

**From Ape to Madonna:
The Evolution of Humankind
IDIS 217**

Instructor: Dr. Frank T. Kuserk
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Office Hours: MWF 10:00 AM-11:00 AM or by appointment

Classroom: 335 Pricilla Payne Hurd Academic Complex
MWF 4 (11:30 AM-12:20 PM)

Course Description: One of the most profound questions that human beings can ask of themselves has to be, "Where do we come from?" This course will deal with the historical and comparative bio-anthropology of our species, looking at humans as members of the animal kingdom, focusing on the attributes shared with our primate relatives, and exploring the origins of uniquely human attributes. Using the approaches of evolutionary biology, physical anthropology, and archaeology, this course traces human physical evolution and cultural development from its earliest beginning, more than five million years ago, to about 15,000 years ago, just before the beginnings of plant and animal domestication and the rise of complex societies. In addition, this course will pay special attention to the impact that evolutionary ideas have had on social, political, and legal issues in American life. *This course satisfies the Social Impact of Science (U1) requirement within the LinC curriculum.*

Course Objectives: Upon completion of this course students will be able to demonstrate:

- 1) Knowledge of basic concepts of evolutionary biology, including the processes of genetic change, natural selection, and speciation
- 2) Awareness of the historical development of major evolutionary ideas, including Darwinism, the Modern Evolutionary Synthesis, and contemporary evolutionary theory
- 3) Understanding of the major scenarios of human evolution from origins to the present
- 4) Awareness of the impact that evolutionary ideas have had on the social, political, and legal history of the United States
- 5) Ability to distinguish between scientific and nonscientific theories, generate scientific arguments, and support them with appropriate examples or scientific justifications
- 6) Knowledge of and ability to apply the scientific process
- 7) Competence in writing and oral communication of scientific issues
- 8) Ability to integrate concepts within and among science and non-science disciplines
- 9) Understanding of the relevance of evolutionary biology to modern society

Required Texts: Baker, Catherine and James B. Miller (eds.). 2006. *The Evolution Dialogues: Science, Christianity, and the Quest for Understanding*. American Association for the Advancement of Science, Washington, DC.

Larson, Edward J. 2004. *Evolution: The Remarkable History of a Scientific Theory*. The Modern Library, NY.

Zimmer, Carl. 2005. *Smithsonian Intimate Guide to Human Origins*. HarperCollins Publishers, NY.

Grading: The grading system is as follows:

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|----|---|--------|----|---|--------------|
| A | = | 93-100 | C | = | 73-76 |
| A- | = | 90-92 | C- | = | 70-72 |
| B+ | = | 87-89 | D+ | = | 67-69 |
| B | = | 83-86 | D | = | 63-66 |
| B- | = | 80-82 | D- | = | 60-62 |
| C+ | = | 77-79 | F | = | 59 and below |

| | |
|--|-------------------|
| Lecture Exam 1 | 100 points |
| Lecture Exam 2 | 100 points |
| Lecture Exam 3 (Final Exam) | 100 points |
| Personal Reflection Paper | 100 points |
| Discussion Questions & Class Participation | <u>100 points</u> |
| | 500 points |

It is within the instructor's purview to apply qualitative judgment in determining grades for an assignment or for the course.

Class Attendance: It is my experience that students who do poorly in this course are those who miss an excessive number of class meetings. Remember---Part of your grade for this course is based on your participation. It is your responsibility to make sure that I get to know who you are by actively participating in class!

An absence on an examination day will require either prior permission or a suitable excuse from a physician, the Health Center or Dean of Students Office before a make-up is given.

Disability Accommodations: Students who wish to request accommodations in this class for a disability should contact Mr. Joe Kempfer, Assistant Director of Learning Services for Disability Support, 1307 Main Street (extension 1510). Accommodations cannot be provided until authorization is received from the office of Learning Services.

Academic Honesty: Moravian College's policies on academic honesty and disruptive course related student behavior can be found in the Student Handbook. It is assumed that each of you has read and understands these policies and the consequences of violating them.

**Course Schedule
Spring 2009**

Week 1 (1/19 to 1/23): The Process of Evolution: Evolution in the air!

A Modern Creation Story---*2001: A Space Odyssey*

Lecture Notes 1: Before Darwin

Readings: Baker & Miller, Prologue, Chapters 1-2
Larson, Chapters 1-3

Week 2 (1/26 to 1/29): The Process of Evolution: Darwinism, Neo-Darwinism, and Modern Evolutionary Thought

Lecture Notes 2: The Darwinian Revolution

Lecture Notes 3: The Modern Evolutionary Synthesis

Readings: Baker & Miller, Chapters 3, 5
Larson, Chapters 4-5, 7, 10

Week 3 (2/2 to 2/6): The Scientific Background to Human Evolution: Fossils, Radiometric Dating & Biosystematics

Lecture Notes 4: Time, Fossils & Isotopes

Readings: Baker & Miller, Chapter 7

Week 4 (2/9 to 2/13): The Scientific Background to Human Evolution: Molecular Biology

Lecture Notes 5: Molecular Evolution

**CHARLES DARWIN'S 200TH BIRTHDAY
THURSDAY, FEBRUARY 12**

Week 5 (2/18 to 2/20): Our Primate Cousins

Lecture Notes 6: Our Primate Heritage

Reading: Larson, Chapter 6
Zimmer, Chapters 1-2

EXAM 1: FRIDAY, FEBRUARY 20 (Material from Weeks 1-4)

Week 6 (2/23 to 2/27): Hominid Beginnings: Walking Upright

Lecture Notes 7: The First Hominids

Readings: Zimmer, Chapter 3

Week 7 (3/2 to 3/6): No class-Spring Break

Week 8 (3/9 to 3/13): The Australopithecines

Lecture Notes 8: The Australopithecines

Reading: Zimmer, Chapter 4

Week 9 (3/16 to 3/20): The Origin of Modern Humans-The Rise of *Homo*

Lecture Notes 9: Stones & Bones

Reading: Zimmer, Chapter 5-6

Week 10 (3/23 to 3/27): The Origin of Early Humans-Out of Africa

Lecture Notes 10: Out of Africa

Reading: Zimmer, Chapter 7

Week 11 (3/23 to 3/25): The Origin of Modern Humans

Separating Hunters from Gatherers---Date to be announced

Lecture Notes 11: Modern Humans

Reading: Zimmer, Chapter 8

EXAM 2: FRIDAY, MARCH 27 (Material from Weeks 5-10)

Week 12 (3/30 TO 4/3): The Social Impact of Evolutionary Ideas

Lecture Notes 12: The Dark Side: Social Darwinism & Eugenics

Week 13 (4/6 to 4/8): The Social Impact of Evolutionary Ideas: The Scopes Trial

Lecture Notes 13: Monkey Trial

View and Discuss: *Inherit the Wind* (1960)

Readings: Larson, Chapter 9

No Class- Easter Break (Friday, April 9 & Monday, April 13)

Week 14 (4/20 to 4/24): The Social Impact of Evolutionary Ideas: After Scopes

Lecture 14: From Dayton to Dover---What Should We Teach?

Readings: Larson, Chapter 11

Week 15 (4/27 to 5/1): Science, Evolution, and Religious Faith

Personal Reflections on Science, Faith, and Human Origins

Materialism and *The Material Girl*

Readings: Baker & Miller, Chapter 8, Epilogue
Larson, Chapter 12

**FINAL EXAM: DATE, TIME AND PLACE TO BE
ANNOUNCED (Material from Weeks 11-15)**