

Introduction to Ethnobotany

11:776:205 (3 credits)

Spring Semester (odd years)

Tuesday, Thursday 10:55 AM – 12:15 PM 138A Foran Hall

CONTACT INFORMATION

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Office Hours: by arrangement

COURSE DESCRIPTION

Broad overview of the science of how people use plants in different cultures and societies (ethnobotany), with emphasis on current research and issues.

COURSE WEBSITE, RESOURCES AND MATERIALS

- Course website: Sakai
- Required text: *Plants and Society*, 7th. Levetin and McMahon, McGraw-Hill (earlier editions will vary in page numbers for assignments and content)
- Additional reading and activities: All non-textbook reading and activities (PDFs, online video, podcasts, etc.) will be posted on the course website and are mandatory unless stated otherwise. Lectures and other materials will be posted to the course website.

PREREQUISITE

01:119:115 General Biology OR 01:119:103 Principles of Biology OR 11:776:242 Plant Science

COURSE LEARNING GOALS

(Link to Plant Biology Undergraduate Program Goals: <http://plantbiology.rutgers.edu/undergrad/plantbiology/>)

By the end of this course, the student will be able to:

1. Comprehend and describe the basics of plant anatomy, physiology, and chemistry, and domestication and history of food (addresses program goal 1)
2. Identify common ethnic foods and other products (addresses program goal 1)

3. Describe the interdisciplinary nature of ethnobotany in a historical, cultural, medicinal, and global context (addresses program goal 2)
4. Discuss current issues and research associated with ethnic products (addresses program goals 3 and 4)

ASSIGNMENTS/RESPONSIBILITIES AND ASSESSMENT

Grading (150 points)

- Quizzes (3 at 20 points each) 60 points
- Project 1: Ask grandma and grandpa 20 points
- Project 2: Paper on edible ethnic produce 20 points
- Project 3: Weight-loss pill 20 points
- Project 4: Independent essay 30 points

Grades will be classified based on Rutgers approved system: A, B+, B, C+, C, D, and F.

Quizzes will include material assigned from the textbook, additional assigned reading or activities, and lectures. Quizzes will also include practical components such as identification of common fruits, spices, herbs, and vegetables.

Projects represent independent work. Turnitin will be used to assess text for plagiarism. Points will be taken off for misspellings, wrongly formatted text, sloppiness, and similar mistakes, and all plagiarism will be reported to the Dean. Significant and constructive participation in class discussions may enhance grades. Grades will be posted online so that students can monitor their progress in the class.

Learning goals assessment: Specific questions on quizzes and review of independent projects will be used to assess student knowledge of all course learning goals, from technical proficiency (course learning goals 1 and 2) to context (course learning goal 3) and communication of current issues and demonstration of critical thinking (course learning goal 4). The percentage score on these assessments will determine the level of mastery: >90% outstanding; 80-89% good; 70-70% satisfactory; <69% unsatisfactory.

PARTICIPATION GRADE AND ABSENCE POLICY

Attendance is mandatory. Lack of attendance will lower your grade. Laptops are welcome for note taking, but Internet surfing is not permitted. If you cannot attend class for medical or other reasons, notify the instructors prior to the missed class indicating the reason or use the University absence reporting website (<https://sims.rutgers.edu/ssra/>) to indicate the date and reason for the absence. An e-mail is automatically sent to the instructor.

COURSE SCHEDULE

Lecture	Unit	Topic	Reading
1	Unit 1: Plants and Society	Introduction to Ethnobotany Introduction to Project 1 "Ask Grandma and Grandpa"	Chapter 1
2	Unit 2: Intro to Plant Life	Ethnobotany: case study from Liberia	Chapters 2 to 4
3	Unit 2: Intro to Plant Life	Back to the basics: plant anatomy and physiology	Chapters 2 to 6
4	Unit 2: Intro to Plant Life	Back to the basics: plant chemistry and benefits to plants and humans in the wide array of produced natural products	Chapter 4
5	Unit 2: Intro to Plant Life	Back to the basics: genetics, DNA, evolution, naming, and classification	Chapters 7 to 9
6	Unit 2: Intro to Plant Life	Lecture/Demonstration: supermarket botany, a.k.a. major plant families in ethnobotany and field trip/hands-on demonstration, Rutgers greenhouse Deadline: project 1 due	Chapters 9 to 14

