

ANTH M01L: BIOLOGICAL ANTHROPOLOGY LAB

Originator

akinkella

Co-Contributor(s)

Name(s)

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College

Moorpark College

Discipline (CB01A)

ANTH - Anthropology

Course Number (CB01B)

M01L

Course Title (CB02)

Biological Anthropology Lab

Banner/Short Title

Biological Anthropology Lab

Credit Type

Credit

Start Term

Fall 2021

Catalog Course Description

Provides hands-on understanding of principles of evolution and genetics. Covers comparative vertebrate anatomy, modern and fossil hominids, primatology, variation in modern human populations, medical genetics and adaptability. Introduces molecular biological methods.

Taxonomy of Programs (TOP) Code (CB03)

2202.00 - Anthropology

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

A (Transferable to both UC and CSU)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

E - Non-Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

Will not be required

Grading method

(L) Letter Graded

Alternate grading methods

(O) Student Option- Letter/Pass

(P) Pass/No Pass Grading

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Activity

Laboratory

Minimum Contact/In-Class Laboratory Hours

52.5

Maximum Contact/In-Class Laboratory Hours

52.5

Total in-Class

Total in-Class

Total Minimum Contact/In-Class Hours

52.5

Total Maximum Contact/In-Class Hours

52.5

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class

Minimum Outside-of-Class Hours

0

Maximum Outside-of-Class Hours

0

Total Student Learning

Total Student Learning

Total Minimum Student Learning Hours

52.5

Total Maximum Student Learning Hours

52.5

Minimum Units (CB07)

1

Maximum Units (CB06)

1

Prerequisites

ANTH M01 or concurrent enrollment

Entrance Skills

Entrance Skills

ANTH M01

Prerequisite Course Objectives

- ANTH M01-describe the scientific process as a methodology for understanding the natural world.
- ANTH M01-define the scope of anthropology and discuss the role of biological anthropology within the discipline.
- ANTH M01-identify the main contributors to the development of evolutionary theory.
- ANTH M01-explain the basic principles of Mendelian, molecular and population genetics.
- ANTH M01-evaluate how the forces of evolution produce genetic and phenotypic change over time.
- ANTH M01-demonstrate an understanding of classification, morphology and behavior of living primates.
- ANTH M01-summarize methods used in interpreting the fossil record, including dating techniques.
- ANTH M01-recognize the major groups of hominin fossils and describe alternate phylogenies for human evolution.
- ANTH M01-identify the biological and cultural factors responsible for human variation.

Requisite Justification

Requisite Type

Prerequisite

Requisite

ANTH M01

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Closely related lecture/laboratory course

Requisite Type

Concurrent

Requisite

ANTH M01

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Closely related lecture/laboratory course

Student Learning Outcomes (CSLOs)

Upon satisfactory completion of the course, students will be able to:

- | | |
|---|---|
| 1 | identify the biological basis for human evolution, in terms of evolutionary theory, primate studies, and the human fossil record, and demonstrate these understandings through laboratory practicums. |
| 2 | analyze and discuss the relevance of biological anthropology for analyzing contemporary questions (e.g., why some individuals are more susceptible to a disease than others, the genetic basis of traits such as height, weight, etc.). |

Course Objectives

Upon satisfactory completion of the course, students will be able to:

- | | |
|----|---|
| 1 | apply the scientific method. |
| 2 | identify the outcomes of evolutionary processes. |
| 3 | describe structure and function of DNA and RNA. |
| 4 | demonstrate how human traits are inherited. |
| 5 | identify the bones of the human skeleton through the analysis of cast material in the laboratory. |
| 6 | identify anatomical and behavioral features of non-human primates. |
| 7 | examine the relationship between form and function in relationship to human and nonhuman primate skeletal morphology. |
| 8 | compare the morphology of primates and early hominins. |
| 9 | describe the biological and behavioral adaptations of the genus Homo. |
| 10 | identify defining features of anatomically modern humans. |

