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CHAMINADE UNIVERSITY SPRING 2000 (E) PROGRAM " APRIL 3 - JUNE 12 * SCHOFIELD ED CENTER

Course: **BI 130 - Ethnobotany LECT (3.0 cr)** Wln 5:30-9:55 p.m. scheduled time
Instructor: **Shirley Black Gerum, B.A., Botany; MPH, Environmental Health**
e-mail: **gerum@hawaii.edu** snail Mail: **P.O. Box 18: Haleiwa, HI 96712**
Ofc Hours: **Immediately after each class; or by appointment (CUH-SB tel: 624-2515)**
Text: **None - See Annotated References List**

I. COURSE DESCRIPTION: **This course provides an overview of ethno-/economic botany for the non-science major with an introduction to the native and introduced plants of Hawaii. The word ethnobotany has two components—ethno + botany-a combination of the Greek terms** *etbnos,* (people) and *botanikos* < *botany* (plant). **Since botany is the study of plants, ethnobotany is devoted to the study of "people's plants" and borrows equally from anthropology and botany to understand the reciprocal influence of plants and culture. Exploration of the geographic and cultural origins of the 20+ plants brought to Hawai`i by ancestors of today's Hawaiian population will provide us a window to Pacific history, culture; language and technology. Since man's existence, development, medicine, migration, history, economy, and (often) belief systems have been shaped by plants over time, you will find the study of ethnobotany has direct links to many different fields and majors. We will track uses of plants from the Stone Age to the Space Age, examining migration theories by glottochronistic, material culture and DNA evidence. Student input/experiences will make our discussions richer and are vital to interactive excellence. Our focus will be local-Hawaiian/Pacific ethnobotany, but our reach will be global.**

II. CLASS OBJECTIVES: **To learn ethnobotanically important plants of Hawai`i (native and introduced), to understand the difference in native endemic, indigenous plants and Polynesian and post-contact introduced plants in the Hawaiian environment; to understand the conditions and trends that give rise, thru natural selection, to the unique flora of Hawaii; to work with and make useable articles/implements from plant materials; to appreciate the role of plants in W global cultural history; to understand the importance of plants in economics, aesthetics, medicine and their place in the future; to instill an appreciation for the natural world; to foster environmental awareness; to truly appreciate and preserve biodiversity; to protect the habitats of Hawaiian plants in the wild,to learn consumer awareness/safety issues for herbal supplements; to understand rights of indigenous peoples and their plant uses; to distinguish between etic and emic observations. of other cultures; to sharpen critical thinking tools for analyzing published research; to apply critical thinking skills & lessons learned from this class to survival in the wild.**

III. METHODOLOGY/CLASS FORMAT: **Class lectures & assignments will be structured to provide students with fundamental knowledge to form the basis for further exploration and application of ethnobotany. The format is designed to provide comprehension, application, analysis, synthesis and evaluation tools for ongoing study. Life experiences will be incorporated where applicable. Since we live in such exciting times of discovery, current news you bring to share from newspapers, journals, other publications about ethnobotanical issues, applications and solutions will be a part of required assignments. Let's seek out novel uses of plants and algae. We will all learn fromindependent student inquiry-based research projects, crafts shared in student seminars.**

IV. **REQUIREMENTS** AND GRADING:

* No makeup exams or quizzes. Exception: documented work/medical emergency, field, TDY

5 Assignments or Exams * (50 points each)	250 pts
3 News/Journal Articles to Share re Ethnobotany	15 pts
Attendance/Sportsmanship/Participation	15 pts
	280 pts

A= 90-100% (252-280); B= 80-89% (224251.99); C= 70-79% (196-223.99); D= 60-69% (168-195.99); **F=** Below 60% (167)

2000 B.C - Here, eat this root (Adapted from unsourced, forwarded e-mail)
1000 A.D. - That root is heathen. Here, say this prayer.
1850 A.D. - That prayer Is supersition. Here, drink this potion.
1940 A.D. - That potion Is snake oil. Here, swallow this pill.
!985 A.D. - That pill is ineffective. Here, take this antibiotic
2000 A.D. - That antibiotic is no longer effective. Here, eat this root.

