IDS 2935: Feeding the Planet: Nutrition, Sustainability, and the Economics of Eating Quest 2

I. General Information

Class Meetings

- Semester: Spring 2023
- Time: MWF period 4 (10:40-11:30am)
- Location: CBD 0220

Instructors

- Lead Instructor: Jeanette Andrade, Assistant Professor (Food Science and Human Nutrition)
- Office: Food Science and Human Nutrition Building, Room 467B
- Office Hours: Monday and Wednesday, 12:00-1:00pm, or by appointment
- Contact: jandrade1@ufl.edu 352-294-3975
- Instructor: Laura Acosta, Lecturer in Dietetics (Food Science and Human Nutrition)
- Office: Building 120, Room 104D
- Office Hours: Friday, 11:00am-1:00pm, or by appointment
- Contact: ljacosta@ufl.edu 352-273-3472
- Instructor: Derek Farnsworth, Associate Professor (Food and Resource Economics)
- Office: McCarty Hall B, Room 1083
- Office Hours: Tuesday and Thursday, 12:00-1:00pm, or by appointment
- Contact: <u>dfarnswo@ufl.edu</u> 352-294-7698

Course Description

This Quest 2 course explores the challenges of eating well around the globe considering environmental and economic factors, as well as access to and availability of nutritious food. Relying on the disciplines of food and resource economics, food science, and human nutrition, the course investigates and reflects on the contemporary international issues of global nutrition and sustainability from both economic and health perspectives. Major themes include the economics of global food systems, the growing problem of food waste, the implications of population growth, the impact of various eating patterns (e.g., animal sourced proteins, vegan, vegetarian, etc.) on the environment, the issues of food security and sustainability, and the elusive meaning of "healthy" eating. These themes are represented on an

international level, with local and regional examples presented for classroom discussions and activities. Through field trips to local and classroom discussion and debates, students will grapple with the essential question of whether it is possible to feed a growing global population in a healthful, economically-feasible, and environmentally responsible way. The course will culminate with a group project in which students synthesize potential sustainable solutions for various regions of the world, considering both environmental and nutritional perspectives. 3 credits.

Quest and General Education Credit

- Quest 2
- Social & Behavioral Sciences
- International (N)

This course accomplishes the <u>Quest</u> and <u>General Education</u> objectives of the subject areas listed above. A minimum grade of C is required for Quest and General Education credit. Courses intended to satisfy Quest and General Education requirements cannot be taken S-U.

Required Readings and Works

There is no textbook for this course, but various articles, videos, etc. (listed below in the Course Schedule) will be made available through the class Canvas page. Materials and Supplies Fees: n/a

II. Graded Work

Graded Activity	Points	Percentage of Grade
Survey Data Analysis	50 points	10%
Reflections (10)	20 points each (200 points total)	40%
Debates (2)	50 points each (100 points total)	20%
Group Project	50 points	10%
Cumulative Final Exam	100 points	20%
Total	500 points	100%

Description of Graded Work

Survey Data Analysis: 50 points (10% of grade)

- Grading
 - Recording a 1-day 24-hour recall (10 points)
 - Analysis of 1-day 24-hour recall (20 points)
 - o Identify motivation/behaviors for dietary habits (15 points)
 - Pros/cons of this method (5 points)

<u>Reflections</u>: 10 at 20 points each for a total of 200 points (40% of grade)

- In certain weeks of the course, you will reflect upon the week's topic to address what new information you learned, what is additional information that you would have liked to learn about, and how you will apply this information to your other courses/career/graduate school.
- Grading:

- Connection to other courses/career/graduate school: 10 points
- Connection to class outcomes/discussion: 5 points
- No spelling/grammatical errors: 2 points
- References correctly: 3 points

Debates: 2 at 50 points each (20% of grade)

- Debate 1: 50 points
 - Topic: "Are vegetarian diets superior?"
 - Topic: "Insect protein: Should we all eat bugs?"
- Debate 2: 50 points
 - Topic: "Future of food sustainability: Obtaining our food Globally or Locally?"
 - Topic: "Food policies: Federal government or Local government?"
- Grading:
 - Position paper: 30 points
 - Engagement: 10 points
 - Professionalism: 10 points

Group Project: 50 points (10% of grade)

- Working in a group of no more than 4 students, you will choose a country and describe the primary food or nutrition-related concerns in that area, how these issues evolved, and what threats they present. You and your group will then facilitate a 15-minute class discussion around the challenges and potential solutions for creating a healthful, sustainable, and planet-friendly food system in that country/region.
- Grading:
 - Paper: 35 points
 - Presentation: 15 points

Cumulative Final Exam: 100 points (20% of grade)

• A multiple choice/true-false cumulative final exam will be administered during the day of the regularly scheduled final exam.

