices may be impacted by distance, traffic, time of day, special events and prime time surcharges. To qualify for program discounts, users must select "shared ride" when booking in the Lyft app. For more information, click here.



Course Schedule: Autumn 2026

Schedule and assignments subject to change with as much advance notice as possible.

Week	Theme and Topics	
1	"Welcome to Jurassic Park!" Course overview; introduction to the novel	Metacognition 1 Novel vs. film (d) What is a dinosaur? (d)
Expected ELOs	3.1,4.2	
2	"Oh, Mr. DNA! Where'd you come from?" Basics of DNA and genetics; understanding genetic engineering; general discussion on cloning dinosaurs	DNA modeling (I) Sequencing (I) PCR review (I) Designer organisms, GMO (D)
Expected ELOs	1.1, 1.2, 1.3, 2.1, 3.1, 3.2, 4.1, 4.2	
3	"Because Grant's like me: he's a digger." Introduction to paleontology; dinosaur anatomy and physiology; fossil evidence, exploration of various species	Current dig sites (D) Fossilization (D) Phylogenetics review (I) Create a dinosaur (I)
Expected ELOs	1.4, 3.1, 3.2, 4.1, 4.2	
4	"Hold onto your butts." Overview of biotechnology used in the novel; discussion of its feasibility and modern advancements	in vitro fertilization (D) The "lysine contingency" (D) CRISPR (I) Restriction enzymes (I) Project teams identified
Expected ELOs	1.1, 1.2, 1.3, 2.3, 3.1, 3.2, 4.1, 4.2, 4.3	
5	"Condors! Condors are on the verge of extinction." The science and ethics of cloning; de-extinction possibilities and challenges; case studies of modern efforts	Current projects (D) History of cloning, Dolly (D)
Expected ELOs	1.6, 2.1, 2.2, 2.3, 2.5, 3.1, 3.2, 4.1, 4.2	
6	"That doesn't look very scary" Exam I (weeks 1-5); understanding dinosaur behavior	Pack hunters (D) Comparisons to today (I) Aggression (D)
Expected ELOs	1.4, 3.1, 3.2, 4.1, 4.2	
7	"Because they sure don't look like birds to me." Dinosaurs' ecological role; comparisons to modern animals	Dinosaurs of today (I) Jurassic Park food web (I) Draft proposals
Expected ELOs	1.4, 1.5, 2.2, 3.1, 3.2, 4.1, 4.2, 4.3	

 $Continued\ on\ next\ page...$

Course Schedule: Autumn 2026

Schedule and assignments subject to change with as much advance notice as possible.

Continued...

Week	Theme and Topics	$egin{aligned} & \mathbf{Activities} \ & & & & & & & & & & & & & & & & & & $
8	"Alright so she's suffering from Melia toxicity?" Island's plant life; role of flora in an ecosystem; impact of dinosaurs on plant biodiversity	Metacognition 2 Reconstructing plants? (D) Design an ecosystem (I) Proposals
Expected ELOs	1.2, 1.5, 1.6, 2.2, 2.5, 4.1, 4.2	
9	"How can you know anything about an extinct ecosystem?" Potential impacts on modern ecosystems; discussion of invasive species; ethical considerations	Unintended consequences (I)
Expected ELOs	1.5, 2.1, 2.2, 2.3, 2.5, 3.2, 4.1, 4.2	
10	"I own an island off the coast of Costa Rica." Feasibility of our own park; ethical considerations and risks; case studies of modern zoos	Are zoos modern-day Jurassic Parks? (D)
Expected ELOs	2.1, 2.2, 2.3, 2.4, 2.5, 4.1, 4.2	
11	"They didn't stop to think if they should!" Exam II (weeks 6-10); introduction to bioethics; ethical considerations of genetic engineering	Current ethical dilemmas (D)
Expected ELOs	2.1, 2.2, 2.3, 2.4, 2.5, 4.1, 4.2	
12	"It didn't require any discipline to attain it." Role of scientists in society; accountability in research; portrayal of scientists in the novel	What is a scientist? (D) "Alternative facts" (D) Annotated bibliography
Expected ELOs	2.1, 2.3, 2.4, 2.5, 4.1, 4.2, 4.3	
13	"We'll have a coupon day or something." Impact of biotechnology on society; public perception and media representation of genetic engineering; corporate greed	CDC, WHO, FDA (D) "Big Pharma" (D) Groupthink mentality (D)
Expected ELOs	2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 4.1, 4.2	
14	"You never had control! THAT's the illusion!" Importance of conservation and biodiversity; potential impact of bringing back extinct species; future directions in genetic engineering and biotechnology; the novel's legacy	$\begin{array}{ccc} {\rm Does} & conservation & {\rm include} \\ & de\text{-}extinction? & {\rm (D)} \end{array}$
Expected ELOs	2.2, 2.3, 2.4, 2.5, 4.1, 4.2	
Finals	"Life uh finds a way." Final Exam (weeks 11-14 + comprehensive topics)	Metacognition 3 SALG Poster submission
Expected ELOs	all	