V. STUDENT RESPONSIBILITIES:

1. **Academic Honesty:** Chaminade University policies regarding academic honesty are clear. (See CUH Undergraduate Catalog.) Students will be required to read and verify understanding of the CUH policies and penalties regarding academic honesty. (Please read, sign, make copy of attached sheet and return signed original.)

2. **Attendance/Participation/Sportsmanship (APS) :** Attendance, participation and sportsmanship are vital to maintaining interactive excellence. To emphasize the importance of participation, support for those presenting ideas to the class and to underscore zero tolerance for unwelcome remarks, 15 points of the total grade will be based on APS. **Attendance:** Students with the highest grades are often those who have participated in hands-on activities/materials, discussions, arc prcsent for demonstrations, special speakers, and A/Vs. The pace of an accelerated class does not allow time to repeat material missed due to absence or late arrival. **Participation:** The input of class members is one of the most valuable components of a university-level class. Your questions, comments open doors. Good **Sportsmanship** goes a long way in any field-yielding to those who are speaking, withholding negative comments and judgments. A science class is a good place to polish up skills in polite scholarly debate to support or challenge existing theories, technology, society standards.

3. **Missed Quizzes/Exams:** Out of respect to students who come prepared to take quizzes/exams in spite of obstacles/illnesses, students who miss a quiz or exam will not be given the opportunity for a makeup exam. Exceptions will be made on a case-by-case basis for students with documented duty or medical emergencies (note from clinic or supervisor), who come prepared to take test on day of return. A message must be left at SB CUH office (624-3515) re absence on day of exam/quiz. It is the student's responsibility to keep informed of assignments, quizzes. Please check with other students if you miss class. "Not knowing" of a quiz will not excuse any student from taking any announced quiz/exam on announced date.

Course: Bi 130: Ethnobotany Lab (1.0 Cr)
Days/Times: 3 hrs/wk Tu/Thur within scheduled 5:30-9:50 p.m. class time published in class schedule
Note: Regrettably, it will be impossible to make up some labs, demos, lab quizzes even with documented illness or work absence.

COURSE DESCRIPTION and CLASS FORMAT: To take advantage of daylight for observing plants in the living laboratory of our Schofield environment, labs may be at the beginning, middle, or end of scheduled class time and will include walks around Schofield plantings and volunteer weeds, fieldtrips, A/Vs, group and independent field assignments. The lab/lecture components of this course are interwoven. However, the lab experience will provide more applied ethnobotanical experiences to support lecture assignments and reinforce cognitive learning. Comprehension, application, analysis, synthesis will increase with opportunities to observe, describe, identify, locate, recognize plant structures. Students will d ssect a variety of plants to learn plant anatomy and to gain experience in recognition/identific tion of common features of plant families. Schofield has an abundance of plants to learn from. CUH SB students will be seeing plants outside our classroom that students on the mainland see only in photographs (or as dried specimens.) Lab materials will be provided for observation. Lab quizzes will include identification of plants, plant structures, plant uses, plant families-many from campus walks/fieldtrips. Several field experiences are planned to support the lecture material and to provide students with the opportunity to observe plant species in the wild as well as in labeled, documented collections. Students will use cultivated & wild plants to explore plant structure, anatomy. Since voucher specimens are crucial to academic publishing, students will learn to make herbarium pressings. We will sharpen our observation, classification, skills in the field and jump-start our awareness by exposing ourselves to opportunities that will prompt questions. Science is basically observing, recording information & questioning.

LAB REQUIREMENTS /GRADING: 10 assignments and/or quizzes @ 15 pts. each for a total of 150 points.
A = 90=100% (135-150); B = 80-89% (120-134); C = 70-79% (105-119); D = 60-69% (90-104); F = Below 90 pts

*"In the end, we will conserve only **what** we love, we will love only what we understand and we will understand only what we are taught."* Baba Dioum, Senegal

Academic Honesty

The following excerpts (in quotes) are from the current CUH Undergraduate Catalog:
"Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of Faculty. Punishment for academic dishonesty will be determined by the instructor and the Dean and may range from an "F" grade for the work in question to an "F" for the course to suspension or dismissal from the University."

