Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
Submit original form and 2 copies. Attach a course syllabus to each.

1. This request is submitted by the Department of [Anthropology]

2. Course prefix, number and complete title [Anth 647 Lithic Artifact Analysis]

3. Course description (not more than 50 words)
   Laboratory-based course reviewing methods archaeologists use to analyze stone tools and debitage, including identification of tool-stone sources, reconstruction of technology, explanation of assemblage variability, and microscopic use-wear analysis.

4. Prerequisite(s) [Graduate classification and permission of instructor]
   Cross-listed with [Cross-listed courses require the signatures of both department heads]

5. Is this a variable credit course? [☐ Yes ☑ No] If yes, from _______ to _______

6. Is this a repeatable course? [☐ Yes ☑ No] If yes, this course may be taken _______ times. Will the course be repeated within the same semester/term? [☐ Yes ☑ No]

7. Has this course been taught as a 489/689? [☐ Yes ☑ No] If yes, how many times? [1] Indicate the number of students enrolled for each academic period it was taught. [Fall 2007: 13; also course taught as Anth 521 multiple times]

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix   Course #   Title (exclude punctuation)
    ANTH   647   LITHIC ANALYSIS

    Lect. Lab SCH Subject Matter Content Code Admin. Unit Acad. Year FICE Code
    2 3 3 45,0301,0001 028008-09 003632

    Do not complete shaded area.

    Approval recommended by:
    [D.F. Hamilton] 01/07    [Emily Davidson] 10-22-07
    Head of Department    Chair, College Review Committee
    Date    Date

    Head of Department (if cross-listed course) Date
    Dean of College Date

    Submitted to Coordinating Board by:
    Dean of College Date

    Director of Academic Support Services Date
    Effective Date

To have this form reviewed, please send to Linda F. Lacey, Mail Stop 1265 or fax to 847-8737.
OAR/AS-5/04

1 of 6 B5
Anth 647  
Lithic Artifact Analysis

Tuesday & Thursday, 2:20-3:35 pm  
Anth 214

Course Instructor

Dr. Ted Goebel; Office: Anthropology 208; Phone: 862-4544; e-mail: goebel@tamu.edu  
Office hours: Noon-2pm, Tuesday & Thursday; 9am-noon, Wednesday

Course Standards

- Understand the significance of lithic artifacts to archaeological science, especially in terms of the kinds of questions that can be asked of this important archaeological resource.
- Know fundamental techniques of stone tool manufacture employed by humans throughout much of prehistory.
- Identify the major types of tools, cores, and by-products found in lithic artifact assemblages, as well as the attributes used to define them.
- Understand and apply techniques of documenting, measuring, and explaining interassemblage similarities and differences.
- Understand theory involved in explaining prehistoric human behavior through lithic artifacts.
- Present results of analyses and experiments in an organized, professional manner.

Course Structure

Class meetings in this course consist of lectures as well as lab exercises/experiments and seminar discussions. Labs will occur every week. During a typical lab week, during the first class on Tuesday the topic of the week will be introduced through lecture, and during the second class on Thursday students will perform a related lab experiment/analysis. Sometimes it will take more than the allotted class time to complete the laboratory assignment, so students should be prepared to come back to the lab at a later time during the week to finish their work. Also, students should expect to spend time in the lab to prepare for lab quizzes.

Students will write brief (2-to-4 page) reports describing each experiment/analysis. Reports should follow the outline shown below.

1) Introduction describing research goals and questions;
2) **Materials and methods** used in the experiment/analysis (and a statement relating these materials and methods to the research goals/questions);
3) **Results** of experiment/analysis (described in writing and illustrated in tables, graphs, or line drawings);
4) **Discussion** of results including (a) explanation of how results relate to research goals or answer research questions, and (b) significance to field of lithic analysis.

Students will also complete a semi-independent **project**. The project will be a focused analysis of a lithic artifact assemblage; it’s product will be a 12-to-15-page report to be due at the end of the semester. The instructor will work with students to find a suitable lithic assemblage to analyze, and to develop specific research questions and analyses for that assemblage.

**Exams** will include both practical and written parts. Practical exams will test students on materials covered in labs—rock types, artifact types, artifact attributes, etc. Written exams will cover concepts and issues from lectures and readings. The final practical exam will be cumulative; however, the final written exam will cover only the second half of the course.

**Graduate Credit:**

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 lab exercises</td>
<td>100</td>
</tr>
<tr>
<td>Final report</td>
<td>100</td>
</tr>
<tr>
<td>Mid-term practical exam</td>
<td>50</td>
</tr>
<tr>
<td>Mid-term written exam</td>
<td>50</td>
</tr>
<tr>
<td>Final practical exam</td>
<td>50</td>
</tr>
<tr>
<td>Final written exam</td>
<td>50</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>400</strong></td>
</tr>
</tbody>
</table>

Final grades will be based on a traditional scale. To receive an “A” grade, you must earn at least 90% of the points (360), to receive a “B” grade, you must earn 80-89% of the points (320-359), to receive a “C” grade, you must earn 70-79% of the points (280-329), etc.

