

## GLY 137 – The Dinosaurs

### Scientific Literacy & Inquiry

Instructor Name: Dr. James Boyle

Course Location: Natural Sciences Complex 216

Office: Cooke 453

Course Time: MWF 12-12:50PM

Student Hours: Monday 10-11AM, Thursday 12-1PM, or by appointment

Zoom Room Link: <https://buffalo.zoom.us/j/4027616352?pwd=NHcreUErRFFCVzlTnVZBZ0FGYmp2UT09>

Email: jamesboy@buffalo.edu

### Public Health Compliance in Classroom setting:

The most current health guidelines can be found [here](https://www.buffalo.edu/coronavirus/latest-update.html) (<https://www.buffalo.edu/coronavirus/latest-update.html>).

If you are unable to attend class you should contact the professor (Dr. Boyle) about accommodations to complete any work you might miss.

### Course Description:

Explores dinosaurs as a biological group: their origin, anatomy, life habits, evolution, and extinction. Evaluates revolutionary new ideas on their physiology, behavior, and significance in the history of life. Uses dinosaurs to exemplify important evolutionary phenomena, how scientists gather new knowledge, and how that knowledge is filtered to the public via academic and popular culture routes.

### Course Materials:

**Textbook:** There is no required textbook for this course, but I will be drawing material in part from Dinosaurs: a concise natural history (4<sup>th</sup> ed.) by David Fastovsky and David Weishampel (ISBN # 978-1108469296). It is an excellent resource if you have the desire and means to purchase it.

**Lecture:** Lectures slides will be made available on UBLearns the night before the lecture will be given. In addition, the live lectures will be recorded and the recordings made available on UBLearns by the day after each lecture.

**Students Hours:** I will be available in my office, Cooke 453, and over zoom on Mondays 10-11AM and Thursdays 1-2PM.. If neither of those times works email me to find an alternative time slot. Question via email are always welcome but make sure the email has the course number and your name in the email somewhere.

Having completed the Scientific Literacy and Inquiry sequence, students will be able to:

Learning Outcomes	Student Achievement of this Learning Outcome will be Assessed by:
1. Demonstrate that scientific knowledge applies across multiple scales of size and/or time.	Passing grade on quizzes 6, 7, 8, 9, 10, 11, and 12. Passing grade for podcast summaries. Passing grade for exam 2 and 3
2. Demonstrate understanding of and employ the scientific method.	Passing grade on quizzes 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, and 12. Passing grade for podcast summaries. Passing grade for exam 2
3. Demonstrate an understanding that science is a continuous process and that our understanding of scientific phenomena has changed across time.	Passing grade on quizzes 3, 5, 12, 13, and 14. Passing grade for podcast summaries. Passing grade for exam 1, 3, and 4
4. Demonstrate an understanding of how scientific principles are used to solve tangible problems.	Passing grade on quizzes 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, and 12. Passing grade for podcast summaries. Passing grades on exams 2 and 3
5. Recognize key ethical issues in scientific practice.	Passing grade on quizzes 3, and 14. Passing grade for podcast summaries. Passing grade for exam 4
6. Distinguish scientific information from pseudo-scientific information and demonstrate an understanding of the nature of legitimate scientific debate.	Passing grade on quizzes 8, 13, and 14. Passing grade on podcast summaries. Passing grade for exam 1

**Course Requirements:**

**Attendance:** I will not be scoring attendance as an explicit part of the course’s grade but will be keeping track of attendance. However, I would strongly suggest that you attend every lecture you are able to because you will get much more information than by trying to read the book or lectures alone and are likely to perform better on assignments and exams. If you expect that you may need to step out of the lecture during class time please place yourself towards the back and edges of the lecture hall to minimize the disturbance to your fellow students.

**Readings:** There are supplemental readings for each week listed in the schedule at the end of this document. These are meant to provide additional background knowledge for those interested or struggling with how the material was presented in class. They are helpful, but not required.

**Grading Policy: (see course schedule at the end of this document)**

Final grades are letter-based (see [here](#) for more information on UB grade policy) and are a weighted average of quizzes, podcast summaries, and exams throughout the semester. There is no final exam during final exam week at the end of the semester.

**Learning assessments will be graded based on rubric criteria and weighted according to the following break-down.**

Weighting	Assessment / Assignment
35%	Fourteen Quizzes (~3% each, with the two lowest quiz scores dropped at the end of the semester)
25%	Podcast Summaries (5% each, five across the semester)
40%	Exams (10% each)

**Quizzes:** Each week (with the exception of the week of fall recess) a quiz will be available on UBLearn and due at the start of the following week's class. These quizzes will cover material from the week and will be open notes. Student's will have three attempts to complete the quiz with the highest score among all attempts used as the final grade. Once started students will have 30 minutes to complete each quiz attempt. At the end of the semester the lowest two quiz grades will be dropped before calculating your final grade.

**Podcast Summaries:** Dinosaurs not only have a strong hold in the popular imagination but also among scientific study where they receive a disproportionate amount of money and attention compared to other fossil groups. This has spilled over to a number of excellent podcasts ([Tetrapod Zoology](#), [Common Descent](#), and [Terrible Lizards](#)) which cover entirely, or in individual episodes, dinosaurs. Over the course of the semester each student is responsible for listening and writing up a summary of **five** such podcast episodes (equates to about 1 every week and a half). I will post a link each week to a particular podcast episode relevant to the lectures. These assignments will have due dates for the week after they are posted but no penalty will be given for late submissions for these assignments. You may complete as many of these summaries as you wish with the five highest scores being used for your grade. I strongly suggest you submit them as you go rather than trying to listen to five hours of podcasts at the end of the semester. Further details on what your summary must contain will be provided during the class.

