



Department of Anthropology

**ANTH 306 Summer Field Training in Archaeology
Archaeological Field Training in Anyang, China**

Credits: 6

Dates: Summer 2011 (6 weeks, from the 9th of May to the 20th of June 2011)

Location: Anyang, China

Instructor: Dr. Zhichun Jing

Email and Phone: jingzh@interchange.ubc.ca, 822-4937

Course Description:

This summer archaeological training will be held in Anyang, China, a UNESCO world heritage site. Anyang is the modern city where the last capital of Shang civilization, the earliest literate civilization in East Asia, was located. The field training will be affiliated with the joint research project “*Human and Social Dynamics of Early Bronze Age China*” between the Institute of Archaeology of the Chinese Academy of Social Sciences and the Department of Anthropology at UBC. In addition to active participation and involvement in on-going archaeological excavation, this summer field training will have a focus on learning ancient technologies and material culture through actual manufacture and examination of a range of artifacts, particularly ceramics, stones, jades, and bronzes. Based on recent findings from our microscopic analysis, different types of local soils that were available to Shang potters will be procured, processed, and used to make domestic pottery vessels as well as ceramic molds, models, and cores for casting bronzes; then they will be fired, using traditional techniques and kilns (that are based on the reconstruction of unearthened Shang kiln remains). The experiment of bronze casting may be performed contingent upon the availability of sufficient time and essential resources. In addition to excavation and experiment-related activities, lectures will be given on the introduction of Shang archaeology so that students will acquire a good understanding of archaeological research in Anyang, and its comparative value and significance in the investigation of early cities and civilizations across the world.

Course Assignments and Grading:

Since this is a field training course, participation in various field activities is mandatory. Each student is required to complete experiment-related exercises and written reports. You are expected to write a field journal on a daily basis. The field journal should summarize fieldwork and experiment-related activities as well as artifact examination and analysis; and it should also critique assigned readings for specific subjects, with reference to our own field activities or the materials you may see or study in the field or museums. Your field journal will be read and graded on a weekly basis. You are required to write a final report that focuses on one or two subjects related to field activities performed through the period of fieldwork. The final report should be 10 to 12 double-spaced pages, not counting the bibliography and title pages, and it must be properly referenced, according to the style of *American Antiquity* or *American Anthropologists*. The final report is due on the 16th of June 2011, and you are required to present your research report to the class on the 17th of June 2011.

Grading will be based on participation in the field activities (20%) and completion of assignments (40%), field journal (20%), and final report and presentation (20%).

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Prerequisites:

Anth103 Introduction to World Prehistory or Anth203 Methods of Anthropological Archaeology or consent of instructor.

Extension:

Assignment and report deadline extensions will ONLY be granted with a documented medical excuse or for observance of a religious holiday recognized by the University (which requires the student to provide two-weeks advance notice to the instructor).

Plagiarism and Cheating:

Plagiarism and cheating are violations of the University of British Columbia Academic Regulations, and carry penalties as severe as dismissal from the University. All students must uphold the University of British Columbia standards of student conduct. Please visit Plagiarism Resource Centre (<http://www.library.ubc.ca/home/plagiarism/>) to understand this serious issue.

Respect:

This course is intended to well serve students from diverse backgrounds. You are expected to respect the opinions and beliefs of others in the class (including your fellow students and instructors) as well as groups of various kinds we may encounter and interact with during the whole period of the field school in China.

Suggestions:

I hope you will enjoy this summer field training program. You are strongly encouraged to make suggestions about how to improve the program.

Required and Suggested Readings:

All required readings will be made available on the course WebCT at least before the departure for China. Additional materials may be provided in the field as needed by each experiment.

Supplies for the Fieldwork

Students will be responsible for their own field tools and supplies including excavation trowel, work gloves and clothing, band-aids, ruler, eraser, drawing pencils, field notebook. Other supplies for excavation and experiments will be provided.

Schedule of Field Activities and Course Readings (they may be subjected to change)
(The readings with * are required)

March or April 2011: Pre-departure Orientation
(date, time, and location to be determined)

All students are required to attend the orientation session in which we will discuss all essential information concerning preparation for the field school, course materials, travel arrangement and safety.

In order to get your self prepared for active involvement in field research and effective learning, you must read the following required readings before your departure.

Video: *Discovery Atlas: China Revealed (2006)*

Readings:

1. General Background on China: Land, People, Culture

* Murphey, R.

1994 The land. In *China*, edited by R. E. Murowchick, pp. 13-23. University of Oklahoma Press, Norman, Oklahoma.

* Murphey, R.

1994 The people. In *China*, edited by R. E. Murowchick, pp. 25-35. University of Oklahoma Press, Norman, Oklahoma.

Hessler, P.

2006 *Oracle bones: a journey between China's past and present*. HarperCollins, New York.

Hessler, P.

