

DEPARTMENT OF ANTHROPOLOGY ANTH 3235 FAO Ceramic Analysis

Fall 2021

CONTACT INFORMATION

Instructor: Dr Timothy Kaiser
Office: OA 3008
Zoom office hours: by appointment
Email: tkaiser@lakeheadu.ca
Course Website: MyCourseLink (D2L)



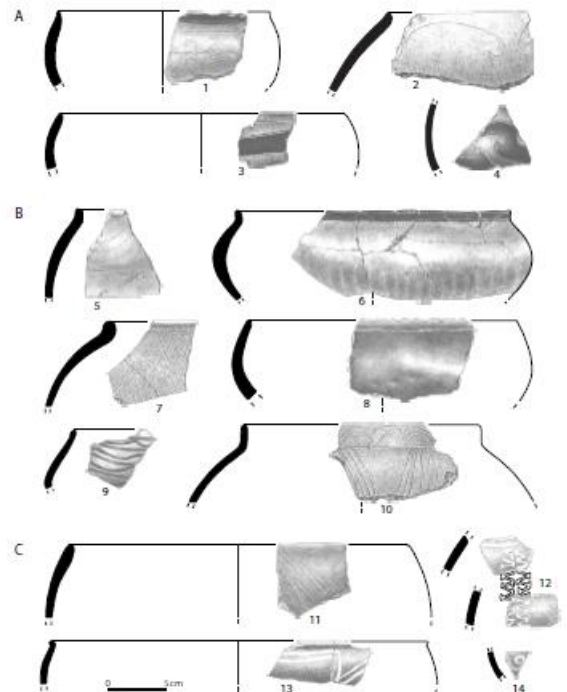
DELIVERY MODE/LOCATION

Lecture: OA 2015 Tuesday & Thursday 11:30 am – 1 pm
Lab: OA 3001 Friday 8:30 – 1130 am

COURSE DESCRIPTION

The analysis of ceramics, combining archaeology and ethnology. From prehistory to the present, people have used clay to form pottery and other objects. How can ceramic evidence permit inferences about societies past and present? Topics include the chemistry and mineralogy of clays; physical properties of ceramics; techniques of pottery production; organization of ceramic data; analysis of pottery style, form and function; instrumental analysis; and frameworks for interpreting the societies, politics, and economies of pottery makers and users. Perspectives from archaeology and ethnology are joined with the development of hands-on laboratory skills including drawing pottery, analyzing fabric, working with a ceramics database, and creating typologies.

<http://navigator.lakeheadu.ca/Content/Default/Controls/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=19&chapterid=2790&topicgroupid=8157&loaduseredit=False&pg=2>



SUPPLEMENTARY COURSE DESCRIPTION

Archaeologists analyze and interpret ceramics, mostly pottery vessels, in order to learn about the past. Ceramics can be used to create a timeline – a chronology of events and processes. Pottery is often capable of elucidating the interactions between different areas and people. Ceramics sometimes indicate what activities were carried out at particular sites. This course focuses on how ceramics and information about ceramics may be recovered and how they might be interpreted.

At first, we will learn about pottery technology. We begin with the physical and chemical characteristics of clay and temper and then go on to a consideration of how useful ceramic vessels are created from clay. Then we will learn how archaeologists have used pots and potsherds to answer questions about the past. Finally, we will consider case studies presented by students. Presentations will summarize the manufacture and use of particular types of ceramics in some chosen geographic area of interest.

COURSE OUTCOMES

By the end of this class you will be able to: (i) explain the physical processes of pottery production, (ii) explain the relevance of the societal contexts within which the production may have taken place, (iii) critically evaluate published work relating to archaeological ceramics, (iv) evaluate the relevance and applicability of various methods of ceramic analysis; (v) employ some archaeological techniques for the analysis and interpretation of ceramic materials; and (vi) devise an effective research plan for the analysis of archaeological ceramic material.



REQUIRED MATERIALS

Prudence Rice, *Pottery Analysis: A Sourcebook*, 2nd ed. (2015) University of Chicago Press
Drafting materials, see Lab 2 instructions, D2L.

ADDITIONAL MATERIALS

Recommended:

Collett, Lesley

2008 An Introduction to Drawing Archaeological Pottery. IfA Professional Practice Paper 10. Reading:
University of Reading Institute for Archaeologists.

