READINGS

All readings for the course are available in the Course Canvas > Modules > Readings. Study all the MAIN readings prior to each class for reading summaries (see the Participation in p.2). SUPPLEMENTARY readings: a good starting point for reference search for ‘critical reviews’ and ‘active discussion.’

ACCOMMODATION

A range of supports and services are available through the Accessible Education Center to eligible students. Contact to Prof. Lee for further arrangement.

For more information:
https://aec.uoregon.edu/content/support-and-services

ACADEMIC INTEGRITY

Respectful environment is key for successful learning.

Check how to avoid academic misconduct and plagiarism at http://dos.uoregon.edu/conduct

https://researchguides.uoregon.edu/citing-plagiarism

Class policy: no cell phone use & restricted laptop/tablet use.
COURSE DESCRIPTION

The course is designed as an introduction to archaeobotany or paleoethnobotany, a subdiscipline of archaeology. The weekly topics will include macroscopic plant systematics, co-evolutionary relations between arable weeds and crops, domestication traced in plant remains, and cultural interpretation on past plant use. Students will learn the basic method of recovering plant remains from the field; laboratory procedures; various qualitative and quantitative assessments on plant remains. Through active participation, students will gain basic analytical skills of plant remains and learn how to critically assess published sources of archaeobotany and its application to cultural interpretation.

LEARNING OBJECTIVES

• An understanding of history of archaeobotany as an archaeological discipline
• An understanding of the recent discourse on plant domestication, traditional use of plant resources, early agriculture, etc.
• Familiarity of well-known cases of archaeobotanical investigation
• Gaining the basic analytical skills of archaeobotanical plant remains
• Learning how to use microscopes, digital photography, etc.
• Learning how to write an archaeobotanical analytical report

EVALUATION SCHEMES

No Curve for this class. Final letter grades will be configured as follows. If the course is taken P/NP, 70% (C-) or higher is required to pass the class. For graduate students the mark is 80% (B-) or higher for passing.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Quality of performance is outstanding relative to that required to meet course requirements; demonstrates mastery of course content at the highest level. A+ is give rarely for performance that significantly exceeds all requirements and expectations.</td>
</tr>
<tr>
<td>B</td>
<td>Quality of performance is significantly above that required to meet course requirements; demonstrates mastery of course content at a high level.</td>
</tr>
<tr>
<td>C</td>
<td>Quality of performance meets the course requirements in every respect; demonstrates adequate understanding of course content.</td>
</tr>
<tr>
<td>D</td>
<td>Quality of performance is at the minimal level necessary to pass the course, but does not fully meet the course requirements; demonstrates a marginal understanding of course content.</td>
</tr>
<tr>
<td>F</td>
<td>Quality of performance in the course is unacceptable and does not meet the course requirements; demonstrates an inadequate understanding of course content.</td>
</tr>
</tbody>
</table>

A' ≥ 97% A ≥ 93% A' ≥ 90% B' ≥ 87% B ≥ 83% B' ≥ 80% C' ≥ 77% C ≥ 73% C' ≥ 70% D' ≥ 67% D ≥ 63% D' ≥ 60% > F

<table>
<thead>
<tr>
<th>SPECIFICS</th>
<th>UNDERGRADUATE STUDENTS</th>
<th>GRADUATE STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>2 Identification quizzes</td>
<td>Quiz 1 on Feb 8 (10 points) &amp; Quiz 2 on Feb 22 (10 points)</td>
<td></td>
</tr>
<tr>
<td>Presentation of the report</td>
<td>15 points on Mar 15 in class</td>
<td></td>
</tr>
<tr>
<td>Analytical report</td>
<td>15 points due on Mar 20</td>
<td></td>
</tr>
<tr>
<td>2 Critical reviews</td>
<td>15 points each due on Jan 25 &amp; Mar 1</td>
<td></td>
</tr>
<tr>
<td>2 Journal external reviews</td>
<td>15 points each due on Jan 25 &amp; Mar 1</td>
<td></td>
</tr>
</tbody>
</table>

PARTICIPATION

Class attendance, active discussion, and evidence of reading will all count towards the participation grade. A summary of the weekly reading assignments is worth of 1 point out of 20 participation marks. Submit hard copies of 6 summaries throughout the term before the lecture of your choice. Each summary should meet the following conditions:

20 points = 10 for Attendance (0.5 each X 20 classes) + 6 for Reading summaries + 4 for Discussion
IDENTIFICATION QUIZZES
Each quiz consists of 10 questions on identification of archaeological and modern plant species through microscopic observation (Feb 8 & 22). No makeup quiz will be given.