**Online Exams:** There will be three exams taken online. Exams will be posted under the "Assignments" tab on UBLearn and be a combination of multiple choice, matching, fill-in-the-blank, and short answer. The exams will have a one-and-a-half window to complete once started (though they are not written to take close to that long) over the course of a week. These will occur the weeks of **September 26 – October 2, October 24 – October 30, November 14 – November 20, and December 12 – December 18**. Exams will focus on the material covered in the course since the previous exam and thus are not explicitly cumulative. However, the material does build on itself and so ideas from earlier in the semester will still need to be applied in many cases. The exams will be open notes without any live or automated proctoring.

Additionally, after each exam an extra-credit assignment will be made available on UBLearn which can be taken to improve your exam score. There will be 15 questions worth 1 point each and you may earn back up to 10 points toward your associated exam score, to a maximum of 100. Example: you score a 73 on exam I, complete the extra credit and get 13/15, your new exam score is a 83 (73+10). These extra credit assignments will typically be due one week after the exam date.

## Make-up Policy:

If circumstances arise that you are unable to complete an assignment before the due date email me ([jamesboy@buffalo.edu](mailto:jamesboy@buffalo.edu)) when you can safely do so (i.e. do not worry about emailing me the day of an exam if you are in a car accident and have to go the hospital). In most cases extensions on due dates should be possible.

## UB Curriculum Capstone:

If you are completing this course as part of your UB Curriculum requirements, please select an 'artifact' from this course that is representative of your learning and upload it to your [UBPortfolio account](#). Templates have been created for this purpose. Artifacts include homework assignments, exams, research papers, projects, lab reports, presentations, and other course materials. Your final UB Curriculum requirement, UBC 399: UB Curriculum Capstone, will require you to submit these 'artifacts' as you process and reflect on your achievement and growth through the UB Curriculum. For more information, see the [UB Curriculum Capstone website](#).

## Academic Integrity:

Academic integrity is a fundamental university value. Through the honest completion of academic work, students not only advance their educational objectives, they sustain the integrity of the university and facilitate the transmission of knowledge and culture based upon the generation of new and innovative ideas. The [Undergraduate Academic Integrity Policy](#) provides additional information about what UB considers to be academic dishonesty and the possible consequences for violating UB's policies on academic integrity. In particular, you should be sure that you are aware of what UB considers to be academic dishonesty and that you understand how to avoid academic dishonesty. If you are unsure about the meaning of any of this information please talk to me or your academic advisor about them and we will try to clarify our expectations.

## Final Grades:

Grade	Quality Points	Percentage
A	4.0	94.0 - 100
A-	3.67	90 - 93
B+	3.33	87 - 89
B	3.00	84 - 86
B-	2.67	80 - 83
C+	2.33	77 - 79
C	2.00	74 - 76
C-	1.67	70 - 73
D+	1.33	67 - 69
D	1.00	65 - 66
F	0	< 65

**Accessibility Resources:**

If you have any disability which requires reasonable accommodations to enable you to participate in this course, please contact the Office of Accessibility Resources, 60 Capen Hall, 645-2608, and also the instructor of this course. The Office of [Accessibility Resources](#) will provide you with information and review appropriate arrangements for reasonable accommodations.

**Available Resources on Sexual Assault:**

UB is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence and stalking. You may call UB's Office of Equity, Diversity and Inclusion at (716) 645-2266 for more information.

**Student Wellness:**

As a student you may experience a range of issues that can cause barriers to learning or reduce your ability to participate in daily activities. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, health concerns, or unwanted sexual experiences. Counseling, Health Services, and Health Promotion are here to help with these or other issues you may experience. You [learn can more about these programs and services](#) by contacting:

Counseling Services:           120 Richmond Quad (North Campus), phone 716-645-2720  
  202 Michael Hall (South Campus), phone: 716-829-5800

Health Services:                Michael Hall (South Campus), phone: 716- 829-3316

Health Promotion:            114 Student Union (North Campus), phone: 716- 645-2837

## Course Weekly Schedule

<b>Dates</b>	<b>Week</b>	<b>Topic</b>	<b>Reading</b>
8/29-9/2	1	Introduction to the Mesozoic World	Ch. 2
9/5-9/9	2	The Fossil Record	Ch. 7
9/12-9/16	3	How New Dinosaurs are Discovered	Supplemental
9/19-9/23	4	What is a Dinosaur?	Ch. 3 & 4
9/26-9/30	5	Dinosaurs in the Tree of Life	Ch. 5
10/3-10/7	6	Theropods I	Ch. 6
10/10-10/14	7	Theropods II	Ch. 7 & 8
10/17-10/21	8	Sauropods	Ch. 9
10/24-10/28	9	Thyreophora	Ch. 10
10/31-11/4	10	Marginocephalia	Ch. 11
11/7-11/11	11	Ornithopoda	Ch. 12
11/14-11/18	12	Dinosaur Extinction	Ch. 17
11/21-11/25	13	Dinosaur History pre-1950s	Ch. 16 (to p. 425)
11/28-12/2	14	Dinosaur History 1960-Present	Ch. 16 (to p. 442)
12/5-12/9	15	Dinosaurs in Pop Culture	Ch. 16 (rest)
12/12-12/19	16	Final Exams Week	

Colors correspond to material which will be tested in each of the three online exams. Chapters in the reading column are from Fastovsky and Weishampel 4<sup>th</sup> edition.