Lab Methods: Ceramic Analysis
Anthropology 418
Spring 2024

Prof. Vincas Steponaitis (vin@unc.edu)
Office: Alumni 108
Hours: Tu, Th 3:30-4:30, and by appointment

Course Description: This course focuses on ancient ceramic technologies and how they can be reconstructed archaeologically. Methods related to the study of ceramic technology are stressed. Students who take this course will learn how traditional potters made their wares, and how archaeologists recognize which techniques were used from the traces left on the finished products. Students will also learn the basic archaeological methods of describing vessel shapes, reconstructing vessel functions, and determining the chemical composition of ceramic materials. The course is intended for serious students of archaeology (undergraduate or graduate) and anyone interested in ancient ceramic technologies. There are no prerequisites.

Course Structure: There will be two meetings per week. In general, each topic will be covered with one or more lectures, followed by a lab designed to give you some practical experience. There will also be three field trips scheduled on Saturdays (see tentative dates below). Class sessions will be informal, hopefully with lots of verbal give-and-take. You will also select an independent project, on which you will present an oral report and write a paper (10-15 pages, double-spaced). The schedule may change and readings may be updated as the semester proceeds.

Course Requirements: In addition to the assigned readings, requirements include periodic lab assignments (30%); a project prospectus, progress report, and oral report (10%); a term paper based on your independent project (30%); and a final exam (30%).

Course Attendance: Class participation is essential. If you must miss class, please tell me in advance if you can. If you can't, then please contact me as soon as possible afterwards. If your absence is for a valid reason per UNC's policies or other unavoidable circumstances (in my judgment), you will either have the opportunity to make up any work that was missed or have that work excused, at my discretion. For each absence that has no valid reason, a make-up is not guaranteed and I may reduce your final grade by one step (e.g., an A will be reduced to an A-). *If you have Covid or the flu, please notify me and do not come to class.*

Course Web Site: The syllabus, lab exercises, and other relevant information will be posted on the course web site at <http://rla.unc.edu/courses/Anth418/>.

Course Schedule (dates subject to minor changes):

1/11	Introduction
1/16-2/22	Ceramic production: principles and reconstruction [project prospectus due 2/12]
2/27-3/7	Vessel function: analysis of shape and use-wear
	[Spring break]
3/19-3/21	Vessel function: 3D modeling [project progress report due 3/21]
3/26-4/9	Chemical and mineral characterization
4/11	Organization of production
4/16-4/30	Student projects: oral reports
5/3	Paper due (4 pm)
5/7	Final exam (12 pm)

Schedule of Saturday Morning Field Trips (subject to change):

TBA	Wheel throwing and kiln firing (Mark Hewitt, Pittsboro, NC)
TBA	Coiling and open firing (Joe Herbert, UNC Art Lab)
TBA	Cooking with traditional pottery (Rachel Briggs, UNC Art Lab)

Honor Code: Students are expected to adhere to UNC's honor code. In particular, you must refrain from "lying, cheating, or stealing" in the academic context. If you are unsure about which actions violate that honor code, please see me or consult the web (honor.unc.edu).

Generative AI Usage Guidance: Use of generative AI in your coursework is based on the following principles: (1) AI should help you think, not think for you. Use these tools to give you ideas, perform research (in compliance with point 2 below), and analyze problems. Do not use them to do your work for you, e.g., do not enter an assignment question into ChatGPT and copy the response as your answer. (2) Engage with AI technologies responsibly, critically evaluating AI-generated outputs and considering potential biases, limitations, and ethical implications in your analysis and discussions. (3) You are 100% responsible for your final product. (4) You are the user; if AI makes a mistake and you use it, then it's your mistake. (5) The use of AI must be open and documented. (6) The use of any AI in the creation of your work must be declared in your submission and explained. Details on how to source your AI usage are explained below. For more information see <https://provost.unc.edu/student-generative-ai-usage-guidance/>

Attendance Policy: As stated in the University's Class Attendance Policy, no right or privilege exists that permits a student to be absent from any class meetings, except for these university approved absences: (1) authorized university activities; (2) disability, religious observance, or pregnancy; and (3) significant health condition and/or personal/family emergency. See the UNC Class Attendance Policy for details (catalog.unc.edu/policies-procedures/attendance-grading-examination/#text). Also see the "Course Attendance" requirements above.

