BOT2800C Plants in Human Affairs
Spring 2026 Syllabus (3 credit hours)

Lecture meetings
Tuesday/Thursday T,R | Period 6 (12:50 PM - 1:40 PM), LIT 0101

Lab meetings (Rolfs Hall 0114)
Class# 17285 R | Periods 7-8 (1:55 PM - 3:50 PM)
Class# 10709 F | Period 3 - 4 (9:35 AM - 11:30 AM)
Class# 17283 F | Period 6 - 7 (12:50 PM – 2:45 PM)

Final Exam Period: 4/29/2026 @ 5:30 PM - 7:30 PM

Instructors
Lecture:
Dr. Norman Douglas, nadouglas@ufl.edu, 618A Carr Hall. Tel (352) 294-2842.
Email is the preferred means of communication in this course.
Office hours: Tues 2PM or by appointment.

Lab instructors:
Emeline Pano, e.pano@ufl.edu
Esteban Jimenez Vargas, jimenezvargas.je@ufl.edu

Course description
ROLE OF PLANTS IN DEVELOPMENT OF CIVILIZATION AND INFLUENCE OF PLANTS ON WORLD HISTORY, POLITICS, ECONOMICS AND CULTURE. SURVEY OF USEFUL AND HARMFUL PLANTS AND PLANT PRODUCTS. THIS COURSE AFFORDS STUDENTS THE ABILITY TO CRITICALLY EXAMINE AND EVALUATE THE PRINCIPLES OF THE SCIENTIFIC METHOD, MODEL CONSTRUCTION, AND USE THE SCIENTIFIC METHOD TO EXPLAIN NATURAL EXPERIENCES AND PHENOMENA.

This course is an introduction to the vast array of plants and plant products that shape our lives. We will explore some of the plants that humans use and learn how they influence human culture and have shaped civilization from prehistory to the modern world. To better understand why plants are so crucial to us, we will also learn basic structure and function of plant tissues and metabolites in the body of the living plant and the means by which humans obtain, process, and trade in plant-based products. We hope that you not only come away from this course with a better understanding and appreciation for the importance of plants in our lives, but also have fun in the process. You can expect to learn about basic plant biology, ecology, and evolution, develop and evaluate hypotheses about why plants are used the way they are, and communicate botanical knowledge in an informed manner.

General Education Course Student Learning Outcomes- Physical and Biological Sciences
Content--Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern biological and physical systems.

Critical thinking--Formulate empirically-testable hypotheses derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes.

Communication--Communicate scientific knowledge, thoughts, and reasoning clearly and effectively.

Student learning outcomes will be assessed through graded lecture and laboratory quizzes and exams, participation in class discussions & activities, the completion of a written assignment, and an in-class presentation. The B Learning Outcomes and Specific Learning Objectives for the Biological Sciences (B) can be found at the following links:
https://undergrad.aa.ufl.edu/general-education/gen-ed-courses/structure-of-gen-ed-courses/slos-and-performance-indicators/student-learning-outcomes/
https://undergrad.aa.ufl.edu/general-education/gen-ed-program/subject-area-objectives/

In BOT2800, General Education objectives are met through a combination of activities including lectures, in-class discussions and activities, written exercises, oral presentations, and laboratory exercises. Assessment of Student Learning Outcomes for Content and Critical Thinking takes place through two graded exams, weekly laboratory exercises, and two lab practical exams. The Critical Thinking and Communication SLOs are evaluated through the production of an original written account of a plant species and its human uses, and an oral presentation of the written work for the rest of the class. A minimum grade of C is required for general education credit.

Course Learning objectives

After completion of this course, students will be able to:

- Draw and describe the basic structure of a plant and identify major tissues important to humans
- Describe the structure and function of fibers, vascular tissue, and wood and how this relates to human use
- Distinguish between primary and secondary metabolites and the functions of these for both plants and human use
- Discuss the relative definitions of “toxic” and “medicinal” plants
- List the plants that were foundational in the development of human civilization and explain their roles
- List and discuss several of the world’s most economically important plants
- Discuss the centers of origin for agriculture and human civilization
- Explain how plant domestication occurs and describe the evolutionary evidence for domestication
- Describe the central role of plant resources in motivating European colonialism
- Critically evaluate commercially available plant products for their ecological and humanitarian impact
- Discuss scientific, economic, and political issues with genetically modified crop plants

Textbooks

1) Lab manual for BOT2800C. (Required) This is available for purchase (~$20) at Target Copy (on University Avenue) in Gainesville.

Grading

Lecture:	
Two lecture exams – 100 points each	200
Plant expert research – pt. 1, 25 pts, pt. 2, 50 pts.	75
Plant expert presentations – 50 pts	50
Final exam (optional, cumulative) – 100 pts	100
Lab:	
Two Lab Practicals – 50 points each	100
Weekly prelabs – 5 points each	50
Weekly lab activities – 5 points each	50
Weekly postlabs – 5 points each	50
Total	675

Point Range (%)	Letter Grade
≥ 90.00	A
≥ 86.66	A–
≥ 83.33	B+
≥ 80.00	B
≥ 76.66	B–
≥ 73.33	C+
≥ 70	C
≥ 66.66	C–
≥ 63.33	D+
≥ 60	D
≥ 56.66	D–
< 56.66	E

Information on University of Florida grading policies and the assignment of grade points can be found here: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/. A minimum grade of "C" is required for General Education credit.

