

GEO 3315: Hungry Planet: Global Geographies of Food

I. General Information

Class Meetings

- Spring 2025
- Meeting Day/Time: Online asynchronous

Instructor

- Lacey Harris-Coble, PhD Student, Department of Geography
- Office Hours: Wednesdays 2-4 pm (on zoom <https://ufl.zoom.us/j/8219834312>)
- Email: lharriscoble@ufl.edu

Course Description

“Training is everything. The peach was once a bitter almond; cauliflower is nothing but cabbage with a college education.” - Mark Twain

This quote from a novel by Mark Twain notes the importance of education with a humorous and botanically correct analogy. As you will learn in this course almonds and peaches, and cauliflowers and cabbages are closely related. It is also a reminder that many of the modern crops on our plates did not always exist, at least in the form that we know them.

What we eat today is not same as what our parents or grandparents ate when they were young, and our current diets are even more different compared to the diets of our ancestors thousands of years ago. Although humans have primarily relied on agricultural production to produce food for approximately 12,000 years, the types of foods grown and the places where they are grown, *or the geography of crops*, has changed considerably over time. These changes in diets have occurred along with dramatic changes to the methods of agricultural production, food consumption and globalization, which is reflected in the changing geography of crops.

In this course we will explore the botanical characteristics of crops and discuss their places of origin and current centers of production. We will also use geographical concepts to examine the botanical, environmental, and historical factors that shape the modern geography of crops and discuss how the geography of crops relates to current food systems issues and research. Finally, students will develop and apply writing, mapping, and presentation skills to a crop of their choice.

General Education Credit

- Biological Sciences

This course accomplishes the [General Education](#) objectives of the subject areas listed above. A minimum grade of C is required for General Education credit. Courses intended to satisfy General Education requirements cannot be taken S-U.

Required Readings and Works

Materials and Supplies Fees: n/a

All reading materials will be made available on Canvas.

Software

ArcGIS Pro is accessible to students for free through UF Apps. The UF Help Desk can assist students with issues opening or accessing UF Apps. For technical issues using ArcGIS Pro to complete map assignments please notify the course instructor.

II. Graded Work

Description of Graded Work

Assignment descriptions may be updated at the discretion of the instructor. Further instructions for assignments will be provided in class and on Canvas.

Assignment	Description	Requirements	Points (Percent)
Discussion Posts	Discuss the course content for that week and how it relates to your personal or academic experiences.	One post per week for a total of 15 posts (10 points or 1% each).	150 (15%)
Online Quizzes	There will be 5 online quizzes to check your understanding of the lecture/slide content. Each quiz will be 10 questions out of a question bank of approximately 20 questions.	5 total, one for each module (10 points or 1% for each quiz).	50 (5%)
Module Reflections	Each module reflection is a minimum of 400 words, discuss what you learned from each module. Note this is NOT A GENERIC SUMMARY of what was covered in the module, this should be written in first-person and should discuss what	5 total (30 points each or 3%) A generic 3rd person summary of the content (which could be generated with Chat GPT) will not be graded – you will be given a 0 for not following the assignment instructions and you will have the	150 (15%)

	you knew about the module topics before the module and how your understanding of the topics changed as a result of the module content. You can also discuss what readings or videos you liked or disliked, what you found most interesting or confusing etc. I want to see your OWN thoughts, critical thinking and reflection on the module topics.	opportunity to resubmit the assignment in the correct form for a regrade.	
Map Assignments	There will be five map tutorials where you will learn how to make different types of crop maps using ArcGIS Pro. The results of these tutorials will comprise one part of each map assignment. The map you produce will be graded for both completion and quality. In addition, each map assignment will have a written component such as describing your map, evaluating maps from other sources, or relating the data in your map to other information sources.	5 total, one for each module (100 points or 10% each)	500 (50%)
Final Project	The final project will allow you to apply what you have learned throughout the semester. For this project you will be able to use the maps that you have made as part of the map assignments as part of your project. There will be two parts to the final project presentation, the first part will be a zoom recording and the second part is a reflection on giving the presentation to a friend or family member. In addition, the final project may include a critical reflection on a current crop issue in the US.	Final project presentation (100 points or 10%) Final project reflection (50 points or 5%)	150 (15%)
Total			1000 pts

Grading Scale

There will be no extra credit or optional assignments.