Orton, Clive, Paul Tyers, and Alan Vince

1993 *Pottery in Archaeology*. Cambridge

Skibo, James and Gary Feinman

1998 *Pottery and People*. Utah

Sinopoli, Carla

1991 *Approaches to Archaeological Ceramics*. Springer.

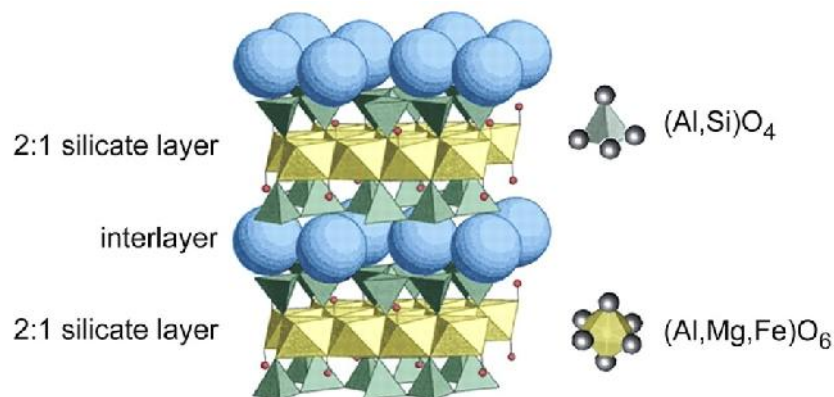
Shepard, Anna

1982 *Ceramics for the Archaeologist* The full-text PDF is available for free online at
http://www.carnegieinstitution.org/publications_online/Ceramics_Arch.pdf

Rice, Prudence

1996a Recent Ceramic Analysis: 1. Function, Style, and Origins. *Journal of Archaeological Research*
4:133-163.

1996b Recent Ceramic Analysis: 2. Composition, Production, and Theory. *Journal of Archaeological
Research* 4:165-202.



EVALUATION

Component	Value	Due Date
Labs x 8	8x5 = 40%	See below
Reading responses x 6	6x3.3% = 20%	Weeks 3-6, 8, and 9
Annotated bibliography	10%	Week 9
Presentation	10%	Week 11
Research paper	20%	Last class

Labs:

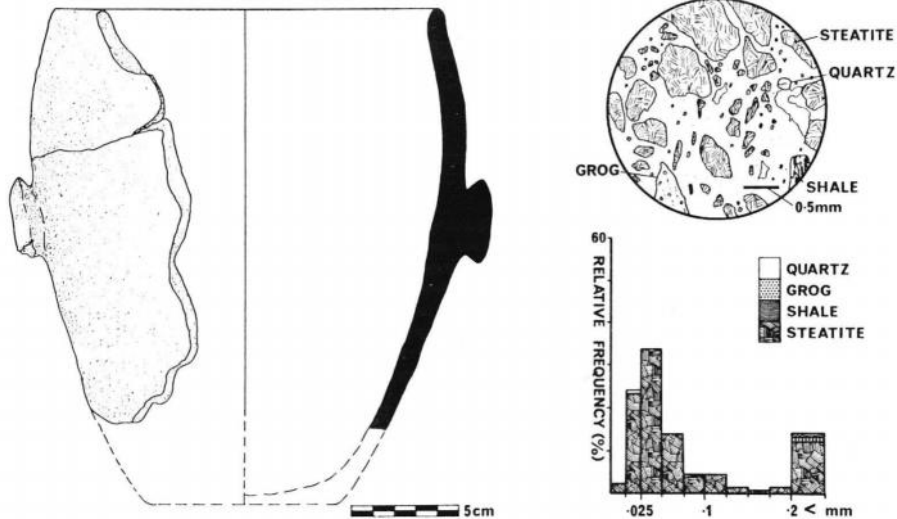
There will be 9 lab sessions. Each will have a hands-on component and a written component. Due dates will vary; see specific instructions.

Reading responses:

Answer a few short questions assessing your understanding of or reactions to the assigned chapters or papers in Weeks 3-6 and 8-9. A rapid response is expected. No extensions.

Assignments:

The annotated bibliography, presentation, and research paper will be on the same topic: a summary of what is known about a particular ceramic tradition, i.e., the manufacture and use of (a) particular type(s) of pottery or other fired-clay material(s) in some chosen geographic area of interest in the ethnographic present or the archaeological past. Students will conduct independent bibliographic research which they will report as an annotated bibliography, and then synthesize as a PowerPoint presentation and as a 15-page paper. Detailed instructions will be found on D2L.



