

Term Information

Effective Term Autumn 2015
Previous Value Autumn 2013

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

We are requesting GE status in the Natural Science (Biological Science) category.

What is the rationale for the proposed change(s)?

This course meets the rationale and learning outcomes for the GE category or categories we are requesting, as outlined in the Curriculum and Assessment handbook.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

None

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area Anthropology
Fiscal Unit/Academic Org Anthropology - D0711
College/Academic Group Arts and Sciences
Level/Career Undergraduate
Course Number/Catalog 3304
Course Title The Living Primates
Transcript Abbreviation Living Primates
Course Description Survey of the behavior, morphology and conservation of living primates; particular emphasis given to field studies and the position of humans within the Order Primates.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 7 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites

[Previous Value](#)

Prereq: 2200 (200).

Exclusions

Not open to students with credit for 304.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code

26.0708

Subsidy Level

Baccalaureate Course

Intended Rank

Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

General Education course:

Biological Science

The course is an elective (for this or other units) or is a service course for other units

[Previous Value](#)

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

- The principal objective of this course is to introduce students to the diversity of living primates. Student successfully completing the course will be able to answer the following questions:
- What are primates and how do they differ from other mammals?
- What are the major morphological and behavioral features that distinguish each primate group?
- What factors account for the taxonomic diversity among primates?
- In what ways are human primates similar to and different from non-human primates?
- What is the future of living primates?

[Previous Value](#)

Content Topic List

- Conservation
- Ecology
- Diet
- Adaptation
- Evolution
- Prosimian anatomy
- Lemurs
- Reproduction
- Gorillas
- Chimpanzees
- Baboons
- Motherhood

Attachments

- Assessment plan Anth 3304.docx: Assessment Plan
(GEC Course Assessment Plan. Owner: Freeman, Elizabeth A.)
- GE Rationale _Anth 3304.docx: GE Rational
(Other Supporting Documentation. Owner: Freeman, Elizabeth A.)
- Syllabus Anth 3304.doc: Syllabus
(Syllabus. Owner: Freeman, Elizabeth A.)
- Dr Larsen letter 10 07 14.doc: Chair's Letter
(Cover Letter. Owner: Freeman, Elizabeth A.)
- Revised Assessment plan for ANT 3304.docx: Revised Assessment Plan
(GEC Course Assessment Plan. Owner: Freeman, Elizabeth A.)
- Summary of changes to ANT 3304_The Living Primates.docx: Summary of Revisions
(Other Supporting Documentation. Owner: Freeman, Elizabeth A.)
- 3304The Living Primates_Syllabus_GE Package.doc: Revised Syllabus
(Syllabus. Owner: Freeman, Elizabeth A.)

Comments

- All concerns in the 10-29-14 email have been addressed; specifically genotype-phenotype material and expansion of assessment plan to address specific learning outcomes. *(by Freeman, Elizabeth A. on 02/10/2015 10:42 AM)*
- See 10-29-14 e-mail to S. McGraw & E. Freeman. *(by Vankeerbergen, Bernadette Chantal on 10/29/2014 01:09 PM)*

COURSE CHANGE REQUEST
3304 - Status: PENDING

Last Updated: Haddad,Deborah Moore
02/10/2015

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Freeman,Elizabeth A.	10/22/2014 02:56 PM	Submitted for Approval
Approved	McGraw,William Scott	10/23/2014 08:52 AM	Unit Approval
Approved	Haddad,Deborah Moore	10/23/2014 12:04 PM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	10/29/2014 01:10 PM	ASCCAO Approval
Submitted	Freeman,Elizabeth A.	02/10/2015 10:42 AM	Submitted for Approval
Approved	McGraw,William Scott	02/10/2015 10:47 AM	Unit Approval
Approved	Haddad,Deborah Moore	02/10/2015 01:32 PM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	02/10/2015 01:32 PM	ASCCAO Approval



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7 October 2014

Dear Curriculum Panel Members,

I am pleased to submit this curricular bundle for your review. This bundle includes a number of new courses, courses for General Education consideration, and several course changes. These submissions reflect the evolving profile of our teaching mission and what we have to offer our students and the institution generally. The Department of Anthropology has taken on one of its biggest curriculum revisions, involving both undergraduate majors (Anthropological Sciences, Anthropology) and graduate program, in its recent history. I am excited to endorse all of these submissions, and look forward to implementing the revisions to the Anthropology curriculum.

