ARIZONA ARCHAEOLOGICAL SOCIETY
DEPARTMENT OF CERTIFICATION

CERTIFICATION MANUAL

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ACKNOWLEDGMENTS

Arizona is fortunate to have professional archaeologists willing to share their time and knowledge with amateurs who have an avocational interest in archaeology. The cooperation of these professionals with the Arizona Archaeological Society (AAS) has resulted in a quality educational program for presentation throughout the state.

AAS members Ben Mixon, Grace Schoonover, Charlie Gilbert, and Dorothy Bender met in 1977 and organized the Department of Certification. Several archaeologists were appointed to the Department of Certification in the first year. Professional archaeologists who served during the first year were:

Alfred E. Dittert, Jr.
Fred Plog
Alexander J. Lindsay, Jr.
Sharon F. Urban
Chad Phinney
Donald E. Weaver, Jr.

Professional Archaeologists currently working with the Department of Certification are:

Teresa (Hoffman) Pinter
Glen Rice
Stephanie Whittlesey

Professional archaeologists who have worked with the Department of Certification in the past are:

Alexander J. (Lex) Lindsay
E. Charles Adams
Cory D. Breternitz
Alfred E. Dittert, Jr.
John Hohmann
Mark Hackbath
Robert H. Lister
Martin McAllister
Chad Phinney
Peter J. Pilles, Jr.
Fred Plog
Gary Stumpf
Sharon F. Urban
Donald E. Weaver, Jr.

The Department is also grateful for each individual who has helped with the work of certification, whether attending meetings, serving on committees, or helping plan for better service to the public and to the preservation of archaeological resources.
The following have served as Chairpersons of the Department since its inception:

1977-1980        Ben Mixon
1980-1982        Grace S. Schoonover
1982-1983        Robert S. Hardy
1983-1984        Maurice D. Shoger
1984-1985        Bill Steinmann
1986-1992        Joan N. Clark
1992-1996        Charles Steger
1996-2000        Joyce Eyman
2000-2006        T. Ann Gorton
2006-Present     Robert Lindsay

The following have served at Secretary for the Department:

1977-1984        Sharon Urban
1985-1986        Pat Lawson
1987-1995        Sharon Urban
1996-1997        Janet Krueger
2000-2001        Larry White
2001-2005        Susan Relecom
2005-Present     Evelyn Partridge

The following have served as Recorder for the Department:

1987-1993        Pat Lawson
1993-1996        Lucy Jane Jackson
1996-2003        Les Chapman
2003-Present     Roger Haase

The following have served as Treasurer for the Department:

1992-1993        Pat Lawson
1993-2005        John Sturgis
2005-Present     Mike Magnan

The following have served as Chairperson of the Department’s Review Committee:

Circa 1979        Don Dove
1981-1983        Wilma Allen
1983-1984        Dorothy Bender
1984-1986        Joan Clark
1986-1990        Karen Atwell
1990.2006        Gary Stumpf
2006-Present     Stephanie Whittlesey

The following has served as Certification Manual Manager:

2000-2005        Les Chapman
2005-Present     Jerry Mead
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MISSION OF THE DEPARTMENT OF CERTIFICATION

The mission of the Department of Certification is to provide the basis for high quality education and training in the various aspects of archaeology for Arizona Archaeological Society (AAS) members throughout the State, and to set standards for Instructors who teach those courses and for professionals who become Chapter Advisors. The Department maintains a database of students who have taken AAS courses for certification credit, and of instructors approved to teach courses for certification credit. The Department also issues certificates to persons who successfully complete course requirements.

DEPARTMENT OF CERTIFICATION GUIDELINES

In carrying out its mission, the Department will adhere to the following guidelines:

- The Department will provide policy and guidance for the AAS Certification Program.
- The Department will have an audited fund to provide for its activities.
- The Department shall insure the Certification Program relates to the Society’s policy and practices for archaeological values.
- The Department will be active to educate the general public about the Society.
- The Department shall attempt outreach to other archaeological groups, local and state, to promote preservation of archaeological sites.
- The Department shall actively liaison with the professional archaeological community.

DEPARTMENT OF CERTIFICATION ORGANIZATION

The Department of Certification (the Department) was created by the AAS in 1977. The Department has established a Certification Program that is designed to provide training in various aspects of archaeology, independent from an academic degree program.

The Department staff consists of a Chairperson, Treasurer, Secretary, Recorder, Review Committee Chairperson, five professional archaeologists, and representatives from each AAS Chapter and their alternates.

The Certification Program serves as a source of trained and qualified individuals who are prepared to assist the professional community on archaeological projects. Students enrolled in the Certification Program pursue a course of study designed to increase their knowledge and consequently their value to archaeological projects and to those qualified Project Directors under whose supervision they work.
Course standards and content are established by the Department prior to a class being presented to the membership. By establishing these standards and by instituting a process of approving both the Courses and the Instructors, the presentation of Certification classes will provide consistent course material to members of Chapters in various locations throughout Arizona. Note that certain classes may offer material specifically tailored to a particular area of the State.

In order to receive Certification credit for a course, a student must complete a course that has been approved by the Department, and taught by an Instructor who has satisfied the qualification requirements established by the Department. The hours of the student’s attendance during the Certification course at lectures, field trips, laboratory, or field crew, must be reported in timely fashion by the Chapter Representative, or Department Representative, or in his or her absence, by the Instructor, the Field School Director or Representative. The information is sent to the Department Recorder for entry to the Certification Database. Refer to pages 7 and 8, “Duties of the Recorder”.

The Review Committee established by and within the Department is made up of a Chair appointed by the Department Chair and four members, three of whom are professional archaeologists. The Committee considers course content, applications for Instructor, Chapter Advisor, and funding, as well as student waivers for courses taken outside the Certification Program. The Committee makes recommendations to the Department as a whole, and the Department makes the final decision. Waiver application forms, called Student Course Waiver Requests, are available from the Chapter Representative. Before waivers can be granted for a certification course, evidence must be presented that the standards for the completed course are equivalent to those taught within the Certification Program.

The Project Committee was established in 2002 as an oversight committee to monitor projects undertaken by the Department of Certification and to make recommendations to the Department as a whole on project implementation. Certification is not the main aim in these projects, although there may be an education component in them. The Project Committee is made up of a Chair appointed by the Department Chair and four committee members (at least two of whom are professional archaeologists). The Committee provides assistance to the Principal Investigator or other professional archaeologist in charge. As part of its mission, the Committee develops guidelines for AAS Projects to include an outline for written project proposals, annual work plans, and report schedules. It offers suggestions annually to the AAS Project Manager regarding all phases of implementation, continuing education efforts at an advanced level, and report submission. The Project Committee will review annually the performance of each AAS Project Manager and will recommend to the Department Chair whether each Project Manager should continue serving for another year.
COURSE CERTIFICATION DEFINED

Certification in a course means that the individual possesses a level of knowledge in the subject area commensurate with the course objectives stated in the course syllabus. When a certificate has been signed by the class Instructor, Field School Director, Field School Representative, or Chapter Representative, it signifies that the individual has satisfactorily completed requirements for a class that presented certified material, and that the class was taught by an approved Instructor. Satisfactory completion of the course, if applicable, must be reported in timely fashion by the Representative, or in his or her absence, by the Instructor or Field School Director, to the Department Recorder for entry into the Certification Database and hard copy files. A student may take an AAS course without being considered for certification credit.

REQUIREMENTS FOR ENROLLMENT IN THE CERTIFICATION PROGRAM

A. Membership in the Arizona Archaeological Society.

B. Submission of a completed Certification Program Application form, with the appropriate fee, to the Department Treasurer.

DEPARTMENT ACTIONS FOLLOWING ENROLLMENT

A. The Treasurer deposits the application fee and forwards the application form to the Certification Recorder. The Recorder issues a permanently assigned Certification Number, prepares a numbered Certificate, signed by the Chairperson, and forwards it to the applicant.

B. The Recorder enters the permanent Certification Number and record into the Database for the enrollee. The application form and other pertinent records are placed in a hard copy file folder.

DEPARTMENT AND STUDENT REQUIREMENTS AND RESPONSIBILITIES

A. PREHISTORY OF THE SOUTHWEST (PHSW), formerly “Southwestern Archaeology”, is an introductory course in the study of the American Southwest. The Department strongly recommends that, in order for a student to gain an overall knowledge of the prehistoric cultures of the southwestern United States and establish a basic and logical background for other courses, this prerequisite course be completed prior to enrolling in other Department courses. Giving due consideration to the scheduling of Department courses, however, enrollment in other certification courses is allowed prior to completing PHSW. Other certification courses concluded before completion of PHSW will be posted to the students permanent record; however, a student will not be considered fully certified in any course until the PHSW course has been satisfactorily completed. Certification courses completed prior to completing the PHSW class will be entered and signed on the student's certificate by the class Instructor (or Chapter Representative) and the class records forwarded to the Recorder.
B. It is the responsibility of the student to ensure that his or her certificate is signed by the class Instructor, Field School Director or Representative, or the Chapter Representative, upon completion of the class. It is the responsibility of the Field School Director or Representative, or the Instructor, to provide all class records to the Chapter Representative. It is the responsibility of the Chapter Representative, or the Field School Representative, to forward the class records to the Recorder.

C. When field work or laboratory work is a requirement of the class, a LOG BOOK shall be maintained by the student. The field and laboratory hours worked by the student shall be recorded in the LOG BOOK. This LOG BOOK shall be signed by the person in charge of the field work. The Field School Director, or the class Instructor, shall convey these requirements to the students at the beginning of the class. However, ENSURING THAT THESE REQUIREMENTS ARE SATISFIED IS THE RESPONSIBILITY OF THE STUDENT.

FEES ASSESSED BY THE DEPARTMENT

The Department assessed fees are utilized to partially offset costs of certificates, establishing and maintaining records, mailing, duplication, and toll telephone calls pertinent to the action taken or under review. All fees are to be remitted by check or money order to the Treasurer, payable to the Arizona Archaeological Society, Inc.

Certification Program Enrollment Fee - $10.00 (as of October 2002)
The Certification Program enrollment fee is a one-time fee that registers an individual with the Department and includes all future costs of maintaining the individual's Certification records. The Certification fee may be paid prior to or during enrollment in the individual's first Certification course. This fee is paid through the Chapter Representative to the Treasurer and results in issuance of a certificate by the Recorder.

Course Enrollment Fee - Variable
The course enrollment fee is assessed by the sponsoring Chapter for participation in a scheduled Certification class taught by an approved Instructor. The amount of the enrollment fee is determined by the sponsoring Chapter and is normally a minimum amount required to offset the cost of the Instructor fee, room charges, and incidental expenses for a minimum or anticipated number of students. Additional costs to the student associated with various courses could include required or optional texts, copying charges for class handouts, required class and/or laboratory materials (such as a set of excavation tools), and ancillary supplies.

Student Course Waiver Request Fee - $6.00 (as of October 2002)
This fee is required for each Student Course Waiver Request that is submitted. Each individual may request waiver for one or more courses at the same time, and all courses included in a Student Course Waiver Request are included in this single fee. The fee is paid to the Treasurer.
**Instructor Approval Request Fee - $6.00** (as of October 2002)
The Instructor Approval Request fee is required for each Instructor Approval Request that is submitted. The local chapter, at its discretion, may choose to pay this fee. A prospective Instructor may request approval for one or more courses at the same time within the stated fee. This fee is paid to the Treasurer.
OFFICERS, REPRESENTATIVES, AND PROFESSIONALS

CHAIRPERSON

A. If the Department Chair is vacated, a candidate for Chairperson is selected by Department members at the next regularly scheduled meeting.

B. The Department’s candidate for Chairperson is presented to the AAS State Chairperson for approval.

C. At fiscal year end, an Annual Report of the Department’s activities will be prepared by the Chairperson for presentation to the AAS State Chair.

D. The Chairperson is responsible for calling and conducting all Department meetings, appointing committees, maintaining the records of the Department, and performing other duties as specified in this Certification Manual.

SECRETARY

A. The Secretary is appointed by the Chairperson, with the consent of the members of the Department.

B. The Secretary is responsible for recording the minutes of all meetings of the Department, distributing them to the Department’s mailing list, and providing the minutes to the Chairperson for entry into the records of the Department, following review and approval at the next Department meeting. The Secretary is also responsible for preparing correspondence as requested by the Chairperson and performing other duties as specified in this Certification Manual.

TREASURER

A. The Chairperson appoints the Treasurer, with the consent of the Department members.

B. Duties of the Treasurer, as approved by the Department of Certification.

1. The Treasurer shall be the controller of the accounts of the Department.

2. The Treasurer shall make all collections and disbursements at the direction of the Chairperson.

3. The Treasurer shall prepare and submit periodic financial reports of the Department and such other reports as the Department may direct.

4. The Treasurer shall prepare and submit a complete financial report of the Department to the AAS State Board at its annual meeting, and such other reports as the Board may direct.
5. The accounts of the Department shall be audited each year and reported to the Chairperson. The results shall also be reported to the AAS State Chairperson.

6. The Treasurer, under the direction of the Chairperson, shall prepare an annual budget for the upcoming fiscal year, showing anticipated income and expenditures. The budget must be reviewed and approved by the Department. The approved budget is then submitted to the AAS State Board for presentation at the annual meeting of the Society.

C. Finances.

1. The fiscal year of the Department shall coincide with the fiscal year of the Society.

2. The income from Certification enrollment fees, fees from Field Schools and Workshops run by the Department, fees from applications for such other matters as established by the Department, income from the sale of publications and other appropriate materials, gifts and other sources shall be deposited to the Department’s budgeted accounts.

3. Bank accounts under the control of the Department shall be kept in the name of the Department, and withdrawals will require two signatures, one of the Treasurer and one of another officer of the Department. Note that fees charged by the Chapters for their sponsored classes are to be retained by the Chapter.

RECORDER

A. The Recorder is appointed by the Chairperson, with the consent of the members of the Department.

B. Duties of the Recorder:

1. The Recorder shall receive paid Enrollment Application forms from the Department Treasurer and maintain a computer Database and an annual hard copy file for new enrollees.

2. The Recorder shall issue a serially numbered certificate to each new enrollee and maintain a Database list of certificate numbers that identifies to whom each number is assigned.

3. The Recorder shall receive changes to the approved instructor list from the chairperson and maintain a computer Database and hard copy files for each instructor as described below.

4. At the direction of the Department Chairperson, the Recorder shall research any questions regarding records, and respond to inquiries by appropriate parties.
5. The Recorder shall maintain the Department's Certification Database system on a computer. A procedures manual for operating the Database files, relationships, conventions, tables, posting, and reporting, must be updated by the Recorder as changes are made. The Recorder must perform a weekly on-site backup of the entire database, and provide a current off-site backup copy of the Department's Database to a designated member of the Department at each Department meeting.

6. The Recorder shall establish a Database record and course hard copy folder at the beginning of each new course. All information received from the Chapter Representative, Field School Director or Representative, or course Instructor, shall be recorded in the Database and retained in the hard copy folder. Examples of the information include, a list of students enrolling in the course, class attendance, names of those students who complete all requirements, and number of hours completed by those students who do not complete the entire course and field work. Records received for individuals who are not enrolled in the Certification Program will be retained in the course hard copy folder but not added to the computer Database.

7. The Recorder shall document the completion of the course in the Database and in the course's hard copy folder. The Recorder shall document the student's course(s) waived in the Database and place a copy of the waiver and related correspondence in an annual hard copy file for waivers.

8. The Recorder shall prepare a Database record and hard copy folder for each approved Instructor. The Recorder shall record, in each Instructor's folder, and in the Database, those courses the Instructor is approved to teach, the date of such approval, and the dates the course(s) are conducted. A copy of all applications and related correspondence shall be placed in the hard copy folder.

9. The Recorder shall forward any funds received from the Chapter Representatives to the Department Treasurer together with remittance advice.

10. The Recorder shall submit a status report of activities at each Departmental meeting.
CHAPTER REPRESENTATIVE AND ALTERNATE

A. Chapter Representative shall be appointed to the Department by each local chapter. An Alternate shall also be appointed by each local chapter.

B. Chapter Representatives are expected to attend all Department meetings. Representatives living far from where the meeting is held who cannot attend are expected to contact the Department Chairperson with concerns they wish addressed by the Department. Alternates are likewise encouraged to attend all department meeting. If unable to attend a meeting, the Representative should encourage the alternate to attend if possible.

C. The Chapter Representative is responsible for serving on committees as requested by the Department Chairperson.

D. The Chapter Representatives are expected to assist their respective Chapters to obtain qualified Instructors, locate classroom space in which to conduct classes, recruit and enroll students in classes, assist in presenting classes when necessary.

E. Chapter Representatives are expected to relay information from the Department to their Chapters and provide reports to the Department regarding Chapter certification activities.

F. The Chapter Representative is responsible for assisting with registration at all classes. Checks for class registration shall be made payable to the Chapter of the Society. A receipt shall be issued to each class registrant. Course Enrollment Fees shall be retained by the Chapter sponsoring the course. Certification Program Enrollment forms and fees shall be forwarded, by the Chapter, to the Department Treasurer.

G. The Chapter Representative is responsible for ensuring that all paperwork is completed by the Instructor when a class is complete, and for obtaining all records from the class Instructor upon completion of a course. The Chapter Representative is responsible for ensuring that the Student Certificates are signed and dated by the class Instructor, or by themselves, with the Instructor’s approval. The Chapter Representative shall forward the final paperwork to the Department Recorder in timely fashion and shall maintain a duplicate set for the Chapter.

H. When the class is completed, all information pertinent to the class shall be received by the Department Recorder for posting to the permanent Database record and relevant hard copy file folders.
AAS FIELD SCHOOL REPRESENTATIVE

A. An AAS Field School Representative shall be appointed by the Chairperson, in conjunction with the Field School Director, for each Field School sponsored by the Department.

B. The AAS Field School Representatives shall attend all Department meetings. If unable to attend a meeting, the Representative is responsible for providing a status report to the Chairperson in time for presentation at the Department meeting.

C. The AAS Field School Representative is expected to assist the Field School Director and Instructors with the administration of the Field School, as follows:

1. Advertise the Field School. Recruit students, and assist the Field School Director in setting up for the Field School, recruiting Instructors, and preparing class materials.

2. Assist with registration. Checks for Field School registration, housing, and enrollment shall be made payable to the Arizona Archaeological Society, Inc. A receipt shall be issued to each Field School registrant. Enrollment receipts, together with Certification Program Enrollment forms and fees shall be forwarded with full remittance advice to the Treasurer.

3. Provide an initial roster of the AAS Field School enrollees to the Recorder at the opening of the Field School, showing week of attendance, and listing the courses the enrollees plan to take. Reviewing the accuracy of the preliminary Field School Roster placed on the Certification Database and issued by the.

4. Help gather enrollee’s attendance and hours of participation data during the conducting of the Field School for the Field School Director’s or the Instructor’s pass/fail decisions.

5. Ensure that all paperwork is updated by the Field School Director or Instructors as each week of the AAS Field School is complete.

6. Obtain final records from the Field School Director or Instructors upon completion of the final week of the Field School. Ensure that the Student Certificates are signed and dated by Field School Director or the class Instructor, or by themselves with the permission of the Instructor. The AAS Field School Representative shall forward the final paperwork to the Recorder in timely fashion and shall maintain a duplicate set for the Department Recorder.
AAS Project Manager

A. An AAS Project Manager for Department of Certification Projects shall be appointed by the Chairperson, in conjunction with the Principal Investigator (PI) or other professional archaeologist, for each project sponsored by the Department.

B. The AAS Project Manager shall attend all Department meetings. If unable to attend a meeting, the Manager is responsible for providing a status report to the Chairperson in time for presentation at the Department meeting.

C. The AAS Project Manager is expected to assist the PI, or other professional archaeologist and instructors with the administration of the Project as follows:

1. In conjunction with the PI or other professional archaeologist, submit a plan for the yearly work of the project according to the outline located at Tab 3-J. Adhere to the schedule for submission of project plans and final annual reports.

2. Advertise the Project. Recruit volunteers with requisite skills and assist the PI or other professional archaeologist in setting up field work or lab work, recruiting instructors for advanced training, and preparing class materials.

3. Assist with registration. Checks for Project registration, housing, and enrollment shall be made payable to the Arizona Archaeological Society, Inc. A receipt shall be issued to each Project registrant. Enrollment receipts shall be forwarded to the Department Treasurer.

4. Help to gather participant’s attendance and hours of participation data if these are to be used as certification course hours.

5. Submit an annual report of work completed and plans for the forthcoming year according to schedule. If relevant, forward certification course hours to the Recorder in timely fashion and maintain a duplicate set for the Department.

PROFESSIONAL ARCHAEOLOGISTS

A. Professional archaeologists are appointed to serve as advisors to the Department by the Chairperson of the Department, with the approval of the Department.

B. Professional archaeologist advisors are expected to attend all Department meetings.

C. The professional archaeologist is responsible for serving on committees as requested by the Department Chairperson.

D. The professional archaeologist provides expertise to the Department with respect to current professional standards, methods, laws and
regulations, and assists in the development of certification courses.

**INSTRUCTOR & FIELD SCHOOL DIRECTOR**

A. A Course Instructor, or Field School Director, is considered eligible to present specific courses following the filing, and approval by the Department, of an Instructor Approval Request.

B. The Instructor or Field School Director provides training in archaeological methods and techniques, including archaeological theory as applicable, conservation archaeology, federal and state laws, and safe field practices.

C. It is the responsibility of the Field School Director or Instructor, when presenting a Certification course, to follow the approved course syllabus contained in this Certification Manual.

D. Field School Directors and Instructors are to maintain records of class attendance.

E. Field School Directors or the Instructor shall forward class records in timely fashion to the Chapter Representative, or in his or her absence, to the Recorder upon completion of the course.

F. Certificates shall be signed and dated by the Field School Director or Instructor (or alternatively by the Chapter Representative) when a student has completed all requirements of the course.

G. Field School Directors and Instructors are requested to submit an evaluation of the course material to the Chapter Representative. This evaluation will be used by the Department to improve the course. In addition, a student evaluation is desirable.

H. A Field School Director or Instructor of an approved course may prepare, administer, and grade any examination or other measurement tool, such as a research paper, that he or she may devise. If an examination is administered, a copy of the examination shall be included in the class records.

I. A Field School Director or Instructor may use, as an assistant, a person who is not approved by the Department provided that the assistant functions under the immediate direction and supervision of the Field School Director or Instructor.

J. It is the responsibility of the Field School Director or Instructor to ensure that all outside speakers present material that conforms to the approved course outline.
A. The Certification Manual Manager is appointed by the Certification Department Chairperson, with the consent of the members of the Department, and is a voting member of the Department.

B. Duties of the Certification Manual Manager:

1. Maintain a computer data base with the source documents for the Certification Manual.

2. Update the Certification Manual as new courses are approved or when changes are made in the manual as directed by the Chairperson of the Certification Department.


4. Distribute Certification Manual updates to Certification Manual holders as directed by the Chairperson of the Certification Department.

5. Maintain a list of revisions to the Certification Manual, and at the Direction of the Chairperson of the Certification Department poll the list of instructors for a given course and solicit recommended changes. Forward the responses to the poll to the Certification Department Review Committee for consideration in changes to the course.

6. Attend Departmental meetings and submit a status report of activities at each meeting.


8. Recall Manuals from holders who no longer have need for them or who have resigned from an appropriate office in the AAS.
The Certification Program of the Arizona Archaeological Society (AAS) is designed with the help of professional archaeologists to give training in various aspects of archaeology outside an academic degree program. Because most courses provide field experience in addition to classroom training, students can develop those skills that make them a qualified and valuable member of an archaeological project. The student may elect to join the Certification Program where records will be kept of courses taken, and where certificates will be issued upon successful completion of the course requirements. Or, AAS members who are not seeking certification may take these courses without joining the certification program.

To enroll in the Certification Program an individual must be a member of the Arizona Archaeological Society (AAS), complete the Certification Program Application form, and pay a one-time fee of $10.00. When the application is accepted, the Department Recorder will establish a file in the individual's name to maintain a permanent record of qualifications. The applicant will receive a certificate that instructors will sign as each course is completed and the individual becomes certified in that aspect of archaeology.

Individuals who have previously completed courses similar to AAS approved courses from other societies or educational institutions may apply to the Review Committee of the Certification Department for a waiver. In order to qualify for a waiver, a Student Course Waiver Request Form must be completed and proof must be submitted that the standards of the courses completed were at least equal to those of the AAS Certification Department.

Student Course Waiver Request Forms and additional information about certification courses and when they will be offered may be obtained from the Chapter Certification Representative. Following is a listing of the courses presently offered through the AAS Certification Department with a brief description of areas of study and course requirements.

**Prehistory of the Southwest** - This prerequisite course is listed first because it provides a basic overview of archaeology in the Southwest. It incorporates discussions of cultural sequences, dating systems, subsistence strategies, urbanization, abandonment, and the general characteristics of the major cultural groups in the Southwest. [20 hrs lecture]

**Advanced Southwest Archaeology** - In this course one of the four main cultural regions (Hohokam, Patayan, Mogollon, or Anasazi) is selected for concentrated study. Among the topics examined are: settlement, social and organizational systems, ceramic types, lithics technology, architecture, and interaction with other cultures. [20 hrs lecture, report]
Advanced Southwest Archaeology: Paleoindian and Archaic Periods - This course explores the period in the American Southwest prior to the time of the major Southwestern archaeological cultural traditions (Hohokam, Patayan, Mogollon, and Anasazi) by focusing on the Paleoindian culture (large game hunters) and Archaic culture (small game hunters and gatherers) from the initial entry of peoples into North America to approximately A.D. 500. [25 hrs lecture, report]

Archaeoastronomy of the Southwest
This course will review the current literature on archaeoastronomy in the American Southwest, discuss important issues relating to the naked eye observation of celestial objects in the night sky, and cover basic recordation techniques and methods. This class will sample a small portion of a large body of literature on archaeoastronomy. Mesoamerican archaeoastronomy will be included because of the influence of Mesoamerican cultures on the Southwest and because of the advanced state of archaeoastronomy studies in Middle America.

Archaeological Mapping Techniques - More time is spent in the field for this course so that students can gain experience using such equipment as Electronic Distance Measurement (EDM), compass, tape, transit, and theodolite. The object is to produce a map of a site using other maps, aerial photographs, and measurements made in the field. [12 hrs lecture, 56 hrs field]

Archaeological Photography - This course provides instruction in the practical application of photography to the documentation of archaeological subjects in the field and in the studio. Needs of the archaeologist are explained and illustrated as to how best achieve them. [10 hrs lecture & hands on]

Ceramic Identification and Analysis - This course provides a working knowledge and ability to sort prehistoric ceramics found in Arizona (the basic course can be tailored to any area of the state). Emphasis is placed on identifying specific ceramic types, recognizing vessel forms from sherds, the relationship between research questions and the design of ceramic analysis, and the key technological attributes of ceramics that are most useful for recognizing specific types. [20 hrs lecture, 60 hrs lab]

Field Crew Member I - This course prepares the student to become a valuable member of an excavation crew. It covers the basic tools used (backhoe, shovel, trowel, screen, etc.), how to collect samples for lab tests (pollen, flotation, radiocarbon, dendrochronology, etc.), and site record keeping. [30 hrs lecture, 40 hrs field]

Field Crew Member II - This course is a continuation of Field Crew Member I with an emphasis on preparing the student to take on greater supervisory responsibilities. Some of the areas considered are setting up a site for excavation, applying a research design, controlling the excavation, and interpreting a site. [20 hrs lecture, 40 hrs field]
COURSE LISTING (continued)

Historical Archaeology I - Because the area of investigation is historic, emphasis is placed on how to research documents, records, and literature to supplement findings made in the field. The object of this course is to develop the ability to integrate the various sources of data and interpret the cultural changes that took place. [30 hrs lecture, 10 hrs field & lab]

(Continued)

Introductory Human Osteology - This course is an intensive introduction to the entire human skeleton to prepare students to recognize and properly deal with human remains (from ethical, physical, and legal standpoints) when encountered during archaeological fieldwork during both excavation and survey. The course also promotes proper handling and storage of human remains. [30 hrs lecture & lab]

Laboratory Techniques - This class deals with the methods and materials used in processing, preserving, cataloging, and storage of artifacts. It includes classifying artifacts with particular attention paid to ceramics and lithics. [20 hrs lecture, 40 hrs lab]

Lithic Identification and Analysis - This course provides a working knowledge of, and ability to identify and sort lithic materials found in Arizona. Emphasis is on identifying specific rock types, recognizing minerals, crystals, rock forming processes and analyzing human modification techniques. Laboratory Techniques is suggested as a prerequisite, but is not required. [20 hrs lecture, 40 hrs laboratory, lithics research project]

Pottery Technology - Lectures, laboratory, and field trips will cover characteristics of clay and clay bodies, methods of form and decoration used prehistorically, the uses of ceramics by archaeologists, and an introduction to the identification of the wares of one cultural tradition. However, this is basically a very hands-on course. In order to complete this course the participant must gather clay, form and decorate a pot, and successfully fire it using prehistoric methods. [20 hrs lecture, 40 hrs lab, make 1 pot]

Prehistoric Architectural Analysis - This course introduces the student to various forms of architectural analysis used when investigating prehistoric sites in the American Southwest, including interpretation of different architectural components and overall site configurations observed in the prehistoric record. [20 hrs lecture, 30 hrs analysis, 20 hrs field]

Recorder - Recording consists of preparing documentary records of field facts while on a survey crew or excavation team. The various forms used (field logs, journals, and excavation reports) are examined during this course. [20 hrs lecture, 40 hrs field]
COURSE LISTING (continued)

Rock Art Recorder - This course addresses all types of rock art including pictographs, petroglyphs, and intaglios. Among the topics considered are recognizing types of rock art by style, culture, elements used, and different methods used to record them. [20 hrs lecture, 40 hrs field]

Stabilization and Reconstruction - This course is taught in conjunction with an on-going stabilization/reconstruction project. In addition to field work on the project, there are classroom lectures on evaluating a candidate site, developing a stabilization and reconstruction plan, and examining the different techniques, materials, and equipment used. [20 hrs lecture, 40 hrs field]

Survey Techniques - Surveying is the process of initial discovery, evaluation, determination of the location, and preliminary mapping of an archaeological site. Consequently, this course involves how different types of surveys are organized (including how to recognize a site, use a map and compass, and evaluate a site), and basic mapping. [20 hrs lecture, 40 hrs field]

Writing Preliminary Reports - This course helps the student develop skills for writing reports that conform to standard archaeological writing styles. Also included is the organization of ancillary information and an overview of the mechanics involved to see a report through printing. [20 hrs lecture, 40 hrs field]

Workshops and Seminars - Workshops and seminars are occasionally offered (for example in Ceramics or Lithics Analysis) either in conjunction with a course for certification or to assist the student with intensive training and as a supplement to course content, or presented separately to provide information/ experience to students outside the approved courses. Certification credit is not awarded for workshops and seminars. [hours of lecture, lab, & field will vary]
The Certification Program is designed with the help of professional archaeologists to give training in various aspects of archaeology outside of an academic degree program. Because most courses provide field experience in addition to classroom training, students can develop those skills that make them a qualified and valuable member on an archaeological project.

To enroll in the Certification Program you must be a member of the Arizona Archaeological Society (AAS), complete the application at the bottom of this page, and pay a one-time fee of $10.00. When your application is accepted, the Department of Certification Recorder will establish a file in your name to maintain a permanent record of your qualifications. Also, you will receive a certificate that your instructors will sign as you complete each course and become certified in that aspect of archaeology.

If you have already completed courses similar to AAS approved courses from other institutions, you may apply to the Review Committee of the Certification Department for a waiver. In order to qualify for a waiver, you must complete a Student Course Waiver Request Form and submit proof that the standards of the course(s) completed are at least equal to those established by the AAS Certification Department.

If you need a Student Waiver Request Form or would like more information on the Certification Courses and when they will be offered, please contact your Chapter's Certification Representative.

APPLICATION FOR ENROLLMENT IN THE AAS CERTIFICATION PROGRAM

Name____________________________________________                    Date_______________
Address _______________________________________ City___________________ State_____ Zip Code ___________ Phone _________________ E-mail_______________________________
AAS Chapter _________________Chapter Representative________________________________

If you have previously completed any AAS certification courses, please list the course titles, instructors, and dates below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Instructor</th>
<th>Date</th>
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Fee Paid _______Assigned Certificate Number _________________________

AAS Copyright 2002                             TAB 3-A
Forms & Instructions
Revised October 2002
CLASS REGISTRATION FORM

Date ________________

Student Name__________________________________________

Mailing Address ________________________________________

City ___________________ State ___ Zip ________

Telephone ______________ E-mail ________________

1. Class Information

Name of Class____________________________________________

Instructor________________________________________________

Class Fee - - - - - - - - - - - - - - - - - - - - - - - $ __________

Book - - - - - - - - - - - - - - - - - - - - - - - $ __________

Class taken for certification credit. Yes ___ No ___

2. Membership Information

Membership Dues: Family ________ Single ________ $ __________

(Mark "Paid" if student has a current membership.)