"Plagiarism is the offering of work of another as one's own. Plagiarism is a serious offense and may include, but is not limited to the following:

1. Complete or partial copying direct from a written published or unpublished source without proper acknowledgment to the author. Minor changes in wording or syntax-without acknowledgment to the author-is NOT sufficient to avoid plagiarism charges.
2. Paraphrasing the work of another without proper author acknowledgment.
3. Submitting as one's own original work (however freely given or purchased) the original exam, research paper, manuscript, report, computer file, or other assignment that has been prepared by another individual."

In addition, no student may give or receive help from another or use notes during exams/quizzes. Students giving or receiving help during an exam or quiz will forfeit the test and receive an "F" grade. No student may hand in or cause to be handed in another student's work as his/her work. The copying of another's assignment(s) is also forbidden and will result in an "F"grade for that assignment-for the one copying and the one allowing his/her work to be copied.

I have read the above Chaminade University academic regulation on academic honesty, plagiarism and I understand what it means. I understand that if I turn in work that is not my own, use excerpts witho ut proper citations and references to acknowledge and attribute the author and original source, give or receive help from another or use notes during exams/quizzes, I will receive an "F" grade for the assignment and possibly for the semester in this class.

(Your Name Printed) (Your Signature) (Date)

Please read the above carefully and turn in the signed original to the instructor to indicate you have read and understand the policies and penalties for academic dishonesty. Note: Students are responsible for making copies of this document for their own reference_

COURSE OUTLINE Bi 130: Ethnobotany + Lab Chaminade SPRING Eve Pgm 2000 APR 3 - JUN

Instructor: Shirley Gerum * Days/Times: Tu/Thur:w/in 5:30-9:55 scheduled time

Note: **Subject** to Change to Accommodate Events/Speakers Note: **Walking** shoes required

DATE	DAY	Class	Topic
APRIL 4	TU	1	Introduction to Ethnobotany: What is Ethnobotany? What is Botany? How do Plants fit into 5? Categories of Life on Earth? What is Anthropology? Ground Rules for Studying Other Cultures (Etic/Emic viewpoint, Ethnocentrism) Intro Lab:Taxonom :**Classification** of **Plants:The** Ethnobotany y Of **Salsa&Chips**
APRIL 6	THUR	2	Botanical Latin/Greek Nomenclature, Binomials; A Closer Look at Genus, Species, Family; How is Ethnobotany Related to Other Specialties? Introduction to Plant Structure/Anatomy Lab:Learning Plant Families w/Food Logs; Ethnic plant food for potluck & taxonomic analysis
APRIL 11	TU	3	Ethnobotany around the World; Oral History as Ethnobotanical Data: Learning Data-Collection Techniques in Ethnobotany; Ethnobotany & Indigenous Rights; Ethnobotany & the Environment: Is Pharmaceutical Demand Destroying Forests/Habitats? Herbal Medicine History/Present; How Plants Make Food (for themselves->us) & Oxygen to **Support** Life on Earth, Plant Pigments & Big Business (Phytonutrients/Phytoceuticals/Nutraceuticals/Anti-oxidant Consumer Issues & Safety of Herbal Supplements ("But it's NATURAL, isn't it?) What's A Hawaiian Plant? Native (Endemic & Indigenous) & Introduced Plants (Polynesian & Post-Contact: Lab: Plant Anatomy & Pollination Systems: Campus Walk
APRIL 13	THUR	4	Before People: How Did Plants Arrive in Hawaii (3Ws); Island Forming/Geology of Hawaii After People:Who are the Hawaiians? Where Did They Come From? 2 Theories: Emory-Sinoto (W- E) vs Thor Heyerdahl (E-W); How Did Hawn Native Plants Become Threatened/Endangered Other Threats to the Hawaiian Ecosystem; Hawaii as Living Laboratory for Study of Natural Selection/Evolution: Sexual/Asexual Reproduction: Mitosis/Meiosis; Lab: Herbarium Pressin
APRIL18	TU	5	HARMFUL/POISONOUS TROPICAL PLANTS
APRIL 20	THUR	6	The Ahupua'a System: Life in Pre-Contact Hawai`i;Polynesian Family System Plants for the Hawaiian Thatched Hale, `Hale Building; Kapa (Cloth) Making: After Break: Lab: Ethnobotany of Passover, Palm Sunday, Easter
APRIL 25	TU	7	Hawaiian Shrines:Types of Heiau; The Healing Heiau; Hawaiian Health (Ola) & Medicinal Plants Plants & Health: Plants for Hawaiian Sports/Games of Strength, Stamina, Coordination Exam 1 + Quiz 1&2 (Plant Anatomy)
APRIL 21	THUR	8	Exam 1 + Lab Quiz 1 & 2
MAY 2	TU	9	Fieldtrip to Heiau Ho'ola: Keaiwa: Aiea **Heights**
MAY 4	THUR	10	Polynesian Introduced Plants: Food Plants: Breadfruit, Coconut, Banana, Taro, Sweet Potato
MAY 9	TU	11	Food Plants Continued
MAY 11	THOR	12	Food Plants Finale
MAY 16	TU	13	May 18: Tentative Fieldtrip to Waimea Arboretum & Botanical Garden
MAY 18	THUR	14	Hawaiian Plants for Canoes, Fishing
MAY 23	TU	15	OTHER Uses for Plants: Phytoremediation, Rhizofiltration
MAY 25	THUR	16	Other Uses for Plants Continued
MAY 30	TU	17	Forensic Botany
JUNE 1	THUR	18	**Ho`ike:Student** Seminar**Note: Last Day to turn in Assignments for Credit
JUNE 6	TU	19	Ho`ike Continued + Review for Final Exam
JUNE 8	THUR	20	Final Exam (2) + Lab Quiz 9-10 and Aloha