COURSE SCHEDULE

Week	Date	Topic	• Required and Otherwise Useful Reading
1	Sept 7-9	Introduction to the course	
	Sept 10	LAB 0 – Introduction to the laboratory	
2	Sept 14-16	Properties of ceramics and their analysis <ul style="list-style-type: none">• Rice <i>Pottery Analysis: A Sourcebook</i> Ch 1, 12	
		Recommended/related: Orton, C., <i>et al.</i> Chapters 1 and 2	
		Ortega, Felipe V. (2005) Ceramics for the Archaeologist: An Alternate perspective. In <i>Engaged Anthropology: Research Essays on North American Archaeology, Ethnobotany, and Museology</i> , edited by M. Hegmon and B. S. Eisele, pp. 1-5. Museum of Anthropology, Anthropological Papers, No. 94, Ann Arbor.	
		Gosselain, Oliver P. (1999). In <i>Pots We Trust. The Processing of Clay and Symbols In Sub-Saharan Africa. Journal of Material Culture</i> Vol. 4(2): 205–230 Laboratory Section: Micaceous Pottery Manufacture (Building)	
	Sept 17	LAB 1: Breaking Pots	
3	Sept 21-23	Ceramic materials <ul style="list-style-type: none">• Rice, Ch. 2• C. Orton, <i>et al.</i> Chapter 5• Watch <i>Ceramic Composition with Dr Lindsay Bloch Florida Museum</i> https://www.youtube.com/watch?v=IZ3LrLI5LzE	
		Recommended/related: Velde, B. and I. C. Druc (1999). <i>Archaeological Ceramic Materials: Origin and Utilization</i> . Springer-Verlag Berlin Heidelberg. Read Chapters 2, 3 and 4	
		Arnold, D.E. (1971) The Ethnomineralogy of Ticul, Yucatan Potters: Emics and Etics. <i>American Antiquity</i> 36(1):20-40.	
		Nicholson, P. and H. Patterson (1985) Pottery making in Upper Egypt: an ethnoarchaeological study. <i>World Archaeology</i> 17(2): 222-239.	
	Sept 24	LAB 2: Drawing pottery	

4 **Sept 28-
Sept 30**

Physical properties of clay minerals and inclusions

- Rice, Ch 3-7

Recommended/related:

Bronitsky, G., and R. Hamer (1986) Experiments in Ceramic Technology: The Effects of Various Tempering Materials on Impact and Thermal-Shock Resistance. *American Antiquity* 51:89-101.

Rye, O. S. (1976) Keeping Your Temper Under Control. *Archaeology and Physical Anthropology in Oceania* 11(2):106-137.

Skibo, J.M., M. B. Schiffer, and K. C. Reid (1989) Organic-Tempered Pottery: An Experimental Study *American Antiquity*, Vol. 54(1) pp. 122-146.

Shepard, A. O. (1964) Temper Identification: "Technological Sherd-Splitting" or an Unanswered Challenge *American Antiquity*, Vol. 29, No. 4. (Apr., 1964), pp. 518-520.

Longacre, William A., Jingfeng Xia, and Tao Yang (2000) I Want to Buy a Black Pot. *Journal of Archaeological Method and Theory* 7(4):273-293.

Pierce, Christopher (2005) Reverse Engineering the Ceramic Cooking Pot: Cost and Performance Properties of Plain and Textured Vessels. *Journal of Archaeological Method and Theory* 12:117-157.

Martineau, R. (2005) Identification of the "Beater and Anvil" Technique in Neolithic Contexts: An Experimental Approach. In *Pottery Manufacturing Processes: Reconstitution and Interpretation*, edited by A. Livingstone Smith, D. Bosquet, and R. Martineau, pp. 147-156. BAR International Series 1349, Oxford.

Gosselain, Olivier P. (1992) Bonfire of the Enquiries. Pottery Firing Temperatures in Archaeology: What For? *Journal of Archaeological Science* 19(3):243-259.

Oct 1 LAB 3: Forming pots, first forays

5 **Oct 7-9**

Making Pottery

- Rice, Ch. 8-11
- Watch *Dig Deeper: Pottery (Coil Technique)*
<https://www.youtube.com/watch?v=UgEY-wt-BCg>

Oct 10 NO LAB today

Oct 11-15 FALL STUDY BREAK

6 **Oct 19-21** **Ceramic styles, designs and decorations**

- Rice, Ch. 24

Recommended/related:

Watson, P. J. (1977). Design Analysis of Painted Pottery. *American Antiquity* 42:381-393.