ANALYTICAL REPORT
Students will write an analytical report of their group samples INDIVIDUALLY. The report contains the quantitative and qualitative assessment of plant remains, including tables, graphs, and photographs of plant remains. Students need to provide cultural interpretation on data. Write a 5-page length text and add tables, figures (maps, graphs, charts, photos, etc.), and references cited. Upload the report by March 20 to the folder at Canvas>Modules>Assignments>Analysis Report.

PRESENTATION
Students will present their data as a group for 15 min in class on March 15. Grading will be based on both group and individual effort equally, so students will sign their names in each slide that they make. Each group can also use other groups’ data for comparison. In order to do so, each group is required to send a seed count chart to the GE before the class on March 8. Each group will bring the group presentation file (Powerpoint format) to the class on March 15. More information about the presentation will be provided throughout the lab sections.

WRITING SPECIFICS
Use a 12-size legible font and a double space in 1” margin letter papers.
A late penalty: 2% of the grade each day, including weekends.

CRITICAL REVIEW FOR UNDERGRADUATE STUDENTS
Undergraduate students will select topics relevant to the course materials for two 3-page length reviews, the 1st one due on January 25 and the 2nd one on March 1 in class. Each review will contain:
✓ Summarize the most important theme(s) in each reading of your selection.
✓ Compare concepts, terms, theories, perspectives, and/or methodologies.
✓ Provide your critical assessment on each argument, theory, perspective, and/or methodology.
✓ Include a ‘Reference Cited’ at the end of the paper. Follow the citation style of the Journal of Archaeological Science.

JOURNAL EXTERNAL REVIEW FOR GRADUATE STUDENTS
Graduate students will review one recently published article per assignment on topics relevant to the course materials, as if being a referee to determine whether this article is worthy of publication. Use the ‘Review Form’ and write your assessment in the separate sheet. Review form is available at Canvas>Module>Assignments>Journal Review.

REFERENCE SEARCH
The references should include academic sources (e.g., articles from peer-reviewed journals, books, book chapters published by academic publishers).

Students can use Main and Supplementary readings for this assignment, but also should find at least two academic publications beyond those given in the syllabus.
Useful source at https://researchguides.uoregon.edu/archaeology
**MAIN READINGS**

Atalay, S. And C. A. Hastorf  

2016 Regional diversity on the timing for the initial appearance of cereal cultivation and domestication in southwest Asia. *PNAS* 113(49): 14001-14006.

Boivin, N. L., M. A. Zeder, D. Q. Fuller, A. Crowther, et al.  

Crawford, G. W.  

2010 Identifying high-status foods in the archaeological record. *Journal of Anthropoligal Archaeology* 29: 413-431.

d’Alpoim Gude, J., and R. Spengler  

Ge, W., L. Liu, X. Chen, and Z. Hin.  

Jones, M. and Liu, X.  

Kitagawa, J. and Y. Yasuda  

Lansing, J. S. and J. N. Kremer  

Lee, G. et al.  

Lee, G. –A.  

Liu, X., L. Liu, and A. M. Davis, D. G. Smith, and J. H. McAndrews  

Louderback, L. A., B. N. Pavlik, and A. M. Spurling  

Marston, J. M.  

Miller, N. F.  

Minnis, P. E.  
2001 "One possible future of paleoethnobotany," in *Ethnobiology at the Millennium: Past Promise and

Popper, V. S.

Pearsall, D. M. and C. A. Hastorf

Smith, A.

