

**Arch 5110 FA Archaeological Science Seminar
Fall 2022**

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classroom BB2002
Mon and Wed, 8:30 to 10 am.
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This course addresses communication and critical appraisal in archaeological science. It emphasizes exploration of methods and their theoretical underpinnings. It contributes to skills development in information synthesis and presentation, and critical evaluation of research proposals, briefing documents, oral presentations and formal seminars.

Both faculty members and students will lead seminars that address various research topics in the archaeological and bio-anthropological sciences. You will be expected to read assigned background materials, listen to the presentations, and participate in the discussion that ensues. You will submit short written 'reflections' or critiques about these issues, and contribute a seminar presentation on a topic of your choice.

It is important to review the supporting readings before the presentation to be better prepared to meaningfully participate. The assigned/suggested readings will be available on MyCourseLink (folders with presenter's name on them). PDF versions of Hamilton's class presentations will also be made available. Some of the other presenters might also make their materials available.

The primary 'learner outcome' is to refine students' critical thinking, plus written and oral communication skills. Grading emphasis is on demonstrated comprehension of the topics at hand, and the quality of communication.

Writing must be focused and well-crafted. Think carefully about your objectives and write deliberately and sparingly. Readers' and listeners' attention span is generally short. You must capture interest and provide information that builds to a defensible conclusion. Also important is recognition of uncertainty and potential bias. An important part of scholarship is self-reflection and self-criticism.

Writing well is difficult, and academic prose may be disjointed, convoluted, incompletely argued and jargon laden. Work to do better. When writing about a controversy or difference of interpretation, offer a critically balanced summary of positions, the basis for interpretation, and how well the data supports the divergent conclusions.

Lakehead's Accommodation & Confidentiality Statements:

Lakehead University is committed to achieving full accessibility for persons with disabilities/medical conditions. Part of this commitment includes arranging academic accommodations for students with disabilities/medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability/medical condition 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 email sas@lakeheadu.ca or visit <https://www.lakeheadu.ca/faculty-and-staff/departments/services/sas>

Grading

- 3 critical reviews of papers/presentations (800 words submitted as text documents to the instructor at shamilto@lakeheadu.ca) (3 x 10%)
- research 'speed dating' oral presentation (10%)
- 30 minute seminar presentation (25%)

- 10-15 page paper discussing an instructor-approved topic (25%)
- class participation (10%)

Week 1 (Sept 7) The first class will be cancelled as Hamilton has a field work opportunity. The first lecture pack will be posted as a pdf and will be briefly reviewed in the week of Sept 12.

- Wk1a: Course Introduction
What is academic criticism?

Week 2 (Sept 12, 14) Scott Hamilton

- Wk 2: Role of Theory in Research

Week 3 (Sept 19, 21) Matt Tocheri:

- Topics in PaleoAnthropology. Discoveries, Debates, and the Details: Deciphering the Complexities and Incompleteness of the Hobbit Fossil Record.

Readings <https://drive.google.com/open?id=1iihYJO8OtTNmXiE5i5MdSI-aaCl7VpQm>

- 1) Brown, P., Sutikna, T., Morwood, M.J., Soejono, R.P., Jatmiko, Wahyu Saptomo, E., Rokus Awe Due., 2004. A new small-bodied hominin from the Late Pleistocene of Flores, Indonesia. *Nature* 431, 1055–1061.
- 2) Morwood, M.J., Soejono, R.P., Roberts, R.G., Sutikna, T., Turney, C.S.M., Westaway, K.E., Rink, W.J., Zhao, J.-x., van den Bergh, G.D., Due, R.A., Hobbs, D.R., Moore, M.W., Bird, M.I., Fifield, L.K., 2004. Archaeology and age of a new hominin from Flores in eastern Indonesia. *Nature* 431, 1087–1091.
- 3) Morwood, M.J., Brown, P., Jatmiko, Sutikna, T., Wahyu Saptomo, E., Westaway, K.E., Rokus Awe Due, Roberts, R.G., Maeda, T., Wasisto, S., Djubiantono, T., 2005. Further evidence for small-bodied hominins from the Late Pleistocene of Flores, Indonesia. *Nature* 437, 1012–1017.
- 4) Bednarik, R.G., 1997. The initial peopling of Wallacea and Sahul. *Anthropos* 92:355–367.
- 5) Bednarik, R.G., 2009. Reviewing the Flores Hobbit Chronicles. *Anthropos* 104:195–198.
- 6) Sutikna, T., Tocheri, M.W., Morwood, M.J., Wahyu Saptomo, E., Jatmiko, Rokus Due Awe, Wasisto, S., Westaway, K.E., Aubert, M., Li, B., Zhao, J.-x., Storey, M., Alloway, B.V., Morley, M.W., Meijer, H.J.M., van den Bergh, G.D., Grün, R., Dosseto, A., Brumm, A., Jungers, W.L., Roberts, R.G., 2016. Revised stratigraphy and chronology for *Homo floresiensis* at Liang Bua in Indonesia. *Nature* 532, 366–369.
- 7) Sutikna, T., Tocheri, M.W., Faith, J.T., Jatmiko, Rokus Due Awe, Meijer, H.J.M., Wahyu Saptomo, E., Roberts, R.G., 2018. The spatio-temporal distribution of archaeological and faunal finds at Liang Bua (Flores, Indonesia) in light of the revised chronology for *Homo floresiensis*. *Journal of Human Evolution* 124, 52–74.
- 8) Veatch, E.G., Tocheri, M.W., Sutikna, T., McGrath, K., Wahyu Saptomo, E., Jatmiko, Helgen, K.M. Temporal shifts in the distribution of murine rodent body size classes at Liang Bua (Flores, Indonesia) reveal new insights into the paleoecology of *Homo floresiensis* and associated fauna. *Journal of Human Evolution* 130, 45–60.