Grading Scale

For information on how UF assigns grade points, visit: <u>https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/</u>

А	93 – 100%	С	74 – 76.9%
A-	90 – 92.9%	C-	70 – 73.9%
B+	87 – 89.9%	D+	67 – 69.9%
В	84 - 86.9%	D	64 - 66.9%
B-	80 - 83.9%	D-	60 - 63.9%
C+	77 – 79.9%	E	<60%

III. Annotated Weekly Schedule

Week	Topic Area
	UNIT 1: The Global Food Economy
	Topic: Getting Started
1 (Jan 9 - 13)	Faculty Facilitator: Andrade/Farnsworth/Acosta
	Monday: Introduction to the Big Question: <i>Can we feed a growing global population in a healthful, economically feasible, and environmentally responsible way</i> ?
	Wednesday: Introduction to the Big Question, cont'd Friday: Discussion of Mehrabi reading
	Required Readings:
	 Mehrabi Z, Ellis EC, Ramankutty N. The challenge of feeding the world while conserving half the planet. <i>Nature Sustainability</i>. 2018; 1:409-412 (4 pages) Monbiot G. Lab-grown food will soon destroy farming – and save the planet
	Graded Assignments/Activities:
	Reflection about journal discussion (20 points)
	Topic: What Do We Eat, and Why?
2 (Jan 16-20)	Faculty Facilitator: Andrade
	Monday: NO CLASS - MLK
	Wednesday: Impact social/environment has on dietary patterns/habits Friday: Discussion of Naja reading
	Required Readings:
	• DISCUSSION PAPER: Naja F, Hamadeh R. Nutrition amid the COVID-19 pandemic: A multi-level framework for action. <i>Euro J Clinical Nutr.</i> 2020; 74:1117-1121 (4 pages)
	• Stern PC. Toward a coherent theory of environmentally significant behavior. <i>Journal of Social Issues</i> . 2000; 56(3): 407-424. (17 pages)
	Graded Assignments/Activities:
	Reflection about journal discussion (20 points)
	Topic: How do we measure what we eat and how well we are doing?
3 (Jan 23-27)	Faculty Facilitator: Andrade
	Monday : Qualitative Research – It's in the eye of the beholder
	Wednesday: Quantitative Research – Counting the pennies
	Friday: Discussion of Alakaam reading
	Required Readings:

 Discussion paper: Alakaam AA, Castellanos DC, Bodizo J, Harrison L. The factors influence dietary habits among international students in the United States. Jour. 	
influence dietary habits among international students in the United States. Jour	
	nal of
International Students. 2015; 5(2): 104-120 (16 pages)	-
Baygi F, Mohammadi-Nasrabadi F, Zyriax BC, Jensen OC, Bygvraa DA, Oldenburg	M
Nielsen JB. Global overview of dietary outcomes and dietary intake assessment	-
methods in maritime settings: A systematic review. BMC Public Health. 2021;	
21:1579 (9 pages)	
• Shim JS, Oh K, Kim HC. Dietary assessment methods in epidemiologic studies.	
Epidemiology Health. 2014; 36: e2014009.	
Graded Assignments/Activities:	
 Survey data (Eating Motivations, Behaviors and analysis of dietary habits) (50 p 	nints)
Topic: Introduction to Food Economics	5111257
4 Faculty Facilitators: Farnsworth	
(Jan 30 – Feb	
³⁾ Monday: Historical and current events related to food supply and demand	
Wednesday: Malthusian economics and capacity constraints	
Friday: Reflection discussion	
Required Readings:	
Gouel C, Guimbard H. Nutrition Transition and the Structure of Global Food	
Demand. American Journal of Agricultural Economics. 2019; 101(2): 383-403.	
(<u>https://doi.org/10.1093/ajae/aay030</u>) (20 pages)	
 Ritchie H. How much of the world's land would we need in order to feed the global 	bal
population with the average diet of a given country? 2017.	
(https://ourworldindata.org/agricultural-land-by-global-diets) (8 pages)	
Additional Recommended Resources:	
Malthus, Thomas Robert. An Essay on the Principle of Population. 1872.	
 Krugman P, Wells R. Microeconomics. 2012. Chapter 2. 	
Graded Assignments/Activities:	
Reflection (20 points)	
Topic: Food Systems: Where Does Food Come From?	
5 Faculty Facilitator: Farnsworth	
(Feb 6-10)	
Monday: What is sustainability?	
Wednesday: Global issues in the food supply chain	
Friday: Reflection discussion	
Thuay. Reflection discussion	
Dequired Readings	
Required Readings:	
 Nguyen H. Sustainable Food Systems Concept and Framework. Food and Agricular 	Iture
Organization of the United Nations. 2018.	
(http://www.fao.org/3/ca2079en/CA2079EN.pdf) (8 pages)	
Additional Recommended Resources:	

