IDS 2935: Future Food
Quest 2

I. General Information

Class Meetings

- Asynchronous
- Online

Instructors

- Kelsi Matwick, PhD and Keri Matwick, PhD, Faculty in the Department of Journalism
- Office hours by appointment
- kelsimatwick@ufl.edu and kerimatwick@ufl.edu

Course Description

This Quest 2 course discusses scientific and technological advances in the science of food. *How does modern science improve the food we eat?* Relying on the disciplines of food science, food engineering, and linguistics, the course investigates and reflects on how modern science is being used to improve the health of our bodies and our planet. Topics include modern technologies such as artificial intelligence and the cognitive science of taste and food language. These themes are represented on an international level, with national and regional examples presented for classroom discussions and activities. Through experiments, observations, and food site visits, students see the current way of growing and preparing food and begin to inquire about the feasibility of feeding a global population in an environmentally-responsible and sustainable way. Guided by the lines of inquiry: *what should we eat*? *how will we feed the world?*, the class engages with the topic of future food through readings, videos, and lectures. Through individual and group work, the course provides students the opportunity to individually and collectively engage in and critically think about how interdisciplinary teams work together to solve pressing problems.

Assignments include short essays, experiments, and reports, which focus on the future of food and our expectations around it. The course culminates with a final group presentation that addresses one of the problems raised in class and offers viable solutions. As the course is of the future, imagination and creativity are encouraged so assignment deliverables are in a variety of formats, including videos, presentations, illustrations, and documents. Course resources are also in a variety of formats–book chapters, journal articles, documentaries, podcasts, newspaper articles, and onsite exhibits–that foster discussions and reflections about pressing issues of food in the future. As this course is entirely online, weekly discussions are an integral part of the class experience.

Quest 2, General Education, and Writing Requirement Credits

- Quest 2
- Social & Behavioral Sciences

- Writing Requirement (WR) 2000 words
- This course accomplishes the Quest and General Education 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

None required.

Recommended Readings and Works

American Psychological Association. (2020). *Publication Manual of the American Psychological Association, 7th Edition.* ISBN: 978-1-4338-3217-8. The APA Style 7th Edition is available on the Purdue OWL

Recommended Writing Guide: A terrific guide to general writing rules: Strunk & White's *The Elements of Style.* The first edition is available online for free: https://www.bartleby.com/141/

McGee, H. (2004). *On Food and Cooking: The Science and Lore of the Kitchen*. Scribner Books.

Spence, C. (2017). *Gastrophysics: The New Science of Eating.* New York: Viking.

All other readings and works are available on Canvas.

Materials and Supplies Fees: n/a

II. Graded Work

Description of Graded Work

Graded Work	Points
Assignments	
Chemistry and Cooking Experiment	50
Flavor Sensory Experiment	50
Aroma Wheel and Tasting Experiment	50
Genre Analysis of Food Journalism	50
Experiential Learning Report and Self-Reflection	50
Future Food Problem-Solution Presentation	70
Group Evaluation	5
Sub-total	**325**
Participation and Discussion	
Working in Food, Science, and Technology	25
Burgers from Different Points of View	25
Dietary Guidelines from Around the World	25
Food Labels and Choices	25
Technology in the Food Industry	25
Design a Future Food	25
The Future of Farming	25
Problem-Solution Planning Memo	25
Sub-total	**200**
Total	**525**

Grading Scale

For information on how UF assigns grade points, visit: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/ A minimum grade of C is required for General Education credit. Courses intended to satisfy the General Education requirement cannot be taken S-U.

A	94 – 100%		C	74 – 76%
A-	90 – 93%		C-	70 – 73%
B+	87 – 89%		D+	67 – 69%
B	84 – 86%		D	64 – 66%
B-	80 – 83%		D-	60 – 63%
C+	77 – 79%		E	<60

Description of Assignments

Note: further instructions regarding format and content will be distributed before the assignments are due. Each of these assignments counts towards the course's Writing Requirement and must be completed to receive WR credit.