Chapter Affiliation: _________________________________

3. Certification Enrollment

Enrollment fee ($10.00) - - - - - - - - - - - - - - - - - - - - - $ __________

(Mark "Paid" if student previously enrolled or has a certificate. This is a one time fee.)

Check here if this form is for certification enrollment only. [ ]

TOTAL FEES PAID $ __________
Certificate Number: ______________  Date: ______________

This certifies that ________________________
is enrolled in the Certification of Amateur Archaeologist Program
sponsored by The Arizona Archaeological Society, Inc. Signed
classifications listed below have been completed by the candidate.

______________________________
Certification Department Chairperson

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<th>Classification</th>
<th>I</th>
<th>II</th>
<th>III</th>
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<td>Prehistory of the Southwest</td>
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<td>Advanced Southwest Archaeology I</td>
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<td>Field Crew Member I</td>
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<td>Field Crew Member II</td>
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<td>Ceramics</td>
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<td>Survey Techniques</td>
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<td>Writing Preliminary Reports</td>
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<td>Mapping</td>
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NOTE
Please do not give these pages out to submit a Request. Use them to make as many copies as needed for requests by Students.
ARIZONA ARCHAEOLOGICAL SOCIETY
DEPARTMENT OF CERTIFICATION
SECTION 3-D
PROCEDURE FOR PROCESSING STUDENT COURSE WAIVER REQUEST

A. APPLICANT PROCEDURE

1. Obtain the necessary form from the Chapter’s Certification Department Representative.

2. Complete the form using the instruction sheet provided. Attach a check or money order for $6.00 for the Course Waiver Request processing fee. Deliver the Request form, including all supporting documents, to the Chapter Representative for forwarding to the Department, or mail the Request form and supporting documents directly to the Review Committee Chairperson (name and address will be available from the Chapter Representative).

3. The Student will be notified upon receipt of the Request by the Department. If an initial review discloses inadequate or insufficient information in the Request, additional information may be required.

B. REVIEW COMMITTEE PROCEDURES

1. The Review Committee Chair will reproduce the Request and supporting documents and send them to each member of the Review Committee.

2. The Review Committee will meet during or prior to each regularly scheduled meeting of the Department to discuss each pending Request. The Committee will, through consensus, arrive at a recommendation and present it for consideration by the Department.

3. During that portion of the Department meeting specified in the meeting agenda for discussion of Student Course Waiver Requests, the membership will take action on each Request, following a presentation and discussion of the findings, conclusions, and recommendations of the Review Committee. The Student may attend the Department meeting at which his or her Request will be reviewed.

4. The Review Committee Chair will, within two weeks following the meeting, notify each Student of the decision made on his or her Request. If a Request is denied, the notification shall include the basis for denial. A copy of the notification is sent to the Department Recorder to be filed in the Student’s folder.

5. When a Request is accepted, the file for approved Student Course Waiver Request is sent to the Recorder for records retention and for recording the Course Waiver on the Certification Database.

6. For a denied Request, the Student may file a written appeal and ask for re-evaluation of the Request. The appeal must be submitted to the Chapter Representative within 30 days following receipt of notification of denial. When an appeal is filed, the Student is encouraged to provide additional information or supporting documents to address any deficiency identified in the basis for denial. At the next Departmental meeting, the appeal will be reviewed. Any additional information or supporting documents provided as part of the appeal will be considered in reaching a decision. The Student may attend the Department meeting at which his or her appeal will be reviewed.
INSTRUCTIONS

STUDENT COURSE WAIVER REQUEST

1. Read the entire application before responding.

2. Assemble the appropriate supporting documents to attach to the completed application.

3. Refer to Tab 3-D, Page 1, Paragraph A.2. for submitting the Course Waiver Request. All courses for which a waiver is sought may be included in a single Student Course Waiver Request.

4. The Request must be received by the Department at least four weeks prior to the scheduled date of the meeting at which the Request is to be considered. If less time is allowed, consideration of the Request may be delayed until the next regularly scheduled meeting, resulting in an approximately two-month delay.

5. Personal Supporting Documents: Please provide only copies of supporting documents with the Request form. PLEASE DO NOT SEND ANY OF YOUR ORIGINAL DOCUMENTS. Retain a copy of the application for record purposes.

6. Include with the form any additional information that supports the Course Waiver Request and will aid the Review Committee in its evaluation.

7. The Request may not be immediately processed, and follow-up contact, or the return of the Request may be required, if:
   a. The processing fee is not enclosed with the Request form.
   b. The form is not properly completed.
   c. There is insufficient supporting documentation.
   d. Any items of supporting documentation are judged inadequate.

8. A returned Request will result in at least a two-month delay before it can again be considered by the Review Committee and the Department.

9. A Student may attend the Department’s meeting at which his or her Course Waiver Request is to be reviewed. Information regarding the Department meeting dates and agenda may be obtained from the Chapter Representative or the Department Chair.
A. GENERAL INFORMATION

Name ________________________________
Signature_____________________________
Date _____________________________
Address ______________________________
City____________ State_____ Zip______
Telephone Home ( )_____________________,
Office ( )________________________
E-mail_______________________________

PLEASE PROVIDE COMPLETE INFORMATION FOR ALL QUESTIONS. INDICATE “NA” (NOT APPLICABLE) WHERE APPROPRIATE. ATTACH ADDITIONAL INFORMATION SHEETS AS NEEDED.

B. ACTION SOUGHT - COURSE WAIVER APPROVAL

1. General Information: Check box of courses for which waiver is requested:

<table>
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<tr>
<th>Course</th>
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<td>Survey Techniques</td>
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<td>Survey Techniques II, Crew Chief</td>
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<tr>
<td>Prehistoric Architectural Analysis</td>
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<td>Paleoindian and Archaic Archaeology</td>
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<td>Introductory Human Osteology</td>
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<td>Pottery Technology</td>
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<td>Archaeological Photography</td>
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<td>Zooarchaeology, Faunal Analysis</td>
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<tr>
<td>Shell Identification &amp; Analysis</td>
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</table>

Identify Regions ____________________________
Identify Regions ____________________________

FOR USE BY CERTIFICATION COMMITTEE ONLY

Waiver Request Received
By __________________
Date Received __________________
Fee Included $ _______
Committee Recommends
___________________________
Date __________________
Department Decision
___________________________
Date __________________
Signed By __________________
Date Informed ____________

Signature

Tab 3-D, 5
B. ACTION SOUGHT (continued)

2. Waiver is Requested for the following aspects of the course (check boxes). If waiver is requested for more than one AAS course, provide this information for each course:
   - Class work
   - Fieldwork

3. If a waiver is requested for only class work, or for only field work, explain how the remaining course obligation(s) will be, or have been, satisfied.

C. Letters of Recommendation - Request a letter of recommendation from the instructor of each course, workshop, seminar, field project, or other training that is being proposed as a substitute for an approved AAS course. The letters of recommendation should attest to your understanding of, and competency to carry out, all aspects as detailed in the applicable course syllabus, of the applicable approved AAS course. Please arrange to have the letters of recommendation sent directly to the Chapter Representative or the Review Committee Chairperson. The name and address of the Review Committee Chairperson is available from the Chapter Representative.

   NAME OF INSTRUCTOR                TITLE                DATE OF FIRST
   ADDRESS

D. Documentation to Support Your Waiver Request

Provide for Review Committee consideration, a course outline or equivalent information, for the specific course taken as an alternate to an AAS Certification Department approved course. The Review Committee will use this course outline to determine, by direct comparison to the course requirements contained in the Department of Certification Manual, if the training and experience provided by the alternate course satisfy the Department of Certification requirements. If waiver is requested for more than one course, provide this information for each course. (please check box as applicable):

   Specific Course Outline - or - Equivalent Information
E. **Formal and Practical Experience Applicable to Your Waiver Request:***

Detail the classroom, training, and field experience previously received that is offered as a substitute for the requirements of this course by the AAS. Detail those experiences relevant to the requirements of the classes for which waiver is being requested.

1. **Classroom - Lecture Experience**
   a. **Course Title**
   b. **Credit Hours Earned** Date Course Completed
   c. **Estimate the number of Days** or Hours **of class room work.**
   d. **Course Description**
   
   e. **Institution/Organization**
   f. **Instructor** Location

2. **Classroom - Lecture Experience**
   a. **Course Title**
   b. **Credit Hours Earned** Date Course Completed
   c. **Estimate the number of Days** or Hours **of class room work.**
   d. **Course Description**
   
   e. **Institution/Organization**
   f. **Instructor** Location

3. **Classroom - Lecture Experience**
   a. **Course Title**
   b. **Credit Hours Earned** Date Course Completed
   c. **Estimate the number of Days** or Hours **of class room work.**
   d. **Course Description**
   
   e. **Institution/Organization**
   f. **Instructor** Location

4. **Classroom - Lecture Experience**
   a. **Course Title**
   b. **Credit Hours Earned** Date Course Completed
   c. **Estimate the number of Days** or Hours **of class room work.**
   d. **Course Description**
   
   e. **Institution/Organization**
   f. **Instructor** Location

5. **Classroom - Lecture Experience**
   a. **Course Title**
   b. **Credit Hours Earned** Date Course Completed
   c. **Estimate the number of Days** or Hours **of class room work.**
   d. **Course Description**
   
   e. **Institution/Organization**
   f. **Instructor** Location

6. **Classroom - Lecture Experience**
   a. **Course Title**
   b. **Credit Hours Earned** Date Course Completed
   c. **Estimate the number of Days** or Hours **of class room work.**
   d. **Course Description**
   
   e. **Institution/Organization**
   f. **Instructor** Location

Tab 3-D 7

AAS Copyright 2002
Forms & Instructions
Revised October 2002
2. Fieldwork Experience
   a. Project Name __________________ Location ____________________________
   b. Institution/Sponsor _________________________________________________
   c. Supervisor ________________ Asst. Supervisor _________________________
   d. Project Dates  Start ______ Finish _________________________________
   e. Estimated number of Days ____ or Hours ____ of field experience.
   f. Your status on the project ___________________________________________
   g. Description of experience and/or training
      _________________________________________________________________
      _________________________________________________________________
      _________________________________________________________________

Fieldwork Experience
   a. Project Name __________________ Location ____________________________
   b. Institution/Sponsor _________________________________________________
   c. Supervisor ________________ Asst. Supervisor _________________________
   d. Project Dates  Start ______ Finish _________________________________
   e. Estimated number of Days ____ or Hours ____ of field experience.
   f. Your status on the project ___________________________________________
   g. Description of experience and/or training
      _________________________________________________________________
      _________________________________________________________________
      _________________________________________________________________

Fieldwork Experience
   a. Project Name __________________ Location ____________________________
   b. Institution/Sponsor _________________________________________________
   c. Supervisor ________________ Asst. Supervisor _________________________
   d. Project Dates  Start ______ Finish _________________________________
   e. Estimated number of Days ____ or Hours ____ of field experience.
   f. Your status on the project ___________________________________________
   g. Description of experience and/or training
      _________________________________________________________________
      _________________________________________________________________
      _________________________________________________________________

Fieldwork Experience
   a. Project Name __________________ Location ____________________________
   b. Institution/Sponsor _________________________________________________
   c. Supervisor ________________ Asst. Supervisor _________________________
   d. Project Dates  Start ______ Finish _________________________________
   e. Estimated number of Days ____ or Hours ____ of field experience.
   f. Your status on the project ___________________________________________
   g. Description of experience and/or training
      _________________________________________________________________
      _________________________________________________________________
      _________________________________________________________________

Tab 3-D 8

AAS Copyright 2002
Forms & Instructions
Revised October 2002
F. Documentation

Provide an inventory of Documents Submitted in Support of this Waiver Application:

**DO NOT SEND ORIGINAL DOCUMENTS.**

List all of the documents submitted in copy form for consideration by the Review Committee in support of this Waiver Request. These may include: transcripts, lecture notes, course notes, course syllabus, letters of recommendation, published and/or unpublished reports, field notes, term papers or other material indicative of your work related to this Waiver Request.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 

If necessary, continue listing on a separate page.

VII. Use this space and additional pages if needed for additional comments in support of your Waiver Request.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

Tab 3-D 9
NOTE
Please do **not** give these pages out to submit a Request. Use them to make as many copies as needed for Requests by Advisors.
SECTION 3-E
PROCEDURE FOR PROCESSING CHAPTER ADVISOR APPROVAL REQUEST

A. APPLICANT PROCEDURE

1. Obtain the Approval Request form from the Chapter’s Certification Department Representative.

2. Complete the form using the instruction sheet provided. Attach a check or money order for $6.00 for the Approval Request processing fee. Frequently, the Chapter chooses to pay the $6.00 fee for the Advisor. Deliver the Approval Request, including all supporting documents, to the Chapter Representative for forwarding to the Department, or mail the Approval Request and supporting documents directly to the Review Committee Chairperson (name and address will be available from the Chapter Representative).

3. The applicant will be notified upon receipt of the Approval Request by the Department. If an initial review discloses inadequate or insufficient information in the Approval Request or supporting documentation, additional information may be requested.

B. REVIEW COMMITTEE PROCEDURES

1. The Approval Request and supporting documents will be reproduced and sent to each member of the Review Committee.

2. The Review Committee will meet during or prior to each regularly scheduled meeting of the Department to discuss each pending Approval Request.

3. During that portion of the Department meeting specified in the meeting agenda for discussion of Approval Requests, the membership will take action on each Approval Request, following a presentation and discussion of the findings, conclusions, and recommendations of the Review Committee. The applicant may attend the Department meeting at which his or her Approval Request will be reviewed.

4. The Review Committee Chair will, within two weeks following the meeting, notify the applicant of the decision made on his or her Approval Request. If an Approval Request is denied, the notification shall include the basis for denial. A copy of the notification is sent to the Department Recorder to be filed.

5. When an Approval Request is accepted, the applicant is considered an Advisor to the Chapter. Approval Request files for Approved Chapter Advisors are sent to the Recorder for records retention and recording on the Certification Database.

6. For a denied Approval Request, the applicant may file a written appeal for reevaluation of the Request. The Appeal must be submitted to the Chapter Representative within 30 days following receipt of notification of denial. When an appeal is filed, the applicant is encouraged to provide additional information or supporting documents to address any deficiency identified in the basis for denial. At the next Department meeting, the appeal will be reviewed. Any additional information or supporting documents provided as part of the appeal will be considered in reaching a decision. The applicant may attend the Department meeting at which his or her appeal will be reviewed.
7. The Department will, within two weeks following the meeting, notify the applicant of the decision made on the appealed Approval Request. If the Approval Request is accepted following appeal, the applicant is considered an Advisor to the Chapter, and the Approval Request will be sent to the Recorder for retention and entry into the Certification Database. If the Approval Request is denied following appeal, the Department Chair shall notify both the applicant and the AAS State Chair of the decision. This notification shall include a detailed basis for denial.

8. For an appeal denied by the Department, a written appeal may be filed to the AAS State Chair requesting re-evaluation by the AAS State Board. The appeal shall be made within 30 days following receipt of notification of denial of appealed Approval Request from the Department Secretary. The AAS State Board will review the denial of the appealed Approval Request at a future AAS State Board meeting and render a decision on the Approval Request. The applicant may attend the AAS State Board meeting at which his or her denied Approval Request will be reviewed. If an appeal is directed to the AAS State Board, the decision by the Board is final.

Applicants are invited to contact the Chapter Representative regarding the completion of the Approval Request and the processing procedures. A timely response to any inquiries about the Approval Request will allow for expeditious processing.
INSTRUCTION FOR CHAPTER ADVISOR APPROVAL REQUEST

1. Read the entire Approval Request form before starting to complete it.

2. Assemble the necessary documents requested in the Approval Request, for example, vitae, résumé, and letters of reference, to attach to the completed Approval Request.

3. Refer to the instruction sheet entitled "Procedures for Processing Chapter Advisor Approval Requests" and observe the instructions in TAB 3-E, Page 1, Paragraph A.2. for submitting the Approval Request.

4. The Approval Request must be received by the Department’s Review Committee at least four weeks prior to the scheduled date of the meeting at which the Approval Request is to be considered. If less time is allowed, consideration of the Approval Request may be delayed until the next regularly scheduled meeting which will result in an approximately two month delay.

5. **Personal Supporting Documents:** Please provide only copies of supporting documents with your Approval Request. **PLEASE DO NOT SEND ANY ORIGINAL DOCUMENTS.** Retain a copy of the Approval Request for record purposes.

6. Include, with the Approval Request, any information that will aid the Review Committee in its evaluation.

7. Be sure to provide specific qualifications for functioning as an Advisor to the Chapter.

8. The Approval Request may not be immediately processed and follow-up contact (or return of the Approval Request) may be required if:
   a. The processing fee is not enclosed with the Approval Request.
   b. The form is not properly completed.
   c. There is insufficient supportive documentation.
   d. Any of the items of supportive data are inadequate.

9. A returned Approval Request will result in at least a two-month delay before it can again be considered by the Review Committee and the Department of Certification.

10. The applicant may attend the Department meeting at which his or her Approval Request is to be reviewed. Information regarding the Department meeting dates and agenda may be obtained from the Chapter Representative or Department Chair.
This page intentionally blank.
A. GENERAL INFORMATION

Name ____________________________
Signature ____________________________
Date Signed ____________________________
Address ____________________________
City __________ State __ ZIP __________
Telephone Home ____________________________
Office ____________________________
E-mail ____________________________

PLEASE PROVIDE COMPLETE INFORMATION FOR ALL QUESTIONS. INDICATE “NA” (NOT APPLICABLE) WHERE APPROPRIATE. ATTACH ADDITIONAL INFORMATION SHEETS AS NEEDED.

B. ACTION SOUGHT - CHAPTER ADVISOR APPROVAL

1. General Information
   The AAS Chapter you will be advising ____________________________

2. Please list three references. Letters from your references are optional but may be submitted to the Chapter Representative or the Review Committee Chairperson.

<table>
<thead>
<tr>
<th>NAME OF REFERENCE</th>
<th>TITLE</th>
<th>ADDRESS</th>
<th>ASSOCIATION</th>
<th>DATE OF FIRST</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
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</tr>
<tr>
<td>3rd</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
C. QUALIFICATIONS TO SUPPORT YOUR CHAPTER ADVISOR APPROVAL REQUEST

1. Explain your reason and purpose for requesting Chapter Advisor Approval.

2. Professional information applicable to your request.
   a. Are you making this request for yourself  Yes □  No □
   b. Present Job Title  ________________________________
   c. Former Job Title, if present Job held less than two years.  ________________________________
   d. Present Affiliation
   e. Education
      • School __________________ Location ____________
      • Degree ___________________ Date ________
      • School __________________ Location ____________
      • Degree ___________________ Date ________
   f. Major Specialization _____________ For__________ Degree.
   g. Minor Specialization _____________ For__________ Degree.
   h. Employment Record for past five years, if applicable to this request.
      • Affiliation ______________ Location ____________
      • Position ______________ Dates_______ to ________
      • Affiliation ______________ Location ____________
      • Position ______________ Dates_______ to ________
   i. Professional Organizational Affiliations ________________________________
      _________________________________________
   j. Professional Honors, Grants, Awards. Please provide supporting documentation.
      ________________________________
      _________________________________________
3. Previous Experience. Have you served in a similar capacity on a previous occasion? If so, please document this experience.
   a. Organization __________________ Location __________________
   b. Description of Applicable Experience __________________

D. ADDITIONAL INFORMATION IN SUPPORT OF CHAPTER ADVISOR REQUEST

Provide detail of lectureships or courses taught which are applicable to Chapter Advisor activities and responsibilities. Each entry should state the kind of experience, place and date, the nature of it, whether volunteer or paid, etc.

1. Lecture Experience

1st Course Title ____________________________ Credit Hours ______
   Check all applicable, □ Instructor, □ Paid, □ Student, □ Volunteer, □ Other ____________________________
   Estimate days ______ or hours ______ of classroom work.
   Course Description ____________________________

2nd Course Title ____________________________ Credit Hours ______
   Check all applicable, □ Instructor, □ Paid, □ Student, □ Volunteer, □ Other ____________________________
   Estimate days ______ or hours ______ of classroom work.
   Course Description ____________________________

3rd Course Title ____________________________ Credit Hours ______
   Check all applicable, □ Instructor, □ Paid, □ Student, □ Volunteer, □ Other ____________________________
   Estimate days ______ or hours ______ of classroom work.
   Course Description ____________________________
### 2. Field Experience:

<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Institution/Sponsor</th>
<th>Supervisor</th>
<th>Assistant</th>
<th>Project Dates, Start Finish</th>
<th>Estimated Days/Hours</th>
<th>Your status on the project</th>
<th>Description of experience and/or training</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
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<td></td>
</tr>
</tbody>
</table>
E. MATTERS RELATING TO THE PROPOSED CHAPTER ADVISOR ACTIVITIES:

As may be pertinent, briefly discuss the facilities and opportunities available to the Chapter Advisor, and to the Chapter, for which this approval is requested. Include mention of such matters as field opportunities planned or potentially available to the Chapter (site(s) to be excavated, area(s) for survey, etc.), laboratory space and equipment, catalog facilities, repository for housing collections, and permits issued or requested.

F. DOCUMENTATION - ITEM SUBMITTED IN SUPPORT OF THIS APPLICATION

DO NOT SEND ORIGINAL DOCUMENTS.

List all of the documents submitted, in copy form, for consideration by the Review Committee in support of this application, such as vita, transcript, lecture syllabus, letters of verification and/or reference, published and/or unpublished reports, reviews, etc.

1. 
2. 
3. 
4. 
5. 
6. 
7.
Continue listing as needed on separate pages.
G. Use this page and additional pages if needed for additional comments in support of your Approval Request.
NOTE
Please do not give these pages out to submit a Request. Use them to make as many copies as needed for Requests by Instructors.
SECTION 3-F
PROCEDURE FOR PROCESSING INSTRUCTOR APPROVAL REQUEST

A. APPLICANT PROCEDURE

1. Obtain the approval request form from the Chapter’s Certification Department Representative.

2. Complete the form using the instruction sheet provided. Attach a check or money order for $6.00 for the approval request processing fee. Deliver the approval request, including all supporting documents, to the Chapter Representative for forwarding to the Department, or mail the approval request and supporting documents directly to the Review Committee Chair. (Name and address will be available from the Chapter Representative).

3. The applicant will be notified upon receipt of the approval request by the Department. If an initial review discloses inadequate or insufficient information in the approval request or supporting documentation, additional information may be requested.

B. REVIEW COMMITTEE PROCEDURES

1. The Review Committee Chair will reproduce the approval request and supporting documents and sent them to each member of the Review Committee.

2. The Review Committee will meet during or prior to each regularly scheduled meeting of the Department to discuss each pending approval request. The Committee will, through consensus, arrive at a recommendation and present it for consideration by the Department.

3. During that portion of the Department meeting specified in the meeting agenda for discussion of approval requests, the membership will take action on each approval request, following a presentation and discussion of the findings, conclusions, and recommendations of the Review Committee. The applicant may attend the Department meeting at which his or her approval request will be reviewed.

4. The Review Committee Chair will, within two weeks following the meeting, notify the applicant of the decision made on his or her approval request. If an approval request is denied, the notification shall include the basis for denial. A copy of the notification is sent to the Department Recorder to be filed.

5. When an approval request is accepted, the applicant is considered an Instructor for the specific Courses approved. Approval request files for Approved Instructors are sent to the Recorder for records retention and recording on the Certification Database.

6. For a denied Approval Request, the applicant may file a written and ask for re-evaluation of the Request. The appeal must be submitted to the Chapter Representative within 30 days following receipt of notification of denial. When an appeal is filed, the applicant is encouraged to provide additional information or supporting documents.
to address any deficiency identified in the basis for denial. At the next Department meeting, the appeal will be reviewed. Any additional information or supporting documents provided as part of the appeal will be considered in reaching a decision. The applicant may attend the Department meeting at which his or her appeal will be reviewed.
7. The Department will, within two weeks following the meeting, notify the applicant of the decision made on the appealed Approval Request. If the Approval Request is accepted following appeal, the applicant is considered an Instructor for the approved Courses, and the approved Request will be sent to the Recorder for retention and entry into the Certification Database. If the Approval Request is denied following appeal, the Department Chair shall notify both the applicant and the AAS State Chair of the decision. This notification shall include a detailed basis for denial.

8. For an appeal denied by the Department, a written appeal may be filed to the AAS State Chairman requesting reevaluation by the AAS State Board. The appeal shall be made within 30 days following receipt of notification of denial of appealed approval request from the Department Secretary. The AAS State Board will review the denial of the appealed approval request at a future AAS State Board meeting and render a decision on the approval request. The applicant may attend the AAS State Board meeting at which his or her denied approval request will be reviewed. If an appeal is directed to the AAS State Board, the decision by the Board is final.

Applicants are invited to contact the Chapter Representative regarding the completion of the approval request and the processing procedures. A timely response to any inquiries about the approval request will allow for expeditious processing.
INSTRUCTIONS FOR INSTRUCTOR APPROVAL REQUEST

1. Read the entire approval request before responding.

2. Assemble the appropriate supporting documents to attach to the completed approval request.

3. Refer to Tab 3-F, Page 1, Paragraph A.2. for submitting the approval request. Applicants are encouraged to list as many courses as they wish to teach in their Instructor Approval Request.

4. The approval request must be received by the Department at least four weeks prior to the scheduled date of the meeting at which the approval request is to be considered. If less time is allowed, consideration of the approval request may be delayed until the next regularly scheduled meeting, resulting in an approximately two-month delay.

5. **Personal Supporting Documents:** Please provide only copies of supporting documents with the approval request. **PLEASE DO NOT SEND ANY OF YOUR ORIGINAL DOCUMENTS.** Retain a copy of the approval request for record purposes.

6. Include with the approval request any additional information that supports the ability to teach each of the Certification Courses stipulated in the approval request, and which will aid the Review Committee in its evaluation.

7. The approval request may not be immediately processed, and follow-up contact, or the return of the approval request may be required, if:

   a. The processing fee is not enclosed with the approval request.

   b. The form is not properly completed.

   c. There is insufficient supporting documentation.

   d. Any items of supporting documentation are judged inadequate.

8. A returned approval request will result in at least a two-month delay before the it can again be considered by the Review Committee and the Department.

9. An applicant may attend the Department’s meeting at which his or her approval request is to be reviewed. Information regarding the Department meeting dates and agenda may be obtained from the Chapter Representative or the Department Chair.
Department of Certification

INSTRUCTOR APPROVAL REQUEST

A. GENERAL INFORMATION

Name ________________________________
Signature ____________________________
Date ________________________________
Address ______________________________
City __________________ State ____ Zip ____
Telephone  Home ( ) _________________
Office ( ) _________________________
E-mail ______________________________

FOR USE BY CERTIFICATION COMMITTEE ONLY

Waiver Request Received
By ________________________________
Date Received _______________________
Fee Included $ _____________________
Committee Recommends
_____________________________
________ Date ________________
Department Decision
_____________________________
________ Date ________________
Signed By _________________________
Date Informed ____________________

PLEASE PROVIDE COMPLETE INFORMATION FOR ALL QUESTIONS. INDICATE “NA” (NOT APPLICABLE) WHERE APPROPRIATE. ATTACH ADDITIONAL INFORMATION SHEETS AS NEEDED.

B. ACTION SOUGHT - INSTRUCTOR APPROVAL

1. General Information Indicate the Chapters you are planning to instruct ____________________________

   Archaeoastronomy of the Southwest
   Archaeological Mapping Techniques
   Archaeological Photography
   Field Crew Member I
   Field Crew Member II
   Historical Archaeology I
   Introductory Human Osteology
   Laboratory Techniques
   Lithic Identification & Analysis
   Paleoindian and Archaic Archaeology
   Pottery Technology
   Ceramic Identification and Analysis
   Advanced Southwest Archaeology
   Prehistoric Architectural Analysis
   Prehistory of the Southwest
   Recorder
   Rock Art Recorder
   Shell Identification & Analysis
   Stabilization and Reconstruction
   Survey Techniques
   Survey Techniques II, Crew Chief
   Writing Preliminary Reports
   Zooarchaeology, Faunal Analysis

   Identify Regions ____________________

   Identify Regions ____________________
B. ACTION SOUGHT (continued)

2. Approval is requested to instruct. Please check boxes as appropriate. If approval is requested for more than one class, provide this information for each class.

Class work - Partial or Full time
Fieldwork - Partial or Full time

3. Please list three references. Letters from your references are optional but may be sent to the Chapter Representative or the Review Committee Chairperson if the applicant believes they will contribute additional supportive information.

<table>
<thead>
<tr>
<th>NAME OF REFERENCE</th>
<th>TITLE</th>
<th>ADDRESS</th>
<th>DATE OF FIRST ASSOCIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
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<td>2nd</td>
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<tr>
<td>3rd</td>
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<td></td>
</tr>
</tbody>
</table>

C. QUALIFICATIONS TO SUPPORT YOUR INSTRUCTOR APPROVAL REQUEST

1. Are you aware of, and do you understand, the AAS course and/or field requirements for certification in this course?
   Yes -    No ___

2. Explain your reason and purpose for requesting instructor approval.

__________________________________________________________________________

__________________________________________________________________________

3. Professional Information Applicable to the Request.
   a. Are you making this request for yourself? Yes    No
b. Present job title _____________________________
c. Former Job Title, if present job held less than two years.
   _____________________________
d. Present Affiliation _____________________________
e. Education
   • School _________________ Location _________________
   • Degree ________________________ Date _____________
   • School _________________ Location _________________
   • Degree ________________________ Date _____________
f. Major Specialization __________ For ________ Degree.
g. Minor Specialization __________ For ________ Degree.
h. Employment Record for past five years, if applicable to this request.
   • Affiliation _________________ Location _________________
     Position _________________ Dates _____ to _______
   • Affiliation _________________ Location _________________
     Position _________________ Dates _____ to _______
i. Professional Organizational Affiliations ____________
   _____________________________
   _____________________________
   _____________________________
j. Professional Honors, Grants, Awards. Please provide supporting documentation.
   _____________________________
   _____________________________
   _____________________________
   _____________________________
C. QUALIFICATIONS TO SUPPORT YOUR INSTRUCTOR APPROVAL REQUEST (continued)

4. Previous Experience. Have you taught this course or a similar course on a previous occasion? If so, please document;

a. Organization: Location

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Description of Course</th>
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<table>
<thead>
<tr>
<th># of Students</th>
<th>Course included Fieldwork?</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Yes  No</td>
</tr>
</tbody>
</table>

b. If you are applying to teach more than one course, please supply the information requested in 4.a. above for each additional course. Use “Additional Information Sheets” as needed. Only one fee is required.

D. ADDITIONAL INFORMATION IN SUPPORT OF INSTRUCTOR REQUEST

Provide detail of lectureships or courses taught which are applicable to an Instructor’s activities and responsibilities. Each entry should state the kind of experience, place and date, the nature of it, whether volunteer or paid, etc.

1. Lecture Experience

<table>
<thead>
<tr>
<th>1st. Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

Check all applicable, Instructor, Paid, Student, Volunteer, Other

<table>
<thead>
<tr>
<th>Estimate days or hours of classroom work.</th>
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<table>
<thead>
<tr>
<th>2nd. Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
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</table>

Check all applicable, Instructor, Paid, Student, Volunteer, Other

<table>
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<tr>
<th>Estimate days or hours of classroom work.</th>
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<thead>
<tr>
<th>Course Description</th>
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<table>
<thead>
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<th>Additional Information Sheets</th>
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<table>
<thead>
<tr>
<th>Additional Information Sheets</th>
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</tbody>
</table>
3rd Course Title __________________________ Credit Hours ______

Check all applicable, Instructor, Paid, Student, Volunteer, Other __________________________

Estimate days____ or hours_____ of classroom work.

Course Description __________________________________________

4th Course Title __________________________ Credit Hours ______

Check all applicable, Instructor, Paid, Student, Volunteer, Other __________________________

Estimate days____ or hours_____ of classroom work.

