

SIMON FRASER UNIVERSITY

MEMORANDUM

S.81-70

To..... SENATE

From..... SENATE COMMITTEE ON UNDERGRADUATE
STUDIES

Subject..... FACULTY OF ARTS NEW COURSE PROPOSAL -
ARC. 442-5 FORENSIC ANTHROPOLOGY

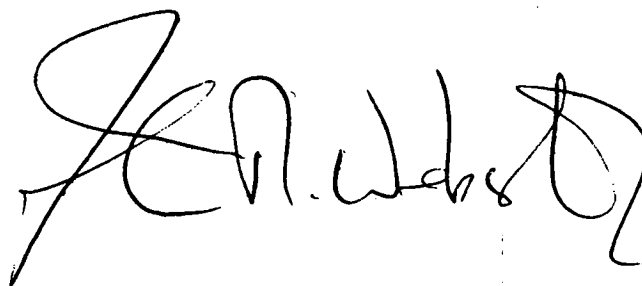
Date..... APRIL 15, 1981

Action undertaken by SCUS, at its meeting of April 7, 1981 gives rise to the following motion.

MOTION:

"That Senate approve and recommend approval to the Board of Governors, as set forth in S.81-70 the proposed new course, ARC. 442-5 Forensic Anthropology."

No additional resources are required with exception of very modest expenses relative to some current books and subscriptions.



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

NEW COURSE PROPOSAL FORM

Calendar Information

Department Archaeology

Abbreviation Code: ARC Course Number: 442

Credit Hours: 5 Vector: 3-1-1
lecture/lab/sem.

Title of Course: Forensic Anthropology

Calendar Description of Course: Current techniques in identification of recent human skeletal remains.

Nature of Course Lecture/Lab/Seminar

and ARC.

Prerequisites (or special instructions): ARC.131, 373 or permission of the instructor

What course (courses), if any, is being dropped from the calendar if this course is approved: None

2. Scheduling

How frequently will the course be offered? once every two years

Semester in which the course will first be offered? 1982-1

Which of your present faculty would be available to make the proposed offering possible? Dr. Mark Skinner

Objectives of the Course To train archaeology students in the most recent forensic techniques for determining, from skeletal remains, age at death, sex, race, stature, and important individual characteristics leading to personal identification. Other objectives are to train police identification officers in archaeological techniques for recovering human skeletal remains and to acquaint medico/legal professionals with the strengths and weaknesses of evidence collected by forensic anthropologists.

4. Budgetary and Space Requirements (for information only)

What additional resources will be required in the following areas:

Faculty nil

Staff nil

Library some current books, new subscriptions to journals

Audio Visual nil

Space nil

Equipment nil

5. Approval

Date: February 26, 1981

Richard Shuttles
Department Chairman

R C Brown
Dean

Chairman, SCUS

SCUS 73-34b:- (When completing this form, for instructions see Memorandum SCUS 73-34a. Attach course outline).

ARCHAEOLOGY 442-5

FORENSIC ANTHROPOLOGY

Spring Semester, 1982

Mark Skinner

TEXT: Stewart, T. D. 1979 Essentials of Forensic Anthropology

A list of assigned readings is provided. The class will meet for a total of 5 hours a week (ca. 3 hours lecture and 2 hours seminar/lab discussion).

Course grade will be based on bi-weekly quizzes (50%) based on your text and assigned readings and on the seminars (25% each) with annotated bibliographies.

The instructor will discuss the pertinent and burgeoning contribution of the archaeologist and physical anthropologist to forensic inquiry both in the field and in the laboratory.

Except in understandable cases, (e.g. R.C.M.P. officers), students accepted in this course will be expected to possess a basic knowledge of human osteological analysis.

Description:

Forensic anthropology is that branch of applied anthropology in which the specialist, trained in analysis of human skeletal material, assists law enforcement agencies in the derivation of maximum personal information from bones, teeth, associated materials and their contextual relationships to establish the identity of the person(s) concerned, cause of death, time elapsed since death and other relevant information.

Techniques of forensic anthropological investigation are of direct relevance to students of prehistoric and fossil human skeletal biology, archaeologists, medico-legal investigators and law enforcement personnel.