Accessibility Resources: Accessibility Resources and Service (ARS) receives requests for accommodations, and through the Student and Applicant Accommodations Policy determines eligibility and identifies reasonable accommodations for students with disabilities and/or chronic medical conditions to mitigate or remove the barriers experienced in accessing University courses, programs and activities. ARS also offers its Testing Center resources to students and instructors to facilitate the implementation of testing accommodations. See the ARS website (ars.unc.edu) for contact information or connect by email (ars@unc.edu).

Counseling and Psychological Services: UNC-Chapel Hill is strongly committed to addressing the mental health needs of a diverse student body. The Heels Care Network website is a place to access the many mental health resources at Carolina. CAPS is the primary mental health provider for students, offering timely access to consultation and connection to clinically appropriate services. Go to their website (caps.unc.edu) or visit their facilities on the third floor of the Campus Health building for an initial evaluation to learn more. Students can also call CAPS 24/7 at 919-966-3658 for immediate assistance.

Title IX Resources: Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Reports can be made to the Office of Equal Opportunity & Compliance online (eoc.unc.edu/report-an-incident) or by contacting the University's Title IX Coordinator (Elizabeth Hall, titleixcoordinator@unc.edu) or the Report and Response Coordinators in the EOC Office (reportandresponse@unc.edu). Confidential resources include Counseling and Psychological Services and the Gender Violence Services Coordinators (gvsc@unc.edu). Additional resources are available online (safe.unc.edu).

(rev. 1/10/24)

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Readings

1/16-2/22 CERAMIC PRODUCTION: PRINCIPLES AND RECONSTRUCTION

Rye, Owen (1981). *Pottery Technology: Principles and Reconstruction*. Washington DC: Taraxacum Press. [pp. 1-137]

Sinopoli, Carla M. (1991). *Approaches to Archaeological Ceramics*. New York: Plenum Press. [pp. 1-42]

Braun, David P. (1983). Pots as Tools. In *Archaeological Hammers and Theories*, J. A. Moore and A. S. Keene, eds., pp. 107-134. New York: Academic Press.

McReynolds, Theresa E., and Joseph M. Herbert (2004). An Evaluation of the Utility of Carolina Clays for Woodland Potters. Paper presented at a joint meeting of the Southeastern Archaeological Conference and the Midwestern Archaeological Conference, St. Louis.

Optional: Carr 1990; DeBoer and Lathrap 1979; Franken 1969; Franken 1974: Introduction; Franken and Kalsbeek 1975; Gibson and Woods 1990: 1-56; Gilman 1967; Gosselain 1992; Hurley 1978; Lawrence 1972; McReynolds and Herbert 2008; Rice 2015: 1-185; Rodgers 1980; Rye 1977; Shepard 1956: 1-94, 147-224, 378-394; van der Leeuw 1976: Parts 2-4.

2/27-3/7 VESSEL FUNCTION: ANALYSIS OF SHAPE AND USE-WEAR

Shepard, Anna O. (1956). *Ceramics for the Archaeologist*. Publication 609. Carnegie Institution of Washington, Washington, DC. [pp. 224-255]

Sinopoli, Carla M. (1991). *Approaches to Archaeological Ceramics*. New York: Plenum Press. [pp. 83-98]

Plog, Stephen (1985). Estimating vessel orifice diameters: Measurement methods and measurement error. In *Decoding Prehistoric Ceramics*, edited by Ben A. Nelson, pp. 243-253. Carbondale: Southern Illinois University Press.

Egloff, B. J. (1973). A Method of Counting Ceramic Rim Sherds. *American Antiquity* 38(3):351-353.

Collett, Lesley (2012). *An Introduction to Drawing Archaeological Pottery*. Institute for Archaeologists, Professional Practice Paper 10. University of Reading, U.K. [pp. 2-12, skim the rest]

Henrickson, Elizabeth R., and M. McDonald (1983). Ceramic Form and Function: An Ethnographic Search and an Archeological Application. *American Anthropologist* 85(3):630-643.

Hally, David J. (1986). The Identification of Vessel Function: a Case Study from Northwest Georgia. *American Antiquity* 51(2): 267-295.

Hally, David J. (1983b). Use Alteration of Pottery Vessel Surfaces: An Important Source of Evidence in the Identification of Vessel Function. *North American Archaeologist* 4(1):3-26.

