

**ANTH 2301-012**  
**Introduction to Physical Anthropology**  
**Synonym 39073**  
**MW 12:00-1:15**  
**Fall 2009**

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Instructor: Michael Pool

Office Hours:

- Riverside Bldg G 9139 512-223-6236
  - MW 1:30-2:30
- South Austin Campus 1329 512-223-9227
  - TTH 12:00-2:00

Home: 280-7654 (Do Not call after 10:00 p.m.)

E-mail: mpool@austincc.edu

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**Syllabus**

Classes start Aug. 24

**Evolutionary Theory**

Aug. 26

Jurmain, et al, Chapter 1: Introduction  
Virtual Lab 1 Section I  
Virtual Lab 3 Section IV

Aug. 31

Jurmain, et al, Chapter 2: Development of Evolutionary Theory  
Virtual Lab 2 Section I

Sept. 2

Jurmain, et al, Chapter 3: The Biological Basis for Life  
Virtual Lab 2 Section II

Sept. 9

Jurmain, et al, Chapter 4: Heredity and Evolution  
Virtual Lab 2 Sections III-IV

Sept. 14

Jurmain, et al, Chapter 5: Macroevolution  
Virtual Lab 7 Sections I-II

**Sept. 21 Test 1: (Chapters 1-5)**

**Virtual Labs 1-2 & 7**

**Contemporary Human Variability**

Sept. 23

Jurmain, et al, Chapter 15: Patterns of Variation  
Jurmain, et al, Appendix C

Sept. 28

Jurmain, et al, Chapter 16 Patterns of Adaptation and Appendix B: Population Genetics: The Math of Microevolution  
Virtual Lab 2 Sections III-IV: Review

Sept. 30

Jurmain, et al, Chapter 17 Legacies of Human Evolution

## Primates

- Oct. 7  
Jurmain, et al, Chapter 6: Primate Overview  
Virtual Lab 1 Sections II-V  
Virtual Lab 3 Sections I-V  
Virtual Lab 4 Sections I-III  
Virtual Lab 5 Sections I-IV
- Oct. 14  
Jurmain, et al, Chapter 7: Primate Behavior  
Virtual Lab 6 Section I-IV  
Virtual Lab 5 Section I: Review
- Oct. 21  
Jurmain, et al, Chapter 8: Models for Human Evolution
- Oct. 26  
Video: *Among the Wild Chimpanzees*

### **Nov. 2 Test 2 (Chapters 6-8 and 15-17) Virtual Labs 1 & 3-6**

## Hominid Evolution

### **Early Hominids**

- Nov. 4  
Jurmain, et al, Chapter 9: Overview of Fossil Primates
- Nov. 9  
Jurmain, et al, Chapter 10: Paleoanthropology  
Chapter 11: Hominid Origins  
Virtual Lab 8 Section I-III  
Virtual Lab 9 Section I-VI  
Virtual Lab 7 Section I-III: Review
- Nov. 11  
Video: *In Search of Human Origins, Video 1*

### ***Homo erectus***

- Nov. 16  
Jurmain, et al, Chapter 12 : Homo erectus  
Virtual Lab 10 Section I-V
- Nov. 18  
Video: *In Search of Human Origins, Video 2*

### ***Homo sapiens***

- Nov. 23  
Jurmain, et al, Chapter 13: Archaic *Homo sapiens*  
Virtual Lab 11 Section I-VI

### **Nov. 23 Last Day to Withdraw**

Nov. 25

Jurmain, et al, Chapter 14: Modern Humans  
Virtual Lab 12 Section I-IV  
Virtual Lab 11 Section I-VI: Review

Dec. 2

Video: *In Search of Human Origins, Video 3*

**Dec. 9: Test 3 (Chapters 9-14)  
Virtual Labs 8-12**

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### Text

Robert Jurmain, Lynn Kilgore, Wendy Trevathan, and Russell Ciochon (2010) *Introduction to Physical Anthropology, 2009-2010 edition, 12<sup>th</sup> Edition*: Cengage Learning. ISBN13: 9780495599791 (Publisher \$ 111.49)