All assignments must be submitted through Canvas unless otherwise instructed by the instructor. Assignment due dates in the syllabus may be adjusted throughout the semester. Changes to assignment due dates will be communicated in class and on Canvas. In the event of a discrepancy between the information provided in the syllabus and Canvas, please follow what is indicated on Canvas.

Grades will be calculated based on the total number of points attained out of the total number of possible points and a letter grade will be assigned based on the university grading scale. Final grades will be rounded to the nearest whole number. For information on how UF assigns grade points, visit: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

A	93 – 100+ of possible points		C	73 - 76
A-	90 – 92		C-	70 - 72
B+	87 - 89		D+	67 - 69
B	83 - 86		D	63 - 66
B-	80 - 82		D-	60 - 62
C+	77 - 79		E	<60

E1: stopped attending, I: incomplete.

III. Weekly Schedule

Students should note that the syllabus is a guideline and that there may be changes to the class schedule. Please refer to our Canvas page for official weekly readings, assignments, and due dates.

Instructional materials for this course consist of only those materials specifically reviewed, selected, and assigned by the instructor(s). The instructor(s) is only responsible for these instructional materials.

Module	Week	Topics, Homework, and Assignments
Module 1: Introduction to Geography and Crops	Week 1	• Topic: Course Overview • Summary: We will discuss the structure of the class during the term and how the geography of crops relates to current events. • Readings: ○ Where do the parts of your hamburger come from? Food Tech - S01E01 - Cheeseburger and Fries ○ Check Canvas page for additional readings
	Week 2	• Topic: Introduction to Geography

Module	Week	Topics, Homework, and Assignments
		• Summary: We will introduce the geography of crops, discuss the history of geography as a discipline, and explore elements of map making. • Readings: ○ Thompson 2017: From Ptolemy to GPS, the Brief History of Maps ○ NYT: Maps That Tell Their Own Stories ○ Carl Sagan: Ancient Measurement of Earth Circumference (video) ○ Check Canvas page for additional readings
	Week 3	• Topic: Introduction to Plant Botany • Summary: We will discuss the botanical attributes of plants, what all plants have in common and what features differentiate different groups of plants. • Readings: ○ UC Davis: Chapter 4 - The Organization Of The Plant Body ○ Check Canvas page for additional readings
	Module 1 Assignments	• Review syllabus • Set up New York Times(NYT) access with your UFID: see instructions for setting up access for the NYT, Wall Street Journal and Economist here • Module 1 Reflection • Discussion Posts (3 total) • Map Assignment #1 (see tutorial and instructions on Canvas) • Module 1 Quiz • All assignments for Module 1 due two weeks after the end of Module 1
Module 2: Crop Suitability and Origins of Agriculture	Week 4	• Topic: Human Manipulation of Plants and Crop Centers of Origin • Summary: We will explore the botanical traits that humans have selected for in plants and we will discuss the centers of origin of our major crops • Readings: ○ The Story of Nikolai Vavilov ○ OSU The Early History of Genetics ○ Check Canvas page for additional readings
	Week 5	• Topic: Crop Suitability • Summary: We will discuss plants biogeography and how to map the suitable climate zones for different crops. • Readings: ○ Peter et al. 2020 - Crop climate suitability mapping on the cloud: a geovisualization application for sustainable agriculture ○ Mahaut et al. 2022 - Matches and mismatches between the global distribution of major food crops and climate suitability ○ Check Canvas page for additional readings
	Week 6	• Topic: Origins of Agriculture • Summary: We will explore early evidence of agricultural practices and theories on the origins of agriculture. • Readings: ○ Harlan 1992 - Views on Agricultural Origins