Chemistry and Cooking Experiment (500-600 words; 50 points)

You will conduct a cooking experiment and write a report and 500-word evaluation about it. This essay counts toward the course's writing requirement. The goal is to demonstrate your understanding of how knowledge of chemistry applies to the kitchen; to compare and explain the results in a clear and precise manner; and thoughtfully engage in responding to why there are so many ways to achieve the same goal, and how these problem-solving strategies can be applied to future problems. Further instructions regarding format and content will be distributed before the paper is due.

Flavor Sensory Experiment (250-300 words; 50 points)

In this assignment, you will design and conduct a flavor sensory experiment. You'll select one food item and test your experience eating in two different scenarios. The goal is to provide you with an opportunity to engage in experiential learning and for you to demonstrate your ability to process and reflect on material presented in different formats on a topic related to food science. The report (min 250 words) counts towards the course's Writing Requirement. Grading will be based on an informative description of the experiment and results; a thoughtful reflection of what was learned from the experiment in how the senses affect taste; two in-text citations to the week's readings or podcast; and two photos, one of each scenario. See rubric for more detail on the course platform.

Aroma Wheel and Tasting Experiment (250-300 words; 50 points)

In this experiential learning assignment, the goal is to apply your understanding of aroma and taste by conducting a tasting and smelling experiment. You will sharpen your ability to describe taste. This paper counts toward the course's Writing Requirement. The paper has two grading components: 1) Write about your experiment, including what beverage and wheel you used. Include your list of words that you identified to describe the taste and smell of your beverage. 2) Respond (min 250 words) to the questions: did the experiment improve your tasting experience? In what ways? Include at least 1 photo showing the setup of the experiment. Include the link to the Aroma Wheel you used. Further instructions regarding format and content will be distributed before the paper is due.

Genre Analysis of Food Journalism (500-600 words; 50 points)

In this close reading assignment, you will demonstrate an understanding of journalism and food. The goal is that you learn to identify characteristics of media reporting on our food system and reflect on the information presented to you and how it is constructed. You will analyze a document on a global level, or the macro elements of the text, and a local level, by considering the sentence-level writing. Together, the global and local approach helps us see how authors *say* their overall message and *how* in the words and writing style. In a paper (min 500 words), you will address the Global and Local Key Concerns. Include an introduction with the article title, and identify its context— publication, audience, and author. Finish with a conclusion on how the genre analysis helped you understand better the conventions of food journalism. This paper counts towards the course's Writing Requirement.

Experiential Learning Report and Self-Reflection Assignment: Methods of Growing Food (500 words; 50 points)

In this experiential learning assignment, you'll investigate methods of growing food by going on a field trip to a food production site. The goal is to observe current ways of growing foods; identify challenges facing traditional farming; and predict how farming methods will be transformed in the future. For the report (min 250 words), document your visit by taking photos and/or video recordings and notes. Submit at least 2 images or video recordings. Describe what you learned and include what, when, where, and who you met. Explain the goal of the food production site, how it is being done, and its challenges, and how you think it will impact or be impacted by the future. For the self-reflection (min 250 words), address these prompts: how has the trip helped you understand where food comes from and how it is grown? How does this experience inform your own food choices? This assignment counts towards the course writing requirement (Report is 250 words and Reflection is 250 words= total 500 words).

Future Table: Problem-Solution Final Presentation (70 points)

In lieu of a traditional Final Exam, you will present a problem-solution recorded video presentation. Working as a group, research one problem that we discussed in class. Research and learn about the problem: explain the origins, the problems raised, and the significance. Then, offer at least one potential solution to solve the problem. The goal is to reveal an understanding of the main themes of the course and give a clear and visually appealing multimedia presentation.

Grading will be based on the following: Create an original, effective, and engaging presentation with at least 5 visuals; a recording of the presentation that is 5-6 minutes long. Each member must speak and be visible on at least 2 slides. Presentation speaking must be evenly distributed among members. Use at least 5 references; at a minimum, 2 must be from the course materials. Provide in-text citations throughout the presentation. Include References as the last slide. Each member is expected to contribute throughout the planning, writing, and delivery of the presentation.

Group Evaluation (5 points)

Group projects are dependent on everyone's contribution and participation to the final project. Success relies on communication, participation, input, and work both in quantity and quality. This Group Evaluation gives you an opportunity to evaluate members of your group of the Problem-Solution Final Presentation as well as evaluate your own work.