The course will familiarize the student with current methods of human skeletal analysis. Each student will investigate and present in seminar form (with annotated bibliography) two of the following topics:

Seminar Topics (in sequence)

1. Sexing of the skeleton
2. Aging of children from teeth
3. Aging of children from ossification
4. Aging of adults from ossification
5. Aging of adults from skeletal remodelling
6. Aging of adults from dentition
7. Senescence in the skeleton
8. Pelvic pregnancy scars
9. Surgery, trauma, and cultural effects on skeleton
10. Occupation, socio-economic status and personal habits
11. Individualization from dental records
12. Mass disasters with body fragmentation
13. Fatal trauma and the skeleton
14. Cremations

continued--

15. Radiography, photography, and video
16. Facial reconstruction
17. Elapsed time since death (soft tissue decomposition)
18. Elapsed time since death (insects, plants, animals)
19. Battered babies
20. The perfect murder
21. Premortem population statistics

Schedule of Lectures, Readings, Labs

1. Lecture: Introduction, History, Overview
Readings: Stewart 1977 (pp. 70-9), Stewart 1979 (Ch. 1)
Kerley 1973 (Ch. 9), Kerley 1978 (pp. 160-173)
2. Lecture: Techniques for the Recovery of Human Remains
 - a) Morse, Crusoe and Smith 1976 (pp. 323-332),
Morse, Stoutamire, and Duncan 1976 (pp. 743-7)
El Najaar & McWilliams 1978 (Ch. 1)
 - b) Krogman 1962 (Ch. VII), El-Najaar and McWilliams
(Ch. IV pp. 72-5), Howells in Stewart 1970 (pp. 111-121),
Stewart 1979 (Ch. 11), Giles and Elliot 1962, Hughes in
Brothwell 1968 (pp. 31-51).
3. Lab: Anatomy of the Skull, Craniometry
Lecture: Determining Race
Readings: Stewart 1979 (Ch. 7), Krogman 1962 (Ch. V),
El-Najaar and McWilliams 1978 (pp. 75-89)
Grob in Stewart 1970 (pp. 19-23), Giles in
Stewart 1970 (pp. 99-109), Moore 1966
(Intro and Ch. 26), Houghton 1974, Phenice
1979, Boucher 1957, Putschar 1976, Steele 1976
4. Lecture: Determining Sex
Lab: The Pelvis
Readings: a) Krogman 1962 (pp. 18-111), Moorrees, Fannings, and
Hunt 1963, Fanning 1961, Miles in Brothwell 1968
(pp 191-209), Lewis and Garn 1960, Burns and
Maples 1976

b) El-Najaar & McWilliams 1978 (pp. 55-72), Stewart
1979 (pp 128-189), McKern in Stewart 1970 (pp 41-56),
Kerley in Stewart 1970 (pp 57-70), Enlow 1966,
Schrantz 1959, Kerley 1965, Bouvier and Ubelaker
1977.
5. Lecture: Determining Age at Death
Lab: Immature and Mature Hard Tissue Age Changes
Readings: Stewart 1979 (Ch. 9 & 10), Trotter in
Stewart 1970 (pp 71-83), Steele in Stewart
1970 (pp 85-97), El-Najaar & McWilliams
1978 (89-115), Krogman 1962 (pp 153-187),
Stewart 1977 (pp 74-6)

6. Lecture: a) Stature Reconstruction

b) Introduction to Forensic Odontology

Lab: Postcranial Osteometry

Readings: Cleland 1944, Keiser-Nielsen 1963, Gustafson & Johanson 1963, Dahlberg 1963, El-Najaar & McWilliams 1978 (Ch. 3)

7. Lecture: Skeletal Effects of Homicidal Trauma

Readings: a) Radiography and Photography - Sassouni 1963, Culbert and Law 1927, Morgan and Harris 1953, Graham & Gray 1965, Krogman 1962 (Ch. X), Stewart 1979 (Ch. 13)

b) Facial Restoration - Snow, Gatliff & McWilliams 1970, Farrar 1977, Krogman 1962 (Ch IX), Stewart 1979 (Ch. 14)

Lab: Firearms and Other Weapons Evidence

8. Lecture: Thermal Injury and Cremations

Readings: Ubelaker 1978 (pp 33-36), Stewart 1979 (Ch. 5), Gejvall in Brothwell & Higgs 1963

9. Lecture: Elapsed Time Since Death

Readings: Stewart 1979 (Ch. 6), Facchini & Pettener 1977, Easton & Smith 1970, Gilbert & Bass 1967, Knight and Lauder 1969