Washburn, Dorothy (1989). The Property of Symmetry and the Concept of Ethnic Style. In *Archaeological Approaches to Cultural Identity*, S. J. Shennan, ed., pp. 157-173. London: Unwin Hyman.

Hole, F. (1984). Analysis of Structure and Design in Prehistoric Ceramics. *World Archaeology* Vol. 15(3):326-347

David, N., J. Sterner and K. Gavua (1988) Why Pots Are Decorated. *Current Anthropology* 29(3):365-389.

Hegmon, M. and S. Kulow (2005) Painting as Agency, Style as Structure: Innovations in Mimbres Pottery Designs from Southwest New Mexico. *Journal of Archaeological Method and Theory* Vol. 12(4), pp. 313-344.

Skibo, J.M., M. B. Schiffer, and N. Kowalski. (1989). Ceramic style analysis in archaeology and ethnoarchaeology: Bridging the analytical gap. *Journal of Anthropological Archaeology*, Vol. 8(4), pp. 388-409

Jernigan, E.W. (1986). A Non-Hierarchical Approach to Ceramic Decoration Analysis: A Southwestern Example. *American Antiquity*, Vol. 51(1) pp. 3-20.

Ortman, Scott G. (2000). Conceptual Metaphor in the Archaeological Record: Methods and an Example From The American Southwest. *American Antiquity* : 65:613-645.

Arnold, D.E. (1984) Social Interaction and Ceramic Design: Community-wide Correlations in Quinoa, Peru. In, *Pots and Potters: Current Approaches in Ceramic Archaeology*, edited by P. M. Rice, pp. 55-69. UCLA Institute of Archaeology, Monograph 24, University of California, Los Angeles

Bowser, B.J. (2000) From Pottery to Politics: An Ethnoarcheological Study of Political Factionalism, Ethnicity, and Domestic Pottery Style in the Ecuadorian Amazon. *Journal of Archaeological Method and Theory* Vol. 7(3), pp. 219-248.

Oct 22

LAB 4a: Making pastes; 4b: Sampling

7 **Oct 26-28** **Analysis of pottery from archaeological contexts**

- Rice, Ch 14, 17-19, 23
- Kaiser, T. (1989) Steatite-tempered pottery from Selevac: A Neolithic experiment in ceramic design. *Archeomaterials* 3(1): 1-10.

- Amicone, SI, AR Mathur, RD Pavitra, N Miković-Marić, I Pantović, and J Kuzmanović-Cvetković (In press. Available online 23 April 2020) Beneath the surface: Exploring variability in pottery paste recipes within Vinča culture. *Quaternary International*

Recommended/related:

Tite, M.S. (1999). Pottery Production, Distribution, and Consumption – The Contribution of the Physical Sciences. *Journal of Archaeological Method and Theory* Vol 6(3), pp. 181-233.

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. 297-326, Plenum Publishers, New York

Neff, H., and D. M. Glowacki (2001). Ceramic Source Determination by Instrumental Neutron Activation Analysis in the American Southwest. *Hector Neff and Donna M. Glowacki*. In, *Ceramic Production and Circulation in the Greater Southwest: Source Determination by INAA and Complementary Mineralogical Investigations*, edited by D. M. Glowacki and H. Neff. The Cotsen Institute of Archaeology, UCLA M.

Glasscock, D. (1992) Characterization of Archaeological Ceramics at MURR by Neutron Activation Analysis and Multivariate Statistics. In *Chemical Characterization of Ceramic Pastes in Archaeology*, edited by H. Neff, 11-26. Monographs in World Archaeology, No. 7, Madison, WI: Prehistory Press.

Speakman, R.J. and H. Neff (2005). The Application of Laser Ablation ICP-MS to the Study of Archaeological Materials—An Introduction. In, *Laser Ablation ICP-MS in Archaeology*, edited by Robert J. Speakman and Hector Neff. University of New Mexico Press

Arnold, Dean E., Hector Neff, and Ronald Bishop (1991). Compositional Analysis and "Sources" of Pottery: An Ethnoarcheological Approach. *American Anthropologist* 93(1):70-90.

Arnold, D.E. (2005). Linking Society with the Compositional Analyses of Pottery: A Model from Comparative Ethnography. In *Pottery Manufacturing Processes: Reconstitution and Interpretation*, edited by A. Livingstone Smith, D. Bosquet, and R. Martineau, pp. 15-21. BAR International Series 1349, Oxford.