Module	Week	Topics, Homework, and Assignments
		○ The Atlantic - America's Lost Crops Rewrite the History of Farming ○ Check Canvas page for additional readings
	Module 2 Assignments	● Module 2 Reflection ● Discussion Posts (3 total) ● Map Assignment #2 (see tutorial and instructions on Canvas) ● Module 2 Quiz ● All assignments for Module 2 due two weeks after the end of Module 2
Module 3: Major Crops and Agricultural Production Systems	Week 7	● Topic: Major Crops – Cereals and Legumes ● Summary: We will explore the important attributes, location of origin and current geography of cereal grains such as wheat, rice and corn. We will discuss the attributes and origins of legumes such as soybeans, beans, peanuts, and peas and the importance as crops for nitrogen fixation. ● Readings: ○ Linneaus on the origins of Maize ○ NYT: Tracking the Ancestry of Corn Back 9,000 Years ○ NYT: A Boom Time for the Bean Industry ○ Check Canvas page for additional readings
	Week 8	● Topic: Major Crops – Roots and Tubers ● Summary: We will explore crops such as carrots and potatoes, as well as their importance throughout history. ● Readings: ○ Mann 2011: How the Potato Changed the World ○ Check Canvas page for additional readings
	Week 9	● Topic: Global Production Systems and Modern Agriculture ● Summary: We will discuss how agricultural systems are characterized using metrics such as farm size, income level and water source. We will discuss package of technologies that led to the Green Revolution and modern agriculture. ● Readings: ○ King 2012: Fritz Haber's Experiments in Life and Death ○ OSU: Genetically Engineered Crops ○ Giller et al. (2021): The future of farming: Who will produce our food? ○ Check Canvas page for additional readings
	Module 3 Assignments	● Module 3 Reflection ● Discussion Posts (3 total) ● Map Assignment #3 (see tutorial and instructions on Canvas) ● Module 3 Quiz ● All assignments for Module 3 due two weeks after the end of Module 3
	Week 10	● Topic: Tropical and Temperate Fruits and Nuts

Module	Week	Topics, Homework, and Assignments
Module 4: Agricultural Trade and Food Security		• Summary: We will discuss fruits and berries native to Europe, Asia, and North America such as tomatoes, apples, and grapes as well as fruits and nuts from tropical regions such as bananas and coffee. • Readings: ○ Purdue - The Origins of Fruits and Fruit Growing - pages 4 to 12 ○ NYT - Opinion Yes, We Will Have No Bananas ○ Tasting History - The Poisonous History of Tomatoes ○ Check Canvas page for additional readings
	Week 11	• Topic: Global Agricultural Trade and Trade Networks • Summary: We will explore the connections between agricultural producers and consumers for various agricultural products at the country level. • Readings: ○ OSU: Colonial Agriculture ○ Fader et al. 2013 - Spatial decoupling of agricultural production and consumption: quantifying dependences of countries on food imports due to domestic land and water constraints ○ Check Canvas page for additional readings
	Week 12	• Topic: Agricultural Production and Food Insecurity • Summary: We will discuss food insecurity and how it relates to agricultural production. • Readings: ○ Devereux 2000: Famines in the 20th century ○ World Economic Forum 2018: Nearly half our calories come from just 3 crops. This needs to change ○ Check Canvas page for additional readings
	Module 4 Assignments	• Module 4 Reflection • Discussion Posts (3 total) • Map Assignment #4 (see tutorial and instructions on Canvas) • Module 4 Quiz • All assignments for Module 4 due two weeks after the end of Module 4
Module 5: The Changing Geography of Crops	Week 13	○ Topic: Agriculture and Conservation ○ Summary: We will discuss how agriculture is contributing to deforestation and map where crops such as coffee, cocoa and oil palm are driving forest loss. ○ Readings: ○ Goldman et al. (2020): Estimating the Role of Seven Commodities in Agriculture-Linked Deforestation: Oil Palm, Soy, Cattle, Wood Fiber, Cocoa, Coffee, and Rubber ○ Our World in Data - To protect the world's wildlife we must improve crop yields – especially across Africa ○ NYT: Animals Are Running Out of Places to Live ○ NYT: Can We Grow More Food on Less Land? We'll Have To, a New Study Finds