Best regards,

A handwritten signature in blue ink that reads "Clark S. Larsen".

Clark Spencer Larsen
Distinguished Professor of Social and Behavioral Sciences and Chair

THE LIVING PRIMATES

Anthropology 3304

Course meets Mon, Wed & Fri from 12:40 am – 1:35 pm in 160 MacQuigg Lab.

Instructor: Dr. W. Scott McGraw
Office: Department of Anthropology, 4064 Smith Laboratory
Tel: 688-3794
Email: mcgraw.43@osu.edu
Office Hours: Tuesday & Thursday from 1:30 – 3:00

This course is a scientific examination of the Order Primates. It is Natural Science (Biological Science) GE course (**under consideration**). The goals are that students understand the principles, theories, and methods of modern science; the relationship between science and technology; the implications of scientific discoveries; and the potential of science and technology to address problems of the contemporary world. The expected learning outcomes are:

- (1) Students understand the basic facts, principles, theories and methods of modern science.
- (2) Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
- (3) Students describe the inter-dependence of scientific and technological developments.
- (4) Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

This course is a physical elective within the Anthropology (BA) and Anthropological Sciences (BS) major.

This course is a core course in the Evolutionary Studies minor. Information regarding the minor and its requirements may be found online at <http://artsandsciences.osu.edu/interdisciplinary>.

Required Texts:

(1) *Primate Diversity* (2000) by D. Falk

(2) *The Primate Anthology: Essays on Primate Behavior, Ecology and Conservation from Natural History* (1997) RL Ciochon & R Nisbett, eds.

Optional (Completely) Text

The Pictorial Guide to the Living Primates (1996) by N. Rowe

STUDENTS WITH DISABILITIES ARE RESPONSIBLE FOR MAKING THEIR NEEDS KNOWN TO THE INSTRUCTOR AS SOON AS THE SEMESTER BEGINS, AND ARE RESPONSIBLE FOR SEEKING AVAILABLE ASSISTANCE FROM THE OFFICE OF DISABILITY SERVICES 292-3307, PRIOR TO OR AT THE BEGINNING OF THE SEMESTER. I RELY ON THE OFFICE FOR DISABILITY SERVICES FOR ASSISTANCE IN VERIFYING THE NEED FOR ACCOMMODATIONS AND DEVELOPING ACCOMMODATION STRATEGIES.

Course Content: Primates are among the most interesting and well-studied of organisms. No group of mammals displays a greater variety of dietary, locomotor, socio-sexual and communicative adaptations than do prosimians, monkeys, apes and humans. Using an explicitly evolutionary approach, we take a detailed look at the key morphological and behavioral adaptations of each primate group and examine how these features are used to construct family trees. In addition we explore what humans can learn about themselves by studying non-human primates and what factors threaten the continued survival of our closest relatives.

Course Objectives: The principal objective of this course is to introduce students to the diversity of living primates. Student successfully completing the course will be able to answer the following questions: (1) What are primates and how do they differ from other mammals? (2) What are the major morphological and behavioral features that distinguish each primate group? (3) What factors account for the taxonomic diversity among primates? (4) In what ways are human primates similar to and different from non-human primates? (5) What is the future of living primates?

Course Requirements: There are three exams: two midterms and a final. Exams are **not** comprehensive and each exam counts towards one third of final grade. Make-up exams will be at the instructor's discretion. If you miss an exam you have 24 hours to contact me. Official documentation is required (doctor's excuse, accident report, etc.) for make-ups. All make-up exams will be essay and must be taken within three days of the regularly scheduled exam. Otherwise, the student will receive an "O" for that exam. Exams are based on lectures, readings, films and discussion. The university takes a serious view of cheating, and should any student engage in this practice during the course of any test, his/her paper will be canceled to a mark of zero, and a report will be made to the administration.

Academic Misconduct: All students should become familiar with the rules governing alleged academic misconduct. All students should become familiar with what constitutes academic misconduct, especially as it pertains to plagiarism and test taking. Ignorance of the rules governing academic misconduct or ignorance of what constitutes academic misconduct is not an acceptable defense. Alleged cases of academic misconduct are referred to the proper university committees.