Course Description __________________________________________

2. Field Experience

1st Project Name ______________ Location _____________

Institution/Sponsor __________________________________________

Supervisor ______________ Assistant ______________

Project Dates, Start _______ Finish ________________

Estimated Days____ or Hours_____ of field experience.

Your status on the project __________________________

Description of experience and/or training________________________

2nd Project Name ______________ Location _____________

Institution/Sponsor __________________________________________

Supervisor ______________ Assistant ______________

Project Dates, Start _______ Finish ________________

Estimated Days____ or Hours_____ of field experience.

Your status on the project __________________________

Description of experience and/or training __________________________
### 2. Field Experience (continued)

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<th>Supervisor</th>
<th>Assistant</th>
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</table>
E. MATTERS RELATING TO THE COURSES APPLICANT INTENDS TO TEACH

As may be pertinent, briefly discuss the facilities and opportunities available to the Instructor and to the Chapter for the instruction of the courses. Include mention of such matters as classroom space, number of students expected to be taught, visual aids, guest lecturers, laboratory space and equipment, catalog facilities, repository for housing collections, sites to be excavated, areas for survey, permits required, and persons who will assist with instruction.
F. DOCUMENTATION - ITEMS SUBMITTED IN SUPPORT OF THIS REQUEST

DO NOT SEND ORIGINAL DOCUMENTS.

List all of the documents submitted, in copy form, for consideration by the Review Committee in support of this Request, such as vita, transcript, lecture syllabus, letters of verification and/or reference, published and/or unpublished reports, reviews, etc.

1. 

2. 

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4. 

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10. 

Continue listing on Additional Information Sheets as needed.
G. Use this page and additional pages if needed for additional comments in support of your Approval Request.
ARIZONA ARCHAEOLOGICAL SOCIETY RELEASE

IN CONSIDERATION of being permitted to participate in archaeological activities such as field trips, classes, hikes and/or field school excavations (together called Activities herein) as a member or guest or invitee or licensee of the Arizona Archaeological Society (hereafter called AAS), Releasor, for himself/herself and heirs, successors and assigns, hereby agrees as follows:

1. Release. Releasor hereby releases from any liability, loss or damage, and waives any claim against, and covenants not to sue the Released Parties named herein, on account of injury to the Releasor or his/her property or resulting in the death of Releasor, whether caused by the negligence of a Released Party or otherwise while the Releasor is engaged in Activities, including but not limited to transportation to and from Activities sites, and first aid, medical treatment or services rendered during Releasor’s participation in Activities.

2. Released Parties. Parties released herein are the AAS, its member, its chapters and their directors and officers, the State organization’s directors and officers, the owners and lessees of premises upon and in which Activities are carried out, and each of them, together called Released Parties herein.

3. Indemnity. Releasor agrees to indemnify the Released Parties and each of them from any loss, liability, damage or cost they may incur due to the presence of Releasor upon or in the Activities site (including but not limited to weather, open excavation pits, scorpions, rattlesnakes, transportation to and from the Activities site, etc.) whether caused by the negligence of the Released Party or otherwise.

4. Legal Effect. Releasor expressly agrees that this release, waiver and indemnity agreement is intended to be as broad and inclusive as is permitted by the laws of the State of Arizona, and that if any portion hereof is held invalid, the balance shall continue in full force and effect.

5. Insurance. RELEASOR MUST PROVIDE HIS/HER OWN HEALTH, ACCIDENT AND LIABILITY INSURANCE AND SUCH INSURANCE MUST BE IN FORCE DURING RELEASOR’S PARTICIPATION IN ACTIVITIES.

6. Agreement. This Release contains the entire agreement between the parties and the terms of this release is a binding contract, and shall remain in effect until the AAS receives a written notice revoking its terms. Releasor further states that he/she has carefully read this Release, knows its contents and signs it freely.

IN WITNESS WHEREOF, Releasor has executed this release on the date stated.

Signature:__________________________________________________
APPLICATION FOR FUNDING OF COURSE OR WORKSHOP

Limited funds are available to support Certification Department Courses and Workshops to offset costs due to a small number of students, or cost of an Instructor’s travel, etc. Up to $250 will be awarded to a Chapter in a year. The submission will be reviewed by the Department Review Committee and the amount of award determined by the Department as a whole. Please print or type and use the back of the form if more space is needed. Please apply several months in advance of when funds are needed.

Chapter Name:________________________________________

Date:______________________

Title of education event: ___________________Number of students:_____

Date(s) of course or workshop: ________________Amount requested:$____

Title of Certification Course or Workshop:_____________________________________

Instructor:__________________ Chapter Certification Rep:________________

State how funds will be used:_______________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

Why you are applying for Department support?________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________
Contact person: __________________ Telephone: __________________

Mailing address: ________________________________________________

E-mail address: ________________ Fax number: _______________________

Please return the form to the Certification Department Chairperson.

APPLICATION FOR FUNDING OF COURSE OR WORKSHOP

Provide added information as needed:
Thank you for taking the time to fill out this form. Your opinions will help us to evaluate and improve our course offerings. On a scale from 1 to 5, with 5 indicating strongest agreement, please answer the following questions by circling the number that best reflects your opinion.

1. The overall course objectives were clear.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

2. The course objectives were adequately met.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

3. The pace of the course was neither too fast nor too slow. Please explain below:  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

4. Students were encouraged to ask questions.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

5. The classroom facilities were adequate.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

6. The text helped you to understand the material.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

7. Handouts and/or supplementary material, if used, helped you to understand the material.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

8. Lectures helped you to understand the material.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

9. Field or laboratory work, if offered, helped you to understand the material.  
   - Strongly Agree: 5  
   - Strongly Disagree: 1

10. Visual aids, if used, helped you to understand the material.  
    - Strongly Agree: 5  
    - Strongly Disagree: 1

11. Assignments, if made, helped you to understand the material.  
    - Strongly Agree: 5  
    - Strongly Disagree: 1

12. Field trips, if offered, helped you to understand the material.  
    - Strongly Agree: 5  
    - Strongly Disagree: 1

13. The course met your expectations.  
    - Strongly Agree: 5  
    - Strongly Disagree: 1

14. You would rate your overall experience in this course as excellent.  
    - Strongly Agree: 5  
    - Strongly Disagree: 1

15. You would recommend this course to a friend.  
    - Strongly Agree: 5  
    - Strongly Disagree: 1

Please turn the page
16. Please tell us the best thing about the course.

17. What would have made the course more enjoyable?

18. Additional comments:

Please return the form to the Chapter AAS Certification Department Representative or designate at the end of class, or mail within a week of the last class to:

_________________________________________
_________________________________________________________________________________________

Thank you for your input. Your comments are important to us.
Outline for Project Request/Report to Project Committee, Department of Certification


A. Introduction
   • Overall purpose of the project
   • Goals for the stated time period (usually one year)
   • Project Background
   • Research Design

B. Summary of Field Methods and Results to date

C. Evaluation of Work Accomplished in the Time Period
   Include how work relates to research design (Stabilization, analysis, mapping, excavation, report writing etc.)

D. Recommendations for Further Work
   Research issues and relevance to research design (brief overview)
   Work to be accomplished in the next time period (one year)

E. Work Plan for the Next Time Period (one year)
   • Personnel
     Indicate the Principal Investigator, Project Manager (the AAS person with day to day responsibility for implementation) as well as Field and Laboratory Directors, Instructors, and ideal number of staff.
   • Field
     Tasks related to research design for specific time period.
   • Laboratory
     Tasks related to research design for specific time period.

F. Schedules
   Include a time line with dates and locations of field and lab work with supervisors and instructors specified. Include dates for preparation of field work report and completion, artifact analysis report preparation and completion, curation etc.

G. Budget
   Include projected income from volunteers as well as anticipated expenditures. The project needs to be self sustaining. Indicate donations.

H. Additional Information
   • Current agreement with land owner
   • Burial treatment and disposition statement
   • References cited

(continued next page)
Submission Dates:
The Project Committee will review AAS Project reports at least once a year according to the following schedule. The Project Committee must have reports in writing prior to Department of Certification meetings in order to make recommendations to the Department.

Two Weeks Prior to First Fall Meeting of Department (Usually mid-September):
Report of work completed in the prior year (September through August)

Two Weeks Prior to Second Fall Meeting of Department (Usually mid-November):
Proposal for work in the coming months (up to September of following year)

Two Weeks Prior to First Meeting of Department in New Year (Usually mid-January):
Fine tuning of proposal, answers to Committee’s questions
ADVANCED SOUTHWEST ARCHAEOLOGY

PURPOSE

To present members with an opportunity to acquire an in-depth understanding of the prehistoric inhabitants of the various regions of the Southwest, especially in what is now Arizona and the immediately surrounding areas (please refer to Figure 1 on the next Page).

OBJECTIVES

After studying a region, the student is to have an in-depth understanding of the following:

1. Chronology of the habitation of the region.
2. Subsistence strategies.
3. Types of dwellings and changes in habitation.
4. Ceramic types and changes thereto during various phases.
5. Lithic technology.
6. Other features unique to the particular people.

FORMAT

Twenty hours of class work are required to present the class. Eight classes of two and one-half hours each are recommended.

Prerequisite: Prehistory of the Southwest as presented by the AAS or the equivalent which has been approved by the Department of Certification.

A regional approach is used for this class. The map on the following page defines the physical boundaries of the four regions. The time frame of Advanced Southwest Archaeology is A.D. 500 to the present.

Examination: At the start of the third class, each student shall be assigned a research report. The reports may be presented either orally or in written form. Written reports may be considered for publication in The Petroglyph.

Note: Classification preference for each region is the choice of the instructor. It is hoped that the instructors qualified in regions other than the "home" areas of respective chapters can present this data to the other chapters of the state.
Figure 1. PREHISTORIC SOUTHWESTERN CULTURAL TRADITIONS
(Based on Cordell 1984)

COURSE OUTLINE

1st Class
Origins: Native Americans living in the Southwest today
descend from the prehistoric cultures, or did they? Prove or
disprove the above statement through analysis of ceramics,
lithics, architecture, linguistics, legends, and traditions.
Historic cultural history, as well as prehistoric cultural
history, is covered at the beginning of this course.
Hypotheses for decline and redistribution of population after
cultural apogee was reached; including migrations,
re-occupations, relocation of population, among others; will
be presented.

2nd Class
Subsistence: Methods developed by prehistoric inhabitants to
sustain life in each region. Investigate subsistence patterns
that enabled not only survival but the steady evolution of an
advancing culture.
<table>
<thead>
<tr>
<th>Class</th>
<th>Topic</th>
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<tbody>
<tr>
<td>3\textsuperscript{rd} Class</td>
<td><strong>Settlement Systems</strong>: What pressures caused a population to be in a state of change? What effect does population expansion and contraction have on settlement patterns?</td>
</tr>
<tr>
<td>4\textsuperscript{th} &amp; 5\textsuperscript{th} Class</td>
<td><strong>Social and Organizational Systems</strong>: From the evidence, what may archaeologists infer about social organization and social systems in the region?</td>
</tr>
<tr>
<td>6\textsuperscript{th} Class</td>
<td><strong>Material Culture of the Region</strong>: Describe the differences in lithics, in ceramics, and in architecture.</td>
</tr>
<tr>
<td>7\textsuperscript{th} Class</td>
<td><strong>Interaction/Action</strong>: Involvement within and without the regional boundaries. Disbursement of ideas on religion, trade, and building techniques.</td>
</tr>
<tr>
<td>8\textsuperscript{th} Class</td>
<td><strong>Wind Up</strong>: Student reports and presentation of individual ideas developed during the course.</td>
</tr>
</tbody>
</table>

See next page for References
REFERENCES

Note: In addition to the material cited below, refer to the materials listed for Prehistory of the Southwest in Tab 15.


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*(A) In Phoenix Chapter Archives
ADVANCED SOUTHWEST ARCHAEOLOGY
THE PALEOINDIAN AND ARCHAIC PERIODS

PURPOSE

To present members with an opportunity to acquire an in-depth understanding of the Paleoindian and Archaic periods as their occupations are viewed broadly across North America with a focus on the Southwest.

OBJECTIVES

After studying the manifestation of the Paleoindian and Archaic periods in the Southwest, the student is to have an in-depth understanding of the current thinking regarding:

A. Arrival of the first Americans and their adaptation to various environments. Paleoenvironmental considerations.

B. Archaeology of the Paleoindian and Archaic periods in the Southwest and important sites for defining and dating the occupations. Synthesis of the Archaic tradition within the Southwest. Manifestation of the Paleoindian and Archaic occupations of the Southwest in the archaeological record, including recognition of Paleoindian and Archaic artifacts and features in situ and recognition of Archaic rock art.

C. Subsistence, economy, and settlement strategies of the Paleoindian and Archaic periods in the Southwest.

D. Transition from Paleoindian to Archaic, and from Archaic to major cultural traditions including Hohokam, Anasazi, Mogollon, Patayan, and Sinagua, or Salado, in the Southwest.

E. Introduction of agriculture in the Southwest considering horticulture and early cultigens.

F. Lithic technologies of the Paleoindian and Archaic periods in the Southwest.

FORMAT

Twenty-five hours of classwork are required to present the class. Ten classes of two and one-half hours each are recommended.

PREREQUISITES

Prehistory of the Southwest as presented by the AAS or the equivalent which has been approved by the Department of Certification. The approach used is (1) a broad overview of the Paleoindian occupation of North America, narrowing to western North America, and focusing on the Southwest; (2) the transition to and occupation of the Southwest during the Archaic period; and the subsequent transition to the major Southwestern archaeological cultural traditions (Anasazi, Hohokam, Mogollon, and Patayan). The time frame of Advanced Southwest
Archaeology: Paleoindian and Archaic Periods extends from the entry of man into North America to approximately A.D. 500.
EXAMINATION

At the start of the third class, each student shall select a research topic for approval by the instructor. The report may be presented either orally or in written form, or both. Written reports may be considered for publication in The Petroglyph.

COURSE OUTLINE

1st Class The First Americans: A brief overview of the development of humankind will precede the examination of the arrival of the first Americans. Issues discussed will include the routes man followed to reach the Americas and the synchronic and diachronic distribution of man across North, Central, and South America. The environments encountered and the adaptive strategies to these environments will be examined. Competing theories related to the issue of arrival, both time and the route, of the first Americans will be examined.

2nd Class Sites and Complexes: Archaeological evidence that established the existence of Paleoindians in the Southwest will be examined and an overview of Paleoindian complexes and site variability will be presented. Sites and complexes discussed will include Folsom and its intellectual consequences for American archaeology; Blackwater Draw near Clovis, New Mexico, which established the Clovis Horizon; Sandia Cave; San Dieguito; Ventana Cave; and the San Pedro River valley sites in southeastern Arizona (Murry Springs, Lehner, Double Adobe, and Naco). Other complexes such as Plainview, Agate Basin, Firstview, Cody, Jay, and other sites, including current research, may be discussed as time permits.

3rd Class Artifacts, Chronology, Environment, Economy, and Settlement: Paleoindian artifacts, lithic, and bone, as well as diagnostic lithic technology will be discussed, and demonstrated if feasible. The Paleoindian Chronology will be discussed, along with the question of whether Clovis people were the first Americans. Current arguments will be explored and current research will be reviewed. Paleoenvironmental reconstructions and their importance to Paleoindian study will be examined. Paleoindian hunting strategies, economy, and settlement will also be discussed.

4th Class End of the Paleoindian Period and Transition to the Archaic: The extinction of the megafauna and the end of the Paleoindian period across the Americas and in the Southwest will be examined. The subsequent transition to the Archaic period and the attendant changes in economy and settlement will be discussed.
5th Class Archaic Culture: Sites and Complexes: The archaeological evidence that established the existence of the Archaic culture in the Southwest will be examined and an overview of Archaic complexes will be presented. Complexes discussed will include Pinto Basin (San Dieguito-Pinto tradition, including Amargosa), Cochise (Chiricahua and San Pedro traditions), as well as Hueco and Coahuila. The Oshara tradition concept (Jay, Bajada, San Jose, Armijo, En Medio, and Trujillo phases) and the Picosa concept (Pinto Basin, Cochise, and San Jose) will be addressed. Archaic sites to be discussed include those in the ancient lake basins of Southern California and Southwestern Arizona (San Dieguito-Pinto); Ventana Cave, San Pedro River Valley, Cienega Creek, and Wet Leggett (Cochise); southeastern New Mexico, Coahuila and eastern Chihuahua in Mexico, and west Texas (Hueco and Coahuila); and Colorado Plateau and Rio Grande Valley (Oshara).

6th & 7th Artifacts, Chronology, Environment, Ecology, Economy, and Classes Settlement Strategies: Archaic artifacts as well as diagnostic lithic technology, both chipped and ground stone, will be examined. The Archaic Chronology will be discussed, including Archaic subsistence adaptations in general. The importance of Paleoenvironmental reconstructions to the Archaic period, as well as ecological issues will be discussed. Archaic period economy and settlement strategies will be examined.

8th & 9th Horticulture and the Evidence of Early Cultigens in the Classes Southwest A brief overview of the development of agriculture in Mesoamerica will be presented. A review of the general models proposed for the transition to food production and their relevance to the Southwest will be addressed. The development of horticulture and the introduction of corn and other cultigens in later Archaic time will be examined. The acceptance of agriculture and the transition from the Archaic period to the major cultural traditions (e.g., Hohokam, Anasazi, Mogollon, Patayan, Sinagua, or Salado) in the Southwest will be discussed.

10th Class Conclusion Student reports and presentation of individual ideas developed during the course.
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<td>1972</td>
<td>The Double Adobe Mammoth: 1970 Excavations along Whitewater Draw</td>
<td>Report: Dr. E. H. Lindsay, Geosciences</td>
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<td>Experiment.</td>
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<td>1982</td>
<td>The Distribution of Fluted Points in Arizona: A Review and Update.</td>
<td>Archaeological Series No. 145. Arizona State Museum,</td>
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<td></td>
<td>University of Arizona, Tucson.</td>
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<td>Overview.</td>
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<td>1984</td>
<td>The Archaic Occupation of the Rosemont Area, Northern Santa</td>
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<td>Rita Mountains, Southeastern Arizona.</td>
<td>University of Arizona, Tucson.</td>
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<tr>
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<td>Ecological Consideration of the Spread of Agriculture in the Arid</td>
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<td>Southwestern United States.</td>
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Advanced SW Archaeology
Revised October 2002
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Windmiller, Ric


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Wilmsen, Edwin N.

Woodbury, Richard B., and Ezra B. W. Zubrow

Wormington, H. Marie


Zubrow, Ezra B. W.
PURPOSE

This class will review the current literature on archaeoastronomy in the American Southwest, discuss important issues relating to the naked eye observation of celestial objects in the night sky, and cover basic recordation techniques and methods. This class will sample a small portion of a large body of literature on archaeoastronomy. Mesoamerican archaeoastronomy will be included because of the influence of Mesoamerican cultures on the Southwest and because of the advanced state of archaeoastronomy studies in Middle America.

Archaeoastronomy is most productive when undertaken as an anthropological study that uses archaeological and astronomical methods and theories. It should include the study of both the landscape and the night sky surrounding an archaeoastronomy site or location, as well as the cultural context in which the ancient/historic astronomy took place. Thus, ethnographic information, when available, should be used to develop research designs and for assisting interpretation; archaeological methods should be applied to the recordation and measurements of alignments; and knowledge of naked eye astronomy is essential.

Three types of archaeoastronomy phenomena in the Southwest will be studied in class and in the field: (1) **Alignments** of petroglyphs, buildings, cairns, or trails with celestial phenomena (sunrise, sunset, moonrise, moonset, planets, constellations or star clusters, etc.); (2) **light and shadow** interaction with rock art panels during certain times of the year; and (3) recorded oral traditions, songs, poems, and other **ethnographic data** that provide cultural context for understanding prehistoric astronomy.

Students in this class will create a notebook that summarizes the main points covered in the readings and in class, and will prepare a field journal describing field observations made by the student during the class. In addition, students will prepare a short (5-7 page) research paper that covers reading materials not assigned in class (see bibliography for additional references).

COURSE OBJECTIVES

At the conclusion of the course, students are expected to:
1. Understand the issues involved in observation of celestial objects with the naked eye
2. Understand the ethnographic basis of astronomical observation
3. Be able to use basic recordation techniques and methods
4. Appreciate the importance of research designs in archaeoastronomy studies
5. Be able to understand and describe alignments of various man-made structures with astronomical objects and events.
6. Observe and describe solar interactions with rock art panels
7. Understand how and why astronomical observation was used in various significant cultures related to the American Southwest: Mesoamerican, Hohokam, Pueblo, Navajo, Apache, and others

PREREQUISITES

The only requirement is the completion of Prehistory of the Southwest I or permission of the instructor.

COURSE FORMAT

The course is designed to be presented in approximately 34 hours, with 20 hours of lecture (as indicated under the Classroom Instruction Section) and 14 hours of laboratory/field experience. Classroom instruction occurs from 6:30 to 9:00 pm once a week for eight sessions. Field observations take place during the week and on weekends.

FIELD WORK

Visits by individual students or groups of students to local sites for observation will be determined during the course. Some field observations will be required for individual students on their own and some will be done together as a class under the supervision of the instructor.

LABORATORY/FIELD MATERIALS

All students will be required to create a journal that records their field observations.

REQUIRED READING

A package of articles and book chapters.
COURSE OUTLINE (Classroom and Field Work Assignments)

I. Introduction to Archaeoastronomy Issues

Topics covered in this class session include the classification of celestial phenomena based on the strength of impression on a naked eye observer, the celestial sphere, charting the sun’s movement, and moon and eclipse cycles.

Reading for this session:


Field Exercise No. 1 (Night Sky):
Students will examine the night sky and plot the most obvious star clusters (constellations) as they see them using graph paper. Position the polar star in the middle of the page. Record time, date, and location. In addition, find a location to place a stick about 1 foot (30 cm) in height that will cast a shadow and then record that shadow over the course of the class, both at the same time and at different times of the day, if possible.

II. Ethnographic Studies in Southwest Astronomy

This class session reviews ethnographic information on astronomy for the Pueblos, Eastern Pueblos, Zuni, Hopi, Navajo, Mescalero Apache, Jicarilla Apache, Seri, Tohono O’odham, Pima, Maricopa, Cocopa, Havasupai, Walapai, and Yavapai.

Reading for this session:


Field Exercise No. 2 (Sunrise and Sunset):
Select an archaeological site or prominent natural feature which has a view of the horizon; observe the sunrise over part of the site or
natural feature. Find a comfortable and/or obvious location (e.g., open or cleared area, rock seat, etc.) to make this observation. Sketch the sun’s location on the horizon, record its azimuth, and note the direction/angle in which the sun moves up into the sky. Fill out the field form. Repeat this exercise for the sunset from the same observation location.

III. Recordation Techniques and Issues 1

This class session examines naked eye astronomy and recording techniques and forms, including determining azimuths.

Reading for this session:

- Archaeoastronomy Site Forms

Field Exercise No. 3 (Night Sky):
Observe the helical rise and set of several major constellations to help determine the ecliptic and celestial equators. Chart their movement across the sky in your journal, record dates and times. Note the movement of the star clusters you observed in field exercise no. 1.

IV. Recordation Techniques and Issues 2

Recordation is discussed further in this class, including methodological issues, the development of archaeoastronomy research designs, criteria for determining if a site is an observatory, and web-based reporting. There also will be a demonstration of the Redshift Star Chart Computer Program.

Reading for this session:

- www.sinaguasunwatchers.com
**Class Demonstration:**  
Redshift Star Chart Computer Program

**Field Exercise No. 4 (Shadow Interactions):**  
Record a mid-day shadow on a rock art panel in your journal. Sketch the shadow’s shape and its relationship to the petroglyph(s). Observe changes in the movement and shape of the shadow over a period of at least an hour. Fill out field form.

**V. Mesoamerican Archaeoastronomy**

This class session discusses the Mayan 584-day Venus calendar (Dresden Codex), the 260-day calendar, the 365-day calendar, Venus star wars, and astronomy temples. In addition, the class examines the conceptualization of geographic latitude by Mesoamerican groups through solar zenith observations and a complex calendar system, as well as the expansion of the Teotihuacan state during the first millennium A.D. based on archaeological data such as pecked circle crosses, building and site orientations, and culturally modified underground caves illuminated with beams of light during certain times of the year.

**Reading for this session:**

**Field Exercise No. 5 (Venus):**
Locate Venus in the night sky; in your journal plot its general location in the sky (cardinal direction and low or high in the sky). Record location (UTMS), date, and time.

**VI. Archaeoastronomy of the Pueblos**

This class session discusses evidence of archaeoastronomy at Chimney Rock in southwestern Colorado and Chaco Canyon in northwestern New Mexico, as well as the apparent responses among the ancient Pueblos to known solar eclipses during prehistoric times.
Reading for this session:


Field Exercise No. 6 (Lunar Observation):
Examine lunar charts to determine the location and shape of the moon one evening. Observe the night sky from an archaeological site or prominent observation location and observe the rising of the moon. Sketch the moon and its movement in the sky. Record location (UTMS), date, and time.

VII. Hohokam Archaeoastronomy

Examples of Hohokam archaeoastronomy are discussed in this class session, including Casa Grande, the Shaw Butte Hilltop site, and the Hole-in-the Rock at Papago Park in Phoenix.

Reading for this session:

- Mixon, Benjamin, and Raymond E. White (1991) “Skywatchers of the Salt River Valley Hohokam”
Field Exercise No. 6 (Sunrise and Sunset, again)
Return to the archaeological site or prominent natural feature which has a view of the horizon that you previously recorded; observe the sunrise again over the same part of the site or natural feature. Sketch the sun’s location on the horizon (record azimuth) and note the direction/angle in which the sun moves up into the sky. Fill out field form. Repeat this exercise for the sunset from the same observation location. Note changes in the location of the sun from your previous observations.

VIII. Conclusions

Students will turn in their research paper and journal, and provide a 5-minute oral presentation on their paper to the class.
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Preston, Robert, and Ann Preston

Reddy, Francis, and Greg Walz-Chojnacki

Reyman, Jonathan E.

Ruggles, Clive

Schaafsma, Polly

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Archaeoastronomy Forms
Site No./Name____________________ Recorder(s)__________________________
Panel No.______ Element No.______ Other______ UTMS____________

Date(s) of Observations [enter date]

Summer Solstice (SS):_________ August Crossquarter (Acq):____________
Autumn Equinox (AE):_________ November Crossquarter (Ncq):__________
Winter Solstice (WS):__________ February Crossquarter (Fcq):__________
Vernal Equinox (VE):___________ May Crossquarter (Mcq):______________
Other Days__________________________

Light and Shadow Movements

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[X] Dark (Shadow) [O] Lit [--] Both Shadow and Light on Element(s) [No] No observation

Sketch Map

North?

Light and Shadow Shapes on Petroglyph(s): [see form terminology] (enter date/time)

________________________ ( ) __________________________ ( ) __________________________ ( )

________________________ ( ) __________________________ ( ) __________________________ ( )

________________________ ( ) __________________________ ( ) __________________________ ( )

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Archaeoastronomy of the Southwest
Released September 2007
Sunlight and Shadow Form Terminology
(From C. Johnson, Utah Rock Art 10, 1992)

Sunlight

Sun Arrow
Sun Wedge
Sun Angle
Sun Dagger
Sun Patch
Sun Cup
Sun Mouth
Sun Box
Sun Nubbin
Sun Line

Shadow

Shadow Arrow
Shadow Wedge
Shadow Angle
Shadow Dagger
Shadow Patch
Shadow Cup
Shadow Mouth
Shadow Box
Shadow Nubbin
Shadow Line
Site No./Name________________
Recorder(s)_______________________________________

Dates Recorded_____________________ UTMS_________________

Panels/Elements____________________________ Time(s) of Event_______________

Azimuth (Compass Bearing) from Place of Observation to Horizon Event ____________

Comments:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Sketch Map

Eastward Horizon

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<th>Summer Solstice</th>
<th>Equinox</th>
<th>Winter Solstice</th>
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<tr>
<td>Sunrise</td>
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Describe Horizon:__________________________________________________________
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Describe Place of Observation:_____________________________________________
Western Horizon

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<th>Summer Solstice</th>
<th>Equinox</th>
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<td>Sunset</td>
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Describe Horizon:
________________________________________________________________________
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Describe Place of Observation:
________________________________________________________________________
Site No./Name________________
Recorder(s)_______________________________________

Dates Recorded_____________________ UTMS_________________

Panels/Architecture_________________________ Time(s) of
Event_____________________

Azimuth (Compass Bearing) from Place of Observation to Star Cluster

Describe Star Cluster(s) [Constellation] and Alignment(s) with
Archaeological Feature(s):

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

Sketch Map of Night Sky

Describe Place of Observation: ____________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
ARCHAEOLOGICAL MAPPING TECHNIQUES

PURPOSE

The purpose of this course is to provide the basic academic and field skill to permit the avocational archaeologist the ability to undertake most mapping programs used in survey and excavation projects of the AAS and to provide assistance to the professional community as may be requested.

OBJECTIVES

At the completion of this course, the student should be able to:

1. Determine the purpose of mapping and the various types of maps which exist.

2. Understand the difference between mapping terms.

3. Name and define the various kinds of archaeological mapping techniques, including GPS.

4. List the various types and functions of instruments and tools used by the archaeologist during mapping projects.

5. Display the ability to use and plot-on USGS Topographic maps; also know of other various map types.

6. Explain how a site is mapped.

7. Indicate the use of photography and its importance in data collection; the same for aerial photography and its importance in site discovery and location plotting.

8. Understand the importance of site spatial relationships and map work/interpretation.

FORMAT

The student will receive a minimum of 12 hours of classroom instruction, coupled with 56 hours of actual field experience. Within the field work requirement, there should be no single specific activity necessary for fulfilling this requirement, though the following conditions must be met;

A. The student mapper should work in at least two different mapping settings, for example, excavation, and survey.

B. The student mapper should experience in the field at least three different mapping methods.
Normally the field work requirements will be fulfilled by work on at least seven different days. The last four hours of field work will be spent in finalizing field notes, site recordation forms, site maps, field maps, and any additional administrative tasks.

A brief final report of the field work undertaken, along with the successful completion of all written and administrative work assigned, coupled with the instructor's evaluation of both the student's classroom and field work, will determine the students successful completion of this course.

COURSE OUTLINE

A. Some general concerns
   1. Principles of mapping
   2. Organizational aspects of mapping
   3. Reasons for mapping
      a. Locational
      b. Excavation
      c. Survey
      d. How reasons for mapping affect how mapping is undertaken
   4. Demands of mapping
      a. Good physical condition
      b. Proper clothes and safety precautions
      c. Field logistics
   5. General mapping techniques
      a. Permits and clearance to do the project and survey particular land areas (i.e., land ownership)
      b. Background research before entering the field
         • Historical maps, photographs, reports
         • Recent field work, maps, report
      c. Determining site numeric designation system
         • MNA system
         • ASM system (including the AZSITE)
         • ASU system
         • Forest Service system
         • BLM system (part of the ASM system)
         • Smithsonian Institution system
         • Gladwin System
         • New Mexico System
   6. Kinds of surveying and mapping

B. Aerial mapping
   1. Problem formation
   2. Aerial photography
      a. Film types and their applications
         • B/W
         • Color
• Infrared
  b. Flying altitudes
  c. Use in survey
• Stereo
  • Viewing, reading aerial photos
• Topography review/survey for course plotting
• Site discovery
• Locational plotting; transferring photo information to topographical maps

3. Determining survey boundaries
4. Boundary effects
  a. Linear transects, interception theory
  b. Quadrant block units, boundary bias

C. Mapping basics
1. Basic definitions
  a. Horizontal plane
  b. Angle
  c. Elevation
  d. Gradient
  e. Line
  f. Distance
  g. Contour
  h. Leveling
2. Units of measurement defined
  a. Acre
  b. Chain
  c. Degree
  d. Minutes
  e. Seconds

3. Environmental variables and mapping techniques: impacts of variation in:
  a. Soils
  b. Topography
  c. Slope
  d. Vegetation
  e. Climate
  f. Sunlight, shadow, reflection
  g. Surveyor's physical and mental state: tiredness factor

4. Mapping field notes
  a. Requirements
    • What constitutes good notes
    • Kinds of notes
    • Suggestions on recording notes
    • Types of field books
  b. Teamwork and coordination between staff and crew
    • There is no such thing as a "dumb" question or observation
    • Talk with each other about what you are seeing and doing
4. Mapping field notes (continued)

c. Assign specific crew member responsibilities
   • Record keeping, site survey forms
   • Topographic map location
   • Site mapping
   • Site photography and aerial work
   • Site boundary determination, site marking (if warranted), site datum placement.