Week 4 (Sept 26, 28) Scott Hamilton, Students

- **Developing a research proposal**
- **Research ‘Speed Dating’.** Students have 10-15 minutes to informally talk about their proposed thesis research. Introduce your thesis idea, how you became interested in the topic, why you think it is interesting and intellectually important, and how you might go about addressing it.

Week 5 Scott Hamilton (Oct 3), Jessica Metcalfe: (Oct 5)

- Hamilton: Introduction to cartography in archaeology

- Metcalfe: ‘The Great and the Small: Stable isotopes and large mammals’
Reading: Metcalfe, J.Z., Ives, J.W., Shirazi, S., Gilmore, K.P., Hallson, J., Brock, F., Clark, B.J., Shapiro, B., 2021. Isotopic evidence for long-distance connections of the AD thirteenth-century Promontory caves occupants, *American Antiquity* 86, 526-548.
Assignment due. Critical Review #1

Study Week (Oct 10 to 16)

Week 6 (Oct 17, 19) Scott Hamilton

- Wk6a: Remote Sensing and its application to archaeology
- Wk6b UAVs and LiDAR applications to archaeology Readings: read one or two.
Hamilton, S. 2018 ‘More than pretty pictures: Drones, bison kills, and considerations of cultural landscapes’
Archaeological Survey of Alberta, Occasional Paper No. 28, pp.53-91.
Hamilton, S. 2017 ‘Drone mapping and photogrammetry at Brandon House 4’. *Society for Historical Archaeology*. 51(4), 563-575. DOI 10.1007/s41636-017-0069-4.
Hamilton, S. and J. Stephenson 2017 ‘UAV (drone) aerial photography and photogrammetry and its utility for archaeological site documentation’. Occasional Paper #2, Ontario Association of Professional Archaeologists.
http://www.apaontario.ca/resources/Documents/APA_OccasionalPaper2_DroneTesting_2017.pdf

Week 7 (Oct 24, 26) Scott Hamilton

- Wk7a Why is ‘Near surface Geophysics’ less widely used in N America compared to Europe?
- Wk 7b Case studies in the application of near-surface geophysics to Canadian Archaeology
 - Proton Magnetometry and fur trade posts
 - Gradiometer and GPR survey at Whitefish Lake precontact site

Week 8 (Oct 31, Nov 2) Tim Kaiser, Scott Hamilton:

Oct 31 Dr. Tim Kaiser. What goes around, comes around. One of the virtuous hallmarks of science, we are told, is that science is reflexive. That is, science is built —in part— around a willingness to re-examine past work, modifying earlier conclusions when and as necessary.

What’s it like to be the subject of a re-investigation?

In this seminar we will look at archeometric research into the hypothesized link between early metallurgy and pottery manufacture. Work done in the 1980s languished for three decades before another crack at the question was taken.

- Nov 2 **Hamilton** How not to go broke or get sued as a small-time archaeological consultant.
Assignment due. Critical Review #2

Week 9 (Nov 7, 9) Tamara Varney, Scott Hamilton

- (**Varney**) topic TBA
- (**Hamilton**) Indian Residential Schools: Historical and socio-political context, operations, ‘death/burial’ investigations, application of non-invasive methods.

Week 10 (Nov 14, 16) Scott Hamilton

- The Archaeology of ‘Contested Ground’.
- Case Study of the Battle of ‘Little Big Horn’ or ‘Greasy Grass’
- Case Study of High Falls Burial Project (Is this research ‘advocacy’ or not?)

- Readings: Hamilton, Morriseau and McCrady 'New Solitudes: Conflicting World Views in the Context of Contemporary Northern Resource Development' Canadian Journal of Archaeology 1995 Vol 19, pp. 3-18. 'This Powerful Place' CBC IDEAS radio documentary by Jody Porter.

Week 11 (Nov 21, 23)

- How to do a formal job interview. Class interviews Scott in his quest for a job. Followed by a critique of his performance.
- (**Hamilton**) Lakehead Complex Settlement Patterns. What do we know about them and what systemic biases affect data interpretation.

Assignment due. Critical Review #3

Week 12 (Nov 28, 30)

Student Seminars

Week 13 (Dec 5, 7)

Student Seminars