2010 *Country driving: a journey through China from farm to factory*. Harper, New York.

2. History and Tradition of the Archaeological Research in China

* von Falkenhausen, L.

1994 Rediscovering the past. In *China*, edited by R. E. Murowchick, pp. 39-49. University of Oklahoma Press, Norman, Oklahoma.

* Chang, K.C.

2002 Reflections on Chinese archaeology in the second half of the twentieth century. *Journal of East Asian Archaeology* 3(1-2):5-13.

3. Shang Archaeology

* Bagley, R.

1999 Shang archaeology. In *The Cambridge History of Ancient China : from the origins of civilization to 221 B.C.*, edited by M. Loewe and E. L. Shaughnessy, pp. 124-231. Cambridge University Press, Cambridge, UK.

* Keightley, D. N.

1999 The Shang: China's first historical dynasty. In *The Cambridge History of Ancient China : from the origins of civilization to 221 B.C.*, edited by M. Loewe

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and E. L. Shaughnessy, pp. 232-291. Cambridge University Press, Cambridge, UK.

Chang, K. C.

1980 *Shang civilization*. Yale University Press, New Haven.

Chang, K.C.

1983 *Art, Myth, and Ritual - the Path to Political Authority in Ancient China*. Harvard University Press, Cambridge.

Li, C.

1977 *Anyang*. University of Washington Press, Seattle.

Thorp, R. L.

2006 *China in the Early Bronze Age: Shang Civilization*. University of Pennsylvania Press, Philadelphia

4. Ancient Technology and Bronze Casting Techniques

* Bagley, R. W.

1990 Shang ritual bronzes: casting techniques and vessel design. *Archives of Asian Art* 43:6-20.

* Franklin, U. M.

1983 On bronze and other metals in early China. In *Origins of Chinese civilization*, edited by D. Keightley, pp. 279-296. University of California Press.

* Lechtman, H. and A. Steinburg

1979 The history of technology: an anthropological point of view. In *The history and philosophy of technology*, edited by G. Bugliarello and D. B. Doner, pp. xxxi, 384 p. University of Illinois Press, Urbana.

* Smith, C. S.

1970 Art, Technology, and Science - Notes on Their Historical Interaction. *Technology and Culture* 11(4):493-549.

Bagley, R. W.

1987 *Shang ritual bronzes in the Arthur M. Sackler collections*. Arthur M. Sackler Foundation, Washington, D.C.

Barnard, N.

1961 *Bronze casting and bronze alloys in ancient China*. Australian National University, Canberra.

Chase, W. T.

1983 Bronze casting in China: a short technical history. *The Great Bronze Age of China*. George Kuwayama, ed. Los Angeles:100-123, ill.

Franklin, U. M.

1999 *The real world of technology*. Rev. ed. CBC Massey lecture series. Anansi, Toronto, Ont.

Pfaffenberger, B.

1992 Social anthropology of Technology. *Annual Review of Anthropology* 21:491-516.

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9 May 2011

Arrive in Beijing

(pick-up at the airport and hotel stay will be arranged)

10 – 11 May 2011

Visit Forbidden City, Great Wall, and Zhoukoudian (Peking Man Site) in Beijing

Video: *National Geographic - Inside The Forbidden City – Secrets (2007)*

BBC: The Great Wall of China (2007)

Readings:

Jia, L. and W. Huang

1990 *The story of Peking man : from archaeology to mystery*. Oxford University Press, New York.

Man, J.

2008 *The Great Wall : the extraordinary story of China's wonder of the world*. Da Capo Press ed. Da Capo Press, Cambridge, Mass.

12 May 2011

Arrive in Anyang (by train)

13 - 24 May 2011

Participation in On-going Excavation and Artifact Analysis

(Assignments # 1 and #2)

Readings:

1. Field Techniques

Hester, T. R., H. J. Shafer and K. L. Feder

1997 *Field Methods in Archaeology*. Seventh Edition ed. Mayfield Publishing Company, Mountain View, California.

* Chapter 3. Research design and sampling techniques, pp. 21-40;

Chapter 4. Site Survey, pp. 41-68;

* Chapter 5. Methods of excavation, pp. 69-112;

* Chapter 6. Data preservation: recording and collecting, pp. 113-142;

Chapter 9. Archaeological mapping, site grids, and surveying, pp. 177-234;

* Chapter 10. Stratigraphy, pp. 235-252;

* Chapter 11. Excavation and analysis of human remains, pp. 254-282;

Chapter 12. Excavation and recovery of botanical materials from archaeological sites, pp. 283-297;

Chapter 13. Basic approaches in archaeological faunal analysis, pp. 298-318.

Appendix – Tables of Equivalents and Conversion Factors

* Hodges, H.

1989 *Artifacts : an introduction to early materials and technology*. Duckworth, London. (Chapter 1, pottery, pp. 19-41; Chapter 18. Examination of pottery and glasses, pp. 194-205).