Cengage Advantage Books: Introduction to Physical Anthropology, 12th Edition. (2010). (loose leaf) Cengage Learning. ISBN-13: 978-0-495-60235-4 (Publisher \$70.99)

John Kappleman (2007) *Virtual Laboratories for Physical Anthropology, Version 4.0.*: Thomson/Wadsworth: Belmont, CA. ISBN13:9780495009924 (Publisher \$ 87.99)

**Preferred: Package of both ISBN10: 0495791105 (much cheaper than bought separately)  
(Publisher \$ 107.00)**

To buy from the publisher directly, you can follow the instructions for the *Multiple Choice Quizzes* extracredit at the end of the syllabus. But instead of clicking on *Multiple Choice Quiz*, you click on *Book Supplements* at the bottom of the left-hand column. In the right upper corner of the next page, you will find “Buy A Bundle.” Click on this and then select bundle for the text and the Virtual Labs to buy the bundle.

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### Course Description

This course is an introduction to the study of the physical characteristics of humans and the physical and cultural evolution of the human species. We will make comparisons between the physical and behavioral characteristics of modern humans and primates and fossil primates. The course places the human species and its development within a temporal and spatial context. We not only examine humans in their present morphological and biological context, but also within an ecological and evolutionary context. Emphasis will be placed on the human species as the product of a long organic and cultural evolutionary process.

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### Course Objectives

1. Will be able to describe what anthropology and physical anthropology are.
2. Will understand the methods and theories of physical anthropology.
3. Will understand the processes of evolution.
4. Will understand the processes of biocultural hominid evolution.
5. Will understand human diversity.

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### Course Rationale

This course is designed to provide students with an understanding of the methods and theories of physical anthropology that will allow students

- (1) to apply anthropological knowledge and skills to everyday life and their chosen careers,
  - (2) to apply the course towards an associate’s degree at Austin Community College, and
  - (3) to prepare them for success in upper division courses in Anthropology at other institutions.
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## Instructional Methodology

This class uses lecture and videos to introduce the student to the field of cultural anthropology. A study guide and chapter summaries are used to help reinforce and retain learning material.

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### Grading

**Tests (200 points):** There are three tests. Each test will be objective, consisting of 50 multiple choice questions. The lower of the first two tests will be dropped. If a test is missed, it will count as the lowest test. **You are required to provide a scantron sheet (available at the Campus Store) and a #2 pencil for each test.** There are no re-takes.

**Participation (100 points):** This part of your grade is based on your attendance and participation in class discussion. This will consist of three parts: attendance (60 points), chapter summaries (20 points), and class discussion (20 points).

**Attendance (60 points)** will be taken from Sept. 3 to Dec.3. You will receive the following points based on absences:

Absences	Points	Absences	Points
1	57.8	10	37.8
2	55.6	11	35.6
3	53.3	12	33.3
4	51.1	13	31.1
5	48.9	14	27.7
6	46.7	15	26.7
7	44.4	16	24.4
8	42.2	17	22.2
9	40.0	18	20

**Chapter Summaries (20 points):** You will write a typed, one page (275 words) summary of each chapter (Chapters 1-17). The summary is due on the date listed in the syllabus for that chapter; you will receive 1.18 points for each summary when handed in on time. The summaries will be accepted late until the day of the test that covers that chapter but will only count 0.625 points. .

**Discussion (20 points):** You can earn up to five points for participating in class discussions. This means consistently asking questions, answering questions, and discussing the material. At the end of the semester (Dec. 7), the class will evaluate each individual to determine how many points each receives.

**Virtual Lab (100 points):** This part of your grade is determined by completing the Labs and sections assigned in the syllabus for each chapter. You will be graded on completing the assigned sections and handing in printouts of the specific pages noted in the "Virtual Lab Grading" list at the end of the syllabus. and of the internet self-test for each lab.

