ANTH A188: INTRODUCTION TO FORENSIC ANTHROPOLOGY

Item	Value
Curriculum Committee Approval Date	10/18/2023
Top Code	220200 - Anthropology
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)
Associate Arts Local General Education (GE)	• Area 5 Physical and Biological Sciences, Scientific Inquiry, Life Science (OB)
Associate Science Local General Education (GE)	• Area 5 Physical and Biological Sciences, Scientific Inquiry, Life (OSB)

Course Description

The forensic anthropology course is designed to introduce students to the scientific concepts and methods employed in this medicolegal field. The course will cover topics including the history of forensic anthropology, basic human osteology, skeletal and dental anatomy, basics of identification and biological profiling from skeletal remains including estimation of sex, age, ancestry and stature, death analysis, trauma and pathological analysis, post-mortem analysis, recovery techniques and crime scene management. Students will also learn about the ethical and legal responsibilities of forensic anthropologists. Transfer Credit: CSU; UC.

Course Level Student Learning Outcome(s)

1. Describe the field of forensic anthropology and the role of the forensic anthropologist within the context of the broader field of Anthropology and the medico-legal system.
2. Create a biological profile by applying appropriate methods and techniques to analyze skeletal remains and to explain the circumstances around death.

Course Objectives

- 1. Explain scientific inquiry and the application of the scientific method, as it applies to anthropological and forensic research
- 2. Describe the history and development of the field of forensic anthropology
- 3. Identify, name, locate, and orientate the bones of the human skeleton
- 4. Identify and describe the various human tooth types
- 5. Demonstrate the ability to side paired bones
- 6. Demonstrate the ability to establish a minimum number of individuals
- 7. Apply methods appropriate at an introductory level for estimating biological age, sex, ancestry or population affinity, and stature from skeletal remains.
- 8. Discuss key indicators used to determine the time since death
- 9. Discuss features that distinguish different types of pathological lesions, and skeletal trauma including anti-, peri- and post-mortem skeletal changes
- 10. Explain proper crime scene management and demonstrate the fundamentals of report writing.
- 11. Explain appropriate recovery methods for human remains
- 12. Describe the ethical and legal responsibilities of forensic anthropologists

Lecture Content

Introduction to Forensic Anthropology, History of the field Historical background, development of the field Forensic anthropologists and the medicolegal community Forensic Anthropology Protocol Scientific method and the scientific approach to forensic anthropology Methods of Forensic Anthropology Data gathering Data analysis Introduction to Osteology and Odontology Skeletal / Bone biology Bone tissue types / histology Categories of bones Joints and Joint types Skeletal growth and development Dental biology, Dental histology, Dental development Axial Skeleton vs Appendicular skeleton Anatomical position, Directional Terminology, Planes of motion General skeletal features Osteology: Major features, landmarks, non-metric variation, and siding of the bones Biological profile Age estimation Juvenile (e.g., Long Bone Fusion, Long Bone Length, Dental formation / Eruption, etc) Adult (e.g. Cranial Fusion, Palatial Sutures, Pubic symphysis. Auricular symphysis, etc) Sex estimation Metric methods (e.g., Skull, Pelvis, Long Bone Length, etc) Non-metric methods (e.g., Cranial Features, Pelvic features, etc) Ancestry Metric and non-metric traits Stature Metric methods (e.g., long bone length) Skeletal indicators of Anti-, Peri-, and Post-mortem changes Trauma Disease Degenerative changes Environmental factors (water, weather, animal activity, etc.) Dental and skeletal indicators of pathology Decomposition Stages of decomposi tion Factors / variables affecting decomposition Estimating time since death Establishing forensic context and management at a crime scene Recovery methods Manner of death vs cause of death Bone vs Non bone Locating, mapping, excavating, collecting remains Contemporary vs noncontemporary Fundamentals of Report Writing Ethics, Legal responsibilities / Legal testimony

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)

Instructional Techniques

Audio and/or Visual Presentations (Power points, videos, animations, 3D images, etc...) used during on campus lectures and/or uploaded to the course management system Demonstration of methods and techniques used for skeletal analysis. Collaborative Group Work Skill-building Exercises Small group or directed class discussions Student-instructor conferences (Online via chat, video conferencing, and/or email) so that the instructor may provide assistance or feedback on assignments and exams Feedback will be provided on assignment as appropriate (e.g. instructor-led discussions, written on printed copy of

assignment, Comments in the course management system for electronic submissions)

Reading Assignments

Students will spend 1-2 hours per week reading assigned chapters and/or supplemental material obtained from the academic literature.

Writing Assignments

Students will spend 1-2 hours per week preparing a forensic analysis report which includes information about all of the topics covered in class.

Out-of-class Assignments

Periodically, students will spend 3-4 hours per week reviewing published forensic anthropology case studies in order to present each assigned case to the class.

Demonstration of Critical Thinking

In small groups, students may compare and contrast various methods used to analyze pathological conditions and/or traumatic injuries.

Required Writing, Problem Solving, Skills Demonstration

Each student will be assigned a skeleton to complete a full skeletal and forensic analysis to determine a biological profile, evidence of trauma or pathology, and an estimation of the time since death. All of this should be conducted at a level appropriate for an introductory class.

Eligible Disciplines

Anthropology: Master's degree in anthropology or archaeology OR bachelor's degree in either of the above AND master's degree in sociology, biological sciences, forensic sciences, genetics or paleontology OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Byers, S.N., Juarez, C.A.,. Introduction to Forensic Anthropology, 6 ed. Routledge, 2023 Rationale: This textbook may serve as the primary text for the course. 2. Required Langley, N. Tersigni-Tarrant, M. Forensic Anthropology: a Comprehensive Introduction, 2 ed. CRC Press, 2017 Rationale: . 3. Required Christensen, A. M., Passalacqua, N.V., Bartelink, E.J.. Forensic Anthropology: Current Methods and Practice, 2 ed. Academic Press, 2019

Manuals Resources

1. Christensen, A. Passalacqua, N.. A Laboratory Manual for Forensic Anthropology, Academic Press , 02-13-2018