Class Cancellations: In case of unexpected instructor absences the information will be posted on the following departmental website. This site should be consulted during inclement weather to check for possible class cancellations or delays. Do not call the department, check the website. <http://monkeys.sbs.ohio-state.edu/news.htm>.

Evaluation: Final grades will be based on three exam scores with each contributing approximately 33% towards your final grade. Final grades will be distributed as follows: A (92-100), A- (90-91), B+ (88-89), B (82-87), B- (80-81), C+ (78-79), C (72-77), C- (70-71), D+ (68-69), D (60-67), E < 60.

THIS PUBLICATION/MATERIAL IS AVAILABLE IN ALTERNATIVE FORMATS UPON REQUESTS. FOR FURTHER INFORMATION, PLEASE CONTACT MS. JEAN WHIPPLE, DEPARTMENT OF ANTHROPOLOGY, 292-4149.

Changes to the syllabus

This syllabus does not represent a formal contract. I will make every effort to cover all the material listed below, but I reserve the right to make changes, as necessary, to this syllabus at any time. Students are responsible for any changes in the syllabus that are announced in class.



Course Outline and Reading Schedule

Wednesday	(Aug. 21st)	The scientific method and natural history
Friday	(Aug. 23rd)	From genome to phenome: genetics shaping primate anatomy and behavior
Monday	(Aug. 26th)	From genome to phenome: adaptation and natural selection
Wednesday	(Aug. 28th)	Primate form and function classification
Reading:	Falk: Introduction & Chapter 2	
Friday	(Aug. 30th)	Primate classification
Reading:	Falk: Introduction & Chapter 2	
Monday	(Sept. 2nd)	No Class – Labor Day
Wednesday	(Sept. 4th)	Primate origins: the Paleocene & Eocene
Reading:	(1) Falk: Chapter 1 (2) Anthology - <i>Backdrop</i> (pp. XIX-XXX)	
Friday	(Sept. 6th)	Primate evolution: the Oligocene & Miocene
Reading:	(1) Falk: Chapter 1 (2) Anthology - <i>Backdrop</i> (pp. XIX-XXX)	
Monday	(Sept. 9th)	Primate Evolution: the Miocene & Plio-Pleistocene
Reading:	(1) Falk: Chapter 1 (2) Anthology - <i>Backdrop</i> (pp. XIX-XXX)	

Wednesday (Sept. 11th) Prosimian Anatomy: Galagos, Lorises & Lemurs

Reading: (1) Falk: Chapter 3
(2) Anthology essay 29: *Radio Bush Baby* (R Martin & S Bearder)
(3) Anthology essay 33: *Calls of the Wild* (S Bearder)
(4) Anthology essay 31: *Lemurs Lost and Found* (P Wright)

Friday (Sept. 13th) Prosimians II: Galagos, Lorises & Lemurs

Reading: (1) Falk: Chapter 3
(2) Anthology essay 29: *Radio Bush Baby* (R Martin & S Bearder)
(3) Anthology essay 33: *Calls of the Wild* (S Bearder)
(4) Anthology essay 31: *Lemurs Lost and Found* (P Wright)

Monday (Sept. 16th) Prosimian III: Lemurs and John Cleese

Wednesday (Sept. 18th) Tarsiers

Reading: Falk: pp. 79-82.

Friday (Sept. 20th) Review

Monday (Sept. 23rd) Exam 1

Wednesday (Sept. 25th) Platyrrhine Biology & The Callitrichines

Reading: (1) Falk: Chapter 5
(2) Anthology essay 20: *Strategies of Reproduction* (RD Martin)
(3) Anthology essay 24: *Diet for a Small Primate* (S Ferrari)

Friday (Sept. 27th) Platyrrhine biogeography and the radiation of monkeys into the New World.