`ÖLELO HAWAII (TO SPEAK HAWAIIAN)

GREETING (to start class):

S: **Aloha ahiahi** (Good evening [`auinalā=afternoon, awakea=midday, kakahiaka=a.m., po=nightl)
R: **Aloha no** (Aloha, indeed, or "Good evening, indeed) (Note: no = indeed).

Q: Pehea 'oe? (How are you?) Pehea 'oe i **kēia** la? (How are you this day?)
R: Maika'i no au - (I am good [fine]) OR: Ano **māluhiluhi** au (I am tired)
Q: Wo 'oe? (And you?)
R: **Maiki'i no au (I** am fine.) **Mahalo nui loa** (Thank you very much.)
S: '**A'ole pilikia -** You're welcome. (lit. no trouble)

Q: '**O wai kou inoa? (What is your name?)**
R: 'O ko'u inoa. (I is my name.)

MISCELLANEOUS EXPRESSIONS AND PHRASES WE MIGHT USE IN CLASS:

• E 'olu'olu 'oe (Please (lit. be nice)

• Hui (Come together!)

• **Ho`omākaukau** (Lit: "Be prepared;" In sports: "Get Ready") 'ae (to permit) "yes"
or We (go)

• E hele **aku `oe!** (or e **hele `oe!**) (Go!)

• E **kōkua** mai 'oe ia'u! (Help me) -

• E kala mai ia'u (Excuse me.) Short version: E kala mai

• Pau ka papa (The class is over.)

• 'A'ole Pau ka hana (The work is not over.)

• 'O Shirley Gerum ko'u inoa. (Shirley Gerum is my name)
• 'O au ke kumu (I am the teacher.) 'O Lisa ka **haumana** (Lisa is the student.)

• Hele 'oe i ke kula nui o Chaminade i Honolulu (You go to Chaminade University of Honolulu)
• **Hele au i ke kula nui o Chaminade i Honolulu** (I go to Chaminade University of Honolulu)

PARTING IS SUCH SWEET SORROW (PARTING EXPRESSIONS WE MIGHT USE):

S: **A hui hou -** Goodbye (Until again we are together)
R: **A hui hou aku no** (Goodbye indeed (Reply) or just A hui hou

S: **E mālama pono** (`oe i kou kino) - Take care (of your body). (Meaning: "Take care of yourself")
R: **Me'oe pū** (Same to you)

Source: *Ka Lei Ha'aheo (Beginning Hawaiian). 1992.* Alberta Pualani Hopkins. UH Press: Honolulu

Key: **S = statement** **Q = question**
R = response or reply **A = answer**