Directions: Please evaluate yourself and each team member on a 4-point scale (1= excellent, 2= good, 3= fair, 4= poor) across 4 variables: prepared, timely, courteous, task-appropriate.

For each team member, type in his/her name, then the score, and add comments explaining your evaluations; provide details and examples (1-3 lines). Outstanding award is optional and can be self-nominated too.

Your evaluations and comments will be taken into account in the final grade of the Final Presentation. Grading is based on completion and thoroughness. See example evaluation on the course platform.

Participation – Discussions

Participation is an integral part of success in this class. This consists of contributing timely and complete posts to the Discussion board. You are expected to ask questions, offer thoughtful comments, and contribute positive energy to the discussion. Following the class netiquette is expected.

Netiquette- Our online etiquette includes professionalism, accuracy, use of proper grammar and punctuation, and respecting others' opinions.

Discussion Posts: Discussions will be conducted throughout the course based on readings, podcasts, and video viewings. Posts should respond in full to the discussion prompts and meet the indicated word count. The first post is due on Thursday, 11:59 pm EST. Reply posts are due on Sunday, 11:59 pm EST. The number of response posts required (1 or 2) is indicated on the instructions of each Discussion. Grading is based on timeliness, completeness, and thoughtfulness as well as demonstration of knowledge of the unit readings and materials.

Grading Rubric(s)

Writing Assessment Rubric and Statements

	Satisfactory (Y)	**Unsatisfactory (N)**
Content	Papers exhibit at least some evidence of ideas that respond to the topic with complexity, critically evaluating and synthesizing sources, and provide at least an adequate discussion with basic understanding of sources.	Papers either include a central idea(s) that is unclear or off-topic or provide only minimal or inadequate discussion of ideas. Papers may also lack sufficient or appropriate sources.
Organization and Coherence	Documents and paragraphs exhibit at least some identifiable structure for topics, including a clear thesis statement but may require readers to work to follow progression of ideas.	Documents and paragraphs lack clearly identifiable organization, may lack any coherent sense of logic in associating and organizing ideas, and may also lack transitions and coherence to guide the reader.

Argument and Support	Documents use persuasive and confident presentation of ideas, strongly supported with evidence. At the weak end of the satisfactory range, documents may provide only generalized discussion of ideas or may provide adequate discussion but rely on weak support for arguments.	Documents make only weak generalizations, providing little or no support, as in summaries or narratives that fail to provide critical analysis.
Style	Documents use a writing style with word choice appropriate to the context, genre, and discipline. Sentences should display complexity and logical sentence structure. At a minimum, documents will display a less precise use of vocabulary and an uneven use of sentence structure or a writing style that occasionally veers away from word choice or tone appropriate to the context, genre, and discipline.	Documents rely on word usage that is inappropriate for the context, genre, or discipline. Sentences may be overly long or short with awkward construction. Documents may also use words incorrectly.
Mechanics	Papers will feature correct or error-free presentation of ideas. At the weak end of the satisfactory range, papers may contain some spelling, punctuation, or grammatical errors that remain unobtrusive, so they do not muddy the paper's argument or points.	Papers contain so many mechanical or grammatical errors that they impede the reader's understanding or severely undermine the writer's credibility.

- The Writing Requirement (WR) ensures students both maintain their fluency in writing and use writing as a tool to facilitate learning.
- The instructors will evaluate and provide feedback before the end of the course on all of the students' written assignments with respect to grammar, punctuation, clarity, coherence, and organization.
- WR course grades have two components. To receive writing requirement credit, a student must receive a grade of C or higher and a satisfactory completion of the writing component of the course.

Participation and Discussion Rubrics

Criteria	Ratings	Points
Informed and Thoughtful	Posts show evidence of having done the assigned work. They accomplish synthesis, analysis, or critique of the readings, issues raised, and peer posts, rather than a simple summary. Posts meet the minimum word count as indicated in the assignment.	**- / 10**
Writing Skill	Posts are clearly written in an appropriate tone and demonstrate a mastery of standard English grammar and sentence structure. Follows APA style when citing sources.	**-- / 5**
Participation and Timeliness	Posts contribute to the discussion and take the perspective of others into account. Posts are professional and respectful. Posts are timely and contribute throughout the week. First post is completed by Thursday, 11:59 pm EST. Reply post(s) are completed by Sunday, 11:59 pm EST. The required number of posts is complete.	**-- / 10**
Total		**/25**

Attendance

Attendance is required. Attendance consists of participating actively in Discussion Boards and submitting Assignments on time. If more than six Discussion Posts and/or Assignments are not submitted during the term, the student will fail the entire course. Each day a submission is late is an automatic 10% deduction. After 5 days, the assignment will receive a 0.