- Monday (Sept. 30th)** Cebidae & Pitheciidae
- Reading: (1) Falk: Chapter 6
 (2) Anthology essay 22: *Capuchin Counterpoint* (C Janson)
 (3) Anthology essay 23: *Scarlet Faces of the Amazon* (J Ayres)
 (4) Anthology essay 25: *Monkeys With Inflated Sex Appeal* (S Boinski)
 (5) Anthology essay 27: *Night Watch on the Amazon* (P Wright)
- Wednesday (Oct. 2nd)** Atelidae
- Reading: (1) Falk: Chapter 6
 (2) Anthology essay 4: *Family Feuds* (C Crockett)
 (3) Anthology essay 21: *Poison in a Monkey's Garden of Eden* (Glander)
 (4) Anthology essay 26: *Menu For a Monkey* (K Strier)
- Friday (Oct. 4th)** Old World Monkeys 1: Colobines
- Reading: (1) Falk: Chapter 7
 (2) Anthology essay 1: *Monkey Moves* (ED Starin)
 (3) Anthology essay 7: *Daughters or Sons* (S Blaffer-Hrdy)
 (4) Anthology essay 17: *Teamwork Tactics* (L Leland & T Struhsaker)
 (5) Anthology essay 18: *The Kindness of Strangers* (ED Starin)
- Monday (Oct. 7th)** Old World Monkeys II: Guenons
- Reading: (1) Falk: Chapter 7
 (2) Anthology essay 19: *The Vervet's Year of Doom* (L Isbell)
 (3) Anthology essay 8: *In the Minds of Monkeys* (Cheney & Seyfarth)
- Wednesday (Oct. 9th)** Old World Monkeys III: Mangabeys & Mandrills
- Reading: (1) Falk: pp. 223-228
 (2) Anthology essay 13: *Monkey on a Riverbank* (K Homewood)
- Friday (Oct. 11th)** Old World Monkeys IV: Geladas & Macaques
- Reading: (1) Falk: pp. 219-233 & Chapter 9 (pp. 230-246)
 (2) Anthology essay 7: *Ms. Monkey* (MF Small)
 (3) Anthology essay 30: *The Rhesus Monkey's Fall From Grace* (C Southwick and M Siddiqui)

- Monday (Oct. 14th)** Old World Monkeys V: Savannah Baboons
- Reading: (1) Falk: Chapter 9
 (2) Anthology essay 3: *Mother Baboon* (J Luft and J Altman)
 (3) Anthology essay 5: *What are Friends For?* (B Smuts)
 (4) Anthology essay 11: *Leading Ladies* (J Altmann)
 (5) Anthology essay 14: *The Predatory Baboons of Kekopey* (Harding & Strum)
- Wednesday (Oct. 16th)** Monkeys as an evolutionary grade
- Friday (Oct. 18th)** Review
- Monday (Oct. 21st)** Exam 2
- Wednesday (Oct. 23rd)** The Lesser Apes I
- Reading: (1) Falk: Chapter 10
 (2) Handout: "Gibbon song and human music from an evolutionary perspective" by Thomas Geissman.
 (3) <http://www.gibbons.de/>
- Friday (Oct. 25th)** The Lesser Apes II
- Reading: (1) Falk: Chapter 10
 (2) Handout: "Gibbon song and human music from an evolutionary perspective" by Thomas Geissman.
 (3) <http://www.gibbons.de/>
- Monday (Oct. 28th)** Living apes as models for the last common ancestor of apes and humans
- Wednesday (Oct. 30th)** Medical Primatology and the ethics of apes in captivity
- Friday (Nov. 1st)** Orangutans I
- Reading: (1) Falk: Chapter 11
 (2) "How to be an orangutan." *Int. Wildlife*. Jan/Feb 1997, pp. 38-45.

Monday	(Nov. 4th)	Orangutans II
Reading	Falk: Chapter 11	
Wednesday	(Nov. 6th)	Gorillas I
Reading:	(1) Falk: Chapter 12 (2) Anthology essay 2: <i>Gorilla Society</i> (P Veit)	
Friday	(Nov. 8th)	Gorillas II
Monday	(Nov. 11th)	No Class – Veterans Day
Wednesday	(Nov. 13th)	Chimpanzees I
Reading:	(1) Falk: Chapter13 (2) Anthology essay 10: <i>Dim Forest, Bright Chimps</i> (Boesch & Boesch) (3) Anthology essay 12: <i>To Catch a Colobus</i> (C. Stanford) (4) Anthology essay 16: <i>Leopard Killers of Mahale</i> (R and J Byrne)	
Friday	(Nov. 15th)	Chimpanzees II
Reading:	(1) Falk: Chapter13 (2) Anthology essay 10: <i>Dim Forest, Bright Chimps</i> (Boesch & Boesch) (3) Anthology essay 12: <i>To Catch a Colobus</i> (C. Stanford) (4) Anthology essay 16: <i>Leopard Killers of Mahale</i> (R and J Byrne)	
Monday	(Nov. 18th)	Pygmy chimpanzees
Reading:	(1) Falk: Chapter13 (2) Anthology essay 15: <i>Acrobatic Pygmy Chimpanzees</i> (RL Susman) (3) Anthology essay 9: <i>The Bonobo's Peaceable Kingdom</i> (T Kano)	
Wednesday	(Nov. 20th)	Pygmy chimpanzees