10. Lecture: Animal Remains and Animal Activity

Readings: Stewart 1979 (Ch. 4)

11. Lecture: Evidence, Procedures, Testimony - The Expert Witness

Readings: Stewart 1979 (Ch. 2), Philips 1977, Neep in Stewart 1970

Lab: Role Play

FORENSIC ANTHROPOLOGY

READING LIST

Mark Skinner

Article Reserves

- Boucher, B.
1957 Sex differences in the foetal pelvis. American Journal of Physical Anthropology. 15:581-600.
- Bouvier, M. and D. H. Ubelaker
1977 A comparison of two methods for the microscopic determination of age at death. American Journal of Physical Anthropology. 46:391-394.
- Burns, K. R. and W. R. Maples
1976 Estimation of age from individual adult teeth. Journal of Forensic Science 21:343-356.
- Culbert, W. L. and F. M. Law
1927 Identification by comparison with roentgenograms of nasal accessory sinuses and mastoid processes. Journal American Medical Association. 88:1634-6.
- Dupertuis, C. W. and J. A. Hadden Jr.
1951 On the reconstruction of stature from long bones. American Journal of Physical Anthropology 9:15-53.
- Easton, A. M. and K. G. V. Smith
1970 The entomology of the cadaver. Medical Scientific Law 10:208-215.
- Gejvall, N.
1963 Cremations. pp. 379-390 in Brothwell, D. R. and E. H. Higgs: Science in Archaeology. Prager, New York.
- Gilbert, B. M. and W. M. Bass
1967 Seasonal dating of burials from the presence of fly pupae. American Antiquity 32:534-5.
- Gilbert, B. M. and T. W. McKern
1973 A method for aging the female os pubis. American Journal of Physical Anthropology 38:31-38.
- Giles, E. and O. Elliot
1962 Race Identification from cranial measurements. Journal Forensic Science 7:147-157.
- Heglar, R.
1972 Paleoserology techniques applied to skeletal identification. Journal Forensic Science 17:358-363.

- Houghton, P.
1974 The relationship of the pre-auricular groove of the ilium to pregnancy. American Journal of Physical Anthropology 41:381-389.
- Howells, W. W.
1957 The cranial vault: Factors of size and shape. American Journal of Physical Anthropology 15:19-48.
- Kerley, E. R.
1965 The microscopic determination of age in human bone. American Journal of Physical Anthropology 23:149-163.
- Kerley, E. R.
1973 Forensic Anthropology. pp. 161-198 in Wecht, C.H. (ed.) Legal Medicine Annual 1973. Appleton-Century-Crofts, New York.
- Knight, B. and J. Lauder
1969 Methods of dating skeletal remains. Human Biology 41:322-341.
- Lewis, A. B. and S. M. Garn
1960 The relationship between tooth formation and other maturational factors. Angle Orthodontist 30:70-77.
- Morse, D., D. Crusoe, H. G. Smith
1976 Forensic Archaeology. Journal Forensic Science 21:323-332.
- Phenice, T. W.
1969 A newly developed visual method of sexing the os pubis. American Journal of Physical Anthropology 30:297-301.
- Philips, K. A.
1977 The "nuts and bolts" of testifying as a forensic scientist. Journal Forensic Science 22:457-463.

Alternates

- Harmeling, G. L. Schuh, E., H. S. Humphreys
1968 Dental identification of bodies in a major disaster. South Carolina Dental Journal 26(7) 4-11 (pp. out of order).
- Johanson, G. and T. Saldgen
1969 Identification of burnt victims with the aid of tooth and bone fragments. Journal Forensic Medicine 16:16-25.
- Mayer, J.
1935 Identification by sinus prints. Virginia Medical Monthly 62:517-9.
- Morovic-Budak, A.
1965 Experiences in the process of putrefaction in corpses buried in earth. Medical Science and the Law. 5:40-3.
- Stevens, P. J. et al
1966 Medical Investigation in fatal aircraft accidents. The role of dental evidence. British Dental Journal 120:263-270.

Williams, G. E.
1954 The identification of persons by x-ray examination of bone trabeculation. Police College Magazine, England. 13 pp.

Book Reserves

Stewart, T. D.
1979 Essentials of Forensic Anthropology. Especially as developed in the United States. Charles C. Thomas. Springfield, Illinois, U.S.A. 300 pp. ISBN 0-398-03811-2, Congress No. 78-7441.