Heidke, J.M., E. J. Miksa, and H. D. Wallace. (2001) A Petrographic Approach to Sand-Tempered Pottery Provenance Studies: Examples from Two Hohokam Local Systems. In, *Ceramic Production and Circulation in the Greater Southwest: Source Determination by INAA and Complementary Mineralogical Investigations*, edited by D. M. Glowacki and H. Neff. The Cotsen Institute of Archaeology, UCLA.

Neff, H.R., L. Bishop, and E. V. Sayre (1989) More Observations on the Problem of Tempering in Compositional Studies of Archaeological Ceramics. *The Journal of Archaeological Science* 15:57-69.

Neff, H., M. D. Glasscock, R. L. Bishop, and M. J. Blackman (1996) A reassessment of the Acid Extraction Approach to Compositional Characterization of Archaeological Ceramics. *American Antiquity* 61:389-404

Chen, M. (2006) Physiochemical Compositional Analysis of Ceramics: A Case Study in Kenting, Taiwan. *Archaeometry* 48(4) 2006, pp. 565-580

Oct 29

LAB 5a: Macroscopic and microscopic characterization; 5b: Drawing pottery 2

8

Nov 2-4

Pottery form, pottery function

- Rice, Ch 25

Recommended/related:

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

Skibo, J.M. (1992) *Pottery Function: A Use Alteration Perspective*. Plenum Press, New York. Read Chapter 3 C.

Heron and R. P. Evershed (1993) The Analysis of Organic Residues and the Study of Pottery Function. In *Archaeological Method and Theory*, vol. 5, M. Schiffer, ed., Tucson: University of Arizona Press.

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

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

Nov 5

LAB 6: Designing a coding system and analysis of a sample of Neolithic pot sherds

9

Nov 9-11

Classification and chronology

- Rice, Ch 13

Recommended/related:

Smith, E. (1979) A Further Criticism of the Type-Variety System: The Data can't be Used. *American Antiquity* 44(4): 822-826.

Whallon, R.J. (1972) A New Approach to Pottery Typology. *American Antiquity* 37:13-33.

Marquardt, W. (1978) Advances in Archaeological Seriation. *Advances in Archaeological Method and Theory* 1: 257-314.

Culbert, T., T. Patrick and R. L. Rands (2007). Multiple Classifications: An Alternative Approach to the Investigation of Maya Ceramics. *Latin American Antiquity* Vol. 18(2), pp. 181- 190.

Kaplan, F.S. and D. M. Levine. Cognitive Mapping of a Folk Taxonomy of Mexican Pottery: A Multivariate Approach. *American Anthropologist*, New Series, Vol. 83(4), pp. 868-884.

Arnold, P.J. (1999). On Typologies, Selection, and Ethnoarchaeology in Ceramic Production Studies. In, *Material Meanings: Critical Approaches to the Interpretation of Material Culture*, edited by E. Chilton, pp. 103-117. (AVAILABLE ON-LINE AS AN E-BOOK)

Nov 12

LAB 7: Seriation

10

Nov 16-18

Ceramic ecology

- Costin, C.L.. (2000) The Use of Ethnoarchaeology for the Archaeological Study of Ceramic Production. *Journal of Archaeological Method and Theory*, Vol. 7, No. 4
- Stark, M.T. (2003) Current Issues in Ceramic Ethnoarchaeology. *Journal of Archaeological Research* 11(3):193-242

Recommended/related:

Arnold, D.E., D. L. Brockington; B. K. Chatterjee; J. C. Howry; W. H. Isbell, M Kresz; T. P. Myers; Y. Onuki; R. Pearson; S. Prasad; R. Ravines; J. S. Raymond; J. C. Sharma; S. Webster; R. Orr Whyte (1975) Ceramic Ecology of the Ayacucho Basin, Peru: Implications for Prehistory [and Comments and Replies] *Current Anthropology*, Vol. 16, No. 2. (Jun., 1975), pp. 183-205.

Costin, C.L.. (2000) The Use of Ethnoarchaeology for the Archaeological Study of Ceramic Production. *Journal of Archaeological Method and Theory*, Vol. 7, No. 4

Stark, M.T. (2003) Current Issues in Ceramic Ethnoarchaeology. *Journal of Archaeological Research* 11(3):193-242

Arnold, D.E. (2003). Ecology and Ceramic Production in an Andean Community. Cambridge University Press. Read Chapters 4 and 9.

