

## COURSE SYLLABUS

### (UN)COMMON READ: IMPROBABLE DESTINIES IDH 2930, Section 1376

Spring, 2018

Class meetings: 222 Carr Hall; Mondays, 3:00–3:50 PM (8th period)

#### **Instructors:**

*Dr. David Blackburn*, Associate Curator, Florida Museum of Natural History

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*Dr. Stuart McDaniel*, Associate Professor of Biology, College of Liberal Arts and Sciences

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\*Office hours by appointment (email or talk to us before/after class)

**Required Text:** *“Improbable Destinies: Fate, Chance, and the Future of Evolution”* by Jonathan Losos

#### **Book Description:**

Professor Jonathan Losos at Harvard University is an evolutionary ecologist who studies the hows and whys of convergent evolution – the remarkable process in which evolution appears to repeat itself. In this book, he addresses the question of whether evolution is predictable. Combining both stories from experimental research in locales like the mountains of Trinidad or the islands of the Bahamas, with lab-based experiments in microbial evolution, Losos weaves together a compelling introduction to the world of evolutionary ecology. The famed naturalist Stephen Jay Gould argued that it was impossible to predict how the world would have turned out if the ‘tape of life’ was rewound and played again. With examples from ground-breaking studies over the past fifty years, Losos argues that while chance is important, many aspects of the evolutionary drama, even those observed over human time-scales, involve characters working from a familiar script. The book will appeal to both undergrads specifically interested in the life sciences and those broadly interested in human’s place in the world.

#### **Course Description:**

We will cover topics that include convergent evolution, evolutionary ecology, field and lab-based experimental biology, and the ways in which our understanding of evolution is being reshaped by recent studies of experimental evolution.

#### **Assignments & Expectations:**

Each week the student will come to class prepared to discuss a new chapter of the book. Major topics introduced in each chapter include convergent evolution, field experiments in the tropics, lab experiments with microbes, fruit flies, and more, and discussion of the place of humans in an evolutionary landscape determined by both chance and fate. As evolutionary biologists, both instructors will share their own expertise relevant to these discussions. Author Jonathan Losos would be available to video-chat with students for at least one class during the semester.

Preparation for each week's class will include responding to writing prompts based on the reading.

Students will be evaluated based on responses to short questions based on the reading and prompt, participation in class discussions, and a short non-technical paper and associated presentation on a recent primary research publication related to the topics explored in the book.

**Grading:**

Weekly Reading/Assignments—30%

Participation in Discussion—30%

Paper—20%

Presentation—20%

**Class Schedule:**

**Week 1:** January 8

Introduction to the course

**Week 2:** January 15

\*\*HOLIDAY\*\*

**Week 3:** January 22

Chapter 1: Evolutionary Déjà Vu

Chapter 2: Replicated Reptiles

**Week 4:** January 29

Chapter 3: Evolutionary Idiosyncrasy

**Week 5:** February 5

Chapter 4: The Not-so-Glacial Pace...

**Week 6:** February 12

Chapter 5: Colorful Trinidad

Chapter 6: Lizard Castaways

*Video-chat with Jonathan Losos*

**Week 7:** February 19

Chapter 7: Manure to Modern Science

**Week 8:** February 26

Chapter 8: Evolution in Swimming Pools...

\*\*DUE: TOPIC OF SHORT PAPER\*\*

**Week 9:** March 5

\*\*UF SPRING BREAK\*\*

**Week 10:** March 12

Chapter 9: Replaying the Tape

**Week 11:** March 19

Chapter 10: Breakthrough in a Bottle

**Week 12:** March 26

\*\*NO CLASS\*\*

**Week 13:** April 2

Chapter 11: Jots, Tittles, and Drunken

Fruit Flies

\*\*DUE: SHORT PAPER\*\*

**Week 14:** April 9

Chapter 12: The Human Environment

Conclusion: Fate, Chance, and

Inevitability...

**Week 15:** April 16

\*Research presentations\*

**Week 16:** April 23

\*Research presentations\*

## **Course Policies**

### Class Attendance and Make-Up Exams

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

### Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### Information on UF Grading Policies

Please see the following link:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### Online Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>

### Cheating and Plagiarism

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructors in this class.