Adelson, L.
1974 The Pathology of Homicide: A Vade Mecum for Pathologist, Prosecutor and Defence Counsel. Charles C. Thomas, Springfield, Illinois, U.S.A. 992 pp.

El-Najjar, M. Y. and K. R. McWilliams
1978 Forensic Anthropology: The structure, morphology, and variation of human bone and dentition. Charles C. Thomas, Springfield, Illinois, U.S.A. 208 pp.

Kaplan, E. J.
 Evidence: A law enforcement officer's guide. Charles C. Thomas, Springfield, Illinois, U.S.A. 336 pp.

Gladfelter, I. A.
 Dental evidence: A handbbook for police. Charles C. Thomas, Springfield, Illinois, U.S.A. 208 pp.

Krogman, W. M.
1962 The human skeleton in forensic medicine. Charles C. Thomas, Springfield, Illinois, U.S.A. 364 pp.

Nash, D. J.
 Individual identification and the law enforcement officer. Charles C. Thomas, Springfield, Illinois, U.S.A. 176 pp.

Sopher, I. M.
 Forensic Dentistry. Charles C. Thomas, Springfield, Illinois, U.S.A. 176 pp.

Spitz, W. U. and R. S. Fisher
1973 Medicolegal investigation of gunshot wounds: Guidelines for the application of pathology to crime investigation. Charles C. Thomas, Springfield, Illinois, U.S.A. 560 pp.

Taylor, R. M. S.
 Variation in morphology of teeth: anthropologic and forensic aspects. Charles C. Thomas, Springfield, Illinois, U.S.A. 408 pp.

Fattch, A.
1976 Medicolegal investigation of gunshot wounds. J. P. Lippincott, Toronto.

- Stewart, T. D. (ed)
1970 Personal identification in mass disasters. National Museum of Natural History. Smithsonian Institution. City of Washington. 158 pp.
- Gustafson, G. *+ Saunders Press, London.*
1966 Forensic Odontology. American Aulevier Publishing Co. New York.
- Ronchese, F.
1948 Occupational marks and other physical signs: a guide to personal identification. Grune & Stratton, Inc. New York 181 pp.
- Brabant, H.; L. Klees, and R. J. Werclos
1958 Anomalies, mutilations, et tumeurs des dents humaines. Edition J. Prelat, Paris, Sciences et Lettres, Liege.
- McKern, T. W. and T. D. Stewart
1957 Skeletal age changes in young american males. Analysed from the standpoint of age identification. Headquarters Quartermaster Research and Development Command, Environment Protection Research Division. U.S. Army Natick, Mass. Techn. Rep. EP-45, AE 7 D.
- Moore, K. L. (ed.)
1966 The sex chromatin. W. B. Saunders Co.
- Grulich, W. W. and S. I. Pyle
1959 Radiographic atlas of skeletal development of the hand and waist. Stanford University Press.
- Hoerr, N. L. and S. I. Pyle
1962 Radiographic atlas of skeletal development of the foot and ankle. Charles C. Thomas, Springfield, Illinois, U.S.A.
- Tanner, J. M. and R. H. Whitehouse
1959 Standards for skeletal age. Parts 1 and 2. Department of Growth and Development, Institute of Child Health, University of London.

RECEIVED

APR - 1 1981

REGISTRAR'S OFFICE
MAIL DESK

Date: 27 March 1981

SFU LIBRARY COLLECTION EVALUATION

(To be completed only for new course or program proposals.)

1. Course No. and Name or Program: A442 Forensic anthropology

Date to be offered: 1982-1

2. Resources currently in collection:

Reading lists. No. and % of titles available: 32 73 %

Related materials in general collection:

Monographs:

Serials Subscriptions:

Backfiles:

Other:

3. Recommended additions to collection:

(Indicate approx. no. of titles, vols.,
date, as appropriate)

Monographs: 15

New serials subscriptions: 2

Serials backfiles:

Other (specify):

Total

ESTIMATED COST	
\$	375.00
	40.00
Total	
\$	415.00

4. Comments:

The Library's weakness in supporting this course is mostly
due to a lack of highly specialized dental and medical journals.
It is not recommended that we acquire them - but rather request
specific articles as needed from UBC via ILL.

OFFICE OF THE DEAN

MAR 30 1981

FACULTY OF ARTS

E. Szabo
For Library

For Faculty Department