Exemptions from this policy include only those indicated per UF's Attendance Policy:
"Acceptable reasons for absence from or failure to engage in class include illness; Title IX-related situations; serious accidents or emergencies affecting the student, their roommates, or their family; special curricular requirements (e.g., judging trips, field trips, professional conferences); military obligation; severe weather conditions that prevent class participation; religious holidays; participation in official university activities (e.g., music performances, athletic competition, debate); and court-imposed legal obligations (e.g., jury duty or subpoena). Other reasons (e.g., a job interview or club activity) may be deemed acceptable if approved by the instructor."
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Documentation must be submitted to instructors within 7 days of the event. Work must be made up no later than 7 days after the event.

III. Annotated Weekly Schedule

Week	Topic Area

	UNIT 1: The Science of Foods: Designing Our Edible Future
1	**Topic: Introduction: What is Future Food?** We start our journey on learning the richness of food and the complexity of the food challenges facing modern society with two key questions: one local and one global–what should I eat? How will we feed the growing world population? As we read, discuss, and reflect on the answers to these questions through food literature, we will begin to understand the exciting advances being made in the science of foods and apply these discoveries in our own lives. **Read:** McClements, David Julian. (2019). Chapter 1: The Science of Foods: Designing Our Edible Future. *Future Foods: How Modern Science is Transforming the Way We Eat.* pp. 1-16. (On Canvas) **Watch**: *Learn About Food Science.* [Video]. Institute of Food Technologists. (6:17 min) https://www.ift.org/career-development/learn-about-food-science **Discussion**: **Introduction** **Quiz**: Syllabus Scavenger Hunt
2	**Topic: Food Scientists and Future Food Science** Food science is a multidisciplinary subject with individuals across academic disciplines working together solving important problems. With a food science degree, you can influence food choices, flavors, and products- oh the possibilities! The average supermarket carries more than 20,000 items, most of which were developed into safe, tasty, and affordable products by food scientists. Imagine walking down the aisle of the grocery store and knowing that you had an important role in bringing a product from farm to fork. As a food scientist, you might work at a large global corporation with the opportunity to travel the world. You might work for a government agency or non-profit foundation. You might start your own business or work with a small start-up company. Whichever route you choose, there's a job waiting for you. We will highlight some exciting aspects of working in this field as well as speculate how these careers may change in the future. **Read:** *Future Foods,* Chapter 1, pp. 16-25 **Explore:** UF Food Science and Nutrition Department and learn about the innovative research of UF faculty and careers in food science. **Discussion**: **Working in Food, Science, and Technology**
	UNIT 2: Food Science and Cooking
3	**Topic: Food Science and Cooking** Through an understanding of science, chefs are designing new foods and discovering new methods on how to cook more delicious, healthy, and sustainable foods. Chefs and food scientists construct food from edible building blocks: water, protein, carbohydrates, fats, and salts. Harold McGee and J. Kenji López-Alt are two food scientists who have applied their knowledge to the kitchen. We consider how they approached different ways to problem-solve cooking the perfect hard-boiled egg. Why are there so many ways to make the perfect egg? and why is it important to keep improving on how we do things?