	 Committee on a Framework for Assessing the Health, Environmental, and Social Effects of the Food System; Food and Nutrition Board; Board on Agriculture and Natural Resources; Institute of Medicine; National Research Council; Nesheim MC, Oria M, Yih PT, editors. A Framework for Assessing Effects of the Food System. Washington (DC): National Academies Press (US); 2015 Jun 17. Summary. (<u>https://www.ncbi.nlm.nih.gov/books/NBK305165/</u>) Nutrition and Food Systems - A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Rome: HPLE; 2017. (<u>http://www.fao.org/3/a-i7846e.pdf</u>
	Graded Assignments/Activities:
	Reflection (20 points)
	UNIT 2: Food Security and Sustainability
6 (Feb 13-17)	Topic: <u>What is Food Security</u> Faculty Facilitators: Andrade
	Monday: Food security – Guest Speaker Dr. Juan Andrade
	Wednesday: Nutrition security
	Friday: Discussion of Eicher-Miller article
	Required Readings:
	• DISCUSSION PAPER: Eicher-Miller HA. A review of the food security, diet and health
	outcomes of food pantry clients and the potential for their improvement through food pantry interventions in the United States.
	 Azam-Ali S. Crop insecurity: What is the future of our food? <i>Financial Times</i>. 2018.
	(https://www.ft.com/content/843c2bbc-379a-11e8-8eee-e06bde01c544) (12 pages)
	Meade B, Thome K. International Food Security Assessment, 2017-2027. USDA
	Economic Research Service. 2017.
	(<u>https://www.ers.usda.gov/webdocs/publications/84128/gfa-28.pdf?v=0</u>) (9 pages)
	Graded Assignments/Activities:
	Reflection of journal discussion (20 points)
	Topic: What is Sustainability?
7 (Feb 20-24)	Faculty Facilitator: Farnsworth
(Monday: Impact of diet on global food sustainability
	Wednesday: Analysis of the palm oil industry
	Friday: Reflection discussion
	Poquired Peedings:
	 Required Readings: Pimentel D, Pimentel M. Sustainability of meat-based and plant-based diets and the
	environment. <i>Am J Clin Nutr</i> . 2003; 78(3): 660S-663S. (3 pages)
	 Peters CJ, Picardy J, Darrouzet-Nardi A, et al. Carrying capacity of U.S. agricultural
	land: Ten diet scenarios. <i>Elementa: Science of the Anthropocene</i> . 2016; 4: 000116.
	(15 pages)
	 Fitzherbert EB, Struebig MJ, Morel A, et al. How will oil palm expansion affect
	biodiversity? Trends in Ecology & Evolution. 2008; 23(10): 538-545. (7 pages)

	 Koh LP, Wilcove DS. Cashing in palm oil for conservation. <i>Nature</i>. 2007; 448(7157): 993-994. (2 pages)
	Additional Decomposed ad Decompose
	Additional Recommended Resources:
	Food and Agriculture Organization of the United Nations Food-based dietary
	guidelines: http://www.fao.org/nutrition/education/food-dietary-guidelines/en/
	 World Health Organization, A healthy diet sustainably produced:
	https://apps.who.int/iris/bitstream/handle/10665/278948/WHO-NMH-NHD-18.12-
	eng.pdf?ua=1
	 How ugly, unloved food can change the world:
	(https://www.ted.com/talks/dana cowin how ugly unloved food can change th
	e world) (Video: 8 minutes)
	Graded Assignments/Activities:
	Reflection (20 points)
	Topic: Sustainable Food Systems in Action Field Trips
8	Faculty Facilitators: Farnsworth
(Feb 27- Mar 3)	
	Monday: Half the class visit to UF Field and Fork Gardens; other half view: Eating our way to
	extinction: https://www.youtube.com/watch?v=LaPge01NQTQ
	Wednesday: Half the class visit to <i>UF Field and Fork Gardens</i> ; other half view: <i>Eating our way</i>
	to extinction: https://www.youtube.com/watch?v=LaPge01NQTQ
	Friday: Reflective thoughts towards the garden visit and the extinction documentary
	Required Readings: n/a
	Graded Assignments/Activities:
	 Reflection for Field and Fork and Movie (20 points)
	Topic: Debate and Mid-point review on reflections, final one
9	Faculty Facilitators: Farnsworth
(Mar 6-10)	
(10101 0 10)	Monday In class debates
	Monday: In-class debates
	Wednesday: In-class debates
	Friday: In-class debates
	Popuired Populinger n/2
	Required Readings: n/a
	Graded Assignments (Activities:
	Graded Assignments/Activities:
	In-class Debates (50 points)
(Mar 12 17)	
(Mar 13-17)	SPRING BREAK WEEK: NO CLASSES
	UNIT 3: What We <i>Do</i> Eat and What We <i>Should</i> Eat
	Topic: <u>What Should We Eat, and Why?</u>
10	Faculty Facilitator: Acosta
(Mar 20-24)	
	Monday: EAT-Lancet Commission Findings
	Wednesday: EAT-Lancet Commission Recommendations