Course Content

Lecture/Course Content

See Lab Content

Laboratory or Activity Content

- 10% - Nature of scientific inquiry and the scientific method
- 10% - Molecular, Mendelian and population genetics
- 10% - Molecular techniques such as PCR (Polymerase Chain Reaction) or equivalent
- 10% - Mechanisms of evolution
- 10% - Comparative primate taxonomy, anatomy and behavior
- 10% - Human osteology
- 10% - Forensic anthropology
- 10% - The nature of the fossil record including dating techniques

- 10% - Fossil and genetic evidence of human evolution
- 10% - Biocultural adaptations and modern human variation

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises
Skills demonstrations
Written expression

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Classroom Discussion
Essay exams
Group projects
Laboratory activities
Laboratory reports
Objective exams
Projects
Participation
Quizzes
Reports/Papers/Journals
Skills demonstrations

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Audio-visual presentations
Collaborative group work
Class activities
Class discussions
Distance Education
Field trips
Laboratory activities
Small group activities

Describe specific examples of the methods the instructor will use:

Instructor will use PowerPoint presentations, board work, educational videos, classroom discussions, and laboratory cast material to explain lab content.

Representative Course Assignments

Writing Assignments

- Written reports on all lab projects, such as compare and contrast the dental formulae of strepsirrhines, New World monkeys, Old World monkeys, apes, and humans
- Exams including short essay questions.

Critical Thinking Assignments

- Identify bones and cast material in the context of a lab practicum.
- Evaluate the locomotor behavior of human and nonhuman primates based on morphological characteristics.
- Compare and contrast different Mendelian inheritance mechanisms.
- Analyze questions about the nature of human osteology, such as: "Why do you think there are so many bones in the cranium? Why do you think we are born with separate cranial bones that later fuse together as we grow and develop?"

Reading Assignments

- Reading assigned chapters in lab manual.
- Read and review key terms as provided by professor.

Skills Demonstrations

- Proper handling of fossil cast collection.
- Proper collection of PCR sample.

Other assignments (if applicable)

- Quizzes on lab exercises

Outside Assignments**Representative Outside Assignments**

Not applicable

Articulation**C-ID Descriptor Number**

ANTH 115L

Status

Approved

Equivalent Courses at 4 year institutions

University	Course ID	Course Title	Units
CSU Sacramento	ANTH 1A	Biological Anthropology Laboratory	1
CSU Channel Islands	ANTH 104L	Bioanthropology Laboratory	1

Comparable Courses within the VCCCD

ANTH R101L - Introduction to Biological Anthropology Lab

ANTH V01L - Biological Anthropology Laboratory

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Pierce College	ANTHRO 111	Laboratory in Human Biological Evolution	2
College of the Canyons	ANTHRO 101L	Physical Anthropology Lab	1

District General Education**A. Natural Sciences****A1. Biological Science**

Approved

B. Social and Behavioral Sciences**C. Humanities****D. Language and Rationality****E. Health and Physical Education/Kinesiology****F. Ethnic Studies/Gender Studies****Course is CSU transferable**

Yes

CSU Baccalaureate List effective term:

F1999

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

B3 Laboratory Activity

Approved

Date Proposed:

F2000

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

Area F: Ethnic Studies

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

UC TCA

UC TCA

Approved

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 5C: Laboratory Science

Approved

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type

Textbook

Classic Textbook

No

Description

Soluri, K. Elizabeth, and Sabrina C. Agarwal. *Laboratory Manual and Workbook for Biological Anthropology*. 2nd ed., Norton, 2020.

Resource Type

Textbook

Description

Walker-Pacheco, Suzanne E. *Exploring Physical Anthropology: A Lab Manual and Workbook*. 3rd ed., Morton, 2017.