Friday (Nov. 22nd) The human primate early human evolution

Reading: Falk: Chapter 14

Monday (Nov. 25th) Prosimian Conservation

(1) Anthology: pp. 193 - 197 (Nisbett and Ciochon)

(2) Anthology essay 28: *The Perils of Primates* (J Wolfheim)

Wednesday (Nov. 27th) Anthropoid Conservation

Friday (Nov. 29th) No Class – Thanksgiving

Monday (Dec. 2nd) Ethics, Extinction and Conservation Biology

Final Exam: Wednesday, December 11th, 12:00 pm – 1:45 pm

Rationale for *The Living Primates* (ANT 3304) as a Natural Science (Biological Science) GE course.

Question: Why does this course qualify for GE status in the Natural Science (Biological Science)?

This course is a hypothesis driven introduction to the key morphological and behavioral adaptations of the primates. The objectives are twofold: (1) to introduce students to the diversity of living primates using an explicitly evolutionary approach and, (2) to use primates as the platform for introducing the scientific method as well as for illustrating how major concepts in evolutionary biology are applied to research, discovery, and problem solving. Most undergraduates - including those pursuing non-scientific fields of study - have some familiarity with living primates (lemurs, monkeys, and apes) so these charismatic animals provide an excellent entry to core concepts in the natural (biological) sciences.

The course is constructed to answer five questions: (1) What are primates and how do they differ from other mammals? (2) What are the major morphological and behavioral features that distinguish each primate group and what methods are used to collect the requisite data? (3) What factors (adaptations) account for the taxonomic diversity among primates? (4) In what ways are human primates similar to and different from non-human primates? (5) What is the future of living primates? In the course of answering these questions, we cover a variety of scientific topics and methods including: hypothesis testing, adaptation and natural selection, principles of classification and taxonomy, size and scaling, cladistics, biogeography, comparative anatomy, reproductive tactics, evolution of social systems, reproductive tactics, kin selection and altruism, evolution and geological time, etc. There is insufficient time to cover any one of these topics in great depth and it is not the purpose of the course to transform every student into a primatologist; however, by surveying the diversity of scientific approaches brought to bear on exploring a single biological radiation (which happens to include *Homo sapiens*), students learn how the scientific process works as well as its outcomes.

NB: This course is already approved as a core course within the **Evolutionary Studies** minor. It is also a physical anthropology elective within the Anthropological Sciences (BS) and Anthropology (BA) majors.

Specific Learning Outcomes of Natural Science (Biological Science) courses.

(1) Students understand the basic facts, principles, theories and methods of modern science.

Response: The course takes an explicitly evolutionary approach to examining the diversity and relationships within the primate order. Phylogenetic (family) trees are hypotheses accompanied by multiple questions: we address the questions and data that are used to generate them as well as those data that have overturned earlier answers. In so doing, students are introduced to the methodological approaches and idiosyncrasies used by primatologists across a variety of sub-disciplines (e.g., comparative anatomists, behaviorists, psychologists, veterinarians, conservationists) in addressing scientific questions at a variety of levels.

(2) Students understand key events in the development of science and recognize that science is an evolving body of knowledge.

Response: Our survey begins with a discussion of how Greek taxonomists (e.g., Aristotle) viewed primates, moves through the Ages of Exploration (when exotic animals were often viewed as monsters) and Europe's Golden era of Natural History (the filling of museum drawers), and concludes with examples of how cutting edge methodologies (DNA sequencing, cloning, GIS, disease control, etc.) are used to address current problems such as the identification of cryptic clades, viruses (Ebola) resulting from the bush meat trade, and preservation of endangered species.

(3) Students describe the inter-dependence of scientific and technological developments.

Response: As noted above, one of the major goals of the course is to illustrate how cutting edge technology is being used to examine questions in primate biology. Examples of these methods/applications include morphometric analyses of bones and teeth, basic biomechanics, molecular (e.g., genetic) primatology, use of primates in HIV research, cognitive (psychological) primatology, population management, use of GIS in primate conservation biology, etc.