Smith, B. D.

Wang, J., L. Liu, T. Ball, L. Yu, and F. Xing
2016 Revealing a 5,000-year-old beer recipe in China. PNAS 113(23): 6444-6448.

Wollstonecroft, M. M., P. R. Ellis, G. C. Hillman, D. Q. Fuller et al.
2012 A calorie is not necessarily a calorie: technical choice, nutrient bioaccessibility, and interspecies differences of edible plants. PNAS 109(17): E991.

Wright, P. J.

Yang, X., Z. Ma, J. Ki, J. Yu, C. Stevens, and Y. Zhuang

Zeder, M.A.

Ziizumbo-Villarreal, D., A. Flores-Silva, and P. C.-G. Marín

SUPPLEMENTARY READINGS

Harris, D. R.

Hastorf, C. A.

Hosoya, L. A.
2011 Staple or famine food?: ethnographic and archaeological approaches to nut processing in East Asian prehistory. Archaeological and Anthropological Sciences 3(1): 7-17.

Gong, Y. Y. Yang, D. Ferguson, D. Tao et al.

Johns, T.


Wang, C., H. Lu, J. Zhang, K. He, and X. Huan. 2016 Macro-process of past plant subsistence from the Upper Paleolithic to middle Neolithic in China: a quantitative analysis of multi-archaeobotanical data. *PLOS ONE* DOI:10.1371/journal.pone.0148136

## WEEKLY SCHEDULE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATES</th>
<th>SUBJECTS</th>
<th>MAIN READINGS</th>
<th>SUPPLEMENTARY READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Jan-9</td>
<td>Course introduction, research History &amp; current issues in paleoethnobotany</td>
<td>Minnis 2001; Pearsall &amp; Hastorf 2011</td>
<td>Marston, Warinner &amp; d’Alpoim Guedes 2014</td>
</tr>
<tr>
<td>Lab</td>
<td>Jan-11</td>
<td>Introduction to lab equipments &amp; assingments</td>
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<tr>
<td>Lab</td>
<td>Jan-18</td>
<td>Initial preparation of samples</td>
<td></td>
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<tr>
<td>Lab</td>
<td>Jan-25</td>
<td>Morphology of Asian crops &amp; weeds; sample analysis</td>
<td>Review 1 due</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Jan-30</td>
<td>Issues in Asian crop domestication, site reiew</td>
<td>Crawford 2009; Jones &amp; Liu 2009; Lansing &amp; Kremer 2011; Lee et al. 2007; Yang et al. 2015</td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Feb-1</td>
<td>Sample analysis</td>
<td></td>
<td>Lee &amp; Bestel 2007; Lee et al. 2011; Hosoya 2011; Weisskopf &amp; Lee 2016; Wu et al. 2014</td>
</tr>
<tr>
<td>Lab</td>
<td>Feb-8</td>
<td>Morphology of major SW Asian crops, sample analysis</td>
<td>Quiz 1 (30 min)</td>
<td></td>
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<tr>
<td>Lecture</td>
<td>Feb-13</td>
<td>Plant management &amp; domestication in America</td>
<td>Louderback 2013; Smith B 2011b; Zilumbo-Villarreal, Flores-Silva &amp; Marín 2012</td>
<td></td>
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<tr>
<td>Lab</td>
<td>Feb-15</td>
<td>Morphology of American domesticates, sample analysis</td>
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<tr>
<td>Lab</td>
<td>Feb-22</td>
<td>Observing microscopic plants, sample analysis</td>
<td>Quiz 2 (30 min)</td>
<td></td>
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<tr>
<td>Lab</td>
<td>Mar-1</td>
<td>Sample analysis</td>
<td>Review 2 due</td>
<td></td>
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<tr>
<td>Lab</td>
<td>Mar-6</td>
<td>Finishing up identification, sorting, and photography</td>
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<tr>
<td>Lab</td>
<td>Mar-13</td>
<td>MNCH visit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Mar-15</td>
<td>Presentation in class</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A schedule is subject to change.