Module	Week	Topics, Homework, and Assignments
		○ Check Canvas page for additional readings
	Week 14	• Topic: Agriculture and Climate Change I • Summary: We will discuss how the geography of crops is changing due to climate change and what this could mean for specific crops. • Readings: ○ Sloat et al. 2020 - Climate adaptation by crop migration ○ Beyer et al. 2022 - Relocating croplands could drastically reduce the environmental impacts of global food production ○ Check Canvas page for additional readings
	Week 15	○ Topic: Agriculture and Climate Change II ○ Summary: We will continue to discuss how the geography of crops is changing due to climate change and what this could mean for specific crops. ○ Readings: ○ NYT - How Global Rice Farming Is Being Transformed by Climate Change ○ NYT - Climate Change Made East Africa's Drought 100 Times as Likely, Study Says ○ NYT: From Apples to Popcorn, Climate Change Is Altering the Foods America Grows ○ NYT: What Climate Change Could Mean for the Coffee You Drink ○ Check Canvas page for additional readings
	Module 5 Assignments	• Module 5 Reflection • Discussion Posts (3 total) • Map Assignment #5 (see tutorial and instructions on Canvas) • Module 5 Quiz • Final Project • All assignments for Module 5 as well as the Final Group Project are due by the last day of classes for the semester

IV. Student Learning Outcomes (SLOs)

At the end of this course, students will be expected to have achieved the [General Education](#) learning outcomes as follows:

Content: *Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline(s).*

- Explain fundamental concepts relating to earth systems and global agriculture and its evolution over time. **Assessments:** Module Reflections, Discussion Posts, Online Quizzes, Map Assignments
- Describe the botanical aspects of the major crop categories, their places of origin, and the geographic processes, both physical and human, that influence the geographic distribution of crops. **Assessments:** Module Reflections, Discussion Posts, Online Quizzes, Map Assignments, Final Project

Critical Thinking: *Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline(s).*

- Analyze and interpret how the geography of crops relates to current food system issues and research topics. **Assessments:** Module Reflections, Map Assignments, Final Project

Communication: *Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).*

- Demonstrate and apply writing, mapping, and presentation skills to the geography of crops. **Assessments:** Map Assignments, Final Project

VI. Required Policies

Attendance Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

For all planned absences, a student in a situation that allows an excused absence from a class, or any required class activity must inform the instructor as early as possible prior to the class. For all unplanned absences because of accidents or emergency situations, students should contact their instructor as soon as conditions permit.

Students shall be permitted a reasonable amount of time to make up the material or activities covered during absence from class or inability to engage in class activities because of the reasons outlined in the university's policy.

Late Assignment Policy

Assignments submitted after the due date will be reduced by one letter grade for each day late unless approval is given by the instructor prior to the due date.

Students Requiring Accommodation

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

UF Evaluations Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they

receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Violations of the Honor Code such as plagiarism will not be tolerated. Acts of plagiarism will receive a 0 on the assignment as well as disciplinary action for academic integrity.

Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

The Writing Studio

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at <http://writing.ufl.edu/writing-studio/> or in 2215 Turlington Hall for one-on-one consultations and workshops.

In-Class Recordings

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Other Student Health and Wellness Resources

- Health and Wellness U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu , 352-392-1575, or [visit U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.
- Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website](#).
- University Police Department: [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
- UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).
- GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, [visit the GatorWell website](#) or call 352-273-4450.

Other Student Academic Resources

- Academic Resources E-learning technical support: [Contact the UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- [Career Connections Center](#): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- [Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources.
- [Teaching Center](#): Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- Student Complaints On-Campus: [Visit the Student Honor Code and Student Conduct Code webpage for more information](#).