DEPAUL | School of Continuing and Professional Studies

Prehistoric Life
Undergraduate Course Information Sheet

Course Number: CCS 259, 4 credits, 10 Weeks
Cross listed Course Number: SNC 210, 4 credits, 10 Weeks
Delivery Formats: Online Async

Course Description

This course promotes students' investigation of fossils to interpret the character of 3.5 billion years of biological evolution and ecological change on earth. By way of scientific reasoning, mathematical inference, and applicable technologies, emphasis is on the exploration of earliest evidence of life, development of multi-celled plants and animals, dinosaur evolution, mass extinction events, mammal diversification, human origins as well as appraisal of the societal reliance on fossil resources and the persistent debate over evolution versus creation. Learning is assessed through labs, a fieldtrip, an exam, video summaries, contributions to online discussions, and a research paper in a scientific format.

Learning Outcomes

After completing this course, you will be able to demonstrate:

• A basic working definition and knowledge of the science of paleobiology.

• An understanding of the historic connections between physical and biological factors governing earth's biodiversity.

• An understanding of the major trends and patterns of biodiversity through earth history.

• An understanding of humanity's evolution as expressed in the fossil record of primates.

• An ability to analyze information generated from scientific investigations in paleontology.

• An understanding of how institutions support the exploration and archiving of earth's biological history and serve as places of scientific learning.

• A working understanding and applied use of scientific reasoning.

Learning Outcomes for SNC 210: Liberal Studies Program - Scientific Inquiry: Science as a Way of Knowing Domain

Students will be able to apply appropriate concepts, tools, and techniques of scientific inquiry.

Students will be able to describe how natural scientific, mathematical, and/or computational methodologies function as mechanisms for inquiry.

Students will be able to explain the interaction between the content of their SI-Elective course and other scientific disciplines or the broader society.

Learning Strategies and Resources

Students will be assessed through a variety of approaches in Prehistoric Life including online discussions, lab reports, a research paper, video summaries, a geologic time exercise, and a fieldtrip report.

Required Readings

Books and learning materials are available at the DePaul bookstore, at http://depaul-loop.bncollege.com, or through alternative sources.

Tattersall, I. (2010). Paleontology: A brief history of life. West Conshohocken, PA: Templeton Press.

Palmer, D., Lamb, S., Gavira, G. A., Frances, P., & DK Publishing, Inc. (2009). Prehistoric life: [the definitive visual history of life on earth]. New York, N.Y: DK Pub.

Videos: (on D2L): Prehistoric Earth: A Natural History (Before the Dinosaurs: Walking with Monsters / Walking with Dinosaurs / Allosaurus / Walking with Prehistoric Beasts / Walking with Cavemen (2008)/ and Planet Dinosaur (2011).

Recommended reading (not required): Cowen, R. (2013). History of life. Chichester: Wiley-Blackwell.

Additional readings may be available on Electronic Reserve, at the DePaul Library. Login to Ares Course Reserves and select the course. Log in using your Campus Connect User ID and password. You will then get a page listing the courses in which you're enrolled that have readings posted in Ares. Click on the title of this course and the list of our electronic reserve readings will be displayed.

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Learning Deliverables

Discussions: Each module of the course has its own discussion. Questions are formulated by the instructor to motivate student interaction and reflection around that week's topics.

Lab Reports. In alternating modules of the course, students undertake lab activities structured to reinforce paleobiology principles and scientific reasoning. Lab topics include: fossil preservation, natural selection, rock specimens, extinct group food niches, and human evolution.

Research Paper Description and Final Draft. Students are provided detailed guidelines for writing a scientifically formatted research paper. Students submit their research question early in the course and a final draft of the paper at the end of the course.

Video Summaries. Students are required to review, evaluate, and reflect on videos that reinforce module topics.

Geologic Time Exercise. Students apply appropriate mathematical formulae to evaluate rock ages and geologic time.

Museum or Fossil Site Field Trip Report. Students will undertake a scientific investigation using a natural history museum or fossil site.

Assessment of Student Learning

Distribution of Grade Points

Graded Assignment	Percentage of Final Grade
Online Discussions	20%
Lab Reports	25%
Research Paper Description	5%
Research Paper Final	20%
Video Summaries	7.5%
Geologic Time Exercise	2.5%
Museum or Fossil Site Field Trip Report	20%

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Grading Scale

A = 93 to 100	A- = 90 to 92	B+ = 87 to 89
B = 83 to 86	B- = 80 to 82	C+ = 77 to 79
C = 73 to 76	C- = 69 to 72	D+ = 65 to 68
D = 61 to 64	F = 60 or below	INC