	Eridau Dran far Dabatas Navt Waak
	Friday: Prep for Debates Next Week
	Required Readings:
	Willett W, Rockstrom J, Loken B, et al. Food in the Anthropcene: the EAT- <i>Lancet</i>
	Commission on healthy diets from sustainable food systems. <i>Lancet</i> . 2019; 393: 447-
	492. (https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(18)31788-
	4.pdf?utm_campaign=tleat19&utm_source=HubPage) (45 pages)
	Graded Assignments/Activities:
	Reflection (20 points)
	Topic: Debates
11	Faculty Facilitators: Acosta
(Mar 27-31)	
	Monday: In-class debates
	Wednesday: In-class debates
	Friday: In-class debates
	Graded Assignments/Activities:
	In-class Debates (50 points)
	Topic: Food Waste
12 (Apr 3-7)	Faculty Facilitators: Farnsworth
	Monday: Plate waste discussion/ keeping track at home.
	Wednesday: Policies affecting food waste
	Friday: Discussion of Grant article
	Required Readings:
	Bolos LA, Lagerkvist CJ, Nayga RM. Consumer Choice and Food Waste: Can Nudging
	Help? Choices. 2019; Quarter 1. (<u>http://www.choicesmagazine.org/choices-</u>
	magazine/theme-articles/examining-food-loss-and-food-waste-in-the-united-
	states/consumer-choice-and-food-waste-can-nudging-help) (7 pages)
	DISCUSSION PAPER: Grant K, Gallardo RK, McCluskey JJ. Are Consumers Willing to Day to Poduce Food Waste? Chaises, 2010; Quarter 1
	Pay to Reduce Food Waste? <i>Choices</i> . 2019; Quarter 1. (http://www.choicesmagazine.org/choices-magazine/theme-articles/examining-
	food-loss-and-food-waste-in-the-united-states/are-consumers-willing-to-pay-to-
	reduce-food-waste) (7 pages)
	Also watch this video:
	 Stuart T. The global food waste scandal. TedTalk.
	(https://www.ted.com/talks/tristram stuart the global food waste scandal)
	(Video: 14 minutes)
	Additional Recommended Resources:
	• Dunning RD, Johnson LK, Boys KA. Putting Dollars to Waste: Estimating the Value of
	On-Farm Food Loss. Choices. 2019; Quarter 1.
	(http://www.choicesmagazine.org/choices-magazine/theme-articles/examining-
	food-loss-and-food-waste-in-the-united-states/putting-dollars-to-waste-estimating-
	the-value-of-on-farm-food-loss)