D. Intensive examination of site surface
  1. USGS Topographic Maps
     a. Types
        • 15 minute
        • 7.5 minute
     b. Reading a map
        • Township, Range, Section
        • Miles, acres, feet, kilometers, meter
        • Elevations
        • UTM's
        • Longitude and Latitude
        • Magnetic vs true north
     c. Using a map
        • Triangulation
        • Map wheels
        • Dot
        • Grid matrix
        • General locational plotting procedures
     d. Using a compass with a topographic map
        • Types of compasses
        • Range Finder (Silva) compass
        • Brunton compass
        • Setting the declinations for both compasses
        • Walking a transect line with a compass
  2. Other types of area/locational maps

E. Basic site mapping (for both survey and excavation)
  1. Site mapping
     a. Mapping techniques
        • Compass and pace
        • Compass and tape
        • Brunton tripod and tape
        • Alidade mapping
        • Theodolite mapping
        • Global Positioning System instruments
     b. Establishing a permanent site datum (site tag placement)
     c. Establishing N/S and E/W base lines
d. Learning typical mapping symbols for features, rocks, trees, artifact scatters, mounds, etc.
e. Precise methods vary from site to site and project to project

2. Field photography
   a. Types of cameras
   b. Types of film
   c. Lighting conditions
   d. Exposure settings
   e. Scale, directional indicators, and photo
   f. Keeping photographic records
   g. Photographic distortion
      • Large scale objects
      • Small scale objects
   h. Photographing site features and artifacts
   i. Aerial photography of the site

F. Measurements of horizontal distances
   1. General methods
      a. Pacing
      b. Taping
      c. Odometer readings
      d. Electronic Distance Measurement (EDM)
      e. Tacheometry
         • Transit/theodolite and stadia rod
         • Alidade and stadia rod
      f. Subtence bar
      g. Global Positioning System
   2. Taping
      a. Care of taping equipment
      b. Taping on level ground
      c. Horizontal measurements on uneven ground
      d. Slope measurements
      e. Sources of error in taping
      f. Laying out a right angle with a tape
      g. Measuring an angle with a tape by the chord method
      h. Measuring an angle with a tape by the tangent method
      i. Laying off angles
   3. Electronic Distance Measurement (EDM)
      a. Classification of EDM instruments
      b. Principles of EDM instrument operation
      c. Computing horizontal distances from slope distances

G. Leveling
   1. Methods for determining differences in elevation
   2. Instruments for differential leveling
      a. Engineer's level
      b. Transit/theodolite
      c. EDM
      d. Hand level
      e. Alidade and stadia rod
G. Leveling (continued)

3. Field procedures and computations for differential leveling
   a. Carrying and setting up the level
   b. Using a stadia rod
   c. Differential leveling
   d. Profile leveling
   e. Sources of error in leveling

H. Measurements of angles
   1. Units of angle measurement
   2. Kinds of horizontal angles
   3. Direction of a line
   4. Bearing versus azimuths
   5. Calculation of bearings
   6. Measuring angles using a transit/theodolite
   7. Measuring angles and computing angles
   8. Establishing a datum point
   9. Laying off a base line and turning angles from the base line

I. Determining direction
   1. Compasses
      a. Types of compasses
      b. Their different uses
   2. The mysteries of north
      a. True north versus magnetic north
      b. Determining and setting magnetic declination
   3. Taking a map bearing with a compass
   4. Typical problems and sources of error in compass
      a. Compass out of level
      b. Pivot needle or sight vanes bent
      c. Fence lines, power lines, cans, pocket knives, or other metal nearby
      d. Reading wrong end of compass needle
      e. Setting declination off wrong side of north
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A. SUGGESTED:

Spier, Robert F. G.

B. ADDITIONAL REFERENCES:

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1975 Field Methods in Archaeology. Mayfield, Palo Alto.

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ARCHAEOLOGICAL PHOTOGRAPHY

PURPOSE

Archaeological Photography provides hands-on instruction in practical applications of photography for archaeology in the field and in the studio. The goals are to increase knowledge of participants regarding the needs of the archaeologist, to illustrate how to best achieve the results desired both in the field and studio, and to assist participants in the creation of publication-quality images.

OBJECTIVES

At the completion of this course, the student should be able to:

1. Identify and utilize available lighting conditions to best photograph architectural features, artifacts in situ, and stratigraphy.

2. Optimize existing conditions of light using a minimum of equipment in the field (shade and fill-flash).

3. Utilize available light and flood lights in the studio.

4. Identify and use different methods of magnification of small objects.

5. Define and use technical language of digital photography.

6. Decide on the best equipment for each situation in the field and in the studio.

7. Create photographs which document archaeological features and artifacts for publication.

METHOD OF INSTRUCTION

Five 2 hour lectures with examples of problems and solutions followed by hands-on experiences which provide opportunities for participants to utilize all information gathered in lecture.

EQUIPMENT

35mm camera (SLR preferred), B&W film (TMAX 100 recommended) and color slide film (Kodachrome 64 recommended). Useful if available: line level or small level flash, tripod, 35mm lens, 55 micro lens, or macro dioptors, yellow filter, 85A filter, 80B filter, polarizing filter, cable release.
COURSE OUTLINE

A. Principles of light
   1. Small source
      a. Sun, flood light, direct flash, household lamp.
      b. Directional
      c. Dark hard-edged shadows
      d. Complicated pictures
      e. Small and bright lights
      f. Distinct area between lit area and shadow
   2. Medium Source
      a. Window with no direct sun hitting object, diffused flood lights
      b. Source approximately as large as it is far from the subject
      c. Soft-edged shadow area
      d. Equal emphasis to the highlight, lit area and shadow
   3. Large Source
      a. Overcast sky, bounced flash, full shade
      b. Source close to subject, surrounds the object with light
      c. Light from many directions
      d. Simplifies subject
      e. Highlights spread out, soft-edged shadows
   4. Direction of light
      a. Top
      b. Side
      c. Three quarter
      d. Front
      e. Back

B. Depth of field
   1. Aperture and depth of field (optimum settings)
   2. Schliemflug principle (focus one-third in on subject)
   3. Close-up photography and aperture
   4. Landscape and depth of field

C. The roles and responsibilities of the archaeological photographer
   1. To effectively document the excavation and the objects recovered from the excavation in order to assist the archaeological team with their research
   2. To produce publication quality images in both field and lab
   3. To keep accurate records of all photographs

D. Field Photography
   1. Purposes of photography in the field
      a. Record progression of excavation from beginning to end
      b. Provide evidence of information that will be lost through the excavation process
      c. Document features and artifacts with publishable quality photographs
      d. Illustrate methods of excavation utilized
      e. Illustrate artifacts in situ
      f. Provide a memory of the excavation for team members
2. Excavation
   a. Before
      • panoramic views
      • aerial views
   b. During
      • excavation in progress
      • people working (avoid backs of heads)
      • aerial views
   c. After
      • panoramic views
      • close-ups of features
      • aerial views

3. Equipment and film
   a. Camera and lenses
      • 35mm single lens reflex cameras
      • 55mm, 35mm, 105mm or 85mm, or zoom lenses
   b. Color film (Kodachrome 64)
   c. B&W film (TMAX 100)
   d. Tarps and reflectors
   e. Ladder
   f. Scales, north arrow, letter board
   g. Photo log
   h. Tripod
   i. Shutter release
   j. Flash and light meter

4. Features, stratigraphy, and artifacts in-situ
   a. Perspective (levelness of camera with respect to feature)
   b. Lighting
      • time of day to photo
      • fill flash for smaller areas
      • adding shade
      • using a reflector to bounce light into an area
   c. Context
   d. Metering
      • spot meters vs. averaging meters
      • basic daylight exposure (in case meter stops working)
      • gray card
   e. Depth of field
   f. Recording data
      • date
      • roll number
      • frame number
      • subject of photograph
      • direction facing
      • comments about time of day, who is in photograph, etc.

5. NAGPRA limitations on photography of burials, cremations, human remains, and associated objects.
COURSE OUTLINE (continued)

E. Studio Photography
1. Lighting
   a. Types of lights (floods, strobes, daylight)
   b. Positioning lights (bounced, reflectors, diffusers)
2. Documentation (record keeping and labeling)
3. Perspectives and depth of field
4. Film and color balancing filters (80A)
5. Color bars and scales
   a. Purpose of scale and color bar
   b. Sizes to use
   c. Placement in frame in relation to object
6. Backgrounds
7. Shadowless photographs
   a. Raised glass method
   b. Dark background (black velvet)
   c. Light box method
8. Magnification
   a. Macro lenses (optimum aperture)
   b. Diopters
   c. Teleconverters
   d. Bellows
9. Props (what to use, what to avoid using)

F. Digital Photography
1. Terms
   a. Jpeg
   b. Tif
   c. Bitmap
   d. Pixels
   e. Pixelate
   f. Resolution
   g. DPI
   h. RGB
2. Equipment and software
3. Pros
4. Cons

G. Assessments/critique of photographs
1. Lighting
2. Composition
3. Details (scales, north arrow, cleanliness, etc.)
REFERENCES

Dorrell, P.

Harp, E.

Howell, C. L. and Blanc, W.

Lefkowitz, L.

Levine, Aaron M.
1986 Excavation Photography - A Day on a Dig. Archaeology. 39 (1): 34-39

Simmons, H. C.
PURPOSE

The purpose of this class is to give members of the AAS a working knowledge and ability to sort prehistoric ceramics found in Arizona. The course is intended to focus on a specific site, or series of related sites, or region of the state. Members may take this class several times to become proficient with the ceramics of various prehistoric culture areas. Prior to the class being taught the instructor shall prepare, for review and approval by the Certification Department, a detailed syllabus that focuses on the ceramic assemblage specific to the sites or region of the state of interest. The detailed syllabus shall include particulars, as they relate to the sites or region, relative to the specific types and wares to be considered and to the appropriate sections of the course outline.

Emphasis is placed on identifying specific ceramic types, recognizing vessel forms from sherds, the relationship between research questions and the design of ceramic analysis, and the key technological attributes of ceramics that are most useful for recognizing specific types.

Another purpose of the course is to build upon the technical information learned by those members who have completed the Pottery Technology course.

PREREQUISITES

The only required Prerequisite is to have successfully completed Prehistory of the Southwest.

Completion of Crew Member I, Laboratory Techniques I, and Pottery Technology is strongly recommended. Participation in the Crew Member I and Laboratory Techniques courses at the sites or in the region upon which the class will focus would be most meaningful for class participants.

FORMAT

The course is designed to be presented in 80 hours, with 20 hours of lecture and 60 hours of laboratory experience. Optional field trips would be included within the laboratory hours.
OBJECTIVES

At the conclusion of the course, students will:

A. Have working knowledge to recognize many of the ceramic types that characterize the site(s) or region of prehistoric Arizona upon which the class is focused.

B. Be able to sort, with various degrees of familiarity, a number of prehistoric ceramic types and wares specific to the site(s) or region upon which the class is focused.

C. Understand the relationship between research topics and analysis forms.

D. Be able to identify the basic characteristics of ceramic technology.

E. Understand the various approaches archaeologists have used to describe ceramic taxonomy.

F. Understand various theories regarding cultural influences on the development of different ceramic traditions.

G. Know the kinds of research topics that can and have been addressed by sherd ceramic sorting. This would include understanding how sherd analysis fits into the overall research design for the sites upon which the class is focused.

COURSE OUTLINE

A. Introduction to the basic ceramic characteristics useful for distinguishing between various wares and types.
   1. Clay
   2. Identifying slip from a wash or carbon streak
   3. Smudging
   4. Distinguishing bowl sherds from jar sherds
   5. Distinguishing organic from mineral paint
   6. Temper
   7. Identifying specific tempering materials
   8. Distinguishing paddle-and-anvil from coiled manufacturing

B. Classification Systems
   1. Details of the classification system in use for the ceramics specific to the site(s) or region of interest.
      a. History of development of the system
      b. Ware
      c. Series
      d. Type
      e. Variety
      f. Principle of Analogous Pottery Types
      g. Rules of Ceramic Nomenclature
      h. Broken Rules of Ceramic Nomenclature
      i. Proper reference style for ceramic nomenclature
2. Brief review of other relevant classification systems.
C. Examples of research topics that have been investigated by sherd analysis.
   1. Cultural boundaries
   2. Trade
      a. Regional systems
      b. Localized production and exchange
   3. Ware characterizations
   4. Dating
      a. Assemblage dating
      b. Seriation
      c. Relative dating
   5. Vessel size
   6. Culture Change
   7. Technology
   8. Migration
   9. Relationship of sherd to whole vessels
  10. Social Status

D. Specific research goals of the course project

   This section will be different each time the course is taught. If the course is being taught as a generic course, it will only describe the research topics listed in Section III. If the course is oriented to a specific project, such as Elden Pueblo, Q Ranch, or Quass Pueblo, etc., this section will address the specific research topics for that project.

E. The sherd analysis form. (NOTE: This will vary each time the course is taught.) This topic will generally include the following information:
   1. Relationship of the form to research topics
   2. Examples of analysis forms and coding instructions
   3. The specific form in use for the course and its organization
   4. How to code the form
   5. Potential data manipulation of analysis categories
   6. Applying ceramic counts to the research topics

F. The specific types that will be taught will depend upon what project, site(s), or region, the course is focused upon.

G. Identifying basic characteristics of other (trade) wares. The specific wares that will be taught will depend upon what project, site(s), or region, the course is focused upon.

H. Replicability of results.
   1. Typing is a relative concept
   2. Replicability Studies
COURSE STRUCTURE

The topics listed above will be taught through a combination of formal lectures to the entire class and then through break-out into smaller groups for hands-on practice with type sherd collections. This will give students the practical knowledge of recognizing the various ceramic types they will encounter.

Once an acceptable level of competence in the sorting of types is demonstrated, actual sorting of ceramics from the site(s) or region of interest will be undertaken by teams as directed by the instructor. Sorting will be verified by the instructor, and the students will enter the analysis results onto the analysis sheet.

At the close of the course, the teams will be combined into a smaller number of teams representing various locations at the site(s) or within the region. They will combine their sherd counts and prepare preliminary interpretations of their analysis as they relate to the research topics of the analysis. Each team will then present their conclusions to the class. Through group discussion, guided by the instructor, the class will evaluate the results; identify distribution patterns, similarities, and differences; and address potential reasons for these. These discussions will form the basis for suggested additions, corrections, or revisions to the research topics and analysis form.

FIELD TRIPS

Field trips may be conducted to local museums, sites, or universities where complete vessels of the type being studied during the course may be viewed.

TOOLS

Each student should supply their own:

A. 10 power magnifying glass.
B. A pliers for nipping the edges of sherds (flat-ended lineman's or stained glass type are recommended).
C. A 0.5 mm lead thickness mechanical pencil for completing forms.
D. A "Tensor" lamp or other similar desk-top lamp to illuminate individual working areas.
E. An extra-fine point black "Sanford" brand "Sharpie" felt tip permanent marker.
F. White correction fluid as background for labeling dark colored sherds.
G. A 0.1 Micron "Pigma" felt tip marker (manufactured by Sakura Color Product Corporation). This provides a very fine point for writing on small sherds.

Optional supplies which may be useful would include a battery-powered, hand-held microscope; a magnet; and a pocket knife.
REFERENCES

Abbott, David R.  

Baldwin, Anne R., and J. Michael Bremer  

Boales, Ralph L., George W. Brainerd, and Watson Smith  

Bennett, M. Anne  

Blineman, Eric  

Bronitsky, Gordon, and Robert Hamer  

Carlson, Roy L.  

Colton, Harold S.  


Colton, Harold S. (continued)

1956 Pottery Types of the Southwest: Wares 5A, 5B, 6A, 6B, 7A, 7B, 7C. San Juan Red Ware, Tsegi Orange Ware, Homolovi Orange Ware, Winslow Orange Ware, Awatovi Yellow Ware, Jeddito Yellow Ware, Sichomovi Red Ware. Ceramic Series No. 3C. Museum of Northern Arizona, Flagstaff.

1958 Pottery Types of the Southwest: Wares 14, 15, 16, 17, 18: Revised Descriptions of Alameda Brown Ware, Prescott Gray Ware, and San Francisco Mountain Gray Ware. Ceramic Series No. 3D. Museum of Northern Arizona, Flagstaff.


Colton, Harold S., and Lyndon Lane Hargrave

Crown, Patricia L., and Ronald L. Bishop

David, N.

David, N., J. Sterner, and K. Gavua

Deetz, J.

Deutchman, Haree L.

Douglass, Amy A.

Douglass, Amy A., and Owen Lindauer

Dunnell, R. C.
Dunnell, R. C., and T. L. Hunt

Ford, James A.

Franken, H. J.

Gifford, James C.

Greer, John W.

Grim, R. E.

Guthe, C. R.

Hally, D. J.

Hawley, Florence

Hegmon, Michelle M.

Hendrikson, E., and M. McDonald

Hodder, Ian

Howard, H., and E. L. Morris (editors)
REFERENCES (continued)

Jurnigan, E. W.

Koob, C. C., and L. M. Lackey (editors)

LeBlanc, S. A.

Marquardt, William H.

Matson, F. R.

Mills, Barbara J.

Nelson, B. A. (editor)

Nelson, Fred W., Jr.

Oppelt, Norman T.

Plog, Stephen


Rice, Prudence M.
Rouse, Irving

Shepard, Anna O.

Sinopoli, Carla M.

Stanislawski, M. B.

van der Leeuw, S. E., and A. C. Pritchard (editors)

Watson, P. J.

Wheat, J., J. Gifford, and W. Wasley
FIELD CREW MEMBER I

PURPOSE

The purpose of this course is to provide the basic academic and practical skills needed to give the avocational archaeologist the ability to participate in excavation projects of the Arizona Archaeological Society (AAS), and to give needed assistance to the professional community as a volunteer, or upon request, under the direction of a qualified archaeologist. It is understood that completion of this course in no way indicates the students are authorized to initiate or develop archaeological field work projects on their own.

The student receives a minimum of 30 hours of classroom instruction and 40 hours of field work. Further, a written report of all field work, including copies of field forms, must be completed and provided the instructor for evaluation.

OBJECTIVES

At the completion of this course, the student is able to:

1. Define the basic vocabulary of field excavation.

2. Determine the purpose of excavation and the necessity of the process, recognizing that each site is unique and excavation is a destructive process. Excavations should never be undertaken without specific purposes. (See Tab 27: Excavation Criteria)

3. Name and define the various kinds of archaeological sites known to exist.

4. List major types of features and explain various ways of excavating them to maximize data collection.

5. Determine the kinds of tools used by the archaeologist and the appropriate conditions to use them.

6. Explain how a site is mapped from an established grid and all work is recorded.

7. Determine the necessity of keeping horizontal and vertical data control.

8. Indicate the use of photography and its importance in data collection.

9. Describe the use of special techniques and methodologies used by archaeologists such as pollen analysis, flotation, and radiocarbon, archaeomagnetic, and dendrochronology dating methods.

10. Interpret the meaning of artifacts and features in context, including disturbance, multiple components, previous excavations, etc.
11. Interpret the implication of spatial relationships.
OBJECTIVES (continued)

12. Understand the basic federal and state requirements for conducting cultural resources investigations, including consulting with Native Americans and others.

COURSE OUTLINE

A. List of basic vocabulary items (minimum - more may be added)

- absolute dating
- alidade
- analogy
- arbitrary level
- artifact
- assemblage
- awl
- Brunton compass
- cist
- connectivity
- context
- contract archaeology
- culture
- dig
- flotation
- focus
- grid
- horizon
- kiva
- lithic
- locus
- mano
- metate
- midden
- mortar
- mound
- natural level
- palynologist
- pestle
- petroglyph
- pithouse
- profile
- provenience
- projectile point
- rebar
- relative dating
- sampling
- screen
- sherd
- superposition
- survey
- test pit
- theodolite
- transit
- trench

B. Methods of and/or alternatives to excavation

1. Reasons for excavation
2. Principles of excavation
3. Demands of excavation
   a. Good physical condition
   b. Proper clothing and safety precautions, including protection from the sun.
4. Organizational aspects of excavation

C. Types of sites

1. Kinds of sites
   a. Habitation
   b. Midden
   c. Quarry
   d. Kill.
   e. Trading center
   f. Ceremonial
   g. Burial
   h. Surface scatter
   i. Rock art
   j. Multi-component
   k. Single component
   l. Stratified
   m. Non-stratified
   n. Plowzone
2. Composition of sites
3. Judgment of site content
   a. Surface finds
   b. Size and configuration of the site
   c. Judicious use of sites
   d. Various other techniques
4. Variable preservation of data

D. Major features and alternative methods of excavation
1. Bounded
   a. Trash mound
2. Non-bounded
   a. Trash pit
3. House floor
   a. Cremation
4. Plaza
   a. Inhumation
5. Kiva
   a. Pit Structures
6. Hearth

E. Excavation tools
1. Power tools
   a. Back hoe, front end loader
   b. Bulldozer
   c. Auger
   d. Mechanical screens
   e. Magnetometer
   f. Sonar
2. Non-power tools
   a. Shovels (various kinds)
   b. Pick
   c. Screens
   d. Trowels
   e. Eye protection
   f. Protective mask
   g. Buckets
   h. Dust pans
   i. Containers (various kinds and sizes)
   j. Small brushes
   k. Brooms (various kinds)
   l. Pick-mattock
   m. Meter stick
   n. String and cord
   o. Bags (various kinds)
   p. Stakes and pins
   q. 3 meter tape

F. Mapping and gridding
1. Mapping techniques, including use of electronic methods, GPS
   and difference between NAD 27 and 83)
2. Establishment of N-S, E-W lines
3. Establishment of a permanent datum point
4. Establishment of secondary datum points
5. Development of an expanding grid system
6. Use of 1, 2, 3, 4, and 5 above by the field worker to control
   data

G. Site record keeping
1. General note taking
2. Review of mapping and gridding
3. Location of archaeological area to be excavated
4. Precise methods vary from site to site
5. Necessity for accurate records
   a. Vertical data
   b. Horizontal data
   c. Specimen number control
6. Keep each work area neat and clean (messy digs lead to messy
   recording)
7. Teamwork and coordination between staff and crew
   a. No such thing as a "dumb" question or observation
b. Talk with each other about what you see and are doing
G. Site record keeping (continued)

8. Assign specific responsibility for record keeping
9. Method of bag (specimen) control.

H. Field photography
1. Types of cameras
2. Types of films
3. Lighting conditions
4. Exposure settings
5. Scale and direction indicators
6. Record and non-record photography
7. Photographic distortion
   a. Large scale objects
   b. Small scale objects
8. Aerial photography

I. Special excavation techniques
1. Burials
   a. General rules
   b. Determining treatment and disposition under NAGPRA & State burial laws.
   c. Documentation
   d. Treatment of bone
   e. Removal from soil
   f. Field packing
2. Flotation samples
   a. Collecting of specimen in the field
   b. Work in field lab
      • Frothing
      • Separation of seeds
      • Soil sifting
      • Water separation
3. Paleomagnetic dating
   a. Remove all iron from the vicinity
   b. Cut sample into units
   c. Photograph sample in situ
   d. Encase sample in plaster in situ
   e. Sample must be leveled as well as true north and magnetic north determined
   f. Records of the sample
4. Palynology
   a. Collection of the sample
   b. Type of sample
   c. Preservation of the sample
   d. Storage of the sample
5. Radiocarbon
   a. Use a clean trowel and other tools
   b. Indicate if dry or wet (mold growth contamination)
   c. Place sample in polyethylene bag or fresh aluminum foil if solid enough
   d. Label the sample with needed data
   e. Fill out necessary records
f. Storage and transportation of sample
I. Special Excavation Techniques (continued)

6. Soil sampling
   a. Use of Munsell Soil Color Charts
   b. Chemical aspects of the soil
   c. Composition
      • Natural soils
      • Human alteration
   d. Soil descriptions
   e. Purpose of soil study

7. Dendrochronology
   a. Well-defined growth rings
   b. Collection procedures similar to radiocarbon
   c. Check to see if preservation is needed - if it is, clear the system with your field supervisor

J. Interpretation of artifacts and features
   1. Analysis techniques for field use
   2. Behavioral inference
   3. Classification systems (types)
      a. Convenient
      b. Cultural
      c. Functional
   4. Description techniques
   5. Determination of use
      a. Context
      b. Ethnographic analogy
      c. Replicative experiments
   6. Cultural associations

K. Interpretation of spatial arrangement
   1. Effect of environment
   2. Arrangement of space
      a. Occupied
      b. Non-occupied
   3. Spatial context
   4. Reconstruction of spatial arrangement
   5. Development of settlement patterns
      a. Internal
      b. External

See Page 6 for REFERENCES.
REFERENCES

Hester, Thomas R., Robert F. Heizer and John A. Graham
1975 Field Methods in Archaeology. Mayfield, Palo Alto. (A)*

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Winston, New York. (A)

Joukowsky, Martha
1980 A Complete Manual of Field Archaeology: Tools and Techniques of

McIntosh, Jane
1999 The Practical Archaeologist: How We Know What We Know About the

Spier, Robert F. G.
Rinehart and Winston, New York.

*(A) In Phoenix Chapter Archives.
FIELD CREW MEMBER II

PURPOSE

This course is designed to complete the training of the archaeological crew member that was initiated in the Field Crew Member I course, which is a prerequisite. This course is designed to complement classroom learning with field experience.

Upon completion of this course the student should have the skills to not only participate in Arizona Archaeological Society (AAS) sponsored excavations, but also to assume some supervisory responsibilities. The course should also enable the student to work with professional archaeologists in either crew member or crew chief roles.

OBJECTIVES

At the completion of this course, the student will be able to:

1. Set up a site for excavation. (See Tab 27) Excavation Criteria)
2. Apply a research design to site excavation.
3. Determine an appropriate excavation strategy given problems of logistics, time and money, research problems, threats of erosion or pot hunting, etc.
4. Read and interpret surface remains for clues to where to begin excavation.
5. Read and interpret stratigraphy.
6. Develop and maintain records of site excavation.
7. Map the site.
8. Accomplish photographic documentation of the site and excavations.
9. Understand the use of specialist studies and how to take samples for them.
10. Direct and coordinate excavations for a section of the site.
11. Interpret spatial and temporal patterns in the site both in terms of artifacts and in terms of architecture or other features.
12. Working with the media and visitors.
FORMAT

The student will receive a minimum of 20 hours of classroom instruction intermixed with at least 40 hours of field experience applying the classroom lessons. Successful completion of the course will entail a brief report of field work, including submission of the field notes, and completion of written or oral exams given by the instructor.

COURSE OUTLINE

A. Preliminaries
   1. Type of project
      a. Testing
      b. Data recovery
   2. Permit requirements
   3. Bluestake
   4. Site security
   5. Logistics
      a. Access
      b. Backdirt management
   6. Equipment
      a. Excavation tools
      b. Recording
      c. Special sample requirements
   7. Research design
   8. Curation agreement

B. Setting up the site for excavation
   1. Site datum
   2. Grid system
   3. Discovery techniques
      a. Machine excavation
         • Trenching
         • Stripping
      b. Hand excavation
   4. Provenience controls
      a. Excavation units
      b. Levels (arbitrary)
      c. Strata (natural)

C. Site recording
   1. Forms
      a. General note taking
      b. Excavation unit specific recording forms
      c. Feature specific recording forms
      d. Profile/trench recording forms
      e. Special sample recording forms
         • Pollen
         • Flotation
         • Archaeomagnetic
         • C-14
         • Other
      f. Methods of storing forms; blank and completed
2. Photography
3. Mapping
   a. Overall site map (topographic)
   b. Feature/unit specific maps
      - Plan views
      - Profiles
   c. Use of GPS and difference between NAD 27 and 83)
4. Computerized field and laboratory records

D. Sampling
1. When to use
2. Types of sampling
   a. Random
   b. Systematic
   c. Judgmental
   d. Other
3. Purposes

E. Excavation techniques
1. Types of features to be expected
2. Control of excavation in non-feature areas
3. Hand versus machine excavation
   a. When justified
   b. When not justified
4. Recovery techniques
   a. Screen size
   b. When to screen
   c. When not to screen
5. Artifact control
   a. Specimen list
   b. Artifact lots
   c. Special sample lots
6. Burials and cremations (refer to Tab 8, Field Crew Member I, Section I.1.b., regarding determination of treatment and disposition under NAGPRA and State burial laws)

F. Site interpretation
1. Stratigraphy
2. Superposition
3. Spatial relationships
   a. Features
   b. Excavation units
4. Intrusives
5. Disturbance-transformation processes
   a. Natural
   b. Cultural
6. Intra-site relationships
7. Environmental relationships

G. Closure
1. Importance of obtaining closure
2. Procedures
COURSE OUTLINE (continued)

H. Post field requirements
   1. Preparation for laboratory work
      a. Artifact processing
      b. Storage
      c. Computerization
      d. Curation
   2. Site record update
   3. Preparation of site report—organization
      a. Notes
      b. Maps
      c. Photographs
   4. Outline for site report

REFERENCES

Note: The following are also suggested references for Field Crew Member 1.

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   1975 Field Methods in Archaeology. Mayfield, Palo Alto. (A)*

Hole, Frank and Robert F. Heizer
   1974 An Introduction to Prehistoric Archaeology. Holt, Rinehart and Winston, New York. (A)

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   1999 The Practical Archaeologist: How We Know What We Know About the Past. Facts on File, Inc. 2nd edition.

Spier, Robert F. G.

*(A) In Phoenix Chapter Archives.
HISTORICAL ARCHAEOLOGY I

PURPOSE

The purpose of this course is to introduce the student to the basic concepts, field techniques, laboratory methods, and research skills used in historical archaeology. This course emphasizes studies from the American Southwest, with limited case studies from outside the region. The goal of the course is to define what historical archaeology entails, prepare the student to recognize various historic sites and artifacts, and to understand how to conduct initial documentation of historic resources.

COURSE REQUIREMENTS

The course consists of 30 classroom hours that include lecture, discussion, and analyses of documents and historic artifact types. At least 10 hours of field/laboratory work include a WWW online exercise, archival retrieval, and an archival project described below.

TEXT

Historical Archaeology (1995), by Charles E. Orser, Jr. and Brian M. Fagan, plus supplemental readings as assigned.

OBJECTIVES

At the completion of the course, the student should be able to:

1. Understand the relationships between historical archaeology, prehistoric archaeology, history, and anthropology, and between historical data and archaeological data.

2. Explain the development of historical archaeology in North America.

3. List some of the methodological and theoretical differences between historical and prehistoric archaeology, especially in the use of historic documentation and records.

4. Display the ability to conduct initial historical archaeological research, with emphasis on documenting sites from extant literature and original records.

5. Understand the use of photography, mapping, and architectural profiling in historical archaeology, and their importance in data collection and documentation.

6. Understand approaches to the major historic artifact groups, and where to find source information about each artifact type.
OBJECTIVES (continued)

7. Display the ability to integrate various sources of historical data (including architecture, artifacts, historic photographs, papers, and records) to interpret a historic site.

8. Demonstrate the ability to undertake basic background and documentary research, including records research, title search, background literature search, and government documents.

ARCHIVAL PROJECT

Requires research in a local or state archive, using documents and/or photographs to gather information about a collection of at least five different historical artifacts (they may be the same artifact type). The paper should demonstrate how the documentary information is relevant to describing and interpreting the artifacts. The results must be reported in a written paper between 10 and 20 pages in length and include endnotes referencing the source materials. Other projects combining historical records, properties and/or artifacts will be considered.

COURSE OUTLINE

A. Introduction
   1. What is Historical Archaeology?
      a. Definition, why do it?
      b. What is history?
      c. History and Prehistory
      d. Careers in Historical Archaeology
   2. A Brief History of Historical Archaeology
      a. In North America
      b. In the Southwest
      c. A world perspective

Readings: Orser and Fagan(1995), Chapters 1, 2, pp. 1-44; Society for Historical Archaeology Brochure; Ayres(1991).

