

SUL ROSS STATE UNIVERSITY

PLANTS AND PEOPLE (BIOL 2401)
Syllabus for Spring 2017

Instructor: Dr. Martin Terry
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Email: mterry@sulross.edu (Please use “Plants & People” as subject of email.)
Office Hours: T 3:00–5:00, W 2:00–5:00, or by appointment. If you feel lucky, drop in at random. If I am in the office, you are welcome.

Time and Place: **Lecture:** TR 8:00–9:15. WSB 204
Lab: T 1:00–2:50. WSB 204.

Required Textbook: Simpson BB and Ogorzaly MC. *Economic Botany: Plants in Our World*. McGraw-Hill, 4th edition. Please bring your textbook to every lecture and every lab.

Learning objectives:

- * Recognize the varied uses of plants in human affairs.
- * Relate the geographic origins of useful plants to their current geographic distributions.
- * Analyze tendencies of particular types of useful materials to occur in specific families of plants, and relate this to evolution.
- * Develop a command of scientific names and common names of useful plants, and distinguish the strengths and weaknesses of these very different kinds of nomenclature.
- * Describe key processes used to convert raw plant material to more useful forms (e.g., the processes involved in converting the seeds of wheat plants into baked bread).
- * Understand the relationship between toxic and therapeutic effects of medicinal plants.
- * Compare and contrast attitudes toward “sacred” plants in different societies.
- * Understand how photosynthesis, aerobic respiration and anaerobic fermentation are involved in the life of plants and the production of alcoholic beverages by humans.
- * Recognize the role of Mendelian genetics and cytogenetics in plant breeding.
- * Understand the role of the processes of molecular biology in plant growth and reproduction—including the production of plant products useful to humans.

Attendance and grades: **Attendance in class is required**, and students will be dropped with an F for excessive absences, defined as absences that exceed 20% of the course (i.e., 9 lectures or 3 labs in this course). If you must be absent from lecture or lab, please inform the instructor IN ADVANCE if possible. Make-up exams will **not** be given in lecture or lab. In the case where a student has missed one hour exam for an acceptable reason, the grade of zero for that exam will be dropped, and the lower of the two other hour exam grades will be substituted for the zero. Grades historically show an unpleasant correlation to the number of absences from class. As a matter of courtesy to your classmates, please be on time, as class will start promptly at 8:00.

Point distribution:

Lecture Exams (3 X 100)	300	50%
Lab Grade =	100	16.7% (Attendance & participation count!)
Final exam =	200	33.3%
Total =	600	100%

TENTATIVE LECTURE SCHEDULE AND TOPICS

<u>DATE</u>	<u>TOPIC</u>	<u>CHAPTER</u>	<u>PAGES</u>
JAN 17	Introduction. Get textbook ASAP!!!!!!!!!!	--	--
JAN 19	Review of fundamental botanical concepts	1	1-12
JAN 24	Plant morphology & physiology	1	12-20
JAN 26	Manipulation of plants by humans	1	21-32
JAN 31	Species, nomenclature & taxonomy	1	32-39
FEB 2	Origins of agriculture	2	40-52
FEB 7	Fruits & nuts (temperate regions)	3	53-74
FEB 9	Fruits & nuts (tropical & subtropical regions)	4	75-106
	EXAM 1		
FEB 14	Grasses: cereal grains & forage crops	5	107-135
FEB 16	Legumes	6	137-154
FEB 19	Foods from leaves, stems, roots, etc	7	155-174
FEB 21	Foods from leaves, stems, roots, etc	7	174-191
FEB 23	Spices, herbs & perfumes	8	192-205
FEB 28	Spices, herbs & perfumes	8	206-217
MAR 2	Plant lipids: vegetable oils & waxes	9	218-242
MAR 7	Valuable Goo: exudates from plants	10	243-261
MAR 9	EXAM 2		
MAR 13-17	SPRING BREAK, NO CLASSES		
MAR 21	Medicines from plants; cultural conceptions of medicine	11	262-269
MAR 23	Medicinal plants, pharmacology, & dietary supplements	11	270-285
MAR 28	Ethnobotany and pharmaceutical development	handout	--
MAR 30	Psychoactive drugs from plants and their regulation	12	286-296
APR 4	Psychoactive drugs from plants and their regulation	12	296-310
APR 6	Plant-derived poisons	12	310-312
APR 11	Stimulating beverages and stimulant drugs	13	313-331
APR 13	Stimulating beverages and stimulant drugs	13	313-331
APR 18	Alcoholic beverages and alcohol as a drug	14	332-345
APR 20	Fibers	15	355-372
APR 25	EXAM 3		
APR 27	Structural materials: wood, cork & bamboo	16	378-398
MAY 2	Invasive species of plants and their economic impact;		
MAY 4	Economically important plants of the Big Bend region. Last day of class.		
MAY 10, Wednesday:	FINAL EXAM (comprehensive, required of all students): 8:00 a.m.–10:00 a.m.		

TENTATIVE LAB SCHEDULE AND TOPICS

Jan 24	Fruits & Nuts of Temperate Regions
Jan 31	Fruits & Nuts of Warm Regions
Feb 7	Cereal Grains & Forage – Grasses
Feb 14	Legumes as human food, animal food, and other uses
Feb 21	Foods from Leaves, Stems & Roots (mostly “vegetables”)
Feb 28	Spices, Herbs
Mar 7	Psychoactive Drugs in Plants
Mar 13–17	SPRING BREAK
Mar 21	Medicinal Plants and their uses
Mar 28	Medicinal Plants, discovery and development
Apr 4	Vegetable Oils & Waxes
Apr 11	Structural Materials: Wood, Bamboo Cork
Apr 18	Perfumes
Apr 25	Stimulating Beverages
May 2	Alcoholic Beverages, review

DISABILITIES INFORMATION: It is Sul Ross State University policy to provide reasonable accommodation to students with disabilities. Qualified students with disabilities needing academic or other accommodations to ensure full participation in the programs, services and activities at Sul Ross State University should contact the Counseling and Accessibility Center, Ferguson Hall 112, Box 122, Alpine, TX 79832 (phone 432-837-8203).