Laboratory

Your laboratory grade will be based upon two practical exams, in class exercises, and pre- and post-lab assignments. Please see your lab instructor for policies, expectations and the schedule of assignments. BOT2800C has an Equipment and Materials & Supplies fee of $108.00. This fee supports the purchase of supplies, plant materials, reagents, and equipment used in lab activities.

Attendance and make ups

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/#absencestext

We understand that absences happen, but if you make this a habit, you will perform poorly in this class. *All lab sessions are required*. If you know in advance that you are unable to attend your lab section (e.g. conference, religious holiday), please contact your TA promptly in order to facilitate attending one of the other lab sections. Students who arrive late to lab miss important introductory material and directions. If you arrive >10 minutes late, you will be penalized 1 point off your pre-lab; if >30 minutes late, you will only be eligible to receive half credit on your pre-lab. On days of the lab practicals, late arrivals may be denied access at the discretion of the TA.

Make-up lecture exams, lab practicals, and online lab assignments will be offered under certain circumstances if a valid and documented excuse is provided. Every effort should be made to attend your lab section or to make arrangements *in advance* to attend another section if space is available. As online lab assignments are available for multiple days, you should have plenty of time to complete them.

Optional Final Exam

At the end of the semester, course grades will be calculated based on all work completed during the semester. If it is mathematically possible to increase your letter grade by earning a 100% on an optional final worth 100 points, you may elect to take the final. The final consists of five essay prompts, and you will choose one to answer. There is no penalty if you choose not to take the final.

Grade curves and extra credit

At the instructor's sole discretion, a curve MAY be applied to grades for exams. There is no curve for assignments, or final course scores. There MAY be opportunities for extra credit – if so, such opportunities will be announced in class and offered to all students equally. DO NOT request special treatment, extra extra credit, grade bumps, etc. at the end of the course. Emails making such requests will be ignored.

Compliance with UF Academic Policies

This course complies with all UF academic policies. For information on those polices and for resources for students, please see this link: https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/

	Lecture Topic	Lecture Summary	Other assignments due	Lab (Thu or Fri)
Tue, Jan 13	Introduction	Introduction to course material and policies		
Thu, Jan 15	Trees and plant classification	Phylogenetic classification of plants; plant nomenclature		NO LAB
Tue, Jan 20	Plant structure	Structure of the plant body		
Thu, Jan 22	Agriculture & Domestication	Timing and key processes in the origins of domesticated plants and agriculture		1 - Intro to plants
Tue, Jan 27	Essential oils	Secondary compounds and uses as perfumes, herbs & spices		
Thu, Jan 29	Pigments and Dyes	Roles of colored plant chemicals in plant biology and human uses as colorants		2 - Essential oils
Tue, Feb 3	Spice Trade to Colonization	Spices as motivation for long-distance trade from the ancient world to 1492	Sign up for your Plant Expert Species on Plant Expert Discussion Board	
Thu, Feb 5	Fiber	Types of fibers obtained from plants and human uses		3 - Dyes
Tue, Feb 10	Raw materials, plantations	Development of large-scale agriculture for production of cash crops		
Thu, Feb 12	Latex & rubber	Biochemistry of latex, botanical sources, economically significant examples		4 - Fibers
Tue, Feb 17	Gums and Resins	Biochemistry of plant gums & resins, uses, significant examples		
Thu, Feb 19	Sugar & Alcohol	Intro to plant carbohydrates, sources of sugar, use of corn as source of alcohols		5 - Exudates
Tue, Feb 24	**Exam 1 (through Gums & Resins)**			
Thu, Feb 26	Photosynthesis, Carbon, and Climate	Importance of photosynthesis in carbon cycle, production of biomass, climate		**Lab Practical 1**
Tue, Mar 3	Deforestation	Patterns of historical and current deforestation, ecological impacts	Submit Plant Expert Part 1 Draft	

Thu, Mar 5	Wood	Botanical origin of woody tissues, function, properties of woods, human usage		6 - Wood
Tue, Mar 10	Paper	How paper "works", natural and human production of paper, historical significance		
Thu, Mar 12	Medicinal plants	Exploration of plant secondary chemistry, types of medicinal compounds, examples		7 - Paper
Tue, Mar 17	Spring Break			
Thu, Mar 19	Spring Break			NO LAB - Spring Break
Tue, Mar 24	Toxic plants	Biological role and examples of plant compounds known for toxicity		
Thu, Mar 26	Psychoactive plants	Types of psychoactive chemicals found in plants, significant examples		8 - Toxic and medicinal plants
Tue, Mar 31	Stimulating beverages	Plants serving as sources of caffeine & related compounds, historical significance		
Thu, Apr 2	Lipids	Biochemical properties of fats and oils, botanical sources, health concerns	Plant Expert Final Paper due	9- Fats, Oils, and Waxes
Tue, Apr 7	**Plant experts symposium Part 1**		Plant Expert Presentation (Odd numbered UFID)	
Thu, Apr 9	**Plant experts symposium Part 2**		Plant Expert Presentation (Even numbered UFID)	10 - Soap
Tue, Apr 14	Protein: Beans & Bread	Biochemical properties of protein related to nutrition, important plant sources of protein		
Thu, Apr 16	Plant Biodiversity	Importance of plants regardless of current economic value; how biodiversity is studied		**Lab Practical 2**
Tue, Apr 21	**Exam 2 (Sugar & Alcohol Onward)**			
Wed, Apr 29	**Final Exam (OPTIONAL)**	5:30-7:30 PM in lecture hall.		