GE Theme course submission worksheet: Origins & Evolution

Overview

Courses in the GE Themes aim to provide students with opportunities to explore big picture ideas and problems within the specific practice and expertise of a discipline or department. Although many Theme courses serve within disciplinary majors or minors, by requesting inclusion in the General Education, programs are committing to the incorporation of the goals of the focal theme and the success and participation of students from outside of their program.

Each category of the GE has specific learning goals and Expected Learning Outcomes (ELOs) that connect to the big picture goals of the program. ELOs describe the knowledge or skills students should have by the end of the course. Courses in the GE Themes must meet the ELOs common for **all** GE Themes <u>and</u> those specific to the Theme, in addition to any ELOs the instructor has developed specific to that course. All courses in the GE must indicate that they are part of the GE and include the Goals and ELOs of their GE category on their syllabus.

The prompts in this form elicit information about how this course meets the expectations of the GE Themes. The form will be reviewed by a group of content experts (the Theme Advisory) and by a group of curriculum experts (the Theme Panel), with the latter having responsibility for the ELOs and Goals common to all themes (those things that make a course appropriate for the GE Themes) and the former having responsibility for the ELOs and Goals specific to the topic of **this** Theme.

Briefly describe how this course connects to or exemplifies the concept of this Theme (Origins & Evolution)

In a sentence or two, explain how this class "fits' within the focal Theme. This will help reviewers understand the intended frame of reference for the course-specific activities described below.

(enter text here)

Connect this course to the Goals and ELOs shared by all Themes

Below are the Goals and ELOs common to all Themes. In the accompanying table, for each ELO, describe the activities (discussions, readings, lectures, assignments) that provide opportunities for students to achieve those outcomes. The answer should be concise and use language accessible to colleagues outside of the submitting department or discipline. The specifics of the activities matter—listing "readings" without a reference to the topic of those readings will not allow the reviewers to understand how the ELO will be met. However, the panel evaluating the fit of the course to the Theme will review this form in conjunction with the syllabus, so if readings, lecture/discussion topics, or other specifics are provided on the syllabus, it is not necessary to reiterate them within this form. The ELOs are expected to vary in their "coverage" in terms of number of activities or emphasis within the course. Examples from successful courses are shared on the next page.

Goal 1: Successful students will analyze an important topic or idea at a more advanced and in-depth level than the foundations. In this context, "advanced" refers to courses that are e.g., synthetic, rely on research or cutting-edge findings, or deeply engage with the subject matter, among other possibilities.

Goal 2: Successful students will integrate approaches to the theme by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future.

	Course activities and assignments to meet these ELOs
ELO 1.1 Engage in critical and logical thinking about the topic or idea of the theme.	
ELO 1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or idea of the theme.	

ELO 2.1 Identify, describe, and synthesize approaches or experiences as they apply to the theme.	
eto 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.	