To print out the specified pages from the Virtual Lab, you can use the "Print SCRNs" key to copy the whole monitor image. Then you can paste this graphic into a word processing program, such as Word; however, WordPad will also do the job. Resize the image to fit on the page. You may also want to resize the image so that more than one image fits on the page. There must be enough detail that the instructor can determine the correct page is present.

Please label the Lab and Section numbers for each set of images, as well as the Lab page number. Other than the "Self-Test" for each lab (70% is required for credit), you will only need to show you did the lab using the page images.

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### Grades

A= 400-356.4 points  
B= 356.3-316.4 points  
C= 316.3-276.4points  
D= 276.4-236.4points  
F< 236.4 points

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## Policies

1. One point will be deducted from your grade for each calendar day an assignment is late after its due date. Points will be deducted until a maximum grade of 70 can be earned; points will not be deducted below a grade of 70. After Dec. 7, a score of zero will be recorded

Chapter summaries will be accepted late until the date of the test for that chapter but will receive half credit.

2. It is not my policy to drop students; it is the student's responsibility to drop the class.
3. Students are responsible for informing me when they show up for class after roll is called.
4. Incompletes are discouraged and will only be given for extenuating circumstances. Time conflicts and poor time management are not acceptable reasons; ACC has a very liberal drop policy you can use in these circumstances.
5. Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, research, or self-expression. Academic work is defined as, but not limited to tests, quizzes, whether taken electronically or on paper; projects, either individual or group; classroom presentations, and homework.

In cases of scholastic dishonesty (cheating) and after meeting with the student or notifying the student of the reasons for believing scholastic dishonesty occurred, a grade of 0 will be recorded for any work determined by the instructor to result from an act of scholastic dishonesty. The Dean of Student Services will be notified of the incident and the academic penalty and will determine if any further disciplinary penalty will be assessed. The student can accept the penalty or dispute in writing to the Dean, within five (5) College class days (excluding weekends) of the student's receipt of written notice of the academic penalty assessed, either the facts of the offense or the academic penalty assessed. The student is referred to the *ACC Student Handbook* for further details.

6. Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the office for Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester.
7. Each student is strongly encouraged to participate in class discussions. In any classroom situation that includes discussion and critical thinking, there are bound to be many differing viewpoints. Students may not only disagree with each other at times, but the students and instructor may also find that they have disparate views on sensitive and volatile topics. It is my hope that these differences will enhance class discussion and create an atmosphere where students and instructor alike will be encouraged to think and learn. Therefore, be assured that your grades will not be adversely affected by any beliefs or ideas expressed in class or in assignments. Rather, we will all respect the views of others when expressed in classroom discussions.

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## Extracredit

**Presentation (1-5 points):** You will be given 1 point of extra credit added to your final grade, up to a total of five points, for giving a five minute presentation on a current (June 2006 and later) article from a newspaper or magazine with a topic directly related to physical anthropology and approved by the instructor. Only two presentations by different students can be given each class.

**Multiple Choice Quizzes (up to 10 points):** You will receive approximately 0.588 points of extracredit **added to your final grade** for completing the tutorial quiz for each chapter at the publishers web site with a grade of 70% or better. They are due by the day of the test for that chapter. None will be accepted after the test date.

Go to <http://academic.cengage.com>. Click on "Anthropology" under "Humanities and Social Sciences." Click on "Physical Anthropology." Go to the icon for *Introduction to Physical Anthropology, 12<sup>th</sup> Edition* and click on link to the "Companion Site" for students below the text book. This takes you to the *Book Companion Site*. In the drop down box in the upper left portion of the page, select the chapter you wish to do. Then on the next page, click on the *Multiple Choice Quiz* link in the left hand column, to take the quiz. After answering the questions, click on the *Submit* link to get to the results page. **You will need a minimum score of 70% to get credit.** Give me a printed copy of the first page results with the score. Do not use email. Re-take the quiz until you get at least a 70% correct result.