B. Theory and Research
   1. Theory in Historical Archaeology
      a. Historical supplementation, reconstruction of past lifeways, processual studies, archaeological science, cognitive studies.
      b. Historical challenge, historical ethnography, testing ground for prehistoric principals, questions of method, archaeology of capitalism, cross-cultural research, production/consumption/industrialism, ideology and power.
   2. General Research Issues in Historical Archaeology
      a. Need for a regional approach with the example of historical archaeology in the Intermountain West.
      b. Interconnectedness of gender, race, class, ethnicity: “those of little note”

C. Archaeological Sites and the National Register
1. Historic properties
   a. Region, district, neighborhood, block, lot, structure, objects
   b. Site types: habitation, industrial, commercial, military, agricultural, religious, transportation, underwater, special purpose, multipurpose, burial.
   c. Mining landscapes and feature systems: extraction, beneficiation, refining.
2. National Register of Historic Places
   a. Evaluate property to determine category, historic context, and significance.
   b. Four criteria with examples: events, persons, architecture, information
   c. SHPO Historic context studies for Arizona


D. Research Techniques: Background Research and Historical Documents
1. Published documents: Books and articles, memoirs, genealogies, travel accounts, biographies, edited letters, speeches, theses and dissertations, newspapers, government documents, ephemera, commercial histories, directories, maps.
2. Unpublished documents: Archives and manuscript collections, census records, Federal records, local records, interviews.
3. Primary and secondary sources
4. Architectural Field Works
   a. Historic American Buildings Survey (HABS)
   b. Historic American Engineering Record (HAER)
5. Evaluation of source: When was it created, is it a primary source, was the person neutral, what was the intended use, was it to inform or persuade, is it a replica of an earlier document?


E. Research Techniques: Survey, Mapping, Architectural Inventories
1. Finding historic sites
   b. Archaeological survey and sampling
2. Subsurface surveying and remote sensing: Use of aerial photography, metal detectors, proton magnetometers, soil resistivity surveys, ground penetrating radar, sonar, soil phosphate analysis, dowsing.

E. Research Techniques: Survey, Mapping, Architectural Inventories (continued)

WWW online exercise: View a website with historical records or one about an historical archaeology project, present a 5 minute summary of your online experience in class.

F. Research Techniques: Excavation and Laboratory Processing
1. Process: Research design, implementation, fieldwork, analysis, interpretation, publication
2. Excavation
   a. Record data in the context of time and space
   b. Methods
   c. Tools
   d. Field recording
   e. Excavating privies: construction, use, maintenance, abandonment processes, and methods for separating individual deposits
3. Conservation
4. Laboratory processing
   a. Organize data into manageable units
   b. Describe types
   c. Create a hierarchy that orders the relationships between artifacts
   d. Study artifact variability


G. Artifact Analysis: Bottles, glass and ceramics
1. Artifacts as:
   a. Historical documents
   b. Commodities
   c. Ideas
2. Sources of information: Trade catalogues, patent records, company histories, others
3. Bottles, Glass
   a. Nomenclature
   b. Technological attributes
   c. Dating
4. Ceramics
   a. Earthen ware and porcelain types
   b. Decoration

H. Artifact Analyses Continued
1. Buttons
   a. Types
   b. Sizes
2. Cans
   a. Terminology
   b. Chronology
   c. History of beer cans
3. Nails
   a. Types
   b. Dating
4. Faunal materials
   a. Butchering techniques
   b. Meat consumption habits
5. Artifacts from an historical archaeology project: the Phoenix Chinatown Excavation.

Readings: Rock (1984); Maxwell (1993); Szuter (1991); AAC Handouts on glass, ceramics, cans, buttons, milk cans, nails, cartridge case and shotshell base headstamps.

I. Interpreting Historic Sites
1. Archaeology of groups: class, race, gender, ethnicity revisited
2. Example of a study attempting to associate artifacts with class (consumer behavior)
3. Local historical archaeology: The excavation for the Phoenix Federal Courthouse
   a. Excavation methods
   b. Sanitation in Turn-of-the-Century Phoenix
   c. Health Care in Territorial Phoenix


J. Project Presentations and Discussion: Each student presents a 10 minute oral summary of their project in class. Hand in 10-20 page paper focused on five historic objects which have been analyzed and interpreted through historic documents and/or archival materials.
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INTRODUCTORY HUMAN OSTEOLOGY

PURPOSE

To prepare members to recognize human remains when encountered during excavation or in other context, to provide an understanding of proper ethical and legal treatment of human remains, and to promote proper handling and storage of human remains to ensure that they are properly protected and secured.

OBJECTIVES

At the conclusion of the course students are expected to:

1. Be able to specifically identify each human bone, or group of bones, by name, including isolated and fragmentary elements. Be able to side bones and bone fragments (as originating from the left or right side of the body), identify segment of bones presented in fragments (proximal/distal, medial/lateral, superior/inferior, anterior/posterior), identify articulations, and recognize effects of bone growth (including epiphyseal closure). Be able to distinguish the anatomy (landmarks and features) of various bones. Be able to recognize and discuss various aspects of dentition including dental terminology, deciduous and adult dental formula, dental development, dental anatomy, tooth identification, dental variation, and dental wear. Be familiar with terms constituting general bone features such as articulation, boss, crest, condyle, diaphysis, eminence, epicondyle, epiphysis, facet, hamulus, head, line, malleolus, neck, process, ridge, spine, torus, trochanter, tubercle, tuberosity, alveolus, canal, fontanelle, foramen, fossa, fovea, groove, meatus, sinus, sulcus, and suture.

2. Have an understanding of how human osteology articulates with the general framework of anthropology, including its relationship with archaeology, paleontology, physical anthropology, and forensics.

3. Understand and be able to discuss ethical and legal issues related to human remains encountered on private, state, and federal lands. Be aware of state and federal laws and to Arizona Archaeological Society rules and guidelines related to human remains.

4. Understand proper procedures for handling and storage of human remains as they relate to both care and treatment of bones (and associated osteometric equipment) and to issues of protection and security. This includes proper use of sliding, hinge, and coordinate calipers; osteometric boards; and bean bags or donut rings.
5. Be familiar with the standard anatomical position of the human body. Be able to properly and appropriately use directional terms such as:
   - orthograde/pronograde,
   - cranial/postcranial/axial/appendicular,
   - superior/inferior
   - dorsal/ventral,
   - proximal/distal,
   - anterior/posterior,
   - medial/lateral,
   - palmar/plantar/dorsal,
   - labial/buccal/mesial/distal/occlusal/lingual,
   - cephalic/cranial/caudal,
   - endocranial/ectocranial

when describing bones and teeth. Be familiar with sagittal, coronal, and transverse reference planes in the human body. Be familiar with terms related to basic motion of the body including abduction, adduction, eversion, extension, flexion, inversion, opposition, pronation, rotation, and supination.

6. Have a broad understanding of bone and tooth formation, growth, and function. Be aware of idiosyncratic, gender, geographic, and ontogenetic variation and their effects upon bone identification. Be aware of the nature, including bone structure and chemistry, calcification, bone growth and repair, and joints and joint lubrication, function such as axial skeleton, upper limbs, lower limbs, and skull, and movement of bones during breathing, manipulation, walking, and chewing.

7. Have a cursory understanding of procedures for recovery, preparation, and curation of human remains; skeletal analysis; age, sex, stature, and ancestry assessment using various bones; nonmetric variation and pathology (trauma and disease); taphonomy; and applications of human skeletal analysis to reconstruction of human populations. Case studies may be used.

FORMAT

Thirty hours of classwork and laboratory work are required to present the class. (Twelve classes of two and one-half hours each are recommended.) The suggested class format is approximately one-half hour of lecture and approximately two hours of laboratory work. The laboratory section should be structured to include an instructor presentation of the specific descriptive material (description of adult and subadult bones, side identification, articulations, and other pertinent material) related to the bones of interest, and a quiz.

PREREQUISITES

Prehistory of the Southwest as presented by the AAS or the equivalent
which has been approved by the Department of Certification.
TEXTBOOK


RESOURCE MATERIAL

For students to derive a reasonable knowledge of human skeletal remains it is recommended that they have access to at least an articulated or disarticulated adult skeleton and an array of fragmentary human bones. Access to a nonadult skeleton would add to the learning experience. A sample of nonhuman bones should also be available for comparative study. All of this material should be properly labeled and sturdy enough to withstand student handling.

EXAMINATION

Cumulative Practice quizzes should be included to add to the student learning experience and to indicate areas of class weakness to guide instructor presentations. These should include occasional non-human bones and may be self-graded or otherwise at the instructor's preference. No formal examinations are required.

COURSE OUTLINE:

1st Class  Lecture  General Overview, including relationship of human osteology to anthropology and subfields, state and federal laws, rules, and guidelines. Arizona Archaeological Society ethics, protection and security of human remains, and care and treatment of bones during handling and storage.

Lab  Use and care of osteometric equipment and bean bags/donut rings. Handling the skull. Cranial vault consisting of frontal, parietals, occipital, and temporals, including discussion of sutures and general cranial abnormalities and pathologies. Total six bones.

2nd Class  Lecture  Introduction to the composition of bone and the layout of the human skeleton, standard anatomical position and directional terms, reference planes, and terms related to motion (see Objective 5). Introduction of general bone features. (see Objective A)

Lab  Skull orientation, sinuses, osteometric points, remaining bones of the skull consisting of maxilla, palatines, vomer, inferior nasal concha, ethmoid, lacrimal, nasals, zygomatic, sphenoid, auditory
ossicles, malleus, incus, and stapes, mandible, and hyoid. Total 23 bones.
<table>
<thead>
<tr>
<th>Class</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th</td>
<td>Dentition including dental terminology, tooth formation, deciduous and adult dental formula, dental development, dental anatomy, dental wear, dental variation, tooth identification, and tooth and chewing function.</td>
<td>Vertebral column including cervical, thoracic, and lumbar vertebra, including general vertebral abnormalities and pathologies. Total 24 vertebra.</td>
</tr>
<tr>
<td>6th</td>
<td>Joints and lubrication.</td>
<td>Shoulder girdle, cervicle and scapula. Total four bones.</td>
</tr>
<tr>
<td>7th</td>
<td>Function of the axial skeleton and breathing.</td>
<td>Arms, humerus, radius, and ulna. Total six bones.</td>
</tr>
<tr>
<td>8th</td>
<td>Function of the upper limbs and manipulation.</td>
<td>Hands, carpals, metacarpals, and phalanges. Total 54 bones.</td>
</tr>
<tr>
<td>9th</td>
<td>Function of the lower limbs and walking.</td>
<td>Pelvic girdle, sacrum, coccyx, and os coccyx. Total four bones.</td>
</tr>
<tr>
<td>10th</td>
<td>Recovery, preparation, and curation of human skeletal remains. Cremations. Taphonomy effects on skeletal remains.</td>
<td>Legs, femurs, patella, tibia, and fibula. Total</td>
</tr>
</tbody>
</table>

Tab 11, Page 6
eight bones.
11th Class Lecture  Skeletal analysis, age, sex, stature, and ancestry assessments. Human or nonhuman; a comparison.
Lab  Feet, tarsals, metatarsals, and phalanges. Total 52 bones.

12th Class Lecture  Nonmetric variation, pathology (trauma & disease), and application of human skeletal analysis to reconstruction of past human populations.
Lab  Introduction of skeletal analysis to determine age, sex, stature, and ancestry.

REFERENCES

Anderson, James E.

Bass, William M.

Bennett, Kenneth A.

Brothwell, Don R.

Buikstra, Jane A., and Douglas H. Ubelaker (editors)

Gilbert, B. Miles

Iscan, M. Yasar , and Kenneth A. R. Kennedy (editors)

Krogman, Wilton M., and M. Yasar Iscan
REFERENCES (continued)

McKusick, Charmion R.
1986 *Southwest Indian Turkeys: Prehistory and Comparative Osteology.* Southwest Bird Laboratory, Globe, Arizona.

Olsen, Stanley J.


Shipman, Pat, Alan Walker, and David Bichell

Steele, D. Gentry, and Claud A. Bramblett

Swedlund, Alan C., and William D. Wade

Ubelaker, Douglas H.

White, Tim D., and Pieter Arend Folkens

Williams, Peter L. (editor)
PURPOSE

To acquaint the student with the methods and materials used in the processing, cataloging, preservation, and storage of artifacts and to provide hands-on experience with artifacts recovered from archaeological sites.

OBJECTIVES

After completing this course, the student is able to perform the following or similar tasks with minimal supervision.

1. Clean artifacts using correct cleaning agents, tools, and procedures.

2. Analyze and classify ceramic artifacts.

3. Analyze and classify lithic artifacts.

4. Use various tools such as hand lenses, scales, Munsell Soil Color Chart, and calipers.

5. Complete analysis forms.

6. Correctly place identification information on artifacts.

7. Be aware of proper materials and procedures used in reconstruction and storage of artifacts and know where to procure such materials.

8. Follow correct procedures for reconstruction of artifacts.

In addition, the student is to have knowledge of procedures and materials used in cleaning, analyzing, and preserving shell, bone, glass, fabric, leather, wood, paper, and basketry. The actual cleaning, analysis, and/or preservation of these materials would be reserved for a Laboratory Techniques II class.

COURSE OUTLINE

A. There are at least three (3) major areas for discussion in this course:
   1. Artifact processing
   2. Cataloging and restoration
   3. Artifact preservation and storage
COURSE OUTLINE (continued)

B. The discussion or curriculum for each study area should start with the theory behind each area, or more simply, how it is done and why it is important

1. Artifact processing
   a. Theory/rationale
   b. Treatment of artifacts
      • Classification of artifacts that come into the lab
      • Cleaning/care of each artifact class
      • Restoration of artifacts where appropriate
      • Other discussions that may be pertinent

2. Cataloging and restoration
   a. Theory/rationale
   b. Specific systems may vary with institution
   c. Basic requirements, placement of artifact within proper context
      • Project or source (donation, private collection, etc.)
      • Archaeological provenience
      • Temporal if determinable
      • Artifact category

3. Preservation and storage
   a. Theory/rationale
   b. Application
      • Classes of artifacts needing preservation
      • Techniques of preservation apropos to each class
      • Permanent storage of artifacts
      • Need for recovery systems for data, as well as for actual artifacts
      • Other

REQUIREMENTS

A. 20 hours of CLASS WORK
   1. Lab Techniques Seminar required (6 hours)
   2. Typology (2 hours)
   3. Remaining hours should cover the following categories: (12 hours)
      a. Archaeological ceramics
      b. Archaeological lithics
      c. Osteology: human and animal
      d. Environmental reconstruction (Paleo-ecology)
      e. Dating methods
      f. Special analytical techniques (not covered in above areas)

B. 40 hours of WORK EXPERIENCE. This should include at least 10 hours in each of three (3) Lab Techniques seminar discussion areas:
1. Artifact processing
2. Cataloging and restoration
3. Artifact preservation and storage
REFERENCES

Cornwall, T. W.

Ellis, Florence Hawley
1929 Tables for Determining Common Minerals and Rocks. Bulletin of the University of New Mexico, Geological Series, Vol. IV, No. 1

Gladwin, et al.

Joukowsky, Martha

Kidder, A. V.
1932 The Artifacts of Pecos. Papers of the Phillips Academy Southwestern Expedition, No. 6, New Haven.

Shepard, Anna O.

Urban, Sharon F.

LITHIC IDENTIFICATION AND ANALYSIS

PURPOSE

The purpose of this class is to give members of the Arizona Archaeological Society a working knowledge of, and the ability to, identify and sort lithic materials found in Arizona. The course is intended to focus on a specific site, a series of related sites, or a region of the state. Members may take this class several times to become proficient with the lithics of various prehistoric culture areas.

Emphasis is placed on identifying specific rock types, recognizing minerals, crystals, rock forming processes and analyzing human modification techniques.

PREREQUISITES

The only requirement is the completion of Prehistory of the Southwest. However, it is strongly recommended that the participant have completed Laboratory Techniques.

FORMAT

The course is designed to be presented in 60 hours, with 20 hours of lecture and 40 hours of laboratory processing, identification and analysis experience. Optional field trips would be included within the laboratory hours.

COURSE STRUCTURE

The content will be presented through lecture, demonstration, hands-on experience, and practical quizzes. Students will work as a class, in groups, and as individuals depending on the skill to be mastered. They will wash, sort, and analyze lithic materials provided by the host chapter. Each student will choose and complete a lithic research project by the end of the course.

RECOMMENDATION

It is highly recommended that serious students in lithic analysis who intend to continue as a member of a project team should create a rock collection gathered from the site project area.

FIELD TRIPS

Field trips will be arranged depending on the needs of the students and the availability of permission from landowners to enter site area.
REQUIRED TEXTS

Adams, Jenny L.

Sliva, R. Jane

RECOMMENDED ELECTIVE TEXTS

Adrefsky, William Jr.
2003 Lithic Debitage: Context, Form, Meaning. The University of Utah Press
Salt Lake City.

Kardulias, P. Nick, and Richard W. Yerkes

Mottana, Annibale, Rodolfo Crespi and Giuseppe Liborio (latest version)

MATERIALS NEEDED

A. Each student should provide:
   1. 10x hand lens
   2. Contact goniometer
   3. Calipers 15cm+
   4. Calculator
   5. Analysis forms

B. Laboratory should be equipped with:
   1. Ohause triple beam balance 2, 6,10g
   2. Munsell ROCK color chart (2)
   3. Marking materials – (BIC Brand Quick Dry White Out; PIGMA Brand Micron 02 #1 Archival Black Ink .30mm; CLEAR fingernail polish)
   4. Various versions of rock and mineral identification guides
   5. Basic rock and mineral collection for reference (optional)
COURSE OBJECTIVES

At the conclusion of the course, students will be able to

1. Recognize basic lithic types that characterize the area of study
2. Understand the significance of flaked and groundstone artifacts to archaeologists
3. Understand the laboratory tools necessary for lithic analysis
4. Recognize informal and formal lithic tools in the field as well as in the laboratory
5. Sort lithic materials based on rock type, fracture and possible use
6. Separate and categorize flaked stone tools
7. Identify the basic fractures associated with specific tool types
8. Explain the role of debitage in the analysis of lithic assemblages
9. Describe the variations seen in pecked and ground stone use
10. Relate the project research design to the format of the analysis sheet
11. Identify the minimal lithic attributes to be recorded for any chosen level of analysis
12. Become familiar with the appropriate Arizona Bureau of Mines Geologic Map for the county where the project site is located
13. Establish a reference collection of local rock types that may be of use in the manufacture of lithic materials

COURSE OUTLINE

A. Introduction to Basic Rocks and Minerals

1. Igneous Rock - Consolidation of a magma
   a. Mode of formation: extrusive (volcanic), hypabyssal, intrusive (plutonic)
   b. Major examples: alkaline feldspar granite, granite, diorite, ophiolitic gabbro, alkaline feldspar, rhyolite, dacite, andesite, basalt, obsidian, diabase

2. Sedimentary Rock - Transformed preexisting rocks
   a. Mode of formation: alteration, transportation, erosion, deposition
   b. Major examples: conglomerate, arkose, argillite, jasper, compact limestone, dolomite, flints, sandstone

3. Metamorphic Rock
   a. Mode of formation: re-crystallization due to temperature and/or pressure
   b. Major examples: quartzite, phyllite, mica schist, chlorite schist, gneiss, serpentine, slate
A. Introduction to Basic Rocks and Minerals (continued)

4. Minerals
   a. Solid crystalline substances
   b. Crystal morphology and its importance
   c. Major examples: copper, galena, hematite, malachite,
      turquoise, epidote, muscovite, biotite, quartz, chalcedony

5. Distribution of rock types
   a. Identify rock sources for local tools using the Arizona
      Bureau of Mines Geologic Map for their county
   b. Locate closest sources, outcrops, and roadbeds near
      project site

B. Rock Tool Types and Tasks

1. Flaked stone
   a. Description
      • Raw material
      • Processing
   b. Usage
      • Cutting
      • Scraping
      • Projecting

1. Ground and pecked stone
   a. Description
   b. Usage
      • Food processing
      • Storage
      • Agriculture
      • War(?)

C. Mechanics of Tool Manufacture

1. Breaking of cobbles and nodules
2. Biface shaping and thinning
3. Direct percussion
   a. Hard hammer
   b. Soft hammer
   c. Use of anvil - bipolar
4. Indirect percussion
5. Pressure flaking
6. Retouching
D Flaked Stone Analysis

1. Flake technology
   a. Terms associated with flakes
      • Soft hammer - dorsal, ventral, platform, lip, erasure, diffuse bulb of force, preparation flake scars, fissures or hackles, contact area, previous blade scar, dorsal ridge areas
      • Hard hammer - pronounced bulb of force, slightly crushed contact area, absence of lip
   b. Basic types of flakes
      • amputated, backed, lade, prismatic
   c. Stages of manufacture
      • primary, secondary, tertiary

2. Flaked tools
   a. Definitions: knife, scraper, graver, chopper
   b. Types of Edges
      • Unifacial - less formal
      • Bifacial - more formal, less common, ex. projectile points

3. Cores - Raw material
   a. Amorphous
   b. Unidirectional
   c. Bidirectional
   d. Discoid
   e. Exhausted
   f. Multidirectional
   g. Polyhedral
   h. Residual
   i. Tabular

4. Hammerstones - Core reduction
   a. Angular
   b. Cobble
      • Round
      • Elongated
   c. Core
   d. Discoid
   e. Spheroid
   f. File
   g. Flaked

5. Debitage - Waste flakes
   a. Recognition of waste flakes
   b. Use of debitage
      • determine techniques of manufacture
      • study technological traits
   c. Intentional and unintentional breaking of artifacts.
E. Ground and Pecked Tool Analysis

1. Design and Manufacture
   a. As relates to specific project and research design

2. Determining Function
   a. Form does not always reflect function
   b. Use of historic photographs
   c. Use of ethnology
   d. Use of experimental archaeology

3. Debitage

4. Types of tools
   a. Abrading, smoothing and polishing
   b. Grinding and pulverizing
      • mano, metate (basin, slab, trough), mortar, pestle, palette
   c. Percussion
      • pottery anvil, pecking stones, choppers, chisels, crushers(?)
   d. Hafted percussion
      • axe, adze, hoe
   e. Perforating, cutting and scraping
      • reamers, awls, saws and files, planes
   f. Spinning
      • spindle whorl
   g. Paraphernalia
      • balls, stone rings, plummet, pigments, ornaments
   h. Containers
      • bowls, censers

F. Laboratory Processing of Lithic Materials

1. Definitions
2. Stone modification
   a. Natural
   b. Human
3. Cleaning
4. Preservation
5. Markings
6. Measurements needed
7. Low or high level magnification

G. Role of the Research Design

1. Site research design
2. Lithic research questions
3. Development of analysis forms for date recording
   a. Arizona State University
   b. Glendale Community College
      • Coldwater Ruin
      • Quass Pueblo
   c. Phoenix Chapter – Arizona Archaeological Society
      • Casa de Piedras
   d. Center for Desert Archaeology
   e. University of Denver

4. Specific (special) data forms

H. Summary

1. Emphasis on the importance of:
   a. physical geology
   b. flake technology
   c. the ability to recognize and separate rock types
   d. the ability to recognize and separate cultural artifacts
   e. non-cultural lithic material
   f. being able to interpret lithic materials in site and non-site contexts

REFERENCES FOLLOW ON PAGES 8 AND 9
REFERENCES (*) indicates substitution with local site reports

Adams, Jenny L.
1997 Manual for a Technological Approach to Ground Stone Analysis. Center for Desert Archaeology. Tucson, Arizona. OP and republished as:

Adrefsky, William Jr.
2003 Lithic Debitage: Context, Form, Meaning. The University of Utah Press
Salt Lake City.

Antieau, John M.

Arizona Bureau of Mines
1957 Geologic Map of Maricopa County. United States Geologic Survey. University of Arizona. Tucson*

Bruder, J. Simon and Robert E. Gasser

Crabtree, Don C.

Craig, Douglas B. (editor)

Doyel, David E. and mark D. Elson (editors)

Gladwin, Harold S., Emil W. Haury, Edwin B. Sayles and Nora Gladwin
Griffith, Richard

Haury, Emil W.

Jernigan, E. Wesley

Kardulias, P. Nick, and Richard W. Yerkes

Mottana, Annibale, Rodolfo Crespi and Giuseppe Liborio

Neusius, Phillip D.

Parry, William J. and Robert L. Kelly

Rodgers, James

Shoger, Maurice Dean

Sliva, R. Jane
POTTERY TECHNOLOGY

PURPOSE

Pottery, or Pottery Technology, is an introductory course in archaeological pottery technology with emphasis upon the American Southwest. The only prerequisites are current membership in the Arizona Archaeological Society and the AAS course, Prehistory of the Southwest or an approved equivalent. Prehistory of the Southwest may be taken concurrently.

Lectures, laboratory, and field trips will cover characteristics of clays and clay bodies, methods of form and decoration used prehistorically, the uses of pottery by the archaeologist, and an introduction to the identification of the ware of one cultural tradition.

There are twenty (20) hours of lecture and approximately forty (40) hours devoted to other activities of a hands-on nature.

OBJECTIVES

At the end of the course the student can perform the following:

1. Name the principal characteristics of clays as they apply to hand built pottery.

2. Discuss the characteristics and functions of the various tempers used prehistorically.

3. Describe the two major methods of forming pottery and the geographic and cultural extent of these methods in the prehistoric Southwest.

4. Describe the principal organic and mineral paints used prehistorically.

5. Discuss the principal uses of pottery by the archaeologist in dating and in cultural analysis.

6. Discuss briefly the concepts of ware and type as used in the Southwest.

7. Describe the system used in naming and classifying pottery.

8. Identify and give the characteristics of four types of vessels from the cultural area studied.

9. Collect, form, and fire a vessel of native clay.

10. Demonstrate the ability to form, decorate, and successfully fire a vessel of acceptable thinness and symmetry, at least six inches in diameter, in an identifiable style (as, for example, Sacaton Red on Buff).
COURSE OUTLINE

A. Introduction to archaeological pottery
   1. The importance of pottery to the archaeologist
   2. Emphasis upon Southwest pottery
   3. The beginnings of pottery in the Southwest
      a. Mogollon
      b. Hohokam
      c. Anasazi
   4. Standard naming system: Locality followed by the color added to the vessel and the color of the vessel surface, as, for example, Mesa Verde B/W or Gila Polychrome, for more than two colors including the background color.
   5. The concept of type and ware
      a. Pottery attributes
      b. How an archaeologist describes vessels or assemblages of vessels

B. Clay and temper
   1. Characteristics of clays
      a. Chemical structures - Hydrated Aluminum Silicates - (Kaolins, Bentonites)
      b. Physical properties of clays
         • Texture (fat and lean)
         • Plasticity
         • Color of clays and of pottery including use of Munsell Soil Color Charts
         • Drying properties
      c. Origin from granitic minerals, basalts, volcanic ash, and others
      d. Occurrence: Primary or residual and sedimentary, marine, aquatic, glacial, shale clay
      e. Impurities of clay and their effects
         • Quartz, sand and silt
         • Calcium carbonate
         • Iron oxide, hematite, limonite, magnetite
         • Organic matter
      f. Effects of heat on clay and pottery
         500 - 1000 degrees Centigrade
      g. Identification of clay source
      h. Slips and pastes
2. Temper
   a. Function of non plastics in the clay
      • Effects upon shrinkage
      • Effects upon strength of pottery
   b. Types of temper
      • Organic
        • Plant fibers
        • Shell
        • Diatomaceous earth
      • Inorganic
        • Ground rock
        • Ground sherd
        • Sands
        • Volcanic ash
   c. Microscopic examination of temper
      • Crushed sherds
      • Thin cut sherds
      • Thin section of sherds, positive identification of
        minerals may require petrographic microscope
   d. Importance of temper analysis in archaeology

C. Methods of forming vessels - the conservatism of the basic
   methods through time
   1. Paddle and Anvil tradition: started on outside of form.
      Hohokam, Sinagua, Papago, Maricopa, Lower Colorado River
      tribes. Wooden paddles; anvils of stone or ceramic
   2. Coil and Scrape tradition: started in a form (Puka). Casas
      Grandes, Mogollon, Anasazi, New Mexico Pueblos, Hopi Mesas
      (centered on First Mesa at this time).
      Scrapers of wood, gourd, sherd

D. Materials and methods of decoration
   1. Plainware - painted - polychrome
   2. Corrugation - incised - punched - stamped - modeled - applique - slips - stucco
   3. Slips and burnish
   4. Organic paint: Bee Weed and Mesquite
   5. Mineral paint, how to distinguish from organic paint.
      Hematite
      - ochers - Limonite - Magnetite - Manganese
   6. Glaze paints - lead based - only as decoration
   7. Yucca brushes
   8. The popularity of organic paint beginning about the 12th
      century in Anasazi areas
   9. Fugitive paint conditions

E. Firing methods
   1. "Open" temporary kilns - kilns of Snaketown - at Hopi
   2. Control of the fire - oxidizing, reducing effects
   3. The fuel: wood, coal, manure later
   4. Temperature achieved in range of 500 to 900 degrees

Centigrade
F. The Ethnology of Southwest pottery
   1. The uses of ethnology in archaeology
   2. The prominent pottery families at Hano, San Ildefonso, Zuni, and Santa Clara.
      Jesse Fewkes, 1895 - Lesou and Nampeyo.
      The Nampeyo "Dynasty" - Maria and Julian Martinez
   3. Raising standards and innovation

G. Pottery and dating
   1. Chronologies and typologies - time and space considerations
   2. Dating
      a. Indirect: Dendrochronology, archaeomagnetic, Carbon 14, accelerator mass spectroscopy
      b. Direct: Seriology, Alpha trace dating of mica in sherds, Thermoluminescence
      c. Tests on sherds: Hardness, strength and porosity, refiring tests

H. Laboratory - workshop activities
   1. Prospecting for clay field trips - two required
   2. Pottery typology for local ware(s) - 6 hours
   3. Preparing clay and forming vessels - 6 hours
   4. Open firing, both oxidizing and reducing - two days
   5. Examination of the temper in sherds with the 20X microscope or lens - 2 hours

HANDS-ON POTTERY MAKING

Each student is to complete several pottery projects. One gradual sequence of items of increasing difficulty for beginners is Hohokam anvil, a ladle or scoop, a small vessel, a larger vessel using paddle and anvil, and another by coil and scrape.

It is useful to have at least two pounds of good proven clay on hand for each student. A selection of proven clays would be desirable. Students will use their own collected clays, of course, but "proven" clays reduce the variables which often produce disasters. A small electric or gas kiln is very useful so that students may see results each week of the course.

CLAY PROSPECTING FIELD TRIP

One Saturday field trip for gathering native clays is required. Two would be better. The instructor should have checked out the clay deposits along the route. Each student should be equipped with plastic buckets and/or plastic bags to carry his or her clay home. At each stop several simple tests should be made. A dropper bottle of dilute HCl is used to test for lime or Caliche. A canteen of water is carried to the clay and everyone works up a bit of clay, making a long 'pencil.' If this can be bent into a one-inch circle without cracking, the clay is a good candidate for further tests. At this time judgements are made about texture, plasticity, iron, and organic. Both residual and sedimentary
clay sources should be visited, if possible. An agreed upon name for the deposits, along with notes about the clay, should be included in the bucket or sack.
Instructions for cleaning, suggestions for tempering, and directions for making test tiles are given at this time. A tile 10 cm long by 2 cm wide and about 4 mm thick is a convenient size. Shrinkage, after drying and firing, is noted and converted to percentages easily. For example, after firing the tile is 8 mm shorter, therefore the shrinkage is 8%. A hole in the tile is convenient for tying to the clay bucket.

The distance to known sites from the clay bed is noted and the likelihood of its use prehistorically is commented on. The party may find likely sources of temper (we found a highly micacious silt).

See the next page for the course REFERENCES
REFERENCES

Bunzel, Ruth L.

Colton, Harold S. (editor)
1952 Pottery Types of the Southwest. Ceramic series beginning in 1952 (and others in the Museum of Northern Arizona Ceramic Series with other editors).

Dittert, Alfred E. and Fred Plog

Fewkes, Jesse Walter

Haury, Emil W.

Martin, Paul and Fred Plog

Maxwell Museum of Anthropology
1974 Seven Families in Pueblo Pottery. University of New Mexico, Santa Fe.


Schroeder, Albert H. (editor)

Shepard, Anna O.

See also REFERENCES following Ceramics Workshop Course Outline.

* (A) In Phoenix Chapter Archives
PREHISTORIC ARCHITECTURAL ANALYSIS

PURPOSE

The goal of this course is to introduce the student to various forms of architectural analysis used when investigating prehistoric sites in the American Southwest. This course will encompass the goals, methods, and techniques that archaeologists undertake to derive various interpretations of the different architectural components and overall site configurations observed in the prehistoric record. This course will expose the student to both classroom and field situations; thus, both lecture and fieldwork are requisites for completion.