Example responses for proposals within "Citizenship" (from Sociology 3200, Comm 2850, French 2803):

ELO 1.1 Engage in critical and logical thinking.	This course will build skills needed to engage in critical and logical thinking about immigration and immigration related policy through: Weekly reading response papers which require the students to synthesize and critically evaluate cutting-edge scholarship on immigration; Engagement in class-based discussion and debates on immigration-related topics using evidence-based logical reasoning to evaluate policy positions; Completion of an assignment which build skills in analyzing empirical data on immigration (Assignment #1) Completion 3 assignments which build skills in connecting individual experiences with broader population-based patterns (Assignments #1, #2, #3) Completion of 3 quizzes in which students demonstrate comprehension of the course readings and materials.
ELO 2.1 Identify, describe, and synthesize approaches or experiences.	Students engage in advanced exploration of each module topic through a combination of lectures, readings, and discussions. Lecture Course materials come from a variety of sources to help students engage in the relationship between media and citizenship at an advanced level. Each of the 12 modules has 3-4 lectures that contain information from both peer-reviewed and popular sources. Additionally, each module has at least one guest lecture from an expert in that topic to increase students' access to people with expertise in a variety of areas. Reading

The textbook for this course provides background information on each topic and corresponds to the lectures. Students also take some control over their own learning by choosing at least one peer-reviewed article and at least one newspaper article from outside the class materials to read and include in their weekly discussion posts.

Discussions

Students do weekly discussions and are given flexibility in their topic choices in order to allow them to take some control over their education. They are also asked to provide

information from sources they've found outside the lecture materials. In this way, they are able to

explore areas of particular interest to them and practice the skills they will need to gather information

about current events, analyze this information, and communicate it with others.

Activity Example: Civility impacts citizenship behaviors in many ways. Students are asked to choose a TED talk from a provided list (or choose another speech of their interest) and summarize and evaluate what it says about the relationship between civility and citizenship. Examples of Ted Talks on the list include Steven Petrow on the difference between being polite and being civil, Chimamanda Ngozi Adichie's talk on how a single story can perpetuate stereotypes, and Claire Wardle's talk on how diversity can enhance citizenship.

ELO 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.

Students will conduct research on a specific event or site in Paris not already discussed in depth in class. Students will submit a 300-word abstract of their topic and a bibliography of at least five reputable academic and mainstream sources. At the end of the semester they will submit a 5-page research paper and present their findings in a 10-minute oral and visual presentation in a small-group setting in Zoom.

Some examples of events and sites:

The Paris Commune, an 1871 socialist uprising violently squelched by conservative forces

Jazz-Age Montmartre, where a small community of African-Americans—including actress and singer Josephine Baker, who was just inducted into the French Pantheon—settled and worked after World War I.
The Vélodrome d'hiver Roundup, 16-17 July 1942, when 13,000 Jews were

rounded up by Paris police before being sent to concentration camps
The Marais, a vibrant Paris neighborhood inhabited over the centuries by
aristocrats, then Jews, then the LGBTQ+ community, among other groups.

Goals and ELOs unique to Origins & Evolution

Below are the Goals and ELOs specific to this Theme. As above, in the accompanying Table, for each ELO, describe the activities (discussions, readings, lectures, assignments) that provide opportunities for students to achieve those outcomes. The answer should be concise and use language accessible to colleagues outside of the submitting department or discipline. The ELOs are expected to vary in their "coverage" in terms of number of activities or emphasis within the course. Examples from successful courses are shared on the next page.

GOAL 3: Successful students will appreciate the time depth of the origins and evolution of natural systems, life, humanity, or human culture, and the factors that have shaped them over time.

GOAL 4: Successful students will understand the origins and evolution of natural systems, life, humanity, or human culture, and the factors that have shaped them over time.

	Course activities and assignments to meet these ELOs
ELO 3.1 Illustrate their knowledge of the time depth of the universe, physical systems, life on Earth, humanity, or human culture by providing examples or models.	
ELO 3.2 Explain scientific methods used to reconstruct the history of the universe, physical systems, life on Earth, humanity, or human culture and specify their domains of validity.	
FIG. 2.2 Frances with asserted and the control of t	
evolution questions.	
ELO 4.1 Describe their knowledge of how the universe, physical systems, life on Earth, humanity, or human culture have evolved over time.	