	Read: ● *Future Foods*, Edible Bricks and Mortar, pp. 35-53. ● *Future Foods,* Jellifying: The Science of the Hard-Boiled Egg, pp. 40-41. ● McGee, H. (2004). Chapter 2: Eggs (pp. 68-117). *On Food and Cooking: The Science and Lore of the Kitchen*. (especially pp. 87-89). ● J. Kenji Lopez-Alt. (Sep 23, 2019). How to boil the perfect egg? *The New York Times.* **Experiment: Chemistry and Cooking**
	UNIT 3: The Science of Deliciousness
4	**Topic: It has to taste good!** The food industry is constantly improving or developing new products to make them healthier or more sustainable. However, these foods will only be successful if they are actually eaten, so they must taste delicious! Our perception of food flavor is a complex phenomenon based on the integration of inputs from various senses, combined with expectations from personal preferences and past experiences. Smell, taste, touch, sight, and sound all impact the way we perceive flavors. **Read:** ● Spence, C. (2017). "Taste." Chapter 1. *Gastrophysics: The New Science of Eating.* New York: Viking. pp. 1-20. ● Harrar, V., Piqueras-Fiszman, B., & Spence, C. (2011). There's more to taste in a coloured bowl. *Perception, 40*, 880-882. **Listen:** ● Podcast interview by Christopher Kimball with Charles Spence: Milk Street, Episode 502, Jan 8, 2021: Frontiers of Food Science: Do Sound and Color Affect Flavor? [especially 22:08- 36:37] **Experiment: Flavor Sensory and Taste Perception**
	UNIT 4: The Language of Food
5	**Topic: Perception and Language: Describing Food and the Aroma Wheel** Language provides a medium for describing the contents of our conscious experience. We use it to share our experiences, thoughts, and intentions with other individuals. Language also has a direct effect on perceptual experiences. In a seminal study, Kay and Kempton (1984) found that linguistic labels influence decisions in a color categorization task. In the same spirit, studies over the past decade have demonstrated how perception is influenced by language. We first learn about wine talk and how language influences our perception of the taste of wine. Then, we conduct an experiment to identify how smell helps us taste food. We'll reflect on how this knowledge can be used towards eating tastier food in the future.

	In the 1980s, Ann C. Noble, PhD, of UC Davis, invented the Wine Aroma Wheel. Now, other aroma wheels have been designed for other foods, such as coffee and chocolate. Being able to identify whether a coffee is "juicy" or "fishy" helps us become better tasters of what makes for good food and enhances our experiences in life. **Read:** ● Hyman, Erin. (24 March, 2011). What Wine-Speak Says About Us. SFMOMA Open Space Blog. ● Lehrer, Adrienne. (2008). Chapter 1. *Wine and Conversation: A New Look*. Oxford Scholarship. pp. 3 – 18. ● Miller-Wilson, Kate. (2022). How to use a Wine Tasting Wheel. *Love to Know.* ● Bosker, B. (29 July, 2015). Is There a Better Way to Talk About Wine? *The New Yorker.* **Watch:** ● Watch this short course (8:00) on the Wine Aroma Wheel and learn the origin and development of the wheel. ● Interview with Dan Jurafsky (11:00): Learning the language of food with Dan Jurafsky **Experiment: Aroma Wheel and Tasting**
	UNIT 5: Towards a More Ethical and Sustainable Future
6	We look to the future and how to feed our growing world. In response to rising consumer demand for meat alternatives, many food companies are developing innovative meat-free products. This involves creating foods with similar properties to existing meat products, such as veggie burgers or sausages or using alternative protein-rich products like tofu or tempeh. This week, we will compare the components of beef and plant-based burgers by determining the production and processing methods of each product; evaluate the ingredients and nutritional differences between beef and plant-based products; and discuss different points of view in the agricultural industry concerning plant-based proteins and traditional beef. This lesson covers a socioscientific issue and aims to provide you with tools to evaluate science within the context of social and economic points of view. **Watch:** ● 2011 documentary *Forks over Knives* to understand the link between chronic diseases and eating meat products. Available for free streaming: https://www.forksoverknives.com/the-film/ (1:36:00) ● Eating less meat won't save the planet about the defense of beef versus plant-based food. (23:11) **Read:** ● Bernard, H. R. (2021). The science in social science. *Proceedings of the National Academy of Science, 109*(51), 20796-20799. This reading will help you recognize how social and behavioral sciences have produced technologies and engineering