Griffiths, Dorothy M. (1978). Use Marks on Historic Ceramics: A Preliminary Study. *Historical Archaeology* 12:78-81.

Crown, Patricia L., et al. (2012). Ritual Black Drink Consumption at Cahokia. *Proceedings of the National Academy of Sciences* 109(35): 13944–13949.

DeBoer, Warren R. (1974). Ceramic longevity and archaeological interpretation: an example from the upper Ucayali, Peru. *American Antiquity* 39(2):335-343.

DeBoer, Warren R. (1985). Pots and pans do not speak, nor do they lie: The case for occasional reductionism, pp. 347-357. In *Decoding Prehistoric Ceramics*, edited by Ben A. Nelson. Carbondale: Southern Illinois University Press.

Additional Case Studies:

Whallon, Robert (1969). Rim Diameter, Vessel Volume, and Economic Prehistory. *Michigan Academician* 11(2):89-98.

Turner, Christy G., and L. Lofgren (1966). Household size of prehistoric Western Pueblo Indians. *Southwestern Journal of Anthropology* 22:117-132.

Blitz, John H. (1993). Big Pots for Big Shots: Feasting and Storage in a Mississippian Community. *American Antiquity* 58(1): 80-96.

Welch, Paul D., and C. Margaret Scarry (1995). Status Related Variation in Foodways in the Moundville Chiefdom. *American Antiquity* 60: 397-419.

Optional: Braun 1980; Cackette et al. 1987; Crown and Hurst 2009; David 1972; Duma 1972; Ericson and De Atley 1976; Ericson and Stickel 1973; Hagstrum and Hidebrand 1990; Heron and Evershed 1993; Orton 1970, 1971; Reber and Evershed 2004b; Rice 2015: 232-244, 411-432; Senior and Birnie 1995; Skibo 1992.

3/18-3/21 VESSEL FUNCTION: 3D MODELING

Davis, R. P. Stephen Jr. (2018). Using 3D for Research and Preservation at the RLA. [https://sketchfab.com/blogs/community/using-3d-for-research-and-preservation-at-the-rla/]

Bischoff, Robert J. (2021). Artifact Photogrammetry Basics. [https://bischrob.github.io/Artifact-Photogrammetry-Basics/]

3/26-4/11 CHEMICAL AND MINERAL CHARACTERIZATION

Rice, Prudence (2015). *Pottery Analysis: A Sourcebook*. Chicago: Univ. of Chicago Press. [pp. 291-303]

Steponaitis, Vincas P., M. James Blackman, and Hector Neff (1996). Large-Scale Patterns in the Chemical Composition of Mississippian Pottery. *American Antiquity* 61(3): 555-572.

Optional: Bishop et al. 1982; Braun 1982; Grim 1968; Goffer 1980; Harbottle 1982; Hutchinson 1974; Isphording 1974; Neff 1992; Peacock 1967, 1968, 1970, 1980; Shepard 1956: 138-168; Shepard 1965; Stoltman 1989, 1991; Tite 1972: 215-222, 224-230, 256-288, 295-300; Wood 1964.

4/16 ORGANIZATION OF PRODUCTION

Sinopoli, Carla M. (1991). *Approaches to Archaeological Ceramics*. New York: Plenum Press. [pp. 83-99]

Costin, Cathy (1991). Craft Specialization: Issues in Defining, Documenting, and Explaining the Organization of Production. In *Archaeological Method and Theory*, vol. 3, M. Schiffer, ed., pp. 1-56. Tucson: University of Arizona Press.

Benco, Nancy L. (1989a). Diversity in Ceramic Production: A Case Study from Medieval North Africa. In *Medieval Archaeology*, C. L. Redman, ed., pp. 97-118. Binghamton, NY: Center for Medieval and Renaissance Texts and Studies.

Roux, Valentine (2003). Ceramic Standardization and Intensity of Production: Quantifying Degrees of Specialization. *American Antiquity* 68(4):768-782.

Optional: Abbott 2009; Abbott et al. 2007; Arnold 1985; Benco 1988; Blitz 1993; Costin 1991; D'Altroy and Bishop 1990; Feinman, Upham, and Lightfoot 1981; Feinman 1985 (in Nelson 1985); Harry 2005; Mills 2007; Rice 1981; Rice 1987: 168-205; Rice 2015: 335-375; Stark 1985 (in Nelson 1985).