ELO 4.2 Summarize current theories of the origins and evolution of the universe, physical systems, life on Earth, humanity, or human culture.	

Example responses for proposals within "Citizenship" (Hist/Relig. Studies 3680, Music 3364; Soc 3200):

ELO 3.1 Describe and analyze a range of perspectives on what constitutes citizenship <u>and</u> how it differs across political, cultural, national, global, and/or historical communities.

Citizenship could not be more central to a topic such as immigration/migration. As such, the course content, goals, and expected learning outcomes are all, almost by definition, engaged with a range of perspectives on local, national, and global citizenship. Throughout the class students will be required to engage with questions about what constitutes citizenship and how it differs across contexts.

The course content addresses citizenship questions at the global (see weeks #3 and #15 on refugees and open border debates), national (see weeks #5, 7-#14 on the U.S. case), and the local level (see week #6 on Columbus). Specific activities addressing different perspectives on citizenship include Assignment #1, where students produce a demographic profile of a U.S-based immigrant group, including a profile of their citizenship statuses using U.S.-based regulatory definitions. In addition, Assignment #3, which has students connect their family origins to broader population-level immigration patterns, necessitates a discussion of citizenship. Finally, the critical reading responses have the students engage the literature on different perspectives of citizenship and reflect on what constitutes citizenship and how it varies across communities.

ELO 3.2 Identify, reflect on, and apply the knowledge, skills and dispositions required for intercultural competence as a global citizen.

This course supports the cultivation of "intercultural competence as a global citizen" through rigorous and sustained study of multiple forms of musical-political agency worldwide, from the grass-roots to the state-sponsored. Students identify varied cultural expressions of "musical citizenship" each week, through their reading and listening assignments, and reflect on them via online and in-class discussion. It is common for us to ask probing and programmatic questions about the musical-political subjects and cultures we study. What are the possibilities and constraints of this particular version of musical citizenship? What might we carry forward in our own lives and labors as musical citizens Further, students are encouraged to apply their emergent intercultural competencies as global, musical citizens in their midterm report and final project, in which weekly course topics inform student-led research and creative projects.

ELO 4.1 Examine, critique, and evaluate various expressions and implications of diversity, equity,

Through the historical and contemporary case studies students examine in HIST/RS 3680, they have numerous opportunities to examine, critique, and evaluate various expressions and implications

inclusion, and explore a variety of lived experiences.

of diversity, equity, and inclusion, as well as a variety of lived experiences. The cases highlight the challenges of living in religiously diverse societies, examining a range of issues and their implications. They also consider the intersections of religious difference with other categories of difference, including race and gender. For example, during the unit on US religious freedom, students consider how incarcerated Black Americans and Native Americans have experienced questions of freedom and equality in dramatically different ways than white Protestants. In a weekly reflection post, they address this question directly. In the unit on marriage and sexuality, they consider different ways that different social groups have experienced the regulation of marriage in Israel and Malaysia in ways that do not correspond simplistically to gender (e.g. different women's groups with very different perspectives on the issues).

In their weekly reflection posts and other written assignments, students are invited to analyze the implications of different regulatory models for questions of diversity, equity, and inclusion. They do so not in a simplistic sense of assessing which model is "right" or "best" but in considering how different possible outcomes might shape the concrete lived experience of different social groups in different ways. The goal is not to determine which way of doing things is best, but to understand why different societies manage these questions in different ways and how their various expressions might lead to different outcomes in terms of diversity and inclusion. They also consider how the different social and demographic conditions of different societies shape their approaches (e.g. a historic Catholic majority in France committed to laicite confronting a growing Muslim minority, or how pluralism *within* Israeli Judaism led to a fragile and contested status quo arrangement). Again, these goals are met most directly through weekly reflection posts and students' final projects, including one prompt that invites students to consider Israel's status quo arrangement from the perspective of different social groups, including liberal feminists, Orthodox and Reform religious leaders, LGBTQ communities, interfaith couples, and others.