	that dominate our everyday lives such as marketing, polling, management, and public health programs. **Discussion: Burgers from Different Points of View** - The social and behavioral sciences have produced technologies and engineering that relate to our everyday lives. These include marketing, public health programs, polling, and management. Like data from polling, data of future food may be both qualitative and quantitative (public sentiment, cultural differences, quality/quantity, etc.). - With your research on your point of view, what does this show about public sentiment and understanding? How do we use these numbers and knowledge to help us make decisions for the greater good?
	UNIT 6: What Should I Eat?
7	**<u>Topic: Dietary Guidelines Around the World</u>** This unit we explore the role of food and nutrition guidelines. Understanding what makes food nutritious helps you make healthy food options. Yet, what to eat differs per culture. Countries around the world offer different dietary guidelines that are intended to establish a basis for public food and nutrition that inform health policies and education programs. By analyzing nutrition guidelines, we develop an awareness of what is being consumed while linking the information to consumer health. We'll also reflect on how government institutions shape the dietary consumption of future generations. **Discussion: Dietary Guidelines Around the World**
8	**<u>Topic: Journalism and Food</u>** The media provide the public with investigations and commentary on aspects of the food sphere. Food journalism reports on food trends and policy changes to the factors behind the food we eat. Stories can range from why bananas are so cheap or how the human brain experiences taste or the reasons behind the latest food recall or how school lunch debt works. Here we examine how food writers tell stories about people, culture, and food. Foods reflect a culinary history and evolution spanning multiple influences, peoples, and places coming together. Food culture is a dynamic expression of prevailing norms– tastes, dietary preferences, and availability of ingredients. What we will be thinking, writing, and reading about in the future about food will undergo significant changes. The goal of the assignment, Genre Analysis of Food Journalism, is to see how authors *say* their overall message and *how* in the words and writing style. In doing so, you'll have a better understanding of the conventions of food journalism. **Genre Analysis of Food Journalism**

9	**Topic: Food Advertising** This week focuses on advertising in food, looking at how institutions and market interests have sought to shape consumers' understandings of food, pleasure, and personal responsibility to health. With tastes linked to advertising, community, experiences—what is authentic and innovative- is explored. By making connections between historical and present food media, we consider how labels convey certain messages about food in a broader, evolving information market of consumers. **Read:** ● Freedman, J., & Jurafsky, D. (2011). Authenticity in America: Class Distinctions in Potato Chip Advertising. *Gastronomica, 11,* 46-54. ● ArtCenter Designmatters Department, Rethinking the Food Label, Summer 2011. ● Berenstein, N. (Feb 1, 2018). "Clean Label's Dirty Little Secret," The New Food Economy. **Discussion: Food Labels and Choices**
10	**SPRING BREAK**
	UNIT 7: Technology, Creativity, and Food
11	**Topic: Food Technology in the Kitchen** As foods and cooking techniques continue to develop, so will the future of food, such as the use of AI in the food industry. Learning about the history of kitchens and how they have changed over the years will help us understand the changes predicted in the future of kitchens. **Discussion: Technology in the Food Industry**
12	**Topic: Flavor Principles and Food** Cooking transforms basic ingredients into appropriate dishes. The components of cuisines are largely shaped by geography and by what is more or less locally available. The selection of basic foods depends on a wide variety of variables: availability, environmental factors (such as climate and soil), ease of production, nutritional benefit, and palatability (Rozin, 2000). All foods, whether meat, fish, vegetables, and grains provide unique qualities of flavor, texture, aroma, and appearance. The goals of this lesson are to identify flavors in cuisines, discuss how flavor plays a role in defining an occasion or significance of a meal, and apply your understanding through hands-on learning and design. An increased understanding of culinary diversity raises questions of future ingredient combinations and whether flavor principles transcend individual preferences and time. **Read** ● Ahn, Y., Ahnert, S., Bagrow, J., & Barabasi, A. (2011). Flavor network and the principles of food pairing. *Scientific Reports 1*(196), 1-6.

