



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**INTRODUCTION TO BIOPHYSICAL ANTHROPOLOGY
ANT6930 3 Credit Hours**

Student Level:

This course is open to students on the college level in either Freshman or Sophomore year.

Catalog Description:

ANT6930 - INTRODUCTION TO BIOPHYSICAL ANTHROPOLOGY (3 hrs.)

Students will explore the theories and mechanisms of human origins and development, in order to gain an appreciation of the biological, physical and history unity and diversity of the human family.

The learning outcomes and competencies detailed in this course meet, or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Project for this course, as sanctioned by the Kansas Board of Regents.

Prerequisites:

None

Controlling Purpose:

This course is designed to help the students explore the theories behind, and the biological and physical evidence for human development and diversity, in order to acquire an informed, scientific view of humanity in terms of biological adaptation, genetic diversity and population dynamics.

Learner Outcomes:

Upon completion of this course, the student will develop competencies in the development of evolutionary theory, basic knowledge of genetic mechanisms and processes, familiar with the principles and structures of primate taxonomy, and will apply critical thinking skills and scientific methods to address the issues of human origins, hominid evolution, and modern biological human diversity.

Units Outcomes and Criterion Based Evaluation Key for Core Content:

The following outline defines the minimum core content not including the final examination period. Instructors may add other material as time allows.

Evaluation Key:

A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same

- field.
- B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.
- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.
- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

UNIT 1: BIO-PHYSICAL ANTHROPOLOGY						
Outcomes: Upon Completion of this unit, students will be able to successfully...						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand and define biological/ physical anthropology.
						Understand and apply the scientific method of investigation, and distinguish it from belief systems.

UNIT 2: EVOLUTIONARY THEORY

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand and define evolution.
						Understand and define natural selection.
						Understand and define fitness, inheritance and acquired.
						Understand how the geological record and fossil record relate to evolutionary theory.

UNIT 3: EVOLUTIONARY GENETICS

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Identify and define gene, chromosome, DNA, protein, enzyme, amino acid, nucleotide, and codon.
						Identify and define the parts of a typical cell, including but not limited to cell membrane, ribosome, nucleus, mitochondria, and lysosome.
						Understand the Mendelian genetics.
						Understand the processes and mechanisms of protein synthesis, inheritance, and mutation.

UNIT 4: PROCESSES OF EVOLUTION

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand and define the terms species, niche, gene frequency, allele frequency, point mutation, and chromosomal mutation.
						Understand and define gene drift and gene flow.
						Recognize and understand the founder effect.
						Recognize and understand the distribution and frequency of sickle cell anemia as an example evolutionary processes at work.

UNIT 5: ORIGIN OF THE SPECIES

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand how existing species give rise to new species.
						Understand how species diversify.
						Understand and distinguish the concepts of gradualism and punctuated equilibrium.

UNIT 6: PRIMATES

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Recognize and understand the principles of taxonomy.
						Identify and define the segments of the human tax.
						Understand and define the characteristics of the primates.
						Understand and distinguish different primate behaviors, and how these are important to studying human development and origins.
						Identify the features of the primate skeleton.
						Understand how fossil remains are located, recovered, and dated.
						Understand how fossils are formed.
						Understand how genetic evidence may be used.

UNIT 7: EVOLUTION OF THE HOMINIDS & GENUS HOMO

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand and describe the evolutionary history of the primates.
						Understand and describe the evolutionary history of the hominids.
						Understand the importance of bipedalism in hominid evolution.
						Describe the distinguishing features and characteristics of the major fossil representatives of primate, hominid and early genus homo evolution.

UNIT 8: MODERN HUMAN ORIGINS

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Recognize the emergence of the genus homo sapiens in the fossil record.
						Understand and describe the physical features, distribution and dates of the various groups of genus homo found in the fossil record.
						Understand and relate what may and may not be said with accuracy about the lives and behaviors of genus homo via the fossil record.
						Understand, define and analyze the various taxonomies and theories of relationships between fossil record members of the genus homo and the earliest modern humans, and with current human populations.

UNIT 9: STUDY OF LIVING POPULATIONS

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand and apply the basic concepts and mechanisms of population dynamics.
						Understand how and what data are useful in describing human populations, and the trends that can be seen in such data.
						Understand and describe in what ways humans have adapted to varying environments.
						Understand and describe how disease influences human populations.
						Understand how sex and gender are interpreted differently by differently by different cultures.
						Analyze and discuss from an informed perspective the issue of "race."
						Apply the knowledge and theory of bio-physical anthropology to some of the problems presented by the idea of race.

UNIT 10: APPLYING BIO-PHYSICAL ANTHROPOLOGY

Outcomes: Upon Completion of this unit, students will be able to successfully...

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Understand how bio-physical anthropology may used in fields such as forensics, history, other fields of anthropology and other disciplines.

Projects Required:

Textbook:

Contact Bookstore for current textbook.

Materials/Equipment Required:

Attendance Policy:

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:

The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:

Based on classroom occupancy

Course Time Frame:

The U.S. Department of Education, Higher Learning Commission, and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching, and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability which may impact work in this class which requires accommodations, contact the Disability Services Coordinator.