OBJECTIVES

At the completion of this course, the student will be able to:

1. Define what architecture is.

2. Identify known architectural variability between the three principal culture groups of the American Southwest, the Hohokam, Mogollon, and Anasazi, and variability expressed through time for each culture area.

3. Identify common inferences and analogies employed between the prehistoric archaeological record and historic and modern architectural studies.

4. Understand various scales of analysis when applied to archaeological architectural analysis.

5. Demonstrate the ability to create architectural profiles.

6. Demonstrate the ability to plot plan view maps of various room features and architectural room configurations.

7. Demonstrate the ability to undertake feature and room recordation on appropriate forms.

8. Begin to interpret site growth patterns and interpret spatial analysis for features, rooms, courtyards, plazas, and other site components in terms of architectural configuration.

FORMAT

The course is designed to be presented in 70 hours, with 20 hours of lecture, 30 hours of field analysis/experience, and 20 hours of archaeological field trips to at least three different archaeological sites where architectural variability will be studied. To complete the field analysis portion of the class, it will be necessary for the student to work on two different archaeological sites containing different forms
of architectural expression.
PREREQUISITE

To enroll in the Prehistoric Architectural Analysis class, the student should have completed Prehistory of the Southwest and Crew Member I.

COURSE OUTLINE

A. Introduction
   1. What is architecture?
      a. Use of space in world context.
         • How and why people partition space.
         • Why do archaeologists study prehistoric architecture.
         • Various forms of prehistoric Southwest architecture.

B. Various Materials Used in Architectural Construction
   1. Material variability (a world perspective).
      a. How people find, create, and use building materials around the world.
      b. How people reuse available material.
   2. The use of material and space in new world prehistoric architecture.

C. Architecture and Ethnography
   1. Inferences and analogies of historic and modern architectural units to prehistoric architecture.
      a. Pueblo architectural analogies.
      b. Navajo/Apache ethnographic analogies.
      c. Pima/Papago ethnographic analogies.
      d. Historic Anglo analogies.

D. Architectural Variability
   1. Architectural attributes.
   2. Functions of architectural components.
   3. Use of space and architecture in the American Southwest and the development of major Southwestern architectural traditions.
      a. The early periods.
         • Archaic period architecture.
         • Archaic to ceramic period transition architecture.
      b. Anasazi architectural variability.
      c. Mogollon architectural variability.
      d. Hohokam architectural variability.

E. Scale of analysis
   1. Differences of scale between features, rooms, components, sites, and site complexes.
   2. Determining what scale or level of analysis is appropriate for particular archaeological problem sets.
F. Recording Prehistoric Architecture
1. Architectural documentation.
   a. Forms.
   b. General note-taking.
   c. Specific architectural documentation.
      • Standard approaches.
      • Computerization.
   d. Feature recordation.
   a. Plan view mapping.
   b. Architectural profiles.
   c. Computerized mapping.
3. Photographing architectural variability.
   a. Feature photography.
   b. Room photography.
   c. Site photography.
   d. Aerial photography.

G. Architectural Interpretation
1. Interpreting site/room function.
   a. Identifying habitation units.
   b. Identifying storage units.
   c. Identifying ceremonial units.
   d. Identifying multi-functional units.
   e. Identifying intra-mural versus extra-mural areas.
2. Identifying spatial relationships (between features, rooms, courtyards, plazas, site components).
   a. Identifying intrusions.
   b. Identifying superpositioning.
   c. Identifying disturbance/transformation processes (natural and cultural).
3. Identifying site growth.
   a. Identification of bonding and abutment patterns.
   b. Identification of exterior versus interior wall surfaces.
   c. Identification of superpositioning of architectural components.
   d. Identification of multiple floor surfaces and the relationships between multiple floor surfaces.
4. Identification of intra-site relationships.
5. Identification of inter-site relationships.
6. Identification of environmental relationships and architectural configurations.

See next page for REFERENCES.
REFERENCES

Ciolek-Torrello, Richard, and J. Jefferson Reid

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Longacre, William A., and J. Jefferson Reid
1974 The University of Arizona Archaeological Field School at Grasshopper: Eleven Years of Multidisciplinary Research and Teaching. The Kiva 40:3-38.

Rock, James T.

Scarborough, Robert, and Izumi Shimada

Thorne, Robert M.
PREHISTORY OF THE SOUTHWEST

PURPOSE

This is the introductory course in the study of the American Southwest. The course will provide an up-to-date synthesis of Southwestern prehistory for members of the Arizona Archaeological Society (AAS) who are interested in enrolling in or are enrolled in the Certification Program and is a prerequisite for all the other courses offered within the program.

The class is designed to be presented during twenty hours of classroom instruction. At the option of the Chapter and the instructor, the course may be presented during eight sessions, each lasting 2½ hours, or ten sessions, each lasting two hours.

The suggested text for this class is *Archaeology of the Southwest*, Second Edition by Linda S. Cordell. Additionally, two other recent books, *The Archaeology of Ancient Arizona* by J. Jefferson Reid and Stephanie M. Whittlesey and *Ancient Peoples of the American Southwest* by Stephen Plog, are suggested as supplemental texts. These books may be obtained through local booksellers. Allow six weeks for delivery if the book, or books, must be ordered. Refer to the REFERENCES for complete citations for these books.

OBJECTIVES

At the end of this course, the student can perform the following:

1. Identify and describe the major geographic areas of the Southwest with their associated culture groups.

2. Indicate at least one theory as to how the Native American peoples arrived in the Southwest and support it with appropriate data.

3. Explain the difference between groups associated with big game hunting versus those who specialized in gathering wild foods.

4. Describe how cultures are developed.

5. Describe the most useful dating systems used in the Southwest.

6. Indicate the importance of domesticated agriculture in the development of life styles.
OBJECTIVES (continued)

7. Explain the concepts of regional integration, aggregation, and dispersed systems and discuss the effects of these on various Southwestern culture groups.

8. Describe data that indicates trade existed and attempt to explain the associated implications.

9. Name and describe the known cultural variations in the prehistoric Southwest comprised of Anasazi (or Ancestral Pueblo) including Mesa Verde, Chaco canyon, Kayenta, Rio Grande, and Virgin; Hohokam; Mogollon; Patayan including Cohonina, Cerbat, Prescott, and Lowland Patayan (or Laquish); Sinagua, Salado, Fremont, and Casas Grandes.

10. Indicate the effect of European contact on the native population.

11. Explain the United States and Arizona laws protecting cultural resources. Evaluate the influence of these laws on the general public.

COURSE OUTLINE

A. Introduction
   1. Contemporary peoples
   2. Prehistoric cultures
   3. History of Southwest archaeology

B. The natural environment
   1. Physiographic provinces
   2. Climate
   3. Vegetation
   4. Fauna
   5. Paleoenvironmental chronology

C. Frameworks for Southwestern prehistory
   1. Major Southwestern traditions
   2. Methods of dating
   3. Current chronologies

D. Paleoindian
   1. Discovery of Folsom and Clovis
   2. Research
   3. Paleoindian complexes
   4. Paleoindian chronology
E. The Archaic period
   1. Paleoenvironmental considerations
   2. Subsistence and settlement
   3. Early cultigens in the Southwest

F. Agricultural strategies
   1. Spread of agriculture in the Southwest
   2. Diversity of prehistoric agricultural and subsistence strategies

G. Early Southwestern communities to A.D. 900

H. Regional integration, A.D. 900 - 1150
   1. The Chaco Phenomenon
   2. Casas Grandes
   3. Hohokam
   4. Areas in between: Mesa Verde, Mimbres, Kayenta
   5. Dispersed systems

I. Late prehistoric aggregated villages A.D. 1150 - 1300
   1. Distributions and patterns of settlements
   2. Ceramic production and distribution
   3. Late prehistoric organization

J. Abandonment
   1. Traditional explanations for abandonments
   2. Reevaluation of the concept
   3. The Southwest at the beginning of history
      a. Historical documents
      b. History, legend, and archaeology of Awatovi
      c. Apache and Navajo

REFERENCES on the next page.
REFERENCES

Ambler, J. Richard
1997 *The Anasazi.* Museum of Northern Arizona, Flagstaff. (A)*

Anyon, Roger, and Steven A. LeBlanc

Cordell, Linda S.

1997 *Archaeology of the Southwest* 2ND ED. Academic Press, San Diego

Haury, Emil W.
1976 *The Hohokam: Desert Farmers and Craftsmen.* University of Arizona Press, Tucson

Lister, Robert H. and Florence C. Lister
1983 *Those Who Came Before.* Southwest Parks and Monument Association, Globe Arizona (paper). The University of Arizona Press, Tucson (cloth)

Noble, David Grant (ed)

Ortiz, Alfonso (ed)


Pilles, Peter J.
1987 *The Sinagua: Ancient People of the Flagstaff Region.* Exploration 2-11.

Plog, Stephen
1997 *Ancient People of the American Southwest.* Thames and Hudson, New York.

Reid, J. and Stephanie M. Whittlesey
1997 *The Archaeology of Ancient Arizona.* The University of Arizona Press, Tucson

*(A) In Phoenix Chapter Archives.*
PURPOSE

The purpose of this course is to certify an applicant for the position of Recorder on a survey crew or excavation team.

OBJECTIVE

The student is to acquire the ability to prepare a documentary record of the field facts and record interpretations of field data, and to collect artifacts and eco-factual materials in the field for transfer to the laboratory.

PROFICIENCY LEVEL ATTAINED  Beginning to Intermediate

LABORATORY TRAINING  20 hours - 10 two-hour workshops are suggested.

A. Archaeological excavation techniques and the goals of excavation  2 hours

B. Archaeological field surveys and goals
(From Tab 19 - Survey Techniques)  2 hours

C. Fundamentals of recording prehistoric and historic cultural remains  2 hours
   1. Techniques for observation
   2. Techniques for measuring
   3. The phenomena of stratification and developing stratigraphy

D. The engineering survey  2 hours

E. Aerial and topographic map reading  1 hour

F. Archaeological photography  1 hour

G. Artifact recognition  4 hours
   1. Ceramics  4. Horn
   2. Shell  5. Lithics

H. Architectural form recognition and description  2 hours

I. Map making  2 hours
   1. The plan view
   2. The profile and profiling
   3. Elevations
   4. Sketching
LABORATORY TRAINING (continued)

J. Application 1 hour
1. Development of records
2. Making forms
3. Writing the record
4. Correlating the various records

K. Museum registration methods 1 hour
(From Tab 12 - Laboratory Techniques)

FIELD TRAINING 40 hours of supervised on-site field work

A. The trainee is involved in actual field work situations. Maximum effort is applied to dealing with ground truth. The trainee is to show proficiency in developing the following:
1. Field log and/or journal of daily events
2. An example of a survey journal and/or an excavation taken in a field situation
3. Making a field map of a site or portion of a site, both as a
   a. Sketch map
   b. An engineering-type survey map using a peep sight alidade and tape, optical alidade, a Brunton compass and tape, string level and tape, or a transit
4. Plot several sites on topographical maps
5. Read an aerial photograph
6. Recognize and draw graphically, and describe in prose several different kinds of architectural features
7. Recognize and describe artifactual content of the site under study

B. The trainee is to show his or her proficiency to properly collect and prepare an adequate record for the following:
1. A specimen for radiocarbon dating
2. A specimen for pollen or soil analysis
3. A specimen for flotation analysis
4. A specimen for tree-ring study
5. Optional: A specimen for archaeomagnetic dating

C. The trainee is to submit his or her notes, records and documents to the site director/instructor for review. The records are to demonstrate:
1. Clarity of record keeping
2. An appreciation for clear expression, consistent reporting, and a demonstration of ability to assess remains observed in quantitative terms.
3. An ability to take clear and sharp photos from a good position. The purpose of this final review is to test the completeness and accuracy of the recording process; the interrelationship among all the various record sets and collections made.
4. This evaluation will rate the work according to:
   a. Usefulness in preparing a description of field work done
   b. Usefulness in cataloging the artifacts
   c. Usefulness of the data for analyzing the field data and
artifacts
REFERENCES

Note: The following are also the suggested references for Field Crew Member I (Tab 8) and II (Tab 9) courses.

Hester, Thomas R, Robert F. Heizer, and John A. Graham
1975 Field Methods in Archaeology. Mayfield, Palo Alto. (A)*

Hole, Frank, and Robert F. Heizer

Joukowsky, Martha

Spier, Robert F. G.

*(A) In Phoenix Chapter Archives.
ROCK ART RECORDER

PURPOSE
The purpose of this course is to provide the basic academic and field skills necessary to qualify the avocational archaeologist to be able to participate in rock art recording projects and to provide assistance to the professional community as may be requested.

OBJECTIVES
At the completion of the course the student will:
1. Be familiar with the terminology and literature of the field of rock art.
2. Be aware of the obligations and law, relating to the protection and preservation of this cultural resource.
3. Be familiar with the various styles and types of rock art in the local area, and in other areas as presented.
4. Understand the limitations and current methods of rock art dating and interpretation.
5. Learn the basics of rock art recording, tools and techniques.
6. Gain confidence in the recording of rock art sites both as an archaeological manifestation, and as a rock art site.
7. Be able to record a site on his/her own, with supervision.
8. Be able to communicate with and assist others with these skills in Rock Art programs.

FORMAT
The student will receive a minimum of 20 hours of classroom instruction, coupled with 40 hours of actual field experience. Within the field work requirements, students (in teams of two or three) will record at least one small rock art site, and then proceed to larger sites again working in a team with at least one certified recorder to supervise.

All completed recordings will be turned over to the appropriate agency (permitting) and closest associated archiving institution in a format most useful to that institute. Additional copies of this information may be housed at other institutions depending upon agreements made at the beginning of the project.

GENERAL COMMENTS
1. Items need not be covered in the order presented, but it is mandatory that all items be covered by the end of the course.
2. Present recording techniques early in the course so that field work can begin as soon as possible.
3. Take a few field trips as orientation for those who have not seen much rock art. Choose a variety of sites stressing variation in elements, methods, style, time periods. Both petroglyph and pictograph sites should be examined, if possible.
GENERAL COMMENTS (continued)

4. Attempt to use all day sessions with morning lecture and afternoon recording or evening lectures and all day recording sessions.
5. Stress the importance of completing field work as soon as possible before the end of the course work.
6. Broaden the horizons with slides of glyphs from different areas: Mesoamerica, Australia, South Africa, Sahara, Europe, for a good general view. Have students bring examples from places they have visited. (Distribution, section D, page 4)
7. Stress the fact that rock art CAN be dealt with from a scientific and anthropological perspective. Assign outside reading, might even put in a test question.
8. Point out that rock art recording may require a variety of methods and techniques based on problem orientation. Recording a rock art site as an archaeological entity is one thing, but studying it is quite another. Offer different examples.
9. Conduct experimental manufacturing of glyphs using a variety of tools and different techniques. This should be done on pieces of commercial sandstone.

COURSE OUTLINE - 60 Hours
This course requires a minimum of 20 Class Hours plus 40 Hours of Field Work. This does not include field trips to view rock art sites.

A. Introduction: terminology and references
1. What is rock art?
2. What is art?
3. What is prehistoric art on rocks?
4. Where does it come from?
5. Terminology Examples:
   a. Pictograph
   b. Petroglyph
   c. Geoglyph (Ground Figures)
   d. Dent/dint
   e. Pecking
   f. Style
   g. Element
   h. Design
   i. Techniques
   j. Ideographs
   k. Meaning
   l. Icon
   m. Type vs. Style is often confused in literature and should not be.
   n. Symbol (What is it?) Important for understanding rock art’s significance.
   o. Panel

6. References - via instructor presentation

Note: Whatever terminology is used in a project should be defined. A good glossary of terminology is the one by Robert G. Bednarik now in print.
B. Public awareness and preservation

1. Public programs:
   a. Lectures
   b. The Media
   c. Amateur societies - certification
   d. Professional societies (Please list others if you know of any.)
      - American Rock Art Research Association
      - International Federation of Rock Art Organization (IFRAO)
      - International Council on Monuments and Sites (ICOMOS)
      - International Committee on Rock Art
      - Eastern Rock Art Research Association (ERARA)
   e. College courses examples:
      - Northern Arizona University
      - Arizona State University
      - Cochise College
      - University of California at Los Angeles
      - University of Nevada at Las Vegas
      - Earthwatch
      - Crow Canyon
   f. Parks, forests and interpretive areas

2. Preservation Examples:
   a. Natural destructive forces
      - Airborne abrasion
      - Animal (cattle, burros, birds)
      - Water percolation
      - Lichen
      - Flooding
      - Molecular breakdown (freezing, solar radiation)
      - Patina
      - Rock decay
      - Rock fall
      - Fire
   b. Human destruction
      - Intentional (shooting, hatcheting, spray paint, graffiti, chalking, touching)
      - Unintentional
   c. Pollution
   d. Revitalization of glyph localities
   e. Only a professional rock art Conservator should be used for any conservation effort.
B. Public awareness and preservation (continued)

3. Laws:
   a. International
   b. Federal
   c. State
   d. Tribal
   e. Rock art records used to monitor or as a basis for the enforcement of the law.
4. Obtain Permission:
   a. Obtain permission to work at sites from land owners, managers, and tribal groups which claim heritage of the site.

C. Classes
   1. Historic, proto-historic and prehistoric
   2. Pictographs
   3. Petroglyphs
   4. Geoglyphs (Earth Forms)
      a. Intaglios
      b. Rock Alignments
   5. Spanish markings
   6. Inscriptions
   7. Graffiti

D. Distribution
   1. Regional styles
   2. Cultural styles
      • Are these styles different? How?
   3. Individual glyph localities
   4. Topological settings
   5. Landscape

E. Construction
   1. Surface used
      a. Soft/hard
      b. Porous vs. non-porous
      c. Patinated vs. non-patinated
      d. Facing what direction
      e. Exposure to what elements
      f. Types of rocks
   2. Pecked
      a. Dent size
      b. Spacing
      c. Depth
      d. Angle of the blow
   3. Incised (scratched, carved, abraded)
      a. Groove shape
      b. Groove depth
      c. Quadrupeds, birds, reptiles, insects, aquatic
4. Botanical - domestic, wild, riverine, desert, mountain, plateau
5. Astronomical - sun, moon, stars, constellations, comets, meteors, eclipse, solstice, and equinox
6. Cupules
7. Subject - maps, trails - can be very interpretive
8. Others - hands, feet

G. Meaning
1. Relating as systems
   a. Ideographic
   b. Style groupings between areas
2. Special relationships
   a. Superimposition
   b. Depictions
3. How does it relate to prehistoric cultural systems and the religions and ideologies of those cultures?
4. What does it tell us that other cultural remains do not?
   a. Define cultural regions
   b. Inter-group contacts
   c. Intra-group variations
   d. Temporal variations
   e. Communication networks
   f. Social institutions (belief systems) Religious practices
   g. World view
   h. Meaning: How does art function in preliterate context?
       • How does rock art function in landscape?
       • Marking sacred spots and maintaining tradition.
       • The symbolic component of art and place
       • Consider the importance of location for understanding function.
   i. Inside meaning of style: How it functions for the people who made it, means of identity, maintaining cultural identity.

H. Style
1. Cultural areas
2. Regional
3. Horizons - time and space considerations

I. Dating
1. Patination and desert varnish
2. Paint and binders
3. Lichen
4. Site association and cultural association
5. Style
   a. early man
   b. Archaic
   c. Hohokam
   d. Pueblo
I. Dating - 5. Style (continued)

e. Historic
   • Native American, Indigenous Peoples
   • Spanish
   • Anglo

6. Superimposition
7. Redone pecking, painting

J. Recording Skills

1. Forms - Show the many examples. Explain one set and then use it to record a site.
2. Photography
   a. Color- slides, color prints or digital and black/white
   b. General environment of site
   c. Data board (information board) in photos
   d. Boulders, panels, clusters and individual elements
   e. Scale and direction
   f. Weathering
   g. Vandalism
3. Sketches of the overall view of site
4. Scale drawings of panels using graph paper and string grids or just doing sketches
5. Drawings (If done from slides, not to be used without follow-up visit and correction in the field.)
6. Munsell Soil Color Chart - Use to stress color of pictographs or petroglyph elements where there are visible patination differences.
7. Geoglyphs (Ground Figures)
8. Computer use in recording
9. Unacceptable methods
   a. rubbings
   b. casts
   c. chalking
   d. aluminum powder paint
   e. touching
   f. painting
   g. using a stick or object to point and touch image

K. Mapping a Site

1. Simple to complex methods
2. Compass use
3. Map reading
4. Locating the UTM of a site on a map
5. Locating sites and panels from existing maps
6. Use Global Positioning System (GPS) Geographic Information System (GIS) with the map. Use the GPS for datums and UTM s.
7. Use Laser Target Range Finder (Line of site, contour, etc.)
FIELD WORK - 40 hours

20 hours - Group recording with the class on several small sites or on one large site.

5 hours - Individual recording of a small site of less than 20 elements.

15 hours - Individual or group recording of a larger site of 75 or more elements.

Utilize the variety of techniques in section J and K of the outline.

COURSE BIBLIOGRAPHY

See page 9. Also, use bibliography from course texts, instructor created, or suggested by the internet

SUGGESTIONS FOR ROCK ART RECORDING CLASSES AND CERTIFICATION
by Jane Kolber

1. Decide what the purpose of certification is. What do you want people to be able to do when they have completed it - how to accomplish that?

2. Recorders should competently be able to do ALL aspects of recording themselves:
   - Mapping - drawing both plain and measured maps.
   - Locating sites - should understand and be able to plot UTMs, not just be able to use a GPS.
   - Be a competent photographer with a film camera - not a point and shoot. Digital cameras should only be used as auxiliary and with at least a 3. MG resolution.
   - If a digital camera is used for main recording purposes, use only 5.MG cameras or better and make printouts, which should only be put onto archival paper and also produce a copy on CD. Do not project slides for any reason.
   - Be able to understand and use a compass fully.
   - Do a usable, comprehensible, accurate string grid drawing - not a piece of artwork.
   - Fill out all questions on a form unless they don’t apply at that site.
   - Be able to fill out a useful, informative daily log.
3. Instructors should:
   - Be able to do with excellence all the work required of the students.
   - Compose site specific forms. Make a CD of forms so you can add to them.
   - Accompany the students into the field for all learning sessions. Students cannot learn to record on their own without someone being with them and checking their work in the field. They should practice first. Work should be satisfactory before attempting an actual recording that will be archived.
   - Stress the importance of conservation. Never demonstrate or recommend the use of any kind of intrusive method, unless it is the only alternative to preservation.
   - Never attempt any form of conservation method without assistance of a rock art conservator.

4. Recording methods should be as non-interpretive as possible.

5. Very small sites should be worked on in classes as larger sites may not get completed, may be too difficult and not give students a sense of accomplishment.

6. Both petroglyph and pictograph sites should be worked on in each class unless they don’t exist in the class region.

7. Excellence is stressed rather than quantity.

8. Students who are not competent should not be certified. A certificate of completion of the course could be issued to those not qualified to do good recording on their own. Many students have to repeat the course to be competent.

9. Recording methods should be as inexpensive as possible. A good used SLR camera and a good compass are the most expensive tools required.
BARNETT, F. A.
1982 Canyon County Prehistoric Rock Art (An illustrated guide to
viewing, understanding, and appreciating the rock art of the
prehistoric Indian cultures of Utah, the Great Basin and the
general Four Corners Region.) Wasatch Publisher, Inc., Salt Lake
City, UT.

COLE, SALLY J.
1990 Legacy On Stone (Rock Art of the Colorado Plateau and Four
Corners Region.) Johnson Books, Boulder, CO.

GRANT, CAMPBELL
1983 The Rock Art Of The North American Indians Cambridge
University Press, New York, NY

HIRSCHMANN, FRED and SCOTT THYBONY
1994 Rock Art Of The American Southwest Graphic Arts Center
Publishing Company, Portland, OR.

MCCREERY, PATRICIA and EKKEHART MALOTKI
1994 Tapamveni (The Rock Art Galleries Of Petrified Forest And
Beyond.) Petrified Forest Museum Association, Petrified Forest,
AZ.

MALLERY, BARRICK
1972 Picture-Writing Of The American Indians Volumes I and II.
Dover Publications, Inc., New York, NY

SCHAASMA, POLLY
1980 Indian Rock Art Of The Southwest School of American Research,
Santa Fe, and University of New Mexico Press, Albuquerque, NM

WITHEY, DAVID S. and LAWRENCE L. LOENDORF (eds.)
1994 New Light on Old Art. Recent Advances in Hunter-Gatherer Rock
Art Research. Institute of Archaeology University of California
Monograph 36. Los Angeles, CA (Introduction of specific general
interest.)
SHELL IDENTIFICATION AND ANALYSIS

PURPOSE

The purpose of this class is to give members of the Arizona Archaeological Society a working knowledge and ability to recognize and analyze archaeological shell assemblages. The course is intended to focus on a specific site, a series of related sites, or a region of the state. Depending on the project objectives, analysis forms will be developed from the research design. Members may take this class several times to become proficient with shell materials found in Arizona.

Emphasis is placed on identification of specific shell genus and species, their sources and their anatomy. Additionally, a strong focus will be on recognition of worked and un-worked shell and analysis of human modification techniques. Laboratory methods of labeling and storing of shell artifacts will also be presented.

Because some archaeologists believe that most of the shell objects found in other parts of the state were manufactured by the Hohokam, and because the Hohokam seem to have used the greatest variety of species in a greater variety of forms than most other pre-historic Arizona societies, the theme of this syllabus is centered around shell artifacts from Hohokam sites.

PREREQUISITES

The only requirement is the completion of Prehistory of the Southwest I. However, it is strongly recommended that the participant have completed Laboratory Techniques.

COURSE FORMAT

The course is designed to be presented in 60 hours, with 20 hours of lecture (as indicated under the Classroom Instruction Section) and 40 hours of laboratory experience (as indicated under the Laboratory Instruction Section). Laboratory experience could include a research paper, and possible field trips to sites that demonstrate shell processing/and or manufacturing.

LABORATORY STRUCTURE

Depending on available resources, participants may wash, sort and analyze bags of shell materials provided by the host chapter; or, identify, analyze, measure and illustrate shell material and artifacts previously processed in the other laboratory collections.

FIELD TRIPS
Visits to local sites may be arranged at the discretion of the instructor according to the needs and interests of the students and as permitted by landowners and managers.

LABORATORY MATERIALS

A. 10x hand lens  
B. Digital or hand drawn caliper 15cm+  
C. Scale with accuracy of +/- 1 gram or +/- 0.1 grams  
D. Microscope 33.5x stereo zoom  
E. Protractor  
F. Standard compass  
G. 35 mm camera with appropriate lenses, or digital camera  
H. Calculator  
I. Analysis forms  
J. Labeling materials  
K. Drawing materials

COURSE OBJECTIVES

At the conclusion of the course, students will

A. Be able to recognize basic shell genera/species that characterize the Hohokam assemblage  
B. Be able to separate modified and unmodified shell material  
C. Be able to sort shell material based on specific use  
D. Be able to identify steps of manufacturing and processing of shell material  
E. Be able to carry out necessary laboratory functions: cleaning, labeling, analysis, measurement, drawing, documentation and proper storage techniques

RECOMMENDED TEXTS


B. It is highly recommended that a selection of articles from the bibliography be chosen by the course instructor. This will provide a good representative background of the broad concepts of shell identification and analysis, the Hohokam trade systems, and the significance of Hohokam shell artifact production. A suggested required reading list is marked with asterisks (*) in the bibliography.

C. Shell identification guides chosen from the following list (Vokes 2002):
Marine Guides

Abbott, Robert Tucker

Keen, A. Myra
1971 Sea Shells of Tropical West America: Marine Mollusks from Baja California to Peru. 2nd ed. Stanford University Press, Palo Alto.

Morris, Percy A.

Rehder, Harald A.

Freshwater and Terrestrial Mollusca Guides

Abbott, Robert Tucker

Burch, J. B.


Burch, John B., and John L. Tottenham

Clarke, Arthur H.

COURSE OUTLINE – CLASSROOM INSTRUCTION

A. General Theory Overview
   1. The Hohokam as shell artifact manufacturers
2. The "sphere of influence" (Nelson 1991)
3. Hohokam trade systems
   a. Northern Sonora (Brand 1937, 1938)
   b. Papagueria and southern edge of the Gila River Valley (Hayden 1972)
   c. Middle and Upper Santa Cruz (Craig 1982)
B. The importance of recognizing unmodified and modified shell found in a site assemblage
C. Examples of source materials from the Gulf of California, Pacific coast, and local freshwater/terrestrial sources
D. Purpose of Decorative Items
   1. Decoration
   2. Wealth
   3. Religious/ceremonial
   4. Status indicators
   5. Family affiliation
E. Terms Involved in Shell Analysis
   1. Axially ribbed
   2. Anterior canal
   3. Horny operculum
   4. Spine
   5. Aperture
   6. Concentric ribbing
   7. Heat-shaped lunale
   8. Lenticular shape
   9. Hinge
   10. Radial structure
   11. Arched hinge plate
   12. Chevron shaped teeth
   13. Height
   14. Crenulated ribbing
   15. Fossa
   16. Operculum
   17. Nacreous
F. Shell Anatomy (Vokes 2002)
   1. Component parts of a univalve (Gastropod/snails)
      a. Spire
         • Apex
         • Penultimate whorl
         • Columella
      b. Body whorl
         • Outer lip aperture
         • Callus/parietal wall
         • Siphonal canal
   2. Component parts of a bivalve (Pelecypod/clams)
      a. Outer shell
         • Umbo
• Beak
• Dorsal/ventral
• Sides
• Cardial rib
• Concentric structure (ribbing)

b. Inner shell
• Cardinal teeth
• Lateral teeth
• Taxadontic teeth
• Muscle scars
• Pallial line

3. Hohokam Shell Genera and Species (mainly Agua Fria River Valley)
a. Marine
• Glycymeris gigantea
• Glycymeris maculata
• Pecten vogdesi
• Spondylus sp.
• Dosinia ponderosa
• Turritella leucostoma
• Cerithium adustum
• Cerithium maculosum
• Cerithidea albonodosa
• Cerithidea mazatlanica
• Columbella sp.
• Oliva melampus
• Oliva spicata
• Olivella alba
• Olivella dama
• Olivella gracilis
• Conus sp.
• Conus brunneus
• Nassarius pogodus
• Nassarius versicolor
• Neritina sp. (Theodorus)
• Theodoxus luleotasciatus
• Haliotis sp.
• Oyster sp.
• Vermicularia sp.
• Strombus sp.
b. Freshwater
• Anodonta californiensis
• Freshwater snails
G. Evidence for Local Manufacturing
1. Raw materials
2. Broken in processing
3. Wastage – debitage
   a. Large unused pieces
4. Finished products – local style
5. Limited use of local resources
   a. Gulf of California – Rocky Point
   b. Pacific Ocean
6. Specific stone technology
7. Bracelet production techniques

H. Shell Working Technology
1. Cutting and breaking
   a. Indicated better in shell debitage
      • Seen easier in thin shell
      • Cut lines and overlaps
      • Breaks along cut lines (ragged edges)
      • Narrow pointed tool (.5 – 1 mm)
2. Chipping/Grinding/Abrasion
   a. Direct blow by small hammer
   b. Hitting object against an anvil
   c. Highly abrasive fine grain stone
      • Negative – positive grinding
      • Repairing tools for bracelets
      • Umbo treatment
        a) Plain
        b) Round
        c) Square
        d) Perforated
        e) Heart-shaped
3. Engraving/Incising
   a. Same as cutting – decorative treatment
   b. Edge nicking
4. Drilling
   a. Use to delimit cut boundaries
   b. Production of suspension/string holes
      • Biconical and conical
5. Acid retard etching
   a. Rare
   b. Use of weak acid
   c. Modern experiments
   d. Known examples
6. Painting
COURSE OUTLINE – LABORATORY INSTRUCTION

A. Laboratory Analysis
1. Separation in the field
2. Assignment of specimen number
3. Proper field storage techniques
   a. Container
   b. Packing material
4. Specimen cleaning process
   a. Dry brushing with soft bristle brush
   b. Immersion (if needed) in distilled water
   c. Soft brushing to remove dirt
   d. Allow to air dry
   e. Chemical cleaning
      • only if necessary (rare)
5. Analysis form
   a. Relationship to research proposal
   b. General data
      • Specimen number
      • Species
      • Artifact cross section
      • Umbo modification
      • Length
      • Width
      • Thickness
      • Inside diameter
      • Artifact identification
      • Comments
      • Drawings
      • Additional data as needed

B. Shell Species Identification
1. Type collection location
   a. Care in handling
      • Modern field specimens (Baja California)
         a) Similarity to those excavated
         b) Effects of sun on coloring
   b. Size considerations
2. Illustrations in site reports
   a. Care in regards to species named
      • Changes
      • Incorrect identification
3. Malocological reports
4. Experts in the field when possible
5. Most common marine species (Keen 1958, 1971)
   a. Cerithidea albonodosa (Gould and Carpenter 1857)
   b. Columbella sp.
   c. Conus sp.
   d. Dosina ponderosa (Gray 1838)
e. Glycymeris gigantean (Reeve, 1843)
f. Glycymeris maculate (Broderip 1832)
g. Laevicardium elatum (Sowerby 1833)
h. Nassarius pogodus (Reeve 1844)
i. Nassarius versicolor (Adams 1852)
j. Neritina luteofasciata (Miller 1879)
k. Olivella alba (Marrat in Sowerby 1871)
l. Olivella dama (Wood 1828)
m. Pecten vogdesi (Arnold 1906)
n. Spondylus sp.

