Animal Tool-Use

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Office & Phone: Soc. Behav. Sci. N-517  
Office Hours: Tu, Th 2:00 - 3:00 pm or by appointment

Classroom: Soc Beha Sci N501  
Class Time: Tu, Th 11:30 - 12:50 pm  
Course Web Site: See Blackboard

COURSE DESCRIPTION
Our ancestors have been making stone tools for at least 3.3 million years. The discovery of stone-tool use in other primates has offered exciting opportunities to examine such behavior in living species. This class provides an overview of animal tool-use and then focuses on three wild non-human primate species - chimpanzees, bearded capuchins, and long-tailed macaques - in order to place the degree of tool making and use seen in the human lineage into a multi-species comparative context.

COURSE OBJECTIVES
This course meets Stony Brook Curriculum's “Evaluate and Synthesize Researched Information” category. Students must demonstrate the ability to locate and organize information from a variety of appropriate sources, determine its relevance, accuracy and credibility. This course meets Stony Brook's SBS+ Pursue Deeper Understanding. Students must use their skills expected from their versatility courses to study and practice them in greater depth, with further study applied to the area in which they are certified. This class will provide an overview of animal tool-use in order to place the degree of tool making and use seen in the human lineage into a multi-species comparative context.

COURSE REQUIREMENTS
Students are expected to attend all classes, discussion sections, and complete all reading assignments if any. The class lectures present material not covered in the readings, and some of the lectures do not have assigned readings. The readings also present some material not covered in the lectures. My PowerPoint presentations will not be up on Blackboard.

EXAMINATIONS AND GRADING
Final grades will be determined by:
Midterm exam = 30 points. It will consist of multiple choice, matching, fill-in-the blank questions (i.e., evaluating your knowledge more than your ability to express that knowledge). You will also have short answer questions and you will be asked to briefly discuss a few of the studied behaviors and show how they contributed to our broader understanding of the topic at hand. Midterm covers only material from the beginning of class to the midterm. Midterm is March 10th.
Cumulative final exam = 30 points. Same format as the midterm, but covering material from the entire course. Week of finals (May 11).
Attendance and Class participation = 10 points. Class participation will be evaluated based on your attendance and your participation in discussions. Students who are not present receive minus points for that class session.
Research paper = 30 points. You will be writing a research paper for this course on a topic of your choice within the context of animal tool-use. The instructor, however, must approve all topics. The aim of this research paper is for you to develop your critical thinking skills and your ability to express your ideas. Students will submit their papers (~10 pages double spaced plus references and figures) on the last day of class for evaluation. Research papers should include figures, maps, stratigraphic sections, other material discussed in lectures and in readings, and have at least 10 bibliographic references from the primary academic literature. Additional guidelines will be given during the first weeks of class.
COURSE RESOURCES
Additional resources and readings for this course will be posted on Blackboard.

COURSE POLICES
Classroom etiquette:
While students are in class, they are expected to give their full attention to the lecture. Reading, talking, eating, texting or browsing on cell phones, leaving or packing up to leave before the professor has dismissed the class are inappropriate classroom behaviors and disruptive to other students. If for some reason you know that you will need to leave lecture early, let me know before class begins, sit near a door, and leave quietly and unobtrusively. If you come to class late, be sure to enter quietly and take care not to disturb the class in progress. Also, please make sure that your watch alarms, pagers, and cell phones do not go off during class.

Attendance and preparation of assignments:
Students are expected to attend all classes; if you expect to miss one or two classes, please email me to inform me. Unexcused absences will lower your grade. Computer glitches (such as computers that die, hard disks that crash, flash drives that are lost, etc) will not be accepted as excuses for failure to do assignments on time, to study for exams, etc.

Americans with Disabilities Act:
If you have a physical, psychiatric/emotional, medical or learning disability that may impact on your ability to carry out assigned course work, please contact the Disability Support Services office in the Educational Communications Center (ECC) Building, room 128 (632-6748). DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential.

Academic Integrity:
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/

Critical Incident Management:
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.
COURSE SCHEDULE AND SYLLABUS

Week 1
(February 26): Introduction to the class, course requirements. Our Primate heritage.
(February 28): In class discussion: What separates us from chimpanzees? Ted Talk, Jane Goodall, 2002

Week 2
(February 2): Ethology, the science of animal behavior
(February 4): Readings TBA

Week 3
(February 9): What is a tool? Definition and terminology
(February 11): Readings TBA

Week 4
(February 16): Bird: the art of using tools
(February 18): Readings TBA

Week 5
(February 23): Sea otters, fish and bottlenose dolphins
(February 25): Readings TBA

Week 6
(March 1): Ants and wasps! A review of insects that use tool
(March 3): Readings TBA

Week 7
(March 8): Borderline examples of tool-using
(March 10): Mid-Term Exam

Week 8
(March 15): NO CLASS – Spring Break!!
(March 17): NO CLASS – Spring Break!!

Week 9
(March 22): Learning from chimps and bonobos in captivity
(March 24): In class discussion: Kanzi the tool-maker?

Week 10
(March 29): Learning from chimps and bonobos in the wild
(March 31): In class discussion: Aimed Throwing and Tool-using of Free-living Chimpanzees

Week 11
(April 5): The nut-cracking bearded capuchin monkeys
(April 7): The bearded capuchin monkeys of Fazenda Boa Vista (documentary)

Week 12
(April 12): Pounding hammers used by long-tailed macaques of Thailand
(April 14): Readings TBA

Week 13
(April 19): Social transmission and learning among primates
(April 21): Readings TBA

**Week 14**
(April 26): The evolution of the human hand
(April 28): Readings TBA

**Week 15**
(May 3): Tool use vs tool making: animal and human perspectives (The Lomekwi 3 discovery)
(May 5): Readings TBA. Research papers due.

**Week 16**
(May 10): Reading day
(May 11): Finals (5:30-8:00 pm)