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## Virtual Lab Grading

### Test 1

- Lab 1 Section I: p. 6
- Lab 2 Section I: p. 10 (3 print-outs: “deviate,” “optimal,” and “stabilizing”)  
p.11 (3 print-outs: “stabilizing selection,” “directional selection,” and “disruptive selection”)  
p. 17 (after “Beak Measurement table” and “Plot Survivorship graph”)  
p. 19 (completed quiz)
- Section II: p. 6 (Step 13), p. 10 (after “Prediction”)  
pp. 11 & 12 (completed Punnet Squares)  
p. 19 (quiz)
- Section III: pp. 5 (after “Click Here”)  
p. 9 (completed Anti-A reaction table)  
p. 11 (completed Anti-B reaction table)  
p. 16 (completed quiz)
- Section IV: p. 3 (map with range of malaria, frequency > 15%, & frequency 5-15% checked)  
p. 4 (Sickle Cell Model Graph after filling in parameters)  
p. 6 (Drug Resistance Graph after entering a parameter)  
p. 7 (Model with Drugs Graph)  
p. 13 1: with “UV Tropics” and “UV Tropics Central” marked and “Dark Skins A-C” marked  
2: with “UV Far North,” “UV Temperate North,” “UV Tropics,” and UV Temperate  
South” marked and “Medium Skin A & B” and “Light Skin marked”  
“Self-Test” results with at least 7 correct answers (internet connection required)
- Lab 3 Section IV: p. 1: (click on “Verification)
- Lab 7 Section II: p. 15: (either “Linear Decay” or “Asymptotic Decay”)  
p. 17: (click on “Other Dating Techniques,  
p. 19: (completed “Composite Section”)  
p. 23: (correctly correlated Paleomagnetic Exercise)

### Test 2

- Lab 1 Section II: p. 3: (“convergent orbits” with visual fields)  
p. 9: (Superfamily classification with lower red button and “Hominidae” clicked on)  
p. 11: (“Classification A” clicked on)
- Section III: p. 2: (click on all but “Humans”)  
p. 3: (click on “features”)
- Section IV: p. 2: (click on “Brain Weight”)  
p. 6: (click on “Chimpanzees” and “Orangutans”)  
p. 7: (click on “Here”)  
p. 8: (click on “Here”)  
p. 14 (click on one of the ”Positional Behaviors”)
- Section V: p. 1 (completed quiz)  
“Self-Test” results with at least 7 correct answers (internet connection required)
- Lab 3 Section II: p. 1 (click on “Femur”)  
Section III: p. 2 (click on ”3rd Class Lever “ and “Here”)  
Section V: p. 5 (after calculating Olecranon-Ulnar Index)  
p. 6 (after graphing “Mystery Primate”)  
p. 8 (after clicking on “Mystery Primate”)  
p. 9 (completed quiz)  
“Self-Test” results with at least 7 correct answers (internet connection required)
- Lab 4 Section II: p. 6 (click on “highlighted limb”)  
p. 12 (click on a “positional behavior”)
- Section III: p. 8 (results)  
p. 9 (graphed “Mystery Primate”)

- p. 11 (completed quiz)  
 p. 14 (complete histogram and “yes” or “no”)  
 “Self-Test” results with at least 7 correct answers (internet connection required)
- Lab 5 Section II: p. 2 (place cursor on “high” nutritional quality)  
 p. 7  
 p. 9 (click on “Primary and Secondary Rain Forest” and then click on “More”)
- Section III: p. 7 (click on “HERE”)  
 p. 11 (click on “Tamarin”)  
 p. 12 (click on “Orangutan”)  
 p. 16 (click on “thick enamel”)  
 p. 25 (place cursor on one of the green highlighted terms)  
 p. 30 (place cursor on one of the green highlighted terms)  
 p. 33 (place cursor on one of the green highlighted terms)  
 p. 36 (click on “here”)
- Section IV: p. 2 (correctly identify “left third molar”)  
 p. 3 (click on “MORE”)  
 p. 4 (answer questions and click on “CHECK”)  
 p. 6 (answer questions and click on “CHECK”)  
 p. 9 (place “new primate” on graph)  
 p. 11 (select best hypothesis)
- “Self-Test” results with at least 7 correct answers (internet connection required)
- Lab 6 Section II: p. 2 (click on one of “red terms”)  
 p. 7 (click on “Biased Sire?”)
- Section III: p. 3 (click on “bout”)  
 p. 7 (click on “Genital Muzzle”)
- Section IV : p. 7 (click on “Aid in reading graph?”)  
 p. 9 (completed quiz)  
 p. 18 (click on “BF”)  
 p. 20 (click on “Who is least often involved in dominance interaction?”)
- Section V: p. 5 (Click on correct statements and then click on “CHECK”)  
 p. 9 (Click on correct statements and then click on “CHECK”)  
 p. 34
- Section VI: p. 1 (complete quiz)
- “Self-Test” results with at least 7 correct answers (internet connection required)