ELO 4.2 Analyze and critique the intersection of concepts of justice, difference, citizenship, and how these interact with cultural traditions, structures of power and/or advocacy for social change.

As students analyze specific case studies in HIST/RS 3680, they assess law's role in and capacity for enacting justice, managing difference, and constructing citizenship. This goal is met through lectures, course readings, discussion, and written assignments. For example, the unit on indigenous sovereignty and sacred space invites students to consider why liberal systems of law have rarely accommodated indigenous land claims and what this says about indigenous citizenship and justice. They also study examples of indigenous activism and resistance around these issues. At the conclusion of the unit, the neighborhood exploration assignment specifically asks students to take note of whether and how indigenous land claims are marked or acknowledged in the spaces they explore and what they learn from this about citizenship, difference, belonging, and power. In the unit on legal pluralism, marriage, and the law, students study the personal law systems in Israel and Malaysia. They consider the structures of power that privilege certain kinds of communities and identities and also encounter groups advocating for social change. In

their final projects, students apply the insights they've gained to particular case studies. As they analyze their selected case studies, they are required to discuss how the cases reveal the different ways justice, difference, and citizenship intersect and how they are shaped by cultural traditions and structures of power in particular social contexts. They present their conclusions in an oral group presentation and in an individually written final paper. Finally, in their end of semester letter to professor, they reflect on how they issues might shape their own advocacy for social change in the future.

Biology BS Curriculum Map

B = beginning, I = intermediate, A = advanced

	Requ	iired Prerequisites for the Biology Major					Bio	olog	y BS	Le	arn	ing	(O	ıtc	om	es						
	ester Course Number	Course Title	Sem.	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	3.1	3.2	3.3	3.4	3.5				
DIO Dog	BIOL 1113xx	Biological Sciences: Energy Transfer and Development																Ì				
BIO Req. #1	Bio 1111 + 1112	or Foundations of Biology 1 & 2 (3 + 4 hours)	4-7	В	В	В	В	В				В		В	В	В	В	В				
BIG	OL 1114xx	Biological Sciences: Form, Function, Diversity, and Ecology	4-5		В		В	В	В	В				В	В	В	В	В				
	MATH 1151	Calculus 1 (5 Hrs.)																T				
		or																				
MATH Req. #1	Math 1140 + 1141	Calculus with Review 1 & 2 (4 hours each)	5-8				В		В		В							В				
		or						1														
	MATH 1156	Calculus for Biol. Sciences (5 Hrs.)																				
	MATH 1152	Calculus 2 (5 Hrs.)																				
		or																				
	MATH 1157	Math. Modeling for Biol. Sciences (5 Hrs.)																				
		or																				
MATH Req. #2	STATS 1450	Intro. to the Practice of Statistics (3 Hrs.)					В	В	В	В	В	В	В	В	В	В		В				
		or	3 - 5																			
	STATS 2450	Intro. to Statistical Analysis (3 Hrs.)																				
		or																				
	STATS 2480	Statistics for the Life Sciences (3 Hrs.)	-																			
	Chem 1210	0 General Chemistry 1																T				
CHEM	or		-	or		5-7	В		В						В		В	В		В		
Req. #1	Chem 1206 + 1208	Foundations of Chemistry 1 & 2 (3 + 4 Hrs.)																				
CH	HEM 1220	General Chemistry 2	5	В		В						В		В	В		В					
CH	HEM 2510	Organic Chemistry 1	4	В		В						В										
CH	HEM 2520	Organic Chemistry 2	4	В		I						I										
CH	HEM 2540	Organic Chemistry Lab 1	2	В		В						I		В	В		В					
CH	HEM 2550	Organic Chemistry Lab 2	2	В		В						I		В	В		В					
PHYS Req. #1	Phys 1200	Mechanics, Thermal Physics, Waves																T				
		or																				
	Phys 1248 + 1249	Mechanics, Work and Energy (4 Hrs) + Rotational Dynamics, Thermal Physics, and Vibrational Motion (3 Hrs.)	5-7	В		В							В	В	В		В					
		or																				

