

Emory University
HLTH 385-000/ANT 385-003 Special Topics: Human Health
Botanical Medicine and Health
MWF 9:35 a.m. -10:25 a.m.
Tarbutton 105

Course Description: Mankind has long recognized that plants are extremely useful as a source of medicine. Medical traditions based on botanical drug sources can be found in all human cultures and date back to prehistory. In this course, both ancient and modern day botanical traditions across many cultures will be discussed as they pertain to medicine. The pathways through which natural drugs are made by plants and how they affect humans will be the focus of this class. Some examples include botanical drugs for infectious disease, cancer, cardiovascular health, dental health, central nervous system function, and much more. By the end of this course, you will have a solid understanding of the major botanical drugs, including their sources, applications, and cultural relevance.

Instructor: Cassandra L. Quave, Ph.D.

Required Text:

- Medical Botany: Plants Affecting Human Health. (2003) Walter H. Lewis and Memory P.F. Elvin-Lewis (2nd Edition) ISBN 978-0471628828

Optional Text:

- Fundamentals of Pharmacognosy and Phytotherapy. (2004) M. Heinrich, J. Barnes, S. Gibbons, E. M. Williamson. ISBN: 0-443-07132-2

Suggested Reading:

- *Plants, People, and Culture: The Science of Ethnobotany.* (1996) Michael Balick and Paul Alan Cox. ISBN: 9780716760276
- *Nafanua: Saving the Samoan Rain Forest.* (1997) Paul Alan Cox. ISBN: 9780716735632
- *The Fever Trail: In Search of the Cure for Malaria.* 2002. Mark Honnigsbaum. ISBN: 978-0374154691
- *Tales of a Shaman's Apprentice: An Ethnobotanist Searches for New Medicines in the Rain Forest.* (1993). Mark Plotkin. ISBN: 9780140129915 ; Dr. Quave's website

Other Resources: [TeachEthnobotany YouTube Channel](#) ; [Dr. Quave's website](#)

Course Requirements:

1. As a student in this course, it is expected that you will actively participate in each class and complete assignments on time. Attendance will be taken at the beginning of each class at exactly 9:35 am. Late arrivals to class will not receive credit for attendance. You will receive 1 point per lecture attended (total 40 points; see grading policy for more details).
2. Assignments are due no later than the assigned due date. If you have technical or personal computer difficulties, you are expected to use the Emory computer work stations or seek Emory computer technology assistance. **Late assignments will NOT be accepted, and you will receive a zero for any missing or late work.** Exceptions to this policy will require explicit permission of the instructor *in writing*. If you are unable to submit your work through blackboard you must turn in a hard copy to Dr. Quave *before the assignment deadline*. Do not submit any work to Dr. Quave via email unless permission to do so is specifically granted *in writing*.
3. Submission of corrupt files for written assignments will be considered as a missing assignment, and students will receive a zero for that assignment. Check your files after upload into blackboard to ensure that they have properly loaded and can be opened.
4. Hard (paper) copies of appropriate documentation for class absences or late assignments due to medical emergencies must be turned in to Dr. Quave within 48 hours of the absence or missed assignment. Submission of documentation by email is not acceptable unless specifically approved in writing by Dr. Quave.

Contact Information

Office: Center for the Study of Human Health, Candler Library, Rm. 107E

Office hours: 10:30 am -12:30 pm, Wednesdays or by appointment

E-mail: cquave@emory.edu

Skype: cassandraquave

Course Procedures:

Dropping a Course: Emory students may withdraw from one or more courses until the Friday at 4pm of the sixth full week of class of the semester after the drop-add period providing that the student continues to carry a load of 12 credit hours or is in his/her final semester of residence as a graduating senior. Please consult your advisor or the Office for Undergraduate Education

Disability: Emory University is committed to ensuring that all University goods, services, facilities, and programs are meaningfully accessible to eligible persons with a disability in accordance with the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act 1973, and other pertinent federal, state, and local laws. The Office of Disability Services (ODS) is the central clearinghouse that processes and facilitates all accommodation requests from qualified students who have completed the registration process in its entirety. Students are responsible for initiating the accommodation request process by self-disclosing their disability and/or chronic medical condition directly to ODS. More detailed information is available on the website at www.ods.emory.edu, or make requests directly to the Office of Disability Services, Emory University, 201 Dowman Drive, University Administration Building, Suite 110, Atlanta, GA 30322, 404.727.6016 (v) or 404.712.2049 (TDD).

Academic Honesty Policy: For more than half a century, academic integrity has been maintained at Emory through the student-initiated and student-regulated Honor Code. The responsibility for maintaining a standard of unimpeachable honor in all academic work falls upon every individual who is a part of Emory University. Every student who chooses to attend Emory College agrees, as a condition of attendance, to abide by all provisions of the Honor Code as long as he or she remains a student in the college. By continued attendance in Emory College, students reaffirm their pledge to adhere to and uphold the provisions of the Honor Code. The Honor Council, a body of at least ten annually appointed students, has responsibility for investigating and adjudicating all alleged violations of the Honor Code. Students found to have violated the Honor Code are subject to verbal reprimand, written reprimand, F in the course in question, suspension, dismissal, or a combination of these and other sanctions. Copies of the Honor Code are distributed and explained to new students and are available in the Emory College office, 218 White Hall, and online at http://www.college.emory.edu/current/standards/honor_code.html.