6. Most common fresh water species
   1. Anodonta californiensis (Lea)
   2. Succinea avarca

C. Artifact Description
   1. Measurements needed
   2. Utilitarian shell
      a. Ground working edges
   3. Decorative shell
      a. Beads
         • Location of stringing holes
         • Perforation of the umbo
         • Spine/aperture removal
         • Disc beads
            a) Perforation size
            b) Bead diameter
            c) Profile
      b. Cylindrical beads - time sensitive
         a) Barrel Beads (Olivella sp.)
         b) True cut cylindrical beads
   4. Pendants
      a. Whole shell
      b. Cut and carved
      c. Ground
   5. Rings
      a. Finger/toe
         • Whole shell
         • Ground
      b. Earrings
   6. Tinklers
   7. Mosaic pieces
   8. Bracelets, armlets, anklets, pendants
      a. Cut and ground
         • Plain
            a) Haury classification system
            b) Umbonal treatment
         • Decorated
            a) Carved
            b) Incised
9. Acid-retard etching
10. Prestige items
   a. Carved-incised bracelets
   b. Pecten vogdesi beads and pendants
   c. Strombus sp. Trumpets
   d. Acid-retard etched shells

**SHELL LITERATURE REFERENCES** (* highly recommended)

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Urban, Sharon F.


Vokes, Arthur W.


1999c The Ancient Use of Seashells in Arizona and Beyond. Old Pueblo Archaeology, Issue Number 18, September 1999. Tucson


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Woodward, Arthur

STABILIZATION AND RECONSTRUCTION

PURPOSE

The purpose of this course is to provide the basic academic and field skill to permit the avocational archaeologist the ability to participate in stabilization and reconstruction projects of the AAS and to provide assistance to the professional community as may requested. This course will also briefly cover the methods and concepts of site excavation with the endpoints of stabilization and reconstruction in mind.

OBJECTIVES

At the completion of this course, the student will be able to:

1. Determine the purpose of stabilization and the various types and methods which exist.

2. Understand the difference between the terms "stabilization" and "reconstruction".

3. Name archaeological sites known to have been stabilized in the American Southwest, plus define the various kinds of stabilization and reconstruction techniques known to have been used.

4. List the various types and functions of tools used by the archaeologist during stabilization projects.

5. Understand the principles in site stabilization and reconstruction.

6. Explain how and why walls are mapped, photographed, and documented before and after stabilization.

7. Learn variations of excavation strategies and methods when stabilization and reconstruction are the anticipated goals.

8. Develop interpretive themes and trails.

9. Indicate the use of photography and its importance in stabilization.

10. Understand both the positive and negative aspects of stabilization and its relationship to archaeological science.

COURSE FORMAT

The student is to receive a minimum of twenty hours of classroom instruction, coupled with forty hours of actual field experience. Within the field work requirement, there should be no single specific activity necessary for fulfilling this requirement, though the following
conditions must be met.
COURSE FORMAT (continued)

1. The student is to work in at least two different types of stabilization work (i.e., walls and floors or stone construction versus adobe construction), plus some form of reconstruction activity.

2. During the five field days, the technician is to be involved in: mapping, profiling, photographing, excavating or clearing, soil/clay analysis, wall stabilization, floor stabilization, wall reconstruction, feature reconstruction, and stabilization/reconstruction documentation and record keeping.

Normally, the field work requirements will be fulfilled by work on at least five different days. The last eight hours of field work will be spent in finalizing and completing drawings/profiles, stabilization forms, reconstruction documentation, and any additional administrative tasks.

A brief final report of the field work undertaken, along with the successful completion of all written and administrative work assigned, coupled with the instructor's evaluation of both the student's classroom and field work, will determine the student's successful completion of this course.

GENERAL COURSE SET-UP

This course is to be taught in conjunction with an on-going stabilization/reconstruction program/project. Through such a program; classroom and laboratory space should be provided without significant cost, as should most major tools, chemicals, building materials, dyes, plus copying of materials to be used as text. No one good text is presently available to use in this course. Therefore, it is suggested that several manuals such as the National Park Service Stabilization Manual, and the Besh-Ba-Gowah Management Plan be used as supportive texts when warranted.

The class is enhanced by the use of guest speakers who have had a wide range of stabilization and reconstruction experience in the American Southwest (both historic and prehistoric sites). A list of possible speakers is presented, below. This is not an all inclusive list but simply one which notes those individuals who have most recently, as of January 1992, undertaken a major stabilization effort.

1. Dr. Alfred E. Dittert, Jr. (New Mexico & historic Yuma, Arizona)
   Department of Anthropology
   Arizona State University
   Tempe, Arizona 85287

2. E. Charles Adams (Homolovi program, director)
   Arizona State Museum
   University of Arizona
   Tucson, Arizona 85721
Another aspect which also enhances this class besides the use of guest lecturers, is at least one, if not two, field trips to other archaeological sites where stabilization and reconstruction efforts have already been undertaken such as Homolovi II, Elden Pueblo, Tonto National Monument, Chaco Canyon, and Besh-Ba-Gowah.
GENERAL COURSE SET-UP (continued)

Persons enrolling in this class must have first completed the required Prehistory of the Southwest class, and are strongly recommended to have already completed Field Crew Member I class (introduction to excavation techniques) before enrolling in this course. Like that class, the student must provide their own basic dig kit for this class.

COURSE OUTLINE

A. Some general concerns
   1. Principles of stabilization
   2. Organizational aspects of stabilization
   3. Reasons for stabilization
      a. Interpretive themes
      b. Site/feature protection
      c. How reasons for stabilization affect how such work is undertaken
   4. Demands of stabilization
      a. Good physical condition
      b. Proper clothes and safety precautions
      c. Judging site contents and their implications for stabilization and reconstruction
         • Site size and configuration
         • Architectural features
         • Floor features/surfaces

B. Stabilization and its goals
   1. Circumstances leading to site stabilization
   2. When such processes are merited or warranted
   3. Stabilization techniques
      a. Basic techniques
      b. Kinds of sites and features which can be stabilized and/or reconstructed including special techniques required for specific features
      c. Teamwork and coordination between staff and crew
         • There is no such thing as a "dumb" question
         • Talk with each other about what you are seeing and doing
      d. Assign specific crew-member responsibilities
         • Record keeping, site stabilization forms
         • Integrity control and work planning
         • Site/feature mapping, wall profiling
         • Site, wall, and feature photography
         • Soil analysis and mortar development and coloration

C. Reconstruction and its goals
   1. Circumstances leading to site reconstruction
   2. When such actions are merited or warranted
   3. Remembering site integrity

D. Excavation or re-excavation with stabilization in view
   1. A review of standard excavation techniques and methods
   2. Variations in strategies due to constraints or requirements
of stabilization and reconstruction
E. Specialized techniques in stabilization
1. Chemical treatments
2. Stone types and uses
3. Working with adobe, wood, glass, and other materials
4. Soil and clay types
   a. Using a Munsell Soil Color Chart
   b. Determining a soils bonding texture and qualities
   c. Matching soils to prehistoric mortars
   d. Development of soil cement mixtures for stabilization
5. Drainage problems
   a. Soils
   b. Topography
   c. Slope
   d. Vegetation
   e. Climate
   f. Additional environmental considerations
6. Keeping the stabilized site clear of unwanted vegetation
7. Special problems when roofing a site

F. Stabilization records
1. Selecting the proper stabilization and reconstruction forms for the particular site and/or feature
2. Developing a stabilization and reconstruction plan
3. Developing interpretive themes
4. Additional necessary documentation
5. Room and feature maps and profiles
   a. Mapping techniques
      • Compass and pace
      • Compass and tape
      • Brunton tripod and tape
      • Alidade mapping
      • Theodolite mapping and profiling
   b. Establishing a permanent site datum
   c. Profiling walls and features
   d. Mapping floors and features
   f. Precise methods vary from site to site and project to project
6. Photography with stabilization and reconstruction in mind
   a. Types of cameras
   b. Types of film
   c. Lighting conditions
   d. Exposure settings
   e. Scale, directional indicators, and photo identification
   f. Keeping photographic records
   g. Photographic distortion
      • Large scale objects
      • Small scale objects

G. Finalization of a project
1. The development and use of interpretive trails
2. Regional themes
3. Museums and visitor centers
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SURVEY TECHNIQUES

PURPOSE

The purpose of this course is to provide the basic academic and field skill to permit the avocational archaeologist the ability to participate in survey projects of the Arizona Archaeological Society (AAS), and to provide assistance to the professional community, as may be requested.

OBJECTIVES

At the completion of this course, the student is able to:

1. Determine the purpose of survey and the various types of survey forms which exist.

2. Understand the difference between the terms "site" and "non-site."

3. Name and define the various kinds of archaeological sites known to exist in the American Southwest.

4. List the various types and functions of tools used by the archaeologist during survey projects.

5. Display the ability to use and plot site location on USGS topographic maps; also know of other various map types.

6. Learn the three principal site designation formats currently in use within Arizona.

7. Understand the principles in site discovery and recognition.

8. Explain how a site is mapped and surface collected and/or sampled.

9. Indicate the use of photography and its importance in data collection; the same for aerial photography and its importance in site discovery and location plotting.

10. Interpret the meaning of artifacts as they relate to time and cultural recognition, plus interpretations of possible site function.

11. Understand the importance of site spatial relationships and survey work/interpretation.

12. Understand both the positive and negative aspects of predictive modeling and its relationship to archaeological survey.
COURSE FORMAT

The student is to receive a minimum of twenty hours of classroom instruction, coupled with forty hours of actual field experience. Within the field work requirements, the following conditions must be met.

1. The student surveyor is to be aware of at least two different environmental settings such as desert, mountain, or plateau.

2. The student surveyor is to experience in the field at least two different survey methods such as sample transect, and systematic large-area block).

Normally, the fieldwork requirements are fulfilled by work on at least five different days. The last four hours of field work are spent in finalizing field notes, site recording forms, site maps, field maps, and any additional administrative tasks.

A brief final report of field work undertaken, along with the successful completion of all written and administrative work assigned, coupled with the instructor's evaluation of both the student's classroom and field work, determines the student's successful completion of this course.

COURSE OUTLINE

A. Some general concerns
   1. Principles of survey
   2. Organizational aspects of survey
   3. Reasons for survey
      a. Academic
      b. Cultural resource management
      c. How reasons for survey affect how a survey is undertaken
   4. Demands of survey
      a. Good physical condition
      b. Proper clothing and safety precautions
      c. Field logistics
   5. General survey techniques
      a. Permits and clearance to do the project and survey particular land areas (i.e., land ownership)
      b. Background research before entering the field
         • Historical maps, photographs, reports
         • Recent field work, maps reports
      c. Determining site numeric designation system
         • The MNA system
         • The ASM system
         • The ASU system
         • The Forest Service system
         • The BLM system (part of the ASM system)
         • The Smithsonian Institution system
B. Discovery factors
1. Problem formation
2. Sampling design
   a. What is sampling?
   b. Sample types
      • Complete
      • Random
      • Stratified
      • Systematic
      • Stratified random
      • Others
   c. Sampling in relation to survey - survey types
      • Sample surveys
      • Block-area surveys
3. Aerial photography, its use in survey
   a. Stereo-viewing
   b. Topography review/survey for course plotting
   c. Site discovery
   d. Locational plotting
4. Determining survey boundaries
5. Boundary effects
   a. Linear transects, interception theory
   b. Quadrant block units, boundary bias

C. Site survey
1. Site types
   a. Composition of sites
      • Clustered artifacts: the archaeological site
      • Non-clustered artifacts
      • A discussion about "non-sites"
   b. Judging site contents
      • Site size and configuration
      • Surface artifact densities
      • Architectural features
   c. Southwest site variability
      • Recognition of pithouse depressions
      • Pueblo trash and masonry deposits
      • Artifact scatters (surficial)
      • Artifact scatters as indicators of subsurface features
      • Recognition of agricultural features
   d. Southwest site types
      • Habitation
      • Midden
      • Quarry
      • Kill
      • Trading center
      • Ceremonial
      • Burial
      • Surface scatter
      • Rock Art
      • Multi-Component
      • Stratified
      • Non-stratified
      • Disturbed deposits (Plowzone)
e. Site formation process
C. Site Survey (continued)

2. Transformation Processes: as they affect site visibility and recovery/ recognition survey work
   a. Natural transformations
   b. Cultural transformations

3. Environmental variables and survey techniques: the impacts of variation in:
   a. Soils
   b. Topography
   c. Slope
   d. Vegetation
   e. Climate
   f. Sunlight, shadow, reflection
   g. Surveyor's physical and mental state: tiredness factor

4. Survey techniques
   a. Transects: Intensity (issues of surveyor spacing)
   b. Walking the transect
      • Zig-zag patterns
      • Straight-line approach
   c. Teamwork and co-ordination between staff and crew
      • There is no such thing as a dumb question or observation
      • Talk with each other about what you are seeing and doing
   d. Assign specific crew-member responsibilities
      • Record keeping, site survey forms
      • Topographic map location
      • Site mapping
      • Site photography and aerial work
      • Site boundary determination, site marking (if warranted), site tag placement, artifact collections

D. Intensive examination of site surfaces
1. USGS Topographic maps
   a. Types
      • 15 minute
      • 7.5 minute
   b. Reading a map
      • Township, Range, Section
      • Miles, feet, acres, kilometers, meters, hectares
      • Elevations
      • UTM's
      • Longitude and latitude
      • Magnetic vs true north
   c. Using a map
      • Triangulation
      • Map wheels
      • Dot-grid matrix
      • General locational plotting procedure
d. Using a compass with a topographic map
   • Types of compasses
     o Range Finder (Silva) compasses
     o Brunton compass
   • Setting the declinations for both compasses
   • Walking a transect line with a compass

2. Other types or area/locational maps

3. Site recording
   a. Survey journal format
   b. Site survey forms
      • Non-computerized forms
        o Various types
        o Their uses
        o Benefits and drawbacks
      • Computerized forms
        o Various types
        o Their uses
        o Benefits and drawbacks
   c. A combination of survey form and journal formats
   d. Determining a rationale for site survey form construction

4. Site mapping
   a. Mapping techniques
      • Compass and pace
      • Compass and tape
      • Brunton tripod and tape
      • Alidade mapping
      • Wilde theodolite mapping
   b. Establishing a permanent site datum (site tag placement)
   c. Establishing N/S and E/W base lines
   d. Use of typical mapping symbols for features, rocks, trees, artifact scatters, mounds, etc.
   e. Precise methods vary from site to site and project to project

5. Field photography
   a. Types of cameras
   b. Types of film
   c. Lighting conditions
   d. Exposure settings
   e. Scale, directional indicators, and photo identification
   f. Keeping photographic records
   g. Photographic distortion
      • Large scale objects
      • Small scale objects
   h. Aerial photography of the site

E. Recovery operations
   1. Surface collections
      a. Judgmental collections
      b. Probabilistic sampling collections
         • Collection transects
         • Grid system collections
         • Time/cost factors
1. Surface Collections (continued)
   
c. Methods of bagging collections
   • Specimen recording
   • Transportation problems with survey

2. Other (often subsurface) data collection methods frequently used on survey
   a. Shovel scraping
   b. Excavation of test soundings
   c. Auger
   d. Magnetometer
   e. Sonar

3. Non-collection strategies
   a. What are these?
   b. Their benefits and drawbacks

F. Interpreting survey data
1. Interpreting artifacts
   a. Analysis techniques for field use
   b. Behavioral inferences
   c. Classification systems
   • Cultural
   • Functional
   • Attributable
   d. Description techniques
   e. Determination of function
   • Context
   • Analogy
   f. Determination of cultural associations

2. Spatial analysis of survey data
   a. Settlement patterns
   b. Locational analysis
   c. Predictive modeling
   • Its use in survey
   • Its potential
   • Its handicaps and problems
REFERENCES

A. Suggested

Dacey, William S.
1981 Archaeological Field Methods: An Introduction. Burgess, Minneapolis. Price is around $10.00

B. Additional references:

Hester, Thomas R., Robert F. Heizer and John Graham
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*(A) In Phoenix Chapter Archives
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Survey Techniques II
Survey Crew Chief

PURPOSE:

The purpose of this course is to provide advanced preparation in field skills to provide the avocational archaeologist the skills to supervise small survey teams in service projects for the Arizona Archaeological Society (AAS), and to provide assistance to the professional community, as may be requested.

PREREQUISITES

A. Prerequisite classes are Survey Techniques I, plus either Ceramic
   B. Identification or Lithics Analysis, or similar experience as approved by the instructor.

OBJECTIVES

A. At the completion of this course, the student shall be able to:
   B. Determine area to be surveyed
   C. Conduct “Desk top survey” (Pre-survey research)
   D. Determine appropriate survey strategies
   E. Be knowledgeable about Pre-Survey Techniques—Remote Sensing Technique
   F. Layout survey areas.
   G. Take detailed, accurate and concise notes on every aspect of the archaeological survey.
   H. Plot Universal Transverse Mercator locations of recorded archaeological sites on the U.S.G.S. field and project maps
   I. Be knowledgeable of the Geographic Information System (GIS) and its use in predictive modeling.
   J. Be familiar with the iPAQ, TDS Recon, Penmap system, and other systems of gathering survey data.
   K. Input appropriate data in computer.
   L. Integrate photography, mapping, and note taking into a system that will enable the crew chief to interpret the meaning of site location, subsistence strategies and artifact interpretation.
M. Prepare a draft site report or part thereof, in acceptable format for agencies.

N. Apply appropriate requirements of the Antiquities Act of 1906 and the additions to this act throughout the years, i.e. NAPA, ARPA, NAGPRA, NHPA.

COURSE FORMAT

A. The student is to receive a minimum of 20 hours of classroom instruction, coupled with 40 hours of actual fieldwork. Within the fieldwork requirements, the following conditions must be met.

B. Student crew chief is to be aware of the personalities and knowledge level of his or her crew.

C. The student crew chief is to be able to determine the best sampling strategies for an archaeological survey in plateau, mountain and desert settings.

D. The student crew chief will develop a survey database for recording all the pertinent records during the survey.

E. The fieldwork requirements will be fulfilled by directing a crew of at least two for a minimum of 30 hours. The remaining field hours will be fulfilled through a variety of tasks: input all daily records into the computer data base; maintain daily logs; plot sites recorded on permanent field maps; maintain and keep up to date all photographic records; be responsible for and maintain all equipment used by crews; be responsible for a portion of the draft report.

F. The draft report or parts thereof, along with the completion of all written and administrative work assigned, coupled with the instructors evaluation of both student’s classroom and field work, determine the student’s successful completion of this course.
RECOMMENDED ELECTIVE TEXTS


MATERIALS NEEDED:

A. Recommended equipment
   1. GPS
   2. Vernier calipers, mm designations
   3. Compass with adjustable declination

B. For Your own use
   Camera—digital or standard

COURSE OUTLINE

A. Determine area to be surveyed

B. Desk top survey
   1. Studying published information
   2. Previous find spots
   3. Building surveys
   4. Old maps and documents (BLM Reading Room)
   5. Existing site files
      a. BLM Reading room
      b. Local archives
      c. University of Arizona site Files
      d. Arizona State University site Files
      e. Local National Forest Service
      f. Museum of Northern Arizona site files
   6. Existing aerial photographs

C. Determine appropriate survey strategies
   1. What are you trying to learn?
      a. Culture Resource Management
      b. Academic pursuits. i.e. problem oriented
   2. Survey phases
      a. Reconnaissance survey
      b. Intensive survey
      c. Class I, Class II and Class III
   3. Probabilistic sampling strategy
      a. Simple random sample
      b. Judgmental sampling
c. Pros and Cons of each strategy. Results of practical application

D. Determine the percentage of the area that will give you a good sample

4. Layout of survey areas/Establishing the grid

D. Remote Sensing Techniques/Understanding their function
1. Geophysics
2. Magnetometry
3. Resistivity
4. Ground Penetrating Radar (GPR)
5. Aerial photography / LIDAR laser mounted on aircraft

E. Pedestrian Survey Techniques
1. Determining method – zig zag or straight
2. Crew size
3. Spacing considerations
   a. Dense underbrush
   b. Visibility
   c. Which way do we go?
4. Computer aided data entry
   a. Geographic Information System (GIS)
      (1) Its use in predictive modeling
5. I-Paq and other total station surveying systems
   (1) Pros
   (2) Cons

F. Site recording -- Crew Chief’s responsibilities
1. Development and use of analysis sheets
   a. Ceramics
   b. Flaked stone
   c. Ground stone
   d. Photography
   e. Other
2. Importance of notetaking
   a. Field book / journals/ Daily Logs
   b. Software: ArcPad for field notes
3. Crew chief responsibilities
   a. Instruct in use of forms and logs
   b. Review crew logs
   c. Computer data entry -- daily logs, site and analysis sheets

G. Site mapping-- Crew chief responsibilities
1. Deciding on method to use
   a. compass and pace, compass and tape, Brunton tripod and tape
   b. Instructing crew
2. Plotting Universal Transverse Mercator locations
   a. on the U.S.G.S. field maps
   b. on project maps
3. Updating project maps
4. Software:  ArcView
H. Crew supervision
   1. Need for cooperation and team work
   2. Crew safety
   3. Communication with Field Director

I. Interpreting survey data
   1. Integration of photography, mapping, and notes
   2. Site location
   3. Subsistence strategies
   4. Artifact interpretation

J. Report writing
   1. Format
      a. SHPO standards
      b. Forest Service standards
WRITING PRELIMINARY REPORTS

PURPOSE

To provide the student with the necessary knowledge and skills to prepare a usable preliminary report which would include basic descriptions and site location, excavation methods and techniques, artifact comparison and interpretation.

OBJECTIVES

After completing this course the student is to be able to perform the following tasks:

1. Define a preliminary report.
2. Develop an acceptable outline.
4. Organize ancillary information.
5. Describe the basic methods of research organization (paper).
6. Demonstrate a knowledge of appropriate printing techniques and graphics usage.
7. Practice the correct usage of photography for the preparation of illustrative materials.
8. Explain the importance of the various sections of a standard report.

COURSE OUTLINE

A. What is a preliminary report? 2.5 hours
   1. Scope of a preliminary report
   2. Necessity for research of the literature
   3. Organization of literature research

B. Outline of paper
   1. Organization of information
   2. Rank order of information

C. Style
   1. Consistency
   2. Style manuals
   3. Expression, tenses
   4. Guiding the reader
COURSE OUTLINE (continued)

D. Organization of ancillary information 2.5 hours
1. Appendices
2. REFERENCES
   a. Style
   b. Cards
3. Examination - reports - critique

E. Mechanics 1 7.5 hours
1. The manuscript
   a. Setting up a manuscript
   b. Instructions to the typist
   c. Editing or proofing - editor's marks
   d. Instructions to printer
   e. What does your printer want?
2. Printing techniques
   a. Letter press
   b. Offset
   c. Gestefax
   d. Automatic systems
3. Graphics
   a. Explanation of proportions, line cuts, half-tones, multiple screening
   b. Charts and graphs
   c. Maps
   d. Line drawings
   e. Lettering
   f. Shading
   g. Hand work
   h. Films
   i. Press-on letters
   j. Emphases
   k. Artifact and figure orientations

F. Mechanics 2 2.5 hours
1. Class problems
   a. Use of various materials - pens, inks, press-on letters, shading, film, scratch board, charcoal, overlays, etc.

G. Mechanics 3 2.5 hours
1. Photography

H. Completing the manuscript 2.5 hours
1. Conclusions
2. Abstract
3. Overall critique of a report

LABORATORY Write a brief report 40 hours minimum
REFERENCES

Dittert, Alfred E., Jr. and Fred Wendorf

Zweifel, Frances W.

* (A) In Phoenix Chapter Archives
PURPOSE

This course is an intensive introduction to the methods used to analyze animal bones from archaeological sites, and the procedures and theory used to interpret zooarchaeological data. The focus is on reaching a synthesis of taphonomy and zooarchaeology.

OBJECTIVES

The primary material to be taught will be basic identification of skeletal elements, the recognition of bone breakage patterns and bone modification such as cut marks and tooth marks, and the manipulation of this data for purposes of interpreting the formation processes of bone assemblages and reconstructing human behavior.

At the conclusion of the course, students are expected to:

A. Be able to specifically identify mammalian bones, or groups of bones, by name – including isolated and fragmentary elements. Be able to identify segments of bones presented in fragments as proximal/distal, medial/lateral, superior/inferior, anterior/posterior. Be able to identify areas of bone growth and how these areas relate to age determination (i.e. epiphyseal closure).

B. Understand how zooarchaeology and faunal analysis fits into a general framework of anthropology, including its relationship with archaeology, paleontology, physical anthropology, and philosophy of science.

C. Understand how research questions in zooarchaeology are developed and the inter-play between research design, methodology, and interpretation.

D. Identify different types of surface modification at a microscopic level: namely, cutmarks, hammerstone percussion marks, carnivore tooth marks, and rodent gnawing. Be able to interpret these patterns in terms of site formation processes and agent of accumulation.

E. Identify different patterns of weathering and bone breakage: namely, transverse/right; spiral/green; and intermediate. Be able to interpret these patterns in terms of site formation processes.

F. Differentiate skeletal element counts such as NISP and MNE.

G. Identify implications of human behavior based on mortality profiles.
FORMAT

Twenty hours of class work and twenty hour of laboratory work are required for this class. The suggested class format is approximately two hours of lecture and four hours of laboratory work per week. Lecture will also include time for discussion of assigned readings and an opportunity for students to present a case study from the Southwest and their opinions as to the effectiveness of the study in question. The laboratory section should be structured as an open work time where students work individually with the comparative faunal collections to familiarize themselves with mammalian skeletal remains from the Southwest. In addition to the lecture and laboratory times, students will hand in a one page summary of an article once a week.

PREREQUISITES

None – No prior training necessary, although it is recommended to have taken human osteology.

TEXTBOOK

Zooarchaeology Readings course handout(s)  
Archaeology of Animals by Simon Davis

Useful books:
Vertebrate Taphonomy by R. Lee Lyman  
Zooarchaeology by E.S. Reitz & E.S. Wing

RESOURCE MATERIAL

For students to derive a reasonable knowledge of mammalian skeletal anatomy and identify surface modification, it is recommended that they have access to a comparative collection of remains from the Southwest as well as a comparative taphonomic collection.

LABORATORY MATERIALS

A. 10x hand lens
B. Digital or hand drawn caliper 15cm
C. Scale with accuracy of +/- 1 gram or +/- 0.1 grams (provided at laboratory)
D. Microscope: stereo zoom minimum 20x capability (provided at laboratory)
E. Analysis forms
F. Labeling materials
G. Drawing materials
H. Comparative Faunal Collections (provided at laboratory as required)

COURSE OUTLINE

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Zooarchaeology & Faunal Analysis
Issued January 2006
Lecture 1: Introduction: Taphonomy & Zooarchaeology
Differentiate the two fields and understand their respective roles in interpreting faunal assemblages; tie in to history and philosophy of science and development of zooarchaeology as a discipline.

Lecture 2: Subsistence Ecology & Human Behavior
Identify push-pull factors for human mobility and subsistence ecology. Discuss how the development of pastoralism can be addressed through faunal analysis.

Lecture 3: Identifying Basic Skeletal Anatomy & Dentition
Review from Lab 1 and emphasize dentition. Go through deciduous and adult dentition, dental formulas, and the growth and development of mammalian teeth. Emphasize tooth morphology and correlation with ecological niche.

Lecture 4: Quantitative Measures in Zooarchaeology
Discuss the differences between NISP, MNI, and MNE. Discuss pros and cons to each system of measure and what type of research situation best suits each measure.

Lecture 5: Identifying Surface Modification
Identify basic forms of surface modification: rodent, carnivore, and human. Describe each type and show examples of surface modification from comparative taphonomic collection.

Lecture 6: Interpreting Surface Modification
Review types of surface modification. Describe how different types of surface modification and the relative frequencies of surface modification type allow researchers to infer agent(s) of accumulation and site formation processes for zooarchaeological assemblages.

Lecture 7: Bone Breakage and Weathering
Describe different types of bone breakage and fracture angle – discuss implications for site formation processes.

Lecture 8: Mortality Profiles
Discuss implications of mortality profiles for zooarchaeologists to infer: 1) resource exploitation strategy and 2) process of domestication. Examples of aging based on comparative collection.

Lecture 9: Basic Graphs, Databases, Simple Statistics & Curation of Faunal Material
Students learn how recording sheets and databases are constructed for recording zooarchaeological observations on an assemblage and work to design their own database and data entry forms. Discuss effective and ineffective ways to summarize data. Discuss
curation of faunal material.

**Lecture 10: Zooarchaeological Case Studies**
Students present case studies for zooarchaeological and faunal analyses from a geographic or temporal region of interest. (Examples of possibilities are found in the attached references section.) Students should summarize the articles, dissect the author’s argument, and explain how effectively they think the author communicates his/her argument.

**Lab 1: Identifying Basic Skeletal Anatomy**
Basic bones of the mammalian skeleton: cranial (frontal, parietal, occipital, temporal, maxilla), mandible, dentition, vertebral column (atlas, axis, cervical, thoracic, lumbar), rib, humerus, radius, ulna, innominate, femur, tibia, metapodials. Also introduce anatomical terminology. Students begin sketches of comparative material labeling the bones and anatomical orientations of their sketches.

**Lab 2: Site Material & Comparative Collection**
Students begin to examine the archaeological material and sort by skeletal element. Sorting by skeletal element helps to become more proficient at identifying bones. Students use comparative collection as a guide for sorting by skeletal element.

**Lab 3: Site Material & Comparative Collection; Identifying Surface Modification**

**Lab 4: Site Material & Comparative Collection; Identifying Surface Modification**
Students continue to work through the archaeological material, using the comparative collection as a guide. Students continue to identify surface modification from the comparative collection and on the archaeological assemblage.