	• Rozin, E. (2000). The role of flavor in the meal and the culture. In H. Meiselman (Ed.), *Dimensions of the meal: The science, culture, business, and art of eating* (pp. 134-142). Springer. • Rozin, E. (2005). Flavor principles: Some applications. In C. Korsmeyer (Ed.), *The taste culture reader* (pp. 42-48). Oxford: Berg. **Discussion: Design a Future Food**
	Unit 8: The Future of Food
13	**Topic: The Future of Food Production** In this lesson, we consider the future of food production of growing crops in three methods: traditional, modern, and future. We learned earlier how AI and robots are being developed to transform gastronomy; they are also being used in the production of food itself. Food farming is no longer limited to the breadbaskets of the world. Greenhouses, vertical farming, and hydroponics are among the future types of farming. **Read:** • Smith, N. (9 Oct. 2018). America's first autonomous robot farm replaces humans with 'incredibly intelligent' machines. *The Guardian.* • Birkby, J. (Jan 2016). Vertical farming. *ATTRA Sustainable Agriculture* **Watch:** • *CNBC Television,* (19 Apr 2022). Iron Ox mixes robotics, AI and farming to transform industrial agriculture. https://youtu.be/srnTNerqorg (3:19) • *CNBC Television,* (3 Oct 2018). Watch Robots Grow Food Without Farmers. https://youtu.be/vtwNKga6thw (2:56) • "Growing Up: How Vertical Farming Works," (2019), *The B1M.* https://youtu.be/QT4TWbPLrN8 (6:19) **Discussion: The Future of Farming**
14	**Topic: Experiential Learning: Farm Visit** Building on the material from last week, this week focuses on farming through an experiential learning assignment. You'll visit a farm or food site of your choice and examine its process. Options include a traditional farm, vertical farm, vineyard, farmer's market, community garden, restaurant garden, school garden, or fish farm. You'll examine the operation and assess its current and future challenges. By engaging in hands-on experience and interaction, you will be better able to connect theories and knowledge learned in the classroom to real-world situations. The assignment includes a report on your trip with at least two images and a self-reflection. **Read:** • Kateman, B. (July 14, 2020). Is the future of farming indoors? *Forbes.* https://www.forbes.com/sites/briankateman/2020/07/14/is-the-future-of-farming-indoors/?sh=19bd37732cc0

	• Asseng, S., et al. (2021). Implications of new technologies for future food supply systems. *The Journal of Agricultural Science, 159,* 315-319. https://doi.org/10.1017/S0021859621000836 **Experiential Learning Report and Self-Reflection Assignment: Methods of Growing Food**
15-16	**Topic: Looking Ahead to the Future of Food** In the final weeks, we contemplate the future of food in articles on ethics, sustainability, and AI. It's important to prepare you, the leaders of tomorrow–and AI and food innovations are our today and our tomorrow. **Read:** • Estabrook, B. (Feb 11, 2022). The Future of Farming Is in Crisis—Here's What's Being Done to Safeguard Our Food System. *Eating Well*. https://www.eatingwell.com/longform/7945845/who-will-farm-our-future/ • Askew K. (Sep 24, 2018). Fast food versus slow food: A choice of 'ethics and sustainability'. Food Navigator., https://www.foodnavigator.com/Article/2018/09/24/Fast-food-versus-slow-food-A-choice-of-ethics-and-sustainability • Abarbanel, A. (Apr 22, 2022). Sushi As We Know It Will Not Survive. Can the Restaurant Industry Reinvent It?. *Bon Appetit.* **Listen:** • Martin, M. (Apr 23, 2022). "What climate change could mean for what goes on your plate." *All Things Considered.* [podcast] *NPR* (5:00) https://www.npr.org/2022/04/23/1094510431/what-climate-change-could-mean-for-what-goes-on-your-plate?t=1650975313777 **Problem-Solution Planning Memo** **Future Table: Problem-Solution Final Presentation** **Group Evaluation**

IV. Student Learning Outcomes (SLOs)

At the end of this course, students will be expected to have achieved the Quest and General Education 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 journalism, social sciences, and biophysical sciences incorporated into the course (Quest 2, S). Assessment: Discussions, Assignments.
  - Identify the social and economic determinants of dietary patterns globally and discuss the health implications of different eating styles. Assessment: Class Assignments.