In this class, the Emory University honor code is in place and you are explicitly responsible for taking care to present work that you claim as your own: there is a *no tolerance policy* in effect for *plagiarism* from any source, inclusive of internet sites, and the written and spoken work of others. If you do not understand what plagiarism is, please read the honor code carefully and seek assistance from the instructor.

Course Expectations:

Students in this course are expected to be active learners and participants, requiring all students to take an active role in their own learning and to share the learning process with the class. Evidence of active learning includes:

- ◆ *“Attending” all lectures*, which is critical to promoting a learning community within the class.
- ◆ *Reading all assigned materials* and making note of questions, areas of interest, and connections you find to other readings.
- ◆ *Active participation*, allowing each student to test his or her own assumptions as well as expand the worldview of others in the class.

Course Grading Policy

ASSIGNMENTS

	POINTS
Lecture Attendance	40
Class Assessments/Assignments	200
Final Plant Monograph	150
Exam 1	155
Exam 2	155
Peer review reports	50
<u>Class/video presentation</u>	<u>50</u>
Total:	800

Grading Scale by Points Earned

750-800 A	540-559 D+
720-749 A-	480-539 D
690-719 B+	<480 F
660-689 B	
640-659 B-	
610-639 C+	
580-609 C	
560-579 C-	

Syllabus: Course Schedule

Class/Date	Topics
History and Introduction to the Field	
Week 1 January 18	History of botanical medicine and healthcare
January 20	Cultural interactions with spices and herbs
Week 2 January 23	Complementary and alternative medicine **Choice of plant for monograph due
January 25	Plants and drug discovery
January 27	Natural products chemistry: major classes of medically relevant compounds I
Week 3 January 30	Natural products chemistry: major classes of medically relevant compounds II
February 1	Dangerous Herbs: Poisons
Remedial Plants	
February 3	Cancer <i>**No lecture meeting – watch lecture video and complete assignments on blackboard</i>
Week 4 February 6	Musculoskeletal System **Monograph reference list due
February 8	Nervous System
February 10	Cardiovascular System
Week 5 February 13	Respiratory System
February 15	Endocrine System
February 17	Urogenital System
Week 6 February 20	Gastrointestinal Tract
February 22	Oral health and Hygiene
February 24	Sensory Organs (eye and ear)
Week 7 February 27	Skin
February 29	Infectious Disease

March 2	Exam 1
Psychoactive Plants	
Week 8 March 5	Hallucinogens
March 7	Stimulants
March 9	Depressants **First draft of plant monographs due
Week 9 March 12	Spring break – No class
March 14	
March 16	
Perspectives in Health Research	
Week 10 March 19	Antioxidants: what are they and why do we need them?
March 21	The food-medicine continuum
March 23	Research ethics: Importance of informed consent
March 26	Research ethics: Bioprospecting vs. biopiracy
Week 11 March 28	Chemical ecology and botanical medicines <u>Guest Lecturer:</u> Jaap de Roode, PhD, Emory University
Survey of Plants in Medical Systems	
March 30	Cultural perspectives on illness and healing **Peer review reports due
Week 12 April 2	Asian <u>Guest Lecturer:</u> Cedric Baker, PharmD, Mercer University
April 4	American
April 6	European
Week 13 April 9	Amazonian
April 11	African <u>Guest Lecturer:</u> Paul Blackmore, PhD, Atlanta Botanical Gardens
April 13	Herbal products in the US & Europe: production, standardization and quality control
Week 14 April 16	Botanical dietary supplements: efficacy and safety issues ** Monograph presentation slides due

April 18	Class Presentations **Final plant monographs due
April 20	Class Presentations
Week 15 April 23	Class Presentations
April 25	Class Presentations
April 27	Class Presentations
Week 16 April 30	Exam 2

* Instructor reserves the right to change the order or topic of lectures described in this syllabus.

Blackboard

You are responsible for checking the course blackboard site on a regular basis. All of your reading assignments, video content, quizzes, discussion topics, lecture slides, and class assignments are available on the course BB site. Important information and announcements will also be posted in BB. With the exception of your exams, all assignments and assessments will be submitted through BB.

Graded Assignments: In addition to the ongoing participation in online discussions, there will be a series of written homework assignments, quizzes, peer review assignments, medicinal plant monograph research paper and a class presentation. Detailed instructions for the monograph, peer review, and presentation are available in blackboard. Be sure to check the list of tasks and reading assignments for each module to assure that you have completed all assignments. As a general rule, the regular assignments (short quizzes, discussion posts, homework) are due by midnight of the day that the assignment is posted in. Plan ahead in order to avoid complications in assignment submission – in other words, do not wait until 11:30 pm to submit assignments! In the case of technical difficulties in which you are unable to upload your assignment to blackboard copy (such as the plant monographs or peer review reports), you must deliver a paper into my hands by 4pm on the assignment due date. You may wish to look ahead to future modules to ensure that you can plan appropriately to complete all assigned work.

Evaluation Criteria for your medicinal plant monograph:

Detailed instructions for the plant monograph and a grading rubric are available on the course blackboard site.

- Logical presentation and clarity of thought and good writing will be valued highly.
- Position your investigation in the literature: review the relevant previous publications and summarize what is known at this time
- Applicability to the course is crucial: Successfully apply your understanding of botanical medicine and health relevance.
- Appropriate citations are mandatory.