Course Schedule

Week or Module Title or Theme	Readings / Learning Activities	Graded Assignments
Week 1, Module 1:	Introductions Tattersall = Chap. 1 Prehistoric Life by DK = pp. 34-43 Supplemental: Paleontology Defined Additional Resources The first lab utilizes a general 15 specimen fossil kit that students must purchase from geology.com (or the bookstore per availability).	1.1 Scientific Reasoning 1.2 Lab Report 1 1.3 Fossils and Fossil Preservation
Week 2, Module 2:	Prehistoric Life by DK = pp. 12-21 Supplemental Websites: Additional Resource Videos: Geologic Time (PBS 12 Minutes)	2.2 Origin of Earth and Earth as a time recorder 2.3 Age of Earth Exercise

Week 3, Module 3:	Tattersall = Chap. 2 & 4 Prehistoric Life by DK = pp. 26-29, 32-33, 50-63 Additional Resource Videos: Origin of Life, Permian Triassic Extinction Video	3.1 Origin of Life and Mass Extinction 3.2 Research Paper Description 3.3 Video Summary 1
Week 4, Module 4:	Tattersall = Chap. 3 & 5 Prehistoric Life by DK = pp. 30-31, 68-93, 106-107, 128-139 Additional Resource Videos: BBC Prehistoric Earth Series: Walking with Monsters Episode 1	4.1 The Tree of Life 4.2 Lab Report 2 4.3 Video Summary 2
Week 5, Module 5:	Prehistoric Life by DK = pp. 96-99, 112-121, 144-153, 174-177, 198-201, 226-233, 284-295, 362-367, 390-395, 418-423 Supplementary Reading: Plant Evolution Additional Resource Videos: Plants are Cool Too: Clarkia Fossils First Tetrapods Tiktaalik (with interactives) First land animals	5.1 Plants: Base of Life on Earth
Week 6, Module 6:	Prehistoric Life by DK = pp. 22-25, 64-67, 82-23, 108-111, 140-143, 170-173, 194197, 222-225, 280-283, 358-361, 386-389, 414-417 Supplementary Information: Wisconsin Silurian Reefs Carboniferous Additional Resource Videos: PETM Paleocene Wyoming Oligocene Oregon Miocene Florida	6.1 Ancient Environments 6.2 Lab Report 3

Week 7, Module 7:	Tattersall = Chap. 6 Prehistoric Life by DK = pp. 162-169, 182-193, 206-221, 244-279, 304-357 Additional Resource Videos: Prehistoric Earth: A Natural History Walking with Dinosaurs Episodes 1 and 2 "New Blood" "Time of the Titans"	7.1 When reptiles ruled the earth 7.2 Museum Fieldtrip Report 7.3 Video Summary 3
Week 8, Module 8:	Tattersall = Chap. 7 Prehistoric Life by DK = pp. 374-385, 404-413, 430-439 Additional Resource Videos: Prehistoric Earth: A Natural History Walking with Prehistoric Beasts, Episodes 1 and 3 "New Dawn" and "Whale Killer"	8.1 Rise of the Mammals 8.2 Video Summary 4 8.3 Lab Report 4
Week 9, Module 9:	Tattersall = Chap. 8 & 9 Prehistoric Life by DK = pp. 440-479 Additional Resource Videos: Prehistoric Earth: A Natural History Walking with Cavemen Beasts, Episodes 1 and 2 "First Ancestors" and "Blood Brothers" Review the Human Origins Interactive	9.1 Human Origins 9.2 Lab Report 5 9.3 Video Summary 5
Week 10, Module 10:	Tattersall = Chap. 10 Additional Resource Video: Intelligent design (NOVA)	10.1 Prehistoric Life: Impact on Human Meaning and Society

	Websites: •On pro-Intelligent Design and Scientific Perspectives (see Overview section)	10.2 Research Paper Final Draft

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Course Policies

For access to all SCPS and DePaul University academic policies, refer to the following links:

SCPS Student Resources Website

DePaul Student Handbook

The D2L Course Website for this course.

Credit for Prior Learning

Students whose home college is SCPS that have not transferred more than 99 credit hours from community college or exam credit, and have not reached 132 credit hours toward graduation may qualify for prior learning credit. If you have prior knowledge you think may be equivalent to the learning outcomes of a SCPS course, you can contact the Office of Prior Learning Assessment at scpspla@depaul.edu or the PLA website for information on how to submit a proposal to use Prior Learning Assessment (PLA) credit for a nominal fee in lieu of regular tuition as an alternative to completing a course.

Course Syllabus

The official syllabus for this course that includes course dates, instructor information and quarter specific details will be provided by the course instructor by the start of the course and available on the course D2L website.

Course Registration

To find out when this course will be offered next, you can go to the SCPS Registration website for details on how to register for the course.

For information on how this course can apply to your program, contact your academic advisor.

School of Continuing and Professional Studies

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