### Test 3

- Lab 7 Section IV: p.2 (place cursor on “The Paleocene Epoch”)  
 p.5 (place cursor on “The Eocene Epoch”)  
 p. 6 (click on “Adapids” and “Omonyids,” and print maps)  
 p. 7 (place cursor on “The Oligocene Epoch”)  
 p. 10 (place cursor on the second arrow from the bottom)  
 p. 15 (place cursor on “The Miocene Epoch”)  
 p. 18 (click on “*Victoriapithecus*”)  
 p. 19 (click on “*Sivapithecus*”)  
 p. 20 (place cursor on “lesser apes”)
- Section V: p. 4 (select shapes for *Victoriapithecus* and *Sivapithecus*)  
 p. 5 (select breadth for *Victoriapithecus*)  
 p. 6 (select “Orientation” for *Hylobates* and *Sivapithecus*)  
 p. 7 (click on *Hylobates* or *Victoriapithecus* at bottom of screen)
- “Self-Test” results with at least 7 correct answers (internet connection required)
- Lab 8 Section I: p. 2 (place cursor on “Robust” or “Gracile”)  
 Section II: p. 3 (click on “*A. afarensis*”)

- p. 4 (click on “HERE” and then place cursor on “diverged”)
- p. 8 (click on “*Homo*”)
- p. 11 (click on “size difference”)
- p. 15 (place cursor on “molars”)
- p. 18 (place cursor on “post-orbital constriction”)
- p. 22 (click on “HERE for a comparison with *A. africanus*”)
- Section III: p. 2 (select “left second molar”)
- p. 3 (enter dental formula and click on “MORE”)
- p. 4 (enter the answers and click on “Check”)
- p. 5 (place “Center of Rotation” and “Bite Point (BP) at M<sup>2</sup>” and then click on “Load arm” and “Force and lever arm”)
- p. 6 (enter the answers and click on “Check”)
- p. 7 (click on “HERE”)
- p. 9 (enter M<sub>1</sub> breadth and hit the “enter” key)
- p. 10 (place the “*A. boisei* data point on the graph)
- p. 12 (answer questions and click on “CHECK”)
- p. 13 (select correct hypothesis)

“Self-Test” results with at least 7 correct answers (internet connection required)

- Lab 9 Section II: p. 1 (place cursor on “ilia”)
- p. 4 (click on “HERE” and then place cursor on “orientation”)
- p. 5 (place cursor on “laterally”)
- p. 6 (click on “HERE” and then on “conclusion”)
- p. 8 (click on “HERE”)
- Section III: p. 2 (place cursor on “sacrum”)
- p. 4 (click on “here” and then place cursor on “broad”)
- p. 5 (place cursor on “sacroiliac joint surface”)
- Section IV: p. 2 (place cursor on “longer”)
- p. 6 (place cursor on “here”)
- Section V: p. 1 (place cursor on “toes of a biped”)
- p. 4 (click on “here to see the medial cuneiform of some fossil hominids,” click on “here,” and then place cursor on “intermediate”)
- p. 6 (click on “Species 3”)
- Section VI: p. 1 (place cursor on “unique features”)
- p. 2 (enter humerus and femur lengths and hit “enter” key to check your measurements and calculate the Humero-femoral index)
- p. 3 (place dot for Lucy on graph)
- p. 4 (click on “HERE” and then place cursor on “bipedalism?”)
- p. 6 (answer questions and “CHECK”)