Sinopoli, C. M.

1991 *Approaches to archaeological ceramics*. Plenum Press, New York.

Stoltman, J. B.

2001 The role of petrography in the study of archaeological ceramics. In *Earth sciences and archaeology*, edited by P. Goldberg, V. T. Holliday and C. R. Ferring, pp. 297-325. Kluwer Academic/Plenum, New York.

2. Anyang Archaeology

* Keightley, D. N.

1999 The Shang: China's first historical dynasty. In *The Cambridge History of Ancient China : from the origins of civilization to 221 B.C.*, edited by M. Loewe and E. L. Shaughnessy, pp. 232-291. Cambridge University Press, Cambridge, UK.

* Thorp, R. L.

2006 *China in the Early Bronze Age: Shang Civilization*. University of Pennsylvania Press, Philadelphia. (Chapter 3. Shang Kings at Anyang; Chapter 4. Shang cult: divination and sacrifice).

Chang, K. C.

1981 The Animal in Shang and Chou Bronze Art. *Harvard Journal of Asiatic Studies* 41(2):527-554.

Chang, K. C.

1995 On the meaning of Shang in the Shang Dynasty. *Early China* 20:70-77.

Hsia, N.

1986 The classification, nomenclature, and usage of Shang dynasty jades. In *Studies of Shang archaeology: selected papers from the International Conference on Shang Civilization*, edited by K. C. Chang, pp. 207-236. Yale University Press, New Haven.

Jing, Z., J. Tang, Z. Liu and Z. Yue

2004 Survey and Test Excavation of the Huanbei Shangcheng in Anyang. *Chinese Archaeology* 4:1-20.

Jing, Z., J. Tang, G. Rapp and J. Stoltman

2002 *Coevolution of Human Societies and Landscapes in the Core Territory of Late Shang State, 2000-2001*. Interim Report submitted to the National National Science Foundation, National Geographic Society, Malcom H. Wiener Foundation, University of Minnesota Foundation, and the Henry Luce Foundation, 130 pages.

Shaughnessy, E. L.

1988 Historical perspectives on the introduction of the chariot into China. *Harvard journal of Asiatic studies* 48(1):189-237.

Tang, J.

1999 The Burial Ritual of the Shang Dynasty: A Reconstruction. In *Exploring China's Past: New Discoveries and Studies in Archaeology and Art*, edited by R. Whitfield and T. Wang, pp. 173-181. Saffron, London.

Tang, J., Z. C. Jing and G. Rapp

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2000 The largest walled Shang City located in Anyang, China. *Antiquity* 74(285):479-480.

Thorp, R. L.

1988 The Archaeology of Style at Anyang, Tomb-5 in Context. *Archives of Asian Art* 41:47-69.

25 - 29 May 2011

Experimental Archaeology: Raw Materials and Pottery Forming

(Assignment # 3)

Readings:

* Harry, K. G.

2010 Understanding ceramic manufacturing technology: the role of experimental archaeology. In *Designing experimental research in archaeology : examining technology through production and use*, edited by J. R. Ferguson, pp. xv, 262 p. University Press of Colorado, Boulder, Colo.

* Kerr, R. and N. Wood

2004 *Science and civilisation in China, Vol. 5 Chemistry and Chemical Technology, Part XII: Ceramic Technology.* University Press, Cambridge. (Part I. Setting the Scene, pp. 1-86).

* Rye, O. S.

1981 *Pottery technology: principles and reconstruction.* Taraxacum, Washington, D.C. (Chapter 3. The Production of Sequence, pp. 16- 28; Chapter 4. Materials and their preparation, pp. 29-36; Chapter 5. Forming, pp. 58-94).

* Stoltman, J. B., Z. Jing, J. Tang and G. Rapp

2009 Ceramic production in Shang societies of Anyang. *Asian Perspectives* 33(1):181-202.

Gosselain, O. P.

2000 Materializing identities: An African perspective. *Journal of Archaeological Method and Theory* 7(3):187-217.

Schiffer, M. B.

2009 Ethnoarchaeology, experimental archaeology, and the "American School". *Ethnoarchaeology* 1(1):7-26.

Schiffer, M. B., J. M. Skibo, T. C. Boelke, M. A. Neupert and M. Aronson

1994 New Perspectives on Experimental Archaeology - Surface Treatments and Thermal Response of the Clay Cooking Pot. *American Antiquity* 59(2):197-217.

Skibo, J. M., M. B. Schiffer and K. C. Reid

1989 Organic-Tempered Pottery - an Experimental-Study. *American Antiquity* 54(1):122-146.

van der Leeuw, S.

1993 Giving the potter a choice: conceptual aspects of pottery techniques. In *Technological choices : transformation in material cultures since the neolithic*, edited by P. Lemonnier, pp. 238-288. Routledge, London.