**Course Text**


**Supplemental Readings**

The following articles can be found on e-reserve through the university library. They will be assigned during specific weeks, as shown in the schedule below.


**Other Course Materials**

You will need some other materials for this class, too.

A three-ring binder will be very useful to keep hand-outs and other written materials organized and accessible.

A spreadsheet and/or graphics program will be helpful in preparing tables and graphs of data generated in labs. If you purchase a graphics program, make sure that it can make simple bar charts, histograms, and line charts, as well as simple two-way tables.

A hand-lens or loupe (about 10x).

For flintknapping, you *must* have the following materials:

- Safety goggles or some other suitable eye protection;
- Leather gloves or some other suitable hand protection;
- Long heavy pants that cover your legs and ankles (preferably blue jeans);
- Shoes and socks (not sandals or tevas; penny-loafers aren’t recommended, either).

You will be provided with raw materials, as well as band-aids, for the flintknapping exercises. If you have any antler at home, think about donating it to the cause!
## Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 29</td>
<td>Introduction to study of lithic artifacts</td>
<td>Chapter 1: pp. 1-10</td>
</tr>
<tr>
<td>Aug 31</td>
<td>Lab 1: Flintknapping-I: making flakes</td>
<td></td>
</tr>
<tr>
<td>Sep 5</td>
<td>Fundamentals of stone-flaking technology</td>
<td>Chapter 2: pp. 11-40</td>
</tr>
<tr>
<td>Sep 7</td>
<td>Lab2: Artifact or geofact? A look at Carter’s Pre-Clovis Texas Street assemblage</td>
<td>Carter 1978</td>
</tr>
<tr>
<td>Sep 12</td>
<td>Lithic raw materials</td>
<td>Chapter 3: pp. 41-60</td>
</tr>
<tr>
<td>Sep 14</td>
<td>Lab 3: Visual inspection and identification of rock types</td>
<td></td>
</tr>
<tr>
<td>Sep 19</td>
<td>Geochemical sourcing of lithic artifacts: case study</td>
<td>Jones et al. 2003</td>
</tr>
<tr>
<td>Sep 21</td>
<td>Lab 4: Tour of TAMU geochemistry laboratories</td>
<td></td>
</tr>
<tr>
<td>Sep 26</td>
<td>Evolution of technology during the Paleolithic</td>
<td>Foley &amp; Lahr (2003)</td>
</tr>
<tr>
<td>Sep 28</td>
<td>Lab 5: Flintknapping-II: retouching tools</td>
<td></td>
</tr>
<tr>
<td>Oct 3</td>
<td>Artifact typologies</td>
<td>Chapter 4: pp. 61-85</td>
</tr>
<tr>
<td>Oct 12</td>
<td>Lab 6 continued</td>
<td></td>
</tr>
<tr>
<td>Oct 17</td>
<td><strong>Mid-term exam: written</strong></td>
<td></td>
</tr>
<tr>
<td>Oct 19</td>
<td><strong>Mid-term exam: practical</strong></td>
<td></td>
</tr>
<tr>
<td>Oct 24</td>
<td>Debitage attribute analysis</td>
<td>Chapter 5: pp. 86-112</td>
</tr>
<tr>
<td>Oct 26</td>
<td>Lab 7: Debitage analysis</td>
<td>Chapter 6: pp. 113-131</td>
</tr>
<tr>
<td>Oct 31</td>
<td>Other approaches to debitage analysis; cores</td>
<td>Chapter 6: pp. 131-142</td>
</tr>
<tr>
<td>Nov 2</td>
<td>Lab 7 continued</td>
<td>Chapter 7: pp. 143-160</td>
</tr>
</tbody>
</table>
Nov 7  Analysis of flake tools                    Chapter 7: pp. 160-177
Nov 9  Lab 8: Unifacial tool analysis            Kuhn (1990)
Nov 14 Analysis of bifaces and bifacial tools   Chapter 7: pp. 177-200
Nov 21 Ground-stone analysis                    Sutton & Arkush (1996: 69-100)
Nov 23 Thanksgiving holiday                    
Nov 30 Lab 10: Microscopic use-wear experiment  
Dec 5  Technology, site function and mobility    Chapters 8 & 9: pp. 201-244

Final Exam: 1-3 pm, Wednesday, Dec 13

Americans with Disabilities Act (ADA) Policy Statement

The following ADA Policy Statement (part of the Policy on Individual Disabling Conditions) was submitted to the University Curriculum Committee by the Department of Student Life. The policy statement was forwarded to the Faculty Senate for information.

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall or call 845-1637.

Academic Integrity Statement

"An Aggie does not lie, cheat, or steal or tolerate those who do."

Please consult the Honor Council Rules and Procedures at the following web:
http://www.tamu.edu/aggiehonor