(4) Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Response: Primates are a fascinating group that includes our distant cousins and closest extant sister taxa. They are also a group of contrasts. In some cultures, primates are considered evil and filthy, whereas in others they are revered as deities. There is ample evidence that apes have a sense of being and that many primates – even some monkeys – show evidence of culture and higher-level thinking. Struggling farmers in the developing world regard crop-raiding monkeys as threats to their livelihood, while millions of dollars are donated annually for conservation efforts in the same parts of the world. To many persons, the thought of being related to monkeys is abhorrent and repulsive; others take comfort knowing there are nonhuman relatives still evolving in the forest. Of utmost importance is the realization that over half of all primate species are in danger of extinction and that one primate – us – is responsible for this mass exodus. All these issues raise significant ethical/philosophical issues (e.g., *Are we justified confining cognizant chimpanzees in solitary cages, even if it means achieving a breakthrough in AIDS research?*) and in this class, we shy away from discussing none of them.

Assessment plan for ANT 3304 (*The Living Primates*)

Assessment: This course will use **three** instruments to assess learning outcomes. **First**, we will use a pre and post course 15 question test to gauge the body of knowledge obtained over the course of the semester. The 15 questions will address the four Biological Sciences expected learning outcomes as articulated in the *ASC Curriculum and Assessment Operations Manual*. The test will be delivered on the first and final day of classes and graded anonymously.

Sample Pre and Post Course Questions Addressing 4 Biological Sciences Learning Outcomes:

Expected Learning Outcome # 1

The primary mechanism of adaptation is:

- a) functional morphology
- b) natural selection
- c) physical anthropology
- d) growth and development
- e) phylogenetic reconstruction

You are a gorilla researcher. Which is (usually) the first step used to solve one of your research problems?

- a) perform an experiment on gorillas
- b) identify and articulate a question about gorillas
- c) collect as much data on gorillas as financially possible
- d) test one or more variables pertaining to gorillas
- e) generate a graph based on preliminary results with gorillas

Which of the following is NOT a macro-evolutionary change associated with primates:

- a) an increase in brain size over geological time
- b) increased reliance on olfaction over geological time
- c) an increase in body size over geological time
- d) a decrease in the number of teeth over geological time
- e) increased reliance on vision over time

The facial patterns of African guenons are a great example of major phenotypic differences arising from genotypic change in a relatively short period of time. Which is true?

- a) guenon facial patterns were likely produced by blending
- b) guenon facial patterns were likely produced by interrupted gene flow
- c) guenon facial patterns were likely produced by chance alone
- d) guenon facial patterns were likely produced by imitating other mammals
- e) guenon facial patterns were likely produced by predator pressure along

Primates have evolved slow life histories. Compared to a 25 pound dog, a 25 primate would, on average:

- a) give birth to more offspring (larger litters)
- b) give birth to larger offspring
- c) have a longer lifespan
- d) have a longer gestation period
- e) have a longer weaning age

Expected Learning Outcome # 2

The Order *Primates* – meaning “of the first rank” – is part of the classification system created by:

- a) Darwin
- b) Linnaeus
- c) Lamarck
- d) Gould
- e) Hawking

The most recent primate extinction occurred approximately:

- a) 50 years ago
- b) 500 years ago
- c) 5,000 years ago,
- d) 500,000 years ago
- e) 5 million years ago

Jane Goodall is one of the world’s most recognizable scientists, having observed wild chimpanzees for nearly sixty years. Her observations helped redefine what it means to be human. During the first year of her study, which of the following did Goodall NOT witness?

- a) chimpanzees using tools
- b) chimpanzees hunting and eating meat
- c) chimpanzees using fire
- d) chimpanzees killing members of other chimpanzee groups
- e) chimpanzees “adopting” orphaned chimpanzee infants

Vocal communication in primates has been studied for over eighty years. Which of the following is FALSE?

- a) primates are able to produce different vocal calls for different kinds of predators (e.g., snake vs. leopard)
- b) primates are able to learn new calls
- c) some primate species are able to understand the “meaning” of the calls produced by other primate species
- d) monkeys and apes have been taught to speak English
- e) monkeys and apes can produce “deceptive” calls (e.g., emit a predator call when no predator is present)

Expected Learning Outcomes # 3 and 4

Non-human primates have been used extensively in scientific research. Which of the following is FALSE?