Resource Type

Textbook

Description

Hens, Samantha M. *Method and Practice in Biological Anthropology: A Workbook and Laboratory Manual for Introductory Courses*. 2nd ed., Pearson, 2014.

Resource Type

Textbook

Description

France, Diane L. *Lab Manual and Workbook for Physical Anthropology*. 8th ed., Cengage, 2017.

Library Resources**Assignments requiring library resources**

Possible research using the Library's print and online periodical resources via databases such as Elsevier ScienceDirect.

Sufficient Library Resources exist

Yes

Example of Assignments Requiring Library Resources

Research and write short papers on such topics as compare and contrast different Mendelian inheritance mechanisms.

Distance Education Addendum**Definitions****Distance Education Modalities**

Hybrid (51%–99% online)

Hybrid (1%–50% online)

100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities.

Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact**Hybrid (1%–50% online) Modality:****Method of Instruction**

Asynchronous Dialog (e.g., discussion board)

Document typical activities or assignments for each method of instruction

Instructor will post a question or a prompt for students to discuss. Students will also use this prompt to interact with other students.

E-mail	Instructor will email students with announcements about the course or an upcoming event. Students in turn may email the instructor with their questions or concerns.
Face to Face (by student request; cannot be required)	Students will have the option to meet the instructor during face-to-face office hours.
Other DE (e.g., recorded lectures)	Instructor may record the lectures and post them for students to view within a specified time frame to be ready for the accompanying assignments for that module.
Synchronous Dialog (e.g., online chat)	Instructor may be available on a certain day or days of the week within a certain time frame to help students and answer their questions via an online chat.
Telephone	Instructor may provide a phone number for the students where they can leave a voicemail and expect a call back within 24 hours.
Video Conferencing	Instructor may be available on a certain day or days of the week within a certain time frame to help students and answer their questions via live video conferencing.
Hybrid (51%–99% online) Modality:	
Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Instructor will post a question or a prompt for students to discuss. Students will also use this prompt to interact with other students.
E-mail	Instructor will email students with announcements about the course or an upcoming event. Students in turn may email the instructor with their questions or concerns.
Face to Face (by student request; cannot be required)	Students will have the option to meet the instructor during face-to-face office hours.
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Telephone	Instructor may provide a phone number for the students where they can leave a voicemail and expect a call back within 24 hours.
Video Conferencing	Instructor may be available on a certain day or days of the week within a certain time frame to help students and answer their questions via live video conferencing.
100% online Modality:	
Method of Instruction	Document typical activities or assignments for each method of instruction
E-mail	Instructor will email students with announcements about the course or an upcoming event. Students in turn may email the instructor with their questions or concerns.
Other DE (e.g., recorded lectures)	Instructor may record the lectures and post them for students to view within a specified time frame to be ready for the accompanying assignments for that module.
Asynchronous Dialog (e.g., discussion board)	Instructor will post a question or a prompt for students to discuss. Students will also use this prompt to interact with other students.
Synchronous Dialog (e.g., online chat)	Instructor may be available on a certain day or days of the week within a certain time frame to help students and answer their questions via an online chat.
Telephone	Instructor may provide a phone number for the students where they can leave a voicemail and expect a call back within 24 hours.
Video Conferencing	Instructor may be available on a certain day or days of the week within a certain time frame to help students and answer their questions via live video conferencing.

Examinations

Hybrid (1%–50% online) Modality

Online
On campus

Hybrid (51%–99% online) Modality

Online
On campus

Primary Minimum Qualification

ANTHROPOLOGY

Review and Approval Dates

Department Chair

03/25/2021

Dean

04/05/2021

Technical Review

03/25/2021

Curriculum Committee

04/06/2021

DTRW-I

MM/DD/YYYY

Curriculum Committee

MM/DD/YYYY

Board

MM/DD/YYYY

CCCCO

MM/DD/YYYY

Control Number

CCC000433122

DOE/accreditation approval date

MM/DD/YYYY