**Lab 5: Databases, Basic Graphs, & Simple Statistics; Site Material & Comparative Collection**
Students continue to work through the archaeological material, using the comparative collection as a guide. Also, students design and begin to implement their database design for analyzing archaeological collection.
LISTS OF TERMS USED IN ZOOARCHAEOLOGY

Physical Landmark Terms

Anterior vs. posterior
Appendicular skeleton: pelvic and pectoral girdles and extremities
Axial skeleton: cranium, vertebrae, ribs, sternum
Canal: tunnel, as in the sacral canal
Cranial vs. caudal
Condyle: rounded eminence, as on the proximal tibia
Crest: a sharp border, as in the sacral or iliac crests
Dorsal vs. ventral
Diaphysis: shaft of long bones
Digitigrade: phalanges only touch ground during locomotion
Epiphysis: articular end
Flat bones: for protection and muscle support, such as scapula, skull (not weight bearing)
Foramen: hole, as in the obturator foramen, or nutrient foramina
Fossa: depression, as in the acetabular fossa, iliac fossa, olecranon fossa, and radial fossa
Head: a smooth rounded eminence for articulation as on the humerus and femur
Incisure: a notch, as in the greater sciatic notch of pelvis, or the acetabular notch
Irregular bones: vertebrae, maxilla, etc.
Lateral vs. medial
Lip: margin of a groove, crest, or line
Long bones: sustain weight, provide muscle attachments, such as the radius, or femur
Metaphysis: line of fusion
Pectoral girdle
Pelvic girdle
Proximal vs. distal
Process: projection, as in the coronoid process of the ulna, styloid process of the cranium, coracoid process of the scapula, and transverse processes of vertebrae
Plantigrade: podials, metapodials, and phalanges touch the ground
Ridge: long spine
Sinus: cavity lined with mucus membrane
Short bones: compact bones with limited motion such as phalanges, metacarpals and metatarsals
Spine: a sharp prominence, such as the neural spine, or acromion spine
Sulcus: a groove, as in the medial epicondyle and trochlea of humerus
Suture: junction between bones, particularly of the skull
Symphysis: where bones come together, as in the pubic or mandibular symphyses
**Trochanter:** a large prominence for muscle attachments, as in the greater and lesser trochanters of the femur

**Trochlea:** pulley-like articulation, such as on the distal humerus

**Unguligrade:** only the last phalanx touches the ground

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**Skeletal Elements**

**Skull:**
Dentary/mandible, Maxilla, Premaxilla, Nasal, Frontal, Parietal, Squamosal/Temporal, Occipital, Zygomatic Arch (Jugal), Incisor, Canine, Premolar, Molar, Endocranium, Vomer, Hyornandibular, Operculum, Preoperculum, Articular, Cleithrum, Otolith, Quadrate

**Axial**
Centrum, Cervical, Thoracic, Lumbar, Caudal, Sacrum, Atlas, Axis, Urostyle, Pygostyle

**Axial Skeleton**
Humerus, Radius, Ulna, Femur, Tibia, Metapodials, Patella, Podials, Calcaneus, Astragalus, Carpometacarpus, Tarsometatarsus, Tibiotarsus, Phalanx

**Pectoral Girdle**
Coracoid, Scapula, Furculum, Sternum, Clavicle

**Pelvic Girdle**
Synsacrum, Ilium, Ischium, Pubis, Acetabulum

**Other**
Epiplastron, Entoplastron, Hyoplastron, Hypoplastron, Xiphiplastron, Peripheral, Costal, Nuchal, Neural, Pygal
Reading References


GUIDELINES FOR WORKSHOPS AND SEMINARS

Workshops and seminars on archaeological methods and techniques may be held in connection with a course for certification to assist the student with intensive training and as a supplement to course content or may be presented separately to provide information/experience to students outside of approved courses. The instructor of the workshop shall strive to follow the general guidelines listed below.

A. The workshop and/or seminar is germane to the goals of the AAS certification program and, as appropriate, to the particular course which it supports.

B. The workshop and/or seminar advises the students on the significance of the subject under study.

C. As applicable, the ethical and legal responsibilities are discussed pertinent to the subject of the workshop and/or seminar. For example: use of permits for survey and excavation, appropriate management and care of human remains, contacts with land owners, etc.

D. As applicable, a portion of the workshop and/or seminar shall include instruction on:

1. The methods for identifying the materials under study.

2. The techniques for recording and describing materials under study.

3. The range of uses and functions for the particular objects and collections under study.

4. Practical means and the techniques to report the materials and resources under study.

E. The purpose and rationale for the care and maintenance of documents, objects, and the collections used in or generated by the course of instruction.
**ARCHAEOLOGICAL CERAMICS WORKSHOP**

**PURPOSE**

It is the goal of this course to introduce the avocational archaeologist to the types of analyses, approaches, and interpretations that archaeologists perform on ceramic remains. Though previous courses on southwest archaeology or general archaeology would be useful, there are no prerequisites for this course.

The course is designed to be presented in twenty hours of classroom instruction. The outline presented below is based upon 8 sessions of 2-1/2 hours each.

The present suggested text for the workshop is *Ceramics for the Archaeologist* by Anna O. Shepard, Publication 609, Carnegie Institution of Washington, 1954, Reprint 1985.

**COURSE OUTLINE**

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Introduction: What is a ceramic?</td>
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<tr>
<td></td>
<td>Clays, temper manufacturing methods.</td>
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<tr>
<td>2nd</td>
<td>Ceramic attributes and function of ceramics:</td>
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<tr>
<td></td>
<td>A. How an archaeologist describes a vessel or assemblage.</td>
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<td></td>
<td>B. Functional analyses of ceramics.</td>
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<tr>
<td>3rd</td>
<td>Ceramic conservation, cleaning, and storage:</td>
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<tr>
<td></td>
<td>A. Cleaning methods and supplies.</td>
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<td></td>
<td>A. Storage and conservation.</td>
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<tr>
<td>4th</td>
<td>Ethnography of pottery:</td>
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<tr>
<td></td>
<td>A. Discussions of living populations of potters and what they teach us.</td>
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<tr>
<td></td>
<td>B. How archaeologists better understand prehistoric ceramics.</td>
</tr>
<tr>
<td>5th</td>
<td>The wonderful world of design:</td>
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<tr>
<td></td>
<td>A. Ceramic decoration and elaboration, types, techniques, and methods.</td>
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<td></td>
<td>B. Recording and understanding design.</td>
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<td></td>
<td>C. Meaning encoded in design.</td>
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<tr>
<td>6th</td>
<td>Sherds and the archaeologist:</td>
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<tr>
<td></td>
<td>A. What kinds of information can sherds tell us?</td>
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<td></td>
<td>B. How to design your own ceramic analysis.</td>
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<tr>
<td>7th</td>
<td>Ceramics and dating:</td>
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<tr>
<td></td>
<td>A. Chronologies and Typologies, what they are and how they are used.</td>
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<td></td>
<td>B. Discussion of ideas of &quot;time&quot; and &quot;change.&quot;</td>
</tr>
<tr>
<td>8th</td>
<td>The Typology - Hohokam, Mogollon, Anasazi, other:</td>
</tr>
</tbody>
</table>
A. Discussion of the chronology for dating.
B. Introduction to the ceramic styles via sherds in type collections and from whole vessel photographs.
BIBLIOGRAPHY

Gifford, James C. and Watson Smith

Lister, Robert H. and Florence C. Lister

Smith, Watson


1973 The Williams Site: A Frontier Mogollon Village In West - Central New Mexico.
LITHIC ANALYSIS WORKSHOP

PURPOSE

This is an introductory workshop in the study of lithic artifacts. It will provide an up-to-date synthesis of the analysis of lithic tools and debitage for members of the Arizona Archaeological Society who are enrolled in the Certification Program. The class has five broad objectives:

1. to familiarize students with the basic principles of lithic technology,
2. to provide "hands-on" experience in flintknapping and the replication of lithic assemblages,
3. to examine technological and functional models of tool manufacturing, use, and maintenance,
4. to examine analytical and classification techniques for the study and interpretation of lithic assemblages, and,
5. to familiarize students with some of the more well-known lithic assemblages found in Arizona and other parts of North America.

FORMAT

The workshop is designed to be presented in twenty hours of classroom and laboratory instruction. This will be presented in 8 sessions of 2½ hour classes. Each class session will contain two sections: the first section will be a discussion of particular issues in lithic technology, and the second section will be a lab involving experimental studies or the analysis of lithic assemblages.

WORKSHOP REQUIREMENTS

Each student will need protective eyewear such as safety glasses or goggles and gloves, preferably leather. Tools for workshop use and lithic raw materials will be provided.

OBJECTIVES

At the end of this course, the student will be able to:

1. Describe the basic principles involved with the production of lithic tools.
2. Identify general classes of lithic raw materials common to lithic assemblages in the Southwest.
3. Distinguish lithic artifacts from nonartifactual lithic materials.
4. Identify several different kinds of lithic debitage frequently observed at archaeological sites.
5. Explain the differences between at least two different contemporary approaches to debitage analysis and classification.
OBJECTIVES (continued)

6. Identify the principle kinds of lithic tools recovered from archaeological sites in the Southwest.

7. Determine the presence and location of used edges on lithic tools and the possible functions they served.

8. Describe several models for the manufacturing, use, and maintenance of lithic tools presented in the archaeological literature.

9. Describe the contributions of at least three researchers who have provided fundamental insights into the nature and use of lithic artifacts.

WORKSHOP OUTLINE

1. Basic principles of lithic technology
   Lithic raw material identification
   Lab: Introduction to flintknapping

2. Lithic raw material procurement and quarrying
   Models of lithic core and flake tool production
   Lab: Flintknapping - Making simple core and flake tools

3. Site formation processes and lithic assemblages
   Models of bifacial tool production
   Lab: Flintknapping - Making bifacial tools

4. Models of tool maintenance and use-life
   Lab: Flintknapping - Resharpening lithic tools

5. Lithic use-wear analysis: High power and low power approaches
   Lab: Analytical techniques for lithic use-wear analysis

6. Debitage classifications and analysis: Traditional stage
   Typologies and the Sullivan and Rozen approach
   Lab: Techniques for debitage classification and analysis

7. Issues: Lithic tool classifications and analysis
   Lab: Techniques for tool classification and analysis

8. Issues: Ground and pecked stone tools and implements
   Lab: Making Hohokam ground stone tools.
REFERENCES

Adams, Jenny L.

Callahan, Errett

Crabtree, Don E.


Dodd, Walter A., Jr.

Ericson, Jonathon E.

Frison, George C.

Hayden, Brian

Hayden, Brian and Margaret Nelson

Holmes, William H.

Keeley, Lawrence H.
REFERENCES (continued)

Nelson, Nels C.

Woodbury, Richard B.
EXCAVATION CRITERIA

PURPOSE

The Excavation Criteria contained herein establish Department policy on the excavation of archaeological sites. These criteria answer two commonly asked questions:

A. What is a Chapter's justification for excavating an archaeological site; i.e., under what conditions shall excavation be deemed appropriate and for what purposes shall it be done?

B. Under what guidelines does a Chapter control the excavation; i.e., how shall an excavation be conducted?

GENERAL POLICY

General policy covering excavation activities are listed below as found in the Articles of Incorporation (1965, as amended) and Constitutional Bylaws (1986) of the Arizona Archaeological Society (AAS).

A. The AAS shall "...operate exclusively for charitable, scientific or educational purposes in such manner as the Board of Directors may deem best, particularly for the purpose of studying and preserving the archaeology of the Southwestern United States." (Articles of Incorporation, Article IIIa)

B. "No member shall participate in any excavation of any historic or prehistoric ruin, burial ground, or other archaeological or historic site, except where such excavation is performed for the accomplishment of one or more of the objectives of the Society as set forth in the Articles of Incorporation, and is in accordance with the laws of the State of Arizona, and the laws of the United States of America relating to such excavations. Any archaeological field project of the Arizona Archaeological Society, or a Chapter of the Society, shall be under the supervision of a Project Director approved by the State Board of Directors and/or, if applicable, the Department of Certification, or the Chapter initiating the project." (Constitutional Bylaws, Article II, Section 7)

C. "Each Chapter shall furnish to the State Board of Directors at the annual meeting, a list of the Chapter's past year archaeological field projects. This list may be included as part of the written report given by the Chapter President at the annual meeting or mailed to the Secretary of the Board prior to that meeting." (Constitutional Bylaws, Article II, Section 11)

E. "Each Chapter shall furnish to the Chairman of the State Board of Directors a written notice, containing all available information, of any new field projects to be undertaken. Any emergency field projects that are undertaken immediately shall be reported to the Chairman of the Board within two (2) weeks after starting the project." (Constitutional Bylaws, Article II, Section 11-A)
GENERAL POLICY (continued)

F. "The income from sale of publications, gifts and other sources, together with dues of Associate members and a portion of other annual dues to be fixed by the Board of Directors, shall constitute the working capital of the Board of Directors. This income is for operations, publications and other current expenses consistent with the purposes of the Society." (Constitutional Bylaws, Article III, Section 4)

G. "The results of all excavations or other research which is carried out by any Chapter of the Society shall be reported and filed with the Secretary of the Board of Directors, with a copy to the editor." (Constitutional Bylaws, Article IV, Section 3)

H. "The Archivist [of each Chapter] .. shall act as custodian of all records relating to excavations, site locations, maps, collections of artifacts, and similar and related records of the Society Chapter." (Constitutional Bylaws, Article VI, Section 13)

DEPARTMENT POLICY/EXCAVATION CRITERIA

A. Department policy on archaeological excavations conducted by a chapter as part of a Certification Class shall be consistent with general policy as set by the AAS in its Articles of Incorporation and Constitutional Bylaws, as described above.

B. Excavations conducted by a chapter as part of a Certification Class are deemed appropriate and allowable only when done for research, educational, or preservation purposes.

C. Excavations conducted by a chapter as part of a Certification Class are not deemed appropriate nor are they allowed when:

1. They would produce monetary profit or material gain so as to violate the charitable status of any chapter or the AAS.

2. There is good reason to believe the legal owner of an archaeological site will receive significant monetary profit or material gain from the excavation itself or from the materials excavated.

3. Any individual other than the legal owner of an archaeological site will benefit either monetarily or materially as a direct consequence of the site being excavated by the AAS. Excluded from this are payments made to individuals or organizations for support and contracted services (e.g., backhoe operator fees, payments for artifact analyses, consultation fees, etc.).

4. There is no research design and no professional archaeological advisor.
DEPARTMENT POLICY/EXCAVATION CRITERIA (continued)

D. Excavations undertaken for research purposes are justified only when the rationale for the excavation is explained in a research design, there is a professional archaeological advisor overseeing the work, and it is reasonable to assume they would produce:

1. Information relevant to current regional research questions concerning the history or prehistory of the Southwest.

2. Information relevant to current scientific questions concerning human behavior and cultural systems in general.

3. They may provide AAS members with training commensurate with the Certification Program guided by a professionally adequate, clearly explained research design under the direction of a Department of Certification approved professional archaeologist.

E. Excavations conducted for preservation purposes are justified only when guided by a research design and when undertaken:

1. For purposes clearly explained in a professionally adequate research design.

2. To protect important scientific information from natural and human-caused forms of deterioration and damage (i.e., protection is afforded through data retrieval).

3. To assess the need for physical protection at a site as determined through controlled archaeological testing.

F. Archaeological sites can be excavated for preservation purposes only after all other alternative protection measures have been exhausted or deemed inappropriate. Examples of alternative measures include (but are not limited to) stabilization, establishing a preservation easement, patrolling, signing, fencing, burying a site, etc.

G. A written agreement shall be made between the excavating Chapter and the owner or managing agency of the archaeological site that is to be excavated. Any permits (either Federal or State) necessary for the excavation shall be obtained beforehand. The written agreement shall state (as a minimum):

1. That all parties find the Research Design/Work Plan acceptable.

2. That the Chapter has made a good faith attempt to gain permission from the land owner to ultimately have all materials excavated from the site curated in an appropriate repository.
3. That the land owner will abide with the Department's policy and applicable Federal or State laws and/or regulations regarding the handling and treatment of human remains.

DEPARTMENT POLICY/EXCAVATION CRITERIA (continued)

H. Native American human remains and/or funerary objects may be discovered prior to, or during, excavation. (If the likelihood of encountering human remains and/or funerary objects during the course of excavation on State or private lands is high, the Chapter is encouraged to contact the Arizona State Museum prior to undertaking excavation and obtain copies of current, relevant guidance provided by the Museum.) In accordance with State laws ARS 41-844 and ARS 41-865, and the Native American Graves Protection and Repatriation Act, such remains and objects shall be treated as follows:

1. On Federal Land
   If materials are encountered on federal land, which appear to be human remains and/or funerary objects, all the activities that might disturb the remains and/or objects must stop. Individuals in charge of the excavation must take steps to protect the remains and/or objects, and immediately notify the responsible federal lands manager. The federal land manager will consult with the appropriate Indian tribes and will provide guidance on what to do.

2. On State Land
   If materials are encountered on State Land, which appear to be human remains, objects buried with them, objects used in Native American ceremonies, or other objects of special significance to Native Americans, all activities that might disturb the remains or objects must stop. Individuals in charge of the project must notify the Arizona State Museum of the circumstances of the find within three working days. The Museum will consult with appropriate groups and will provide guidance on what to do.

3. On Private Land
   If human remains or objects buried with them are encountered on private land, the landowner or landowner's agent is required to notify the Arizona State Museum before further disturbing the remains or objects. The Museum then has ten days, or more if permitted by the landowner, to consult with any groups that may be culturally related to the remains, and to carry out the decision about what to do with the materials.

4. The Arizona State Museum may be contacted in writing by addressing correspondence to: Director, Arizona State Museum, University of Arizona, Tucson, Arizona 85721. The Museum may be contacted by telephone at (602) 621-4794, 621-4795, or 621-6281.
5. Every effort shall be made to maintain the safety and security of the human remains and/or objects while decisions about what to do are being made. If a determination is made by the Arizona State Museum in consultation with the landowner that human remains, objects buried with them, and/or objects of special significance to Native Americans are to be excavated as part of a certification class, the following procedures shall be implemented and closely monitored:

DEPARTMENT POLICY/EXCAVATION CRITERIA (continued)

a. Any legal requirements shall be satisfied prior to continuing any work that may directly affect the remains or materials.

b. Excavation and recording of human remains shall be conducted by AAS members under the direct supervision of either the excavation Project Director, or a qualified professional archaeologist or physical anthropologist.

c. Human remains shall not be displayed to the general public and shall be treated with respect and deference at all times.

d. No human remains will be left exposed overnight or over a weekend. Every effort will be made to provide for 24 hour on-site security when burials are undergoing excavation.

e. As may be permitted by the appropriate federal agency or the State Museum, human remains shall be documented within the guidelines of each particular excavation regardless of their ultimate disposition. This may require contracted analysis with specialists outside of the Chapter conducting the excavation. All contracted specialists who analyze or handle human remains shall comply with the Department's policy statement.

f. Failure to comply with the Department's policy regarding treatment of human remains may be grounds for termination of membership, subject to an investigation of conduct as specified in Article II, Section 6D, of the Society's Constitutional Bylaws, and may subject individuals to civil and/or criminal penalties in accordance with the provisions of State laws ARS 41-844 or ARS 41-865.

I. Methods and techniques used in field excavation, laboratory analysis, and report preparation will be consistent with current scientific standards.

J. The extent of archaeological investigations (e.g., excavation, limited testing, surface collecting, etc.) at any one site shall be commensurate with its level of threat or data potential. As a general rule, no more than 50 percent of any site shall be excavated. An exception to this is when the site is being
excavated for preservation purposes, and more than 50 percent of it is in imminent danger of being completely destroyed from either natural or human causes.

K. The use of backhoes is restricted to the removal of sterile overburden; testing the subsurface components on large sites; or excavating sites that are in imminent danger of being destroyed through natural forces.

L. Excavations cannot be undertaken under severe time constraints, except when done for preservation (salvage) purposes where the site is in imminent danger of being destroyed through natural forces or human forces.

DEPARTMENT POLICY/EXCAVATION CRITERIA (continued)

M. Required logistical support will be identified in a Research Design/Work Plan approved by the AAS State Board of Directors, and/or, if applicable, the Department of Certification or the Chapter initiating the project prior to undertaking an excavation. This support will be provided upon commencement of excavation activities. Logistical support includes, but is not limited, to:

1. Temporary artifact storage area.
2. Laboratory facilities.
3. Necessary personnel for all phases of the research project.
4. All monies as needed for procurement, contract, curation, and other support costs.

N. A Research Design/Work Plan shall be developed prior to undertaking any excavation. An exception to this is in the case where there is insufficient time to complete such a document due to the site being in imminent danger of being destroyed by natural forces or human forces. In all other instances, components of the Research Design/Work Plan shall include:

1. Precise statement of purpose and goals.
2. List of relevant scientific research questions to be addressed.
3. Discussion of the methods and techniques of field excavation and laboratory analysis.
4. Designation of individual responsibility concerning all fieldwork, laboratory analysis, report writing, and dissemination of findings to the scientific community and the general public.
5. Description of how the excavated materials will be curated or otherwise disposed of, as appropriate (this will also be specified in any Federal or State permits).
6. Identification of Project Director who has demonstrated the ability to undertake and complete a research project of similar scope as that being proposed, and who is responsible for the completion of the project.

7. Estimation of time involved for all phases of project with approximate completion dates and manpower estimates.

O. All Research Designs/Work Plans are subject to peer review and approval through a simple majority vote of the Chapter's membership as recommended by its Board of Directors.

DEPARTMENT POLICY/EXCAVATION CRITERIA (continued)

P. Archaeological testing of sites (limited subsurface investigations for planning or evaluation purposes) and surface collecting are to be procedurally treated the same as formal excavations in regard to Department policy. Because of the limited nature of these archaeological undertakings, the treatment given to them (e.g., the development of a Research Design) is expected to be fairly simple. As a general rule, the treatment given to them should be commensurate with the nature and extent of proposed testing or surface collection.

Q. Upon completion of all excavations and other archaeological investigations, the results shall be documented in a professional quality report, and submitted to the Department, the land owner, and the institution that issued the site number, and it shall contain the following information as a minimum:

1. Title Page - Include a title page with a notation indicating that the work was an undertaking of the appropriate Chapter of the AAS.

2. Table of Contents - Include a table of contents with a list of numbered tables, figures, and plates, as appropriate.

3. Abstract - Provide a 250-word or less abstract of the project. The abstract must outline the report contents and refer to specific highlights of the findings.

4. Background - Provide a brief summary of the project and surrounding environment as a context for the data recovery work. Discuss and reference previous archaeological work in the area.

5. Summary - Describe the involved archaeological site including materials present, physical attributes, environmental setting, cultural/temporal affiliation, and function. Identify the significant values of the site (e.g., scientific or educational).
6. Research Orientation - Discuss the research orientation for the data recovery work performed, including the regional research questions and specific study topics investigated.

7. Description of Work Performed - Completely and accurately describe the fieldwork and analysis methods used, the dates of fieldwork, number of crew members, and the number of person-hours involved.

8. Results and Evaluation - Present the results of fieldwork and analysis and discuss these in the context of the original Research Design. Evaluate the success of the data recovery work performed in terms of its contribution to regional research questions and the objectives of the Research Design.

DEPARTMENT POLICY/EXCAVATION CRITERIA (continued)

Q. Upon completion of all excavations (continued)

9. Recommendations - Suggest future data recovery methods and recommend research questions for future archaeological investigations in the area, and if appropriate, on the site.

10. Appendices - Include appendices describing any special studies performed and a report of work hours expended by task.


12. Maps - Include map(s) showing at a minimum the site area boundaries, land ownership, and units excavated or collected.

13. Illustrations - Include sufficient drawings, profiles, and figures to illustrate the data.

14. Tables - At a minimum, include a tabulation of materials and samples recovered and items curated.

15. Photographs - Include photographs as needed to illustrate the data.
RESEARCH DESIGNS

The research design serves as a guide for the field work, laboratory work, disposition of materials, and report writing, that are essential components of archaeological investigations. It is work plans that not only helps focus the efforts of the Project Director and his/her staff, but also provides the means by which the owner of the site can evaluate the quality and appropriateness of the archaeological investigation proposed. The research design should ensure that the investigation addresses important research questions, produces useful results, and is conducted efficiently.

The research design should also serve as a clear statement of the wishes of the landowner with respect to the work to be done. In this way, misunderstandings between the landowner and the archaeologist can be avoided. In some cases, the landowner and the archaeologist may wish to enter into a formal contract which incorporates the research design.

A research design should be prepared for each excavation or collection project and should include the following ELEMENTS:

A. SPECIFIC GOALS OF THE PROJECT

B. RELEVANT RESEARCH GOALS THAT WILL BE ADDRESSED
   The research questions should relate to previous studies in the area and existing knowledge. The research design that proposes work only because “little is known about the prehistory of the area,” without identifying more explicit research questions, should be treated with caution. Such vague plans provide little basis for conducting research, may result only in useless, trivial, or redundant information, and sometimes only mask the ignorance of the persons preparing the plan.

C. PRIORITIES FOR STUDY
   Devoting the same level of effort to all research questions is not necessary. All research questions should be considered, but priorities for their investigation should be established and justified.

D. DEFINITION OF DATA NEEDS
   The information needed to address each research question should be identified.

E. METHODS TO BE USED IN FIELD WORK AND ANALYSIS
   Methods should be justified in terms of their effectiveness in collecting the information that is sought. The plan should also recognize that important information may emerge unexpectedly during fieldwork or analysis and need to be addressed.
E. METHODS TO BE USED - (continued)

1. The methods used should ensure full, clear, and accurate descriptions of all field work and observations. Stratigraphic and associational relationships, environmental relationships, excavation techniques, recording methods, and analytical procedures should be described in such a way as to allow future researchers to reconstruct what was done, what was observed, and why.

2. The methods should take into account the possibility that future researchers will need to use the information collected from the site to address questions not recognized at the time the site was excavated.

3. The research design should consider whether portions of a site can be preserved in place. Destructive methods should not be applied to such portions of sites if nondestructive methods are practical.

F. REPORTING OF RESULTS

The research design should describe how results of the investigation will be reported. For collected information to be useful, it must be made available in usable forms. The following products are normally expected from an excavation program.

1. A report that describes the investigation and its results, with reference to the research questions addressed.
2. Information in the form of tables, charts, and graphs.
3. Raw data in the form of field notes, journals, photographs, and data recording forms.
4. Scholarly and other articles or monographs using the results of the work for analytic purposes or to interpret the site to the public.

G. PROPOSED TREATMENT AND DISPOSITION OF EXCAVATED MATERIAL

The research design for any archaeological excavation should provide for the proper treatment and disposition of collected materials. Care should be taken during conservation, curation, and handling of specimens and records to ensure that materials are not lost, inappropriately altered, or damaged.

It is very important that field notes, artifacts, and photographs from an archaeological project be preserved and made available to future researchers. Such materials can be used to address research questions not anticipated during the original investigation. They can be reanalyzed with new techniques that were not available at the time they were collected. Future researchers may also be able to reinterpret such material from different perspectives or in light of new findings from other sites.
Acceptable options for the disposal of materials collected from archaeological sites include:

1. Permanently curating the materials at a public or private repository, including colleges, university, local museum, which will fully protect them from the elements and from vermin, that will ensure their preservation, and that will guarantee their security and accessibility for future study.
2. Returning the materials to the private land owner after the materials have been described, studied, and analyzed in accordance with the research design, or
3. Loaning the materials to public or private parties, after description and study, provided that access for study and proper care of the materials can be expected.

If collected materials are to be curated, arrangements for this should be made with a repository before the field work begins. The research design should specify the repository that will be used and the terms under which the materials will be curated.

Human remains and funerary objects buried with them must be treated in accordance with the Native American Graves Protection and Repatriation Act or State laws A.R.S. 41-844 and 41-865, depending on where they were found. If such material are encountered on private land, the landowner or the landowner’s agent must notify Arizona State Museum. The Museum then has up to ten days, or more if permitted by the landowner, to consult with Indian tribes or other groups that might be culturally related to the remains, and to carry out the decision about the remains.

It is best to consult the appropriate Indian tribes before excavating if human remains or funerary objects are likely to be encountered. Reaching an understanding with the appropriate tribes on how such remains and objects should be treated can reduce or eliminate delays that might otherwise be necessary. The research design should recognize the need to consult with Native Americans if excavation of human remains is likely.

Any human remains and funerary objects donated to repositories which receive Federal funds may be returned, or repatriated, to a culturally related Indian tribe or lineal descendant if claimed by that tribe or descendant. This is true for human remains and funerary objects collected in the past, as well as any such remains and objects that may be excavated in the future, regardless of land ownership.
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SMALL SITE RESEARCH DESIGN

NOTE: This outline, prepared by Dr. E. Charles Adams of the Arizona State Museum, may be utilized as guidance by individual Chapters when developing a plan for studying small sites.

PURPOSE

Small sites comprise over 90 percent of the archaeological sites in Arizona. These sites are frequently the most impacted by development and are destroyed at a high frequency. Understanding the location and use of small sites is integral to understanding any culture's adaptation to its environment. Yet, small sites receive little research attention and are often not studied in a systematic manner to allow researchers to understand their individual role or integrated role in cultural patterns. This outline is designed to aid the researcher in developing a plan for studying small sites. Additionally, most cultural resource management-generated reports discuss research at small sites, usually involving both survey and excavation.

PREREQUISITES

Requirements include Prehistory of the Southwest and completion of Field Crew Member I and II, and development of supervisory skills prior to implementing research on small sites.

OUTLINE

A. Definition of terms
   1. What is a small site (Wilcox and Pilles 1978)?
   2. What are the characteristics that differentiate a small site from other sites?
      a. Frequently have no structures.
      b. Occasionally have no features.
      c. Usually use is short-lived.
      d. Usually use is seasonal.
   3. Small sites are usually part of a larger landscape use.

B. Research constraints
   1. Construction/contract-oriented research. May be able to gather information on only one site with no other direct research context.
   2. Part of a regional survey. Can look at settlement patterns
   3. Part of a large, varied research program involving survey and excavation
      a. Gather subsurface material
      b. Record information on features and architecture
      c. Gather environmental information
C. The design for research

1. Because these sites are small, one should attempt complete recovery of information - architecture, artifacts, ecofacts.

2. Background to research should be done at two levels.
   a. General area research and data on archaeology, specifically on settlement and small sites.
   b. Small site research specifically.
   c. It is absolutely critical that the small site(s) is(are) placed in the context of regional and local archaeology to attempt to understand its role in the settlement system (culture's use of the landscape).

3. Causes of variability should be recognized.
   a. Time
      • How do the nature and frequency of different small sites change over time?
      • How do their linkages to other sites and especially to large sites vary with time?
   b. Use: What criteria are used/should be used to differentiate small sites - structures, features, artifact classes?
      • Structures
         o Determine associated features, both intramural and extramural
         o Evaluate the artifact assemblage
      • Features
         o Are there features associated with one another and with structures?
         o Are there artifact assemblages associated with features, such as fire-cracked rock?
      • Substantial collections should be made of artifacts to allow statistical analysis.
         o Use flotation to recover micro-artifacts
         o Compare assemblages in "hot spots" to other areas.
      • Take environmental samples - pollen, flotation, faunal, soil
         o Within structures on the occupation surface
         o Within and adjacent to features
         o In extramural areas
         o On generalized used surfaces
         o Soil tests - pH, fraction to evaluate agricultural potential
      • Preservation - site condition affects the remains preserved at a site and in situ at the site.
         o General conditions in the area should be noted
         o Site-specific observations - erosion, burial, etc. - must be noted.
         o Artifacts can also be affected by weathering. Especially surface artifacts can be affected and can influence data recording.
4. Patterns of similarity should be noted, as well as patterns of variability.
   a. What are the similarities - architectural, landscape, artifactual?
   b. What are the underlying causes - stable adaptation, supra-organizational structure (social, political, etc.)?

D. Methodology should flow smoothly out of research constraints and design.
1. Survey - goal is to understand settlement pattern, landscape use, and community structure.
   a. Is the survey coverage 100 percent or a sample?
      • Collection can be based on gridded landscape approach, eschewing traditional site typologies.
      • Can also be stratified by environmental or cultural variables, e.g. soil zones, plant zones, drainages, etc.
      • Only areas with high artifact density are assigned site numbers.
   b. Site collection - choose among several options. Whatever the choice, careful mapping of the site is essential. The site should be gridded to facilitate surface collection and feature mapping.
      • Total collection - sites with low artifact densities should have all artifacts and features plotted on a map.
      • Hot spot sampling - only areas of high density are sampled.
      • Structures - intramural and extramural
      • Random or stratified, random sampling.
      • No collection survey - detailed site maps must be prepared. Detailed artifact, etc. inventories must be made and tied to maps.
2. Excavation - goal is to understand specific elements of the general pattern observed on survey.
   a. Must determine sampling units
      • Full excavation
      • Feature or structure oriented - intramural and extramural
      • Artifact concentration (hot spot) oriented
      • Random stratified, random, etc.
   b. Collection of environmental samples
      • Based on research design
      • To determine site use and association with other sites
   c. Dating
      • Because collection of chronometric samples is difficult, every opportunity should be taken advantage of.
      • Seriation, usually based on ceramics or projectile points.
      • Stratigraphy
E. Analysis and report preparation

1. The purpose of analysis is to search for patterns in the data and to map the changing interface of the culture with its environment and with other groups through the entire range of its use of an area based on small site research. This should be determinable through the culture’s settlement pattern. This pattern is best determined through:
   a. Complete surface mapping and documentation - survey.
   b. Testing a cross-section of this variability.
   c. Tying it to a regional pattern based in a well-thought-out research design.

2. The report should describe what the role of the small site was in the observed cultural pattern.
   a. What processes caused these patterns - both those effecting change and those permitting continuity?
   b. Do the small sites allow inferences about cultural boundaries?
   c. The small sites should allow inferences about landscape exploitation, how it varies through time, and why.
   d. Specific site use may be determined.
   e. Interface of small sites to larger ones and to other small sites should be possible.

REFERENCES AND RECOMMENDED READINGS

Fish, Suzanne K., and Paul R. Fish (editors)

Gumerman, George J. (editor)

Ward, Albert E. (editor)