Lecture	Unit	Topic	Reading
7	Unit 2: Intro to Plant Life	Deadline: on-line self-assessment on Unit 2 due for extra credit	Chapters 2 to 9
	Units 1 and 2	Quiz 1 (in class)	Chapters 1 to 9, plus lectures
	Unit 3: Plants as a Source of Food	Domestication, civilization, and history of food	Chapters 10, 11
8		Introduction to Project 2 “Edible Ethnic Produce Plant Paper”	
	Unit 3: Plants as a Source of Food	Tomato, potato, and chili peppers	Chapters 6, 17, 20
9	Unit 3: Plants as a Source of Food	Wheat, rice, and corn	Chapter 12
10	Unit 3: Plants as a Source of Food	Beans, soy, and licorice	Chapter 13
		Deadline: on-line self-assessment on Unit 3 for extra credit	Chapters 10 to 15
11	Unit 4: Commercial Products	Fabrics and natural crafts and products	Chapter 18
12	Unit 4: Commercial Products	Coffee and tea	Chapter 16
13	Unit 4: Commercial Products	The spice trade and world discovery	Chapter 17
14	Unit 4: Commercial Products	Fats, edible and aromatic oils	Chapters 10, 13, 17
15	Unit 3: Plants as a Source of Food	Ethnic vegetables, greens and herbs, and foods for the future	Chapter 15
16	Unit 4: Commercial Products	Hemp and marijuana	Chapters 18, 20
	Spring recess		
17	Unit 4: Commercial Products	Chocolate and cacao	Chapter 16
		Deadline: project 2 due	
18	Units 3 and 4	Quiz 2 (in class)	Chapters 10 to 18, plus lectures
		Introduction to Project 3 “Safety and contents of a weight loss pill”	
		Deadline: on-line self-assessment on Unit 4 for extra credit.	Chapters 16 to 18
19	Unit 5: Plants and Human Health	Lecture: medicinal plants	Chapter 19
20	Unit 5: Plants and Human Health	Lecture/Discussion: sustainability and natural ecosystems	Chapters 9, 26
21	Unit 5: Plants and Human Health	Lecture/hands-on demo: methods to identify bioactivity in plants, and Introduction to Global Institute of Bioexploration (GIBEX)	Chapter 19 www.gibex.com
		Demonstration of Screens-To-Nature of medicinal plants (TBD) and case study from Namibia	
22	Unit 5: Plants and Human Health	Tropical diseases and their ethnobotanical cures	Chapters 19, 25
		Finding a new cure for malaria (TBD)	
23		Deadline: on-line self-assessment on Unit 5 for extra credit	Chapters 19 to 21
	Unit 6: Algae and Fungi	Beer and bread (Ariane Vasilatis)	Chapters 23, 24
		Deadline: project 3 due	
24	Unit 6: Algae and Fungi	Edible, medicinal, and psychoactive mushrooms	Chapters 20, 23 to 25
		Introduction to Project 4 “Independent essay”	
25	Unit 7: Plants and the Environment	Lecture/Discussion: biofuels	Chapter 26
26	Unit 7: Plants and the Environment	Lecture/Discussion: global warming and feeding the planet	Chapters 18, 26
		Deadline: on-line self-assessment on Unit 6	Chapters 22 to 25
27	Unit 7: Plants and the Environment	Modern medicines vs. herbals, patenting and bioexploration	Chapters 19, 20, 26

Lecture	Unit	Topic	Reading
28	Units 5 to 7 Unit 7: Plants and the Environment	Quiz 3 (in class) Last day of class: Group debate on environmental sustainability Deadline: on-line self-assessment on Unit 7 for extra credit Deadline: Project 4 due	Chapters 19 to 25, plus lectures Chapter 26

FINAL EXAM/PAPER DATE AND TIME

There is no final exam for this course.

ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy/>

The principles of academic integrity require that a student:

- Properly acknowledge and cite all use of the ideas, results, or words of others.
- Properly acknowledge all contributors to a given piece of work.
- Make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- Obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- Treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- Uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that:

- Everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- All student work is fairly evaluated and no student has an inappropriate advantage over others.
- The academic and ethical development of all students is fostered.
- The reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

STUDENT WELLNESS SERVICES

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.