30 - 31 May 2011

Travel to Zhengzhou (by train)

Visit Early Shang City in Zhengzhou and Henan Provincial Museum

Readings:

Bagley, R.

1999 Shang archaeology. In *The Cambridge History of Ancient China : from the origins of civilization to 221 B.C.*, edited by M. Loewe and E. L. Shaughnessy, pp. 124-231. Cambridge University Press, Cambridge, UK.

Thorp, R. L.

2006 *China in the Early Bronze Age: Shang Civilization*. University of Pennsylvania Press, Philadelphia. (Chapter 2. Foundations of the Bronze Age: The Erligang Culture).

1 - 3 June 2011

Travel to Xi'an on the 1st of June to return to Anyang on the 3rd of June 2011 (by train)

Visit Terra-Cotta Army Site in Lishan and the Neolithic Site at Banpo

Video: *BBC China's Terracotta Army (2007)*

Readings:

Man, J.

2008 *The Terra Cotta Army: China's first emperor and the birth of a nation*. Da Capo Press, Cambridge, MA.

Thorp, R. L.

2006 *Visiting China's past : a guide to sites and resources*. 1st ed. Floating World Editions, Warren, CT. (pp. 45-55, Banpo: Farmers in the Loess Lands; pp. 120-128, Lishan: the First Emperor's Army)

4 – 10 June 2011

**Experimental Archaeology: Manufacturing Ceramic Molds and Models for Casting
Bronzes**

(Assignment #4)

Readings:

* Freestone, I. C., N. Wood and J. Rawson

1989 Shang Dynasty Casting Moulds From North China In *Cross-craft and cross-cultural interactions in ceramics*, edited by P. E. McGovern and M. D. Notis, pp. 253-273. American Ceramic Society, Westerville, OH.

* Li, Y.

2007 Co-craft and multicraft: section-mold casting and the organization of craft production at the Shang capital of Anyang. In *Craft production in complex societies : multicraft and producer perspectives*, edited by I. Shimada, pp. 184-223. The University of Utah Press, Salt Lake City.

* Stoltman, J. B., Z. Jing, J. Tang and Z. Yue

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2011 Petrographic Analyses of Ceramics Used in the Production of Shang Bronzes at YinXu (unpublished manuscript).

Gettens, R. J.

1967 *The Freer Chinese bronzes, Volume II. Technical Studies*. Smithsonian Institution, Washington.

Hodges, H.

1989 *Artifacts : an introduction to early materials and technology*. Duckworth, London. (Chapter 4, Copper and copper alloys, pp. 64-79; Chapter 19. Examination of metal objects, pp. 206-222).

Hosler, D.

1995 Sound, Color and Meaning in the Metallurgy of Ancient West Mexico. *World Archaeology* 27(1):100-115.

Kerr, R. and N. Wood

2004 *Science and civilisation in China, Vol. 5 Chemistry and Chemical Technology, Part XII: Ceramic Technology*. University Press, Cambridge. (Part 4. Manufacturing Methods and Techniques – Bronze Age techniques, pp. 396-407).

Lechtman, H.

1977 Style in technology—Some early thoughts. In *Material Culture: Styles, Organization, and Dynamics of Technology*, edited by H. Lechtman and R. Merrill, pp. 3-20. West Publishing, New York.

Miller, H. M. L.

2007 *Archaeological approaches to technology*. Elsevier/Academic Press, Amsterdam; Boston. (Chapter 4. Transformative crafts, pp. 101-166; Chapter 7. The analysis of multiple technologies, pp. 237-245)

Shimada, I.

2005 Experimental archaeology. In *Handbook of archaeological methods*, edited by H. D. G. Maschner and C. Chippindale, pp. 603-642. AltaMira Press, Lanham, MD.

Tite, M. S., V. Kilikoglou and G. Vekinis

2001 Strength, toughness and thermal shock resistance of ancient ceramics, and their influence on technological choice. *Archaeometry* 43:301-324. + comments I and II.

11 – 18 June 2011

Experimental Archaeology: Kiln Construction, Pottery Firing and Bronze Casting

(Assignment # 5)

Readings:

* Rye, O. S.

1981 *Pottery technology: principles and reconstruction*. Taraxacum, Washington, D.C. (Chapter 6. Firing, pp. 96-122).

* Kerr, R. and N. Wood

2004 *Science and civilisation in China, Vol. 5 Chemistry and Chemical Technology, Part XII: Ceramic Technology*. University Press, Cambridge. (Part 4. Kilns, pp. 283-378).

Barnard, N. and T. Sato

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1975 *Metallurgical remains of ancient China*. Nichiosha, Tokyo. (pp. 27-75).

19 June 2011

Leave Anyang and Arrive in Beijing

20 June 2011

Departure for Canada