Stark, M. and J. M. Skibo (2007) A History of the Kalinga Ethnoarchaeological Project. In *Archaeological Anthropology: Perspectives on Method and Theory*, pp. 93-110, edited by J. M. Skibo, M. W. Graves, and M. T. Stark. The University of Arizona Press.

Abbott, D.R. (2007). The process, location, and history of Hohokam Buff ware production: some experimental and analytical results. *Journal of Archaeological Science*

Stark, M.T., R. L. Bishop, and E. Miksa. (2000) Ceramic Technology and Social Boundaries: Cultural Practices in Kalinga Clay Selection and Use. *Journal of Archaeological Method and Theory*, Vol. 7(4), pp. 295-331.

Nov 19

LAB 8: Analysis of a sample of Neolithic pot sherds

11

Nov 23-25

Ceramics and societies

Mills, B.J. (2007). Performing the Feast: Visual Display and Suprahousehold Commensalism in the Puebloan Southwest. *American Antiquity* Vol. 72(2) 210-239.

Tani, M. (1994) Why Should More Pots Break in Larger Households? Mechanisms Underlying Population Estimates from Ceramics In W. Longacre and J. Skibo, eds., *Kalinga Ethnoarchaeology*. pp. 127-168. Washington, D.C.: Smithsonian Institution Press.

Longacre, W.A. and M. T. Stark (1992). Ceramics, kinship, and space: A Kalinga example. *Journal of Anthropological Archaeology*, Vol. 11(2), pp. 125-136

Stark, M.T.. (1992). From Sibling to Suki: Social Relations and Spatial Proximity in Kalinga Pottery Exchange. *Journal of Anthropological Archaeology*, Vol. 11(2) pp. 137-151

Sinopoli, C.M. (1999) Levels of Complexity: Ceramic Variability at Vigayanagra. In, *Pottery and People: A Dynamic Interaction*, edited by J. M. Skibo and G. M. Feinman, pp. 115-136. University of Utah Press

Smith, M.L. (1999). The Role of Ordinary Goods in Premodern Exchange. *Journal of Archaeological Method and Theory*, Vol. 6(2), pp. 109-135.

Cecil, L.G. and H, Neff (2006). Postclassic Maya slips and paints and their relationship to sociopolitical groups in El Petén, Guatemala. *Journal of Archaeological Science*, Vol. 33(10), pp. 1482-1491

Hodge, M.G., L. D. Minc (1990). The Spatial Patterning of Aztec Ceramics: Implications for Prehispanic Exchange Systems in the Valley of Mexico. *Journal of Field Archaeology*, Vol. 17(4), pp. 415-437.

Bray, T.L., L. D. Minc, M. C. Ceruti, J. A. Chávez, R. Perea and J. Reinhard (2005). A compositional analysis of pottery vessels associated with the Inca ritual of capacocha *Journal of Anthropological Archaeology*, Vol. 24(1), pp. 82-100

Pollock, S. (1983). Style and information: An analysis of Susiana ceramics *Journal of Anthropological Archaeology*, Vol. 2(4), pp. 354-390

Bernardini, W. (2000) Kiln Firing Groups: Inter-Household Economic Collaboration and Social Organization in the Northern American Southwest. *American Antiquity*, Vol. 65(2), pp. 365-377

Bernardini, W. (2005) Reconsidering Spatial and Temporal Aspects of Prehistoric Cultural Identity: A Case Study from the American Southwest. *American Antiquity*. Vol. 70(1):31-54

12

Nov 30-
Dec 2

Conclusion

 **RESEARCH PAPERS DUE** 

COURSE POLICIES

- It is your responsibility to do the readings and complete the assignments.
- In case of un-excused lateness, assignments will have 2% deducted from the mark for every day of lateness. No assignment that is more than ten days late will be accepted.

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Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please visit <https://www.lakeheadu.ca/faculty-and-staff/departments/services/sas>

ACADEMIC DISHONESTY

The University takes a most serious view of offences against academic honesty such as plagiarism, cheating and impersonation. Penalties for dealing with such offences will be strictly enforced.

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We respectfully acknowledge that Lakehead University campuses are located on the traditional lands of Indigenous peoples. Lakehead University acknowledges the history that many nations hold in the areas around our campuses, and is committed to a relationship with First Nations, Métis, and Inuit peoples based on the principles of mutual trust, respect, reciprocity, and collaboration in the spirit of reconciliation.