ARCH 2105: Ceramic Analysis for Archaeology
Friday, 3:00-5:20 PM
Rhode Island Hall Seminar Room
Jennifer Meanwell, Jennifer_Meanwell@brown.edu, 401-863-6936
Office Hours: Friday 10:30-12:30 or by appointment
Course Wiki: http://proteus.brown.edu/ceramics2012/Home

This course is designed to familiarize students with the broad range of ceramic materials found in archaeological investigations. These ceramic materials are used by archaeologists to accomplish a variety of goals: create a chronology, document various activities, and identify cultural contacts and exchange between regions. The course will focus on case studies as a way of understanding the theories and techniques used in ceramic analysis.

The first half of the course will be lecture based and will examine the raw materials of ceramics, the spectrum of ceramics used in archaeological contexts, and production techniques. The second half of the course will be a seminar format, with a student discussion leader (or leaders) each week. These seminars will focus on some of the major theoretical debates on how to interpret ceramics in archaeological contexts. Students should select their topic of interest by October 5th in consultation with the instructor.

Students will be expected to lead one of the seminar sessions during the second half of the course. Depending on enrolment, some weeks may have two discussion leaders. The discussion leaders are responsible for preparing a position paper (approximately 5 pages) on the topic for the week that draws on the assigned readings as well as other relevant literature. Additional readings relevant to the seminar topic should be posted to the private course Wiki for other students to read. The readings and the position paper should be posted to the website at least 2 days before the class, so that everyone will have a chance to prepare for the discussion.

Additionally, students will write a term paper (~20 pages) on some aspect of ceramic analysis in discussion with the instructor. This topic should involve a theoretical question, some analysis that has been performed, and should come from a geographic area of the world different from that where the student does their own field work.

**Assessment**

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<td>Term Paper</td>
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<td>Discussion Participation</td>
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**Text**
The main text book for the class will be Prudence Rice’s (1987/2006) *Pottery Analysis: A Sourcebook*, University of Chicago Press, Chicago. This text is the most broadly based book available on ceramic
analysis and contains a wonderful bibliography. Additionally, multiple readings will be taken from a classic book on ceramics by Anna Shepard (1956) *Ceramics for the Archaeologist*, Carnegie Institution, Washington. This book is well worth purchasing in a used form, and is also available for free online. Readings taken from this book will be posted as PDFs on the class website. The entire book is available at http://carnegiescience.edu/publications_online/ceramics_archaeologist/default.html

**Weekly Schedule:**

**Part I**

Week 1: INTRODUCTION (9/7)
- Introduction to course aims and assignments. Working definition of a ceramic. History of ceramics. Basic chemistry review.

Week 2: RAW MATERIALS (9/14)
- Introductory geology. Weathering and deposition. Clay minerals. Crystalline structures and basic classification of silicate minerals. Procurement strategies. (Porcelain, Jasperware, etc.)

Week 3: SPECTRUM OF ARCHAEOLOGICAL CERAMICS (9/21)

Week 4: FORMING (9/28)

Week 5: DRYING AND FIRING (10/5)

Week 6: PROPERTIES OF CERAMICS (10/12)
- Mechanical properties, fracture mechanics, toughness. Porosity, permeability. Thermal shock resistance. Toughening strategies. (Middle Balsas pottery)

Week 7: PROVENIENCE (10/19)
- Mineralogical and chemical approaches. Trace-element analysis. Ceramic ecology. (Carter case study)

**Part II**

Week 8: CLASSIFICATION (10/26)
- Chronology and typology. Seriation. Definition of wares in terms of technological characteristics. Type-variety system.
Week 9: STYLE (11/2)
Definitions of “style” (decorative, technological). Analysis of technological style from a materials science perspective.

Week 10: PRODUCTION, CONSUMPTION AND EXCHANGE (11/9)

Week 11: SPECIALIZATION VERSUS STANDARDIZATION (11/16)
The interplay between technological evidence and economic models. Technological correlates of specialization?

Week 12: FUNCTIONS OF POTTERY (11/30)
Artificial attempts to parse “function” (social, technological, etc.). Materials science perspective on pottery function and ceramic engineering.

Week 13: RESEARCH DESIGN (12/7)
Sample selection and choice of analytical techniques. Constructing arguments from multiple lines of evidence.
(Partial) Reading List:

**Week 1: INTRODUCTION**

Kingery, W.D.


Rice, Prudence


Tite, Michael S.


**Week 2: RAW MATERIALS**

Rice, Prudence


Chiari, G., R. Giustetto, J. Druzik, E. Doehne, G. Ricchiardi


Shepard, Anna O.


Arnold, Dean


Neupert, Mark A.


**Week 3: SPECTRUM OF ARCHAEOLOGICAL CERAMICS**

Grose, D.F.


Lechtman, Heather and Linn Hobbs


Tite, Michael S, I.C. Freestone, M. Bimson


Gourdin, W.H and W.D. Kingery

**Week 4: FORMING**

Shepard, Anna O.


Rice, Prudence


Gosselain, Olivier P.


**Week 5: DRYING AND FIRING**

Rice, Prudence


Shepard, Anna O.


Livingstone Smith, A


Pool, Christopher A.


Sillar, B.


**Week 6: PROPERTIES OF CERAMICS**

Rice, Prudence


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


Cogswell, James W., Hector Neff, and Michael D. Glascock

**Week 7: PROVENIENCE**

Carter, Sidney W., Bettina Wiegand, Gail A. Mahood, Francis O. Dudas, Joseph L. Wooden, Alan P. Sullivan III, and Samuel A. Bowring


Blomster, J. et al.


Flannery, et al.


Neff, H. et al.


Neff, H. et al.


Sharer, R. J. et al.


Stoltman, et al.

2005  Petrographic evidence shows that pottery exchange between the Olmec and their neighbors was two-way. *PNAS* 102(32): 11213–11218.

**Week 8: CLASSIFICATION**

Rice, Prudence M.


Wheat, Joseph Ben, James C. Gifford, and William W. Wasley


Culbert, T. Patrick, and Robert L. Rands


Adams, Richard E. W.


Adams, Richard E. W.

**Week 9: STYLE**

Sackett, J. R.

1977  

1985  

Wiessner, P.

1985  

Sterner, Judy

1989  

Lechtman, Heather.

1999  

1977  

Sillar, B. and M. S. Tite

2000  

**Week 10: PRODUCTION, CONSUMPTION, AND EXCHANGE**

Feinman, G. M.

1985  

Kamp, Kathryn A.

2001  

Rands, Robert L.

1961  

Foias, Antonia E., and Ronald L. Bishop

1997  

Crossland, L. B., and Merrick Posnansky

1978  

Zedeño, María Nieves.

1998  
**Week 11: SPECIALIZATION VERSUS STANDARDIZATION**

Arnold, Dean E.

2000  Does the Standardization of Ceramic Pastes Really Mean Specialization?. *Journal of Archaeological Method and Theory*, vol. 7, no. 4, pp. 333-375.

Arnold, Dean, and Alvaro L. Nieves


Clark, John E. and William J. Parry


Costin, Cathy Lynne.


Longacre, William.


Sillar, Bill


**Week 12: FUNCTIONS OF POTTERY**

Hendon, Julia A.


Tite, Michael and Vassilis Kilikoglou.


Janusek, John Wanye


Bernardini, Wesley.

Bey, George

Golden, Charles, Andrew K. Scherer, A. René Muñoz and Rosaura Vásquez

Week 13: RESEARCH DESIGN
NSF proposals, as available

Costin, Cathy Lynne

Shepard, Anna O.

Tite, Michael S.

van der Leeuw, S.E.