- a) primates were first sent into space in the 1940s
- b) experimental Ebola vaccines were first tested on monkeys
- c) primates are the most frequently used laboratory animal
- d) in 2013 the National Institute of Health announced it would expand use of chimpanzees in captive research
- e) in 1993 a baboon liver was successfully transplanted into a human

Many primates are critically endangered. Aside from humans, the only primates whose numbers are increasing are:

- a) macaques
- b) chimpanzees
- c) spider monkeys
- d) gorillas
- e) baboons

With regard to primates, research and technology, which statement is FALSE?

- a) Cloned primate embryos have been used to make stem-cell lines
 - b) Remotely controlled camera traps helped locate and identify new primate species in Congo, Peru and Myanmar
 - c) The entire chimpanzee genome has been sequenced
 - d) In 2014, drones were launched in Oregon and Washington to search for large, bipedal primates referred to as Bigfoot, Sasquatch, or Yeti.
 - e) Captive breeding programs have saved several primate species from extinction
-

Second, I will be using embedded questions in regular examinations administered during the course of the semester. Results of these questions – scored as a part of regular examinations – will be tracked annually and will provide a longitudinal signal of class performance. We have used both of these instruments in our assessment of current GE courses (e.g., ANT 2200 – *Introduction to Physical Anthropology*) as well as core courses (e.g., ANT 3300 – *Human Origins*, ANT 3401 – *Fundamentals of Archaeology*) within our majors. Both have proven to be highly effective. Based on the last seven years of assessment activities in our department, the percentage of “correct” student responses to the embedded questions clusters around 80%: we will therefore use this standard for assessing embedded questions in this course. Pre and post course testing of expected learning outcomes will use 80% as the standard during the first year of administration. If an insufficient number of students achieve this standard, I will revise the course in order to focus more on those areas (e.g., history of scientific primatology, core facts and principles of primates, intersection of scientific primatology and technology, ethics and primates, etc.) that students find problematic.

Sample Embedded Questions:

- (1) Gibbons are generally described as monogamous primates, yet females are known to have extra-pair copulations. Give two possible explanations for this behavior.
- (2) We discussed distinctions between natural and sexual selection. List three secondary sexual characteristics of adult orangutan males
- (3) Describe the two alternate strategies male orangutans use to maximize their reproductive fitness.

Third, in addition to the post course “assessment” test described above, I will administer a post course **exit survey** to provide an anonymous format – independent of the SEI - in which course satisfaction can be assessed and suggestions for improvement offered. Questions include: (1) How prepared were you for this course?, (2) Were there portions of the course that went too quickly/slowly?, (3) What concepts were explained especially clearly/poorly?, (4) What was the least/most enjoyable portion(s) of the course?, (5) How much time did you spend studying for exams in this course?, (6) How could the instructor most improve this course?

Results from each assessment tool will be entered into our assessment data base, archived in the main office of Department of Anthropology.

To: Natural and Mathematical Sciences Curriculum Panel
From: Department of Anthropology Undergraduate Studies Committee
Date: February 10, 2015
Subject: Revisions to ANT 3304 (*The Living Primates*)

We would like to thank Harald Vaessin and Meg Daly for meeting with representatives of the Department of Anthropology and articulating ways for improving our submission of ANT 3304 *The Living Primates* for GE status. We have attended to the recommendations and hope the course materials and assessment plan are now satisfactory. The major changes are as follows:

(1) Early in the course, we now include two lectures dedicated to illustrating genotype-phenotype relationships as they pertain to the behavior, anatomy and reproduction of living primates. Throughout the course, we use examples from extant primate diversity to demonstrate how selection would favor genes coding for different traits and how they are adaptive in different contexts. Thus - whenever possible - we provide adaptive explanations diagnostic characteristics for such as knuckle-walking, pronounced sexual swellings in females, canine dimorphism, fission-fusion societies, etc.

(2) The assessment plan is more explicit and expansive.

(a) We have included a dozen sample questions that address specific expected learning outcomes for the **pre and post course test** to be graded anonymously.

(b) We have included sample **embedded questions** to be used during regular examinations.

(c) We have added a post **course exit survey** designed to gauge student impressions of preparedness and better identify problem areas.

Please contact us, should you require additional information.