	Phys 1250	Mechanics, Work and Energy, Thermal Physics (5 Hrs.)											
	Phys 1201	E&M, Optics, Modern Physics											
PHYS Reg. #2		or	5	В	В			В	В	В	E	3	
1104:	Phys 1251	E&M, Waves, Optics, Modern Physics											
		Total Hrs.	48-61										

Core Electives for the Major						Biology BS Learning Outcomes													
Sem. Course Number	Course Title	Sem. hrs.	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	3.1	3.2	3.3	3.4	3.5	4	
MICRBIOL 4000 or 4100	General Microbiology	4/5	Α	ı	1	I	1	1	I				Α	Α	I	Α	Ι	I	
BIOCHEM 4511 or 5613 AND 5614	Biochemistry	4/6	Α	ı	Α		ı								ı		ı	ı	
MOLGEN 3300	General Plant Biology	4	Α	ı	ı	1	1	ı	ı				Α	Α	ı	Α	ı	I	
MOLGEN 4500 or 4606	General Genetics	3/4	Α	I	Α	Α	I	ı							I		I	I	
EEOB 2510 or 2511	Human Anatomy	3/4	I														Ι	В	
EEOB 2520	Human Physiology	3	I														Ι	В	
EEOB 3510 or MOLGEN 4700	Cell Biology	3	Α	Α	ı	ı	ı						I					I	
EEOB 3310	Evolution	4	Α	ı		1	Α	ı	ı						ı		ı	ı	
EEOB 3410	Ecology	4	I	ı			Ι		Α				Α	ı	ı	ı	Ι	I	
EEOB 3520	Microscopic Anatomy	3	ı	ı	ı												ı	I	
EEOB 4510	Comparative vertebrate anatomy	3	ı	ı														I	
ANTHRO 2200	Physical Anthropology (Additional Prereq)	4				В	В	В	В				В	В		В	В	В	
BIO 3401 or 3501	Integrated Biology or Integrative Skills in Biology	4/3	I	ı	I	I	I	ı	I				I	В	I	I	ı	ı	
BIO 4901	Biological Capstone	2	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	В	Α	I	Ι	Α	

Additional Biology Electives						Bic	logy	/ BS	Le	arn	ing	ξΟι	ıtc	om	es			
Sem. Course Number	Course Title	Sem. hrs.	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	3.1	3.2	3.3	3.4	3.5	4
BIO 2200	Genome Biology	1		ı		1							ı	I	I	Ι	ı	В
BIO 2750	Scientific Thought in an Anecdotal World	3													В		ı	П
BIO 3001	Jurassic Biology	3	-		ı	-	-	I	ı	I		ı			I	I	ı	П
BIO 3050	Current Events in Biology	1													I	1	ı	П
BIO 3730	Humans vs Germs	3	1			1	1		1						1	1	1	П
BIO 3870	Evolution of Sex	3	I	ı		1	Α		ı						I	Ι	ı	П
BIO 4210	Undergraduate Research in Biology Education	4											Α	Α	Α	Α	Α	Α
BIO 4798	Scientific Roots in England	3	I					Ī									Ī	
BIO 5001	Topics in Biology Teaching	1															Α	Α

BS outcomes

- 1. Explain major biological concepts and discuss how these are connected with various areas of the biological and physical sciences.
 - 1.1. Describe the hierarchical relationship between structure and function at all levels: molecular, cellular, and organismic.
 - 1.2. Diagram, explain, and contrast the major cellular processes in Archaea, bacteria, and eukaryotes.
 - 1.3. Differentiate types of biological macromolecules and compare their contributions to cellular structure and function.