    - Describe the basic principles of food journalism, science, and technology and how they impact production, distribution, and consumption of food around the globe (S). Assessment: Discussions, Assignments.
- **Critical Thinking:** *Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the disciplines(s).*
    - Critically analyze quantitative or qualitative data appropriate for informing an approach or policy that addresses important societal issues or challenges (Quest 2, S/B). Assessment: Discussions.
    - Evaluate the interconnectedness of journalism and food science and synthesize the meaning of food innovation (Quest 2). Assessment: Discussions, Assignments.
- **Communication:** *Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline(s).*
    - Develop and present in clear and effective responses to essential questions about linguistic and environmental issues (Quest 2, S). Assessment: Planning Memo, Presentation
    - Propose potential solutions for creating healthier products to feed the population and enhance the eating experience of people in an ethically and environmentally responsible way, and identify potential barriers to implementing such solutions (S/B). Assessment: Discussions, Final Presentation.
- **Connection:** *Students connect course content with meaningful critical reflection on their intellectual, personal, and professional development at UF and beyond.*
    - Connect course themes like sustainability, food security, and journalism to their own intellectual, personal, and professional development at UF and beyond (Quest 2). Assessments: Reflections, Final Presentation.
    - Connect the technologies and outcomes of social and behavioral sciences (qualitative/quantitative) to our everyday life (Quest 2, S/B). Assessment: Discussions.
    - Reflect on their experience identifying a food security issue and imagining a future that overcomes their chosen issue (Quest 2). Assignment: Final Presentation.

V. Quest Learning Experiences

1. Details of Experiential Learning Component

The course includes an experiential learning component. This assignment has students investigate methods of growing food by going on a field trip. Observing current ways of growing foods helps students consider how farming and food production are being done and how they may be transformed in the future.

Assignment Instructions:

Pick one of the following to visit:

- **Traditional Farm:** Conventional farms rely on natural methods to grow crops and is still a practice used by half of the world's farming population.
- **Vertical Farm:** Vertical farms are among the new ways of farming. If you are in the Florida area, here are some options: Kalera in Orlando, Hardee Fresh in Wauchula, Florida Microgreens in Cape Coral, and Imagine Farms in Little Miami.
- **Community Garden:** Besides building stronger communities, community gardens have many benefits, including making fresh produce accessible, promoting healthier lifestyles, relieving stress, and improving food security.
- **Restaurant Garden:** More and more restaurants are growing their own gardens to directly supply the food served at the restaurant. Gardens also offer an immersive experience for diners who can gaze out the window at the cool greens and tomatoes heavy on the trellis.
- **School Garden:** School gardens provide students with experiential learning opportunities to see how food is grown. They also connect students to healthy eating by motivating them to try the foods that they help grow.
- **Farmers' Markets:** Food markets are sites where farmers bring their goods to sell directly to consumers. They are good places to meet the growers as well as try some tasty food too.
- **Vineyards:** Vineyards grow grapes that are picked and harvested for wine. In the spring, the groundwork for harvest is laid and vines are replanted. While late summer and early fall are typically the busiest time for vineyards, the spring time shows the planning and early stages required to grow grapes.
- **Fish Hatchery:** Fish farms breed, hatch, and grow fish to be sold for food.
- **Meat production site:** UF Meat Processing lab or cattle ranch offers insight into meat production.
- **Other**: please email the instructors if you have another type of food production site that you would like to visit.

1) Report:

- Document your visit by taking photos and/or video recordings and notes. Submit at least 2 images or video recordings.
- Describe what you learned, include what, when, where, and who you met with. Explain the goal of the food production site, how it is being done, and how you think it will impact or be impacted by the future.

2) Self-Reflection: Address these questions:

- How has this site visit helped you understand where food comes from and how it is grown?
- How will this experience inform your own food choices?

Submission: Report + Self-Reflection

- Submit your report, two images or video recordings, and self-reflection as one file.
- You can be creative in the format - presentation, video, blog, written document plus images, or a combination of modes. The report must include at least two images from your site visit. If submitted as an audiovisual file, include the transcript as well.

2. Details of Self-Reflection Component

- Self-reflection is naturally integrated into the course with discussions and readings that ask students to explore how modern science is transforming the way we eat and talk about food.
- The Experiential Learning Assignment includes a Self-Reflection component (Weeks 15-16): In either a video format or document, address these questions: How has this site visit helped you understand where food comes from and how it is grown? How will this experience inform your own food choices?

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 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.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 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.

The use of artificial intelligence or Chabot software is considered academic dishonesty. As indicated in the Honor Code, "A Student must not submit as their own work any academic work in any form that the Student . . . obtained from an outside source."

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 instructors in this class.

Counseling and Wellness Center

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