	 Wilson NLW, Miao R, Weis C. When in Doubt, Throw It Out! The Complicated
	Decision to Consume (or Waste) Food by Date Labels. Choices. 2019; Quarter 1.
	(http://www.choicesmagazine.org/choices-magazine/theme-articles/examining-
	food-loss-and-food-waste-in-the-united-states/when-in-doubt-throw-it-out-the-
	complicated-decision-to-consume-or-waste-food-by-date-labels)
	 Minor T, Hitaj C, Kuchler R, Skorbiansky SR, Roe B, Thornsbury S. Exploring Food Loss
	from Farm-to-Retail in the Produce Industry. <i>Choices</i> . 2019; Quarter 1.
	(http://www.choicesmagazine.org/choices-magazine/theme-articles/examining-
	food-loss-and-food-waste-in-the-united-states/exploring-food-loss-from-farm-to-
	<u>retail-in-the-produce-industry</u>)
	Graded Assignments/Activities:
	Reflection plate waste and what you can do differently (20 points)
	Topic: What can we do differently?
13	Faculty Facilitator: Andrade
(Apr 10-14)	•
	Monday: Sustainable foods
	Wednesday: Technology and the fear
	Friday: Discussion of Dargie article
	Fillay. Discussion of Dargie alticle
	Required Readings:
	 Jennings B. Ethical Aspects of Sustainability. Center for Humans and Nature.
	(https://www.humansandnature.org/ethical-aspects-of-sustainability) (2 pages)
	• Jackson R. Unpacking the ethics of food sustainability: health, harmony, and beyond.
	Nuffield Council on Bioethics. (<u>http://nuffieldbioethics.org/blog/unpacking-ethics-</u>
	food-sustainability-health-harmony) (1 page)
	 Askew K. Fast food versus slow food: A choice of 'ethics and sustainability'. Food
	Navigator. (<u>https://www.foodnavigator.com/Article/2018/09/24/Fast-food-versus-</u>
	slow-food-A-choice-of-ethics-and-sustainability) (2 pages)
	• DISCUSSION PAPER: Dargie J. Biotechnology, GMOs, Ethics and Food Production.
	Food and Agriculture Organization of the United Nations.
	(http://www.fao.org/News/2001/stockholm/biotech.pdf) (21 pages)
	Graded Assignments/Activities:
	Reflection of journal article (20 points)
	Topic: <u>Gathering around a global table</u>
14-15	Faculty Facilitator: Andrade
(Apr 17-26)	
	Monday: Miscellaneous topics – Impact of external factors not discussed
	Wednesday: Miscellaneous topics – How media makes it better Or not
	Friday: Presentations
	Monday: Presentations
	Wednesday: Presentations
	Required Readings: n/a
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	Graded Assignments/Activities:	
	 Gathering around a global table (50 points) 	
Final Exam	Comprehensive final exam (100 points)	
Week		

IV. Student Learning Outcomes (SLOs)

At the end of this course, students will be expected to have achieved the <u>Quest</u> and <u>General Education</u> learning outcomes as follows:

- **Content**: Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline(s).
 - Identify, describe, and explain the cross-disciplinary dimensions of a pressing societal issue or challenge as represented by the social sciences and/or biophysical sciences incorporated into the course (Quest 2).
 - Identify the social and economic determinants of dietary patterns around the world and discuss the health implications of different eating styles (Gen Ed).
 - Describe the basic principles of food economics, and how they impact production, distribution, and consumption of food around the globe (Gen Ed).
- **Critical Thinking**: Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline(s).
 - Critically analyze quantitative or qualitative data appropriate for informing an approach, policy, or praxis that addresses some dimension of an important societal issue or challenge (Quest 2).
 - Evaluate the interconnectedness of food systems and planetary health, and synthesize the meaning of sustainability in the context of a food system (Gen Ed).
- **Communication**: Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).
 - Develop and present, in terms accessible to an educated public, clear and effective responses to proposed approaches, policies, or practices that address important societal issues or challenges (Quest 2).
 - Propose potential solutions for feeding a growing global population in a healthful, economically feasible, and environmentally responsible way, and identify potential barriers to implementing such solutions (Gen Ed).
- **Connection**: Students connect course content with meaningful critical reflection on their intellectual, personal, and professional development at UF and beyond.
 - Connect course content with critical reflection on their intellectual, personal, and professional development at UF and beyond (Quest 2).
 - Recognize how you, as an individual, and you, as a part of a community, can personally contribute now and in your career to addressing food security, sustainability, and environmental issues (Gen Ed).

V. Quest Learning Experiences

1. Details of Experiential Learning Component

• Visit to UF Farm and Gardens: The Farm and Gardens host a variety of production systems that can be used for experiential learning, classes, tours, and events. From art and history to engineering and agronomy, the space is designed to allow all academic disciplines to explore and experience food systems concepts and sustainable agriculture in practice. Additionally, staff, interns, and volunteers work together to manage the space and provide food for the Alan and Cathy Hitchcock Pantry and local charities, such as GRACE Marketplace and Bread of the Mighty Food Bank.

2. Details of Self-Reflection Component

As discussed in the Graded Work section, you will be reflecting on the information presented to you. There are 10 reflections assignments throughout the semester. These are occasions when you will examine what you think, why you think it, and what are the implications of your thoughts for yourself and for others. In either a video format or document, address these questions:

- What do you think about this situation and why?
- How will you explain to friends or family members the importance of this situation?
- How will you use this information in your future career and personal life?

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

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 <u>https://disability.ufl.edu/students/get-started/</u>. 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.aa.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 <u>https://ufl.bluera.com/ufl/</u>. Summaries of course evaluation results are available to students at <u>https://gatorevals.aa.ufl.edu/public-results/</u>.

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

(<u>https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/</u>) 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.

Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: <u>http://www.counseling.ufl.edu/cwc/Default.aspx</u>, 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.