“Self-Test” results with at least 7 correct answers (internet connection required)

- Lab 10 Section II: p. 2 (click on “HERE for information on this specimen”)
- p. 5 (click on “HERE”)
- p. 8 (click on “HERE for more data”)
- p. 12 (click on “HERE for more information on this specimen”)
- p. 13 (click on “HERE for more information on this specimen”)
- p. 15 (click on “figure”)
- Section III: p. 2 (click on “HERE”)
- p. 4 (place cursor on “Compare”)
- p. 5 (place cursor on “comparison”)
- p. 7 (place cursor on “teeth”)
- Section IV: p. 2 (click on “HERE for more information”)
- p. 5 (enter maximum diameter for the Neanderthal specimen and then hit the “enter” key)
- p. 7 (place cursor on “significant”)
- p. 8 (click on correct hypothesis)
- p. 11 (measure femoral head, enter measurement in the box, and hit the “enter” key)

- p. 13 (plot “new specimen” on the graph)
- p. 14 (select correct hypothesis)
- p. 16 (click on “group behavior”)
- p. 17 (click on “HERE” and then place cursor on “Archaic *Homo sapiens*)
- Section V: p. 6 (enter Humerus and Femur lengths and hit the “enter“ key)
- p. 7 (plot “Early *Homo erectus*” on graph)
- p. 8 (plot “*Homo habilis* on graph)
- p. 9 (click on “HERE” and then click on “bipedalism?”)
- p. 14 (click on “hominid”)
- p. 15 (place cursor on “*Homo erectus*”)
- p. 16 (plot “early *Homo*” (*H. habilis*) on graph)
- p. 17 (plot “early *Homo*” (*H. rudolfensis*) on graph)
- p. 18 (select correct hypothesis)
- p. 20 (click on “HERE for a regression for the australopithecines”)
- p. 21 (plot “*Homo habilis*” on the graph)
- p. 22 (plot “*Homo erectus*” on the graph)
- p. 24 (select correct hypothesis)

“Self-Test” results with at least 7 correct answers (internet connection required)

- Lab 11 Section II: p. 2 (click on “closest relatives”)
- Section IV: p. 3 (place cursor on “stone tools”)
- p. 5 (click on all four boxes)
- Section V: p. 1 (place cursor on “Mode II”)
- p. 2 (place cursor on “co-occur“)
- p. 3 (click on “Acheulean”)
- Section VI: p. 1 (click on a species and then calculate and enter the MNI (minimum number of individuals) in the box)
- p. 3 (click on correct type of assemblage)
- p. 5 (click on correct hypothesis)

“Self-Test” results with at least 7 correct answers (internet connection required)

- Lab 12 Section II: p. 9 (place cursor on “definite chin”)
- p. 13 (click on “Bering Starit Drained”)
- p. 26 (plot “new Specimen” on the graph)
- p. 27 (select correct hypothesis)
- p. 31 (enter the diameter of the modern *Homo sapiens* femur in the box)
- p. 34 (select the correct hypothesis)
- p. 38 (place cursor on “increase”)
- p. 39 (select correct hypothesis)
- Section III: P. 2 (place cursor on “dating gap”)
- p. 5 (click on “shortest”)
- Section IV: p. 3 (click on oldest stratum)
- p. 8 (click on correct hypothesis)
- p. 13 (plot “new specimen” on the graph)
- p. 15 (select correct hypothesis)
- p. 18 (plot “new specimen” on the graph)
- p. 20 (select correct hypothesis)
- p. 21 (select cranial features displayed by the skull and select the correct group and then click on “CHECK”)

“Self-Test” results with at least 7 correct answers (internet connection required)