- 1.4. Apply the principles of genetics and describe the flow of genetic information.
- 1.5. Explain changes in organisms through time by applying the principles of evolutionary biology.
- 1.6. Demonstrate how relationships among living things are understood through taxonomy and phylogenetic analysis.
- 1.7. Describe ecological relationships between organisms and their environment.
- 2. Apply concepts from mathematics and other science disciplines for the analysis of processes in living organisms.
 - 2.1. Apply quantitative skills in the analysis of biological processes.
 - 2.2. Apply concepts from chemistry in the analysis of biological processes.
 - 2.3. Apply concepts from physics in the analysis of biological processes.
- 3. Demonstrate problem solving, analytical, and communication skills that will provide the foundation for lifelong learning and career development.
 - 3.1. Apply the scientific process, including designing and conducting experiments and testing hypotheses.
 - 3.2. Use laboratory equipment, employ safe laboratory practices, and adapt tools such as laboratory notebooks and spreadsheets to organize and analyze data associated with scientific processes.
 - 3.3. Retrieve information from the life sciences literature; read, understand, and critically review scientific papers.
 - 3.4. Prepare oral and written reports following a recognized scientific format.
 - 3.5. Develop an awareness of the careers and professions that rely on knowledge of biological sciences.
- 4. Value biology as an integral part of society and everyday life.

Subject: RE: Concurrence Request

Date: Monday, September 1, 2025 at 1:11:01 PM Eastern Daylight Time

From: Freudenstein, John
To: Andrews, Adam
Attachments: image001.png

Dear Adam:

I had not forgotten about this; after reviewing the proposal and thinking about the content, EEOB can give concurrence to this.

Thanks, John

From: Andrews, Adam < andrews.171@osu.edu >

Sent: Tuesday, August 12, 2025 1:38 PM

To: Freudenstein, John < freudenstein.1@osu.edu>

Subject: Concurrence Request

John,

I am attaching the syllabus for a new course we plan to propose in one of the first CLSE CC meetings. In an effort for time efficiency, I am reaching out to formally, but preemptively request concurrence from EEOB.

The course is Biology 3001 - *Jurassic Biology*. It is intended to fulfill the GE Origins and Evolution theme, with a focus on the origins of the biotechnology addressed in the *Jurassic Park* novel.

Thank you for your consideration of the concurrence request.

Regards, Adam



Adam L. Andrews

Assistant Director for Curriculum & Instruction

College of Arts and Sciences | Center for Life Sciences Education

240D Jennings Hall, 1735 Neil Avenue, Columbus, OH 43210

Subject: Re: Concurrence Request

Date: Tuesday, August 19, 2025 at 11:45:45 AM Eastern Daylight Time

From: Dobritsa, Anna

To: Cole, Susan, Andrews, Adam

Attachments: image001.png

Hi Adam,

The Department of Molecular Genetics concurs with offering the Biology 3001 course.

Best, Anna

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: Cole, Susan <<u>cole.354@osu.edu</u>> Sent: Tuesday, August 12, 2025 1:41 PM

To: Andrews, Adam <andrews.171@osu.edu>; Dobritsa, Anna <adobritsa.1@osu.edu>

Subject: FW: Concurrence Request

Thanks Andrew,

Copying Anna Dobritsa as Vice Chair for Education—we will get something back to you in the next week or so

Susan Cole Professor and Chair, Molecular Genetics The Ohio State University

From: Andrews, Adam < andrews.171@osu.edu >

Date: Tuesday, August 12, 2025 at 1:38 PM

To: Cole, Susan < cole.354@osu.edu >

Subject: Concurrence Request

Susan,

I am attaching the syllabus for a new course we plan to propose in one of the first CLSE CC meetings. In an effort for time efficiency, I am reaching out to formally, but preemptively request concurrence from Molecular Genetics.

The course is Biology 3001 - *Jurassic Biology*. It is intended to fulfill the GE Origins and Evolution theme, with a focus on the origins of the biotechnology addressed in the *Jurassic Park* novel.

Thank you for your consideration of the concurrence request.

Regards, Adam



Adam L. Andrews

Assistant Director for Curriculum & Instruction
College of Arts and Sciences | Center for Life Sciences Education

240D Jennings Hall, 1735 Neil Avenue, Columbus, OH 43210 (614) 247-6345 Office / (614) 292-4390 Fax andrews.171@osu.edu clse.osu.edu