

AOM4060/6061
AGRI-FOOD SYSTEMS INNOVATION
SPRING 2022

1. **Catalog Description:** *3 credits.* Students explore the role of innovation in food systems from a reverse chain perspective. Students will gain knowledge of the food system framework from a multi-level (i.e., individual, organizational, etc.) perspective, identify current, innovative business and technological practices, as well as present and think critically about future trends in food.
2. **Instructor:** Dr. Adam Watson
 - a. Office location: 113 Frazier Rogers Hall
 - b. Telephone: 352-294-6740
 - c. E-mail address: jaw7385@ufl.edu
 - d. Course site: Canvas e-Learning. Announcements will be made through Canvas.
 - e. Office hours: MWF 7th and 8th Periods (1:55pm – 3:50pm) or by appointment

Teaching Assistant: Adam Fuerst

- a. E-mail address: Accessed via Canvas e-Learning.
- b. Office hours: By appointment

Your professor has an open-door policy, so do not hesitate to knock on his office. If he is not in his office, please email him and he will respond. To speak to your TA (if one is available during the semester) please use the Canvas messaging inbox system to directly ask a question or to schedule an appointment. **IMPORTANT:** When contacting the professor or the teaching assistant, please allow up to 48 hours for a response, not including weekends or holidays. In addition, your instructor wants to ensure your assignments are graded in a timely many so please allow for 3-5 school days for your assignments to be graded and returned.

3. **Meeting Times:** MWF 3rd Period (9:35am – 10:25am)
4. **Meeting Location:** 129 Frazier Rogers Hall.

In-person sections must meet in the designated meeting location. This course will also meet synchronously through Zoom for online sections ONLY.

For online sections, please use the Zoom link within Canvas (left-hand side of Canvas Course page under Zoom Conferences) to join each meeting. In the event that class cannot be held safely in-person, the entire class will resume and meet online through Zoom at the regularly scheduled meeting time. Lectures will be recorded and can be viewed later and can be found under the Zoom Conferences tab.

5. **Course Pre-requisites/Co-requisites:** Any AOM or ABE or PKG course, or junior standing
6. **Course Objectives:**

Students, upon completing this course, will be able to:

- a. Recognize the importance of agri-food systems innovation.
- b. Define and describe innovation in agri-food systems, including identifying points in the system that provide opportunities as well as challenges for participants.
- c. Analyze innovation in the agri-food industry, including current and future trends.
- d. Apply a systems perspective to think critically about the inter-relationships within agri-food systems.
- e. Summarize the agri-food system and discuss changes that improve efficiency, safety, affordability, profitability, and sustainability.
- f. Create an innovative food product conceptual plan demonstrating knowledge of food sensory attributes, safety, distribution and marketing.

7. Course Schedule: Listed assigned meeting times.

Week	Date	Module	Activity	Assignment Due
1	2-Jan	1	No Class	
	3-Jan		No Class	
	4-Jan		No Class	
	5-Jan		Introductions	
	6-Jan		No Class	
	7-Jan		Lecture	Syllabus Quiz
	8-Jan		No Class	
2	9-Jan	2	No Class	
	10-Jan		Lecture	
	11-Jan		No Class	
	12-Jan		Lecture	
	13-Jan		No Class	
	14-Jan		Activity	Quiz 2
	15-Jan		No Class	Discussion Post 2
3	16-Jan	3	No Class	
	17-Jan		Holiday MLK	
	18-Jan		No Class	Case Study 1 Analysis
	19-Jan		Lecture	
	20-Jan		No Class	
	21-Jan		Lecture	Quiz 3
	22-Jan		No Class	Discussion Post 3
4	23-Jan	4	No Class	
	24-Jan		Lecture	
	25-Jan		No Class	
	26-Jan		Lecture	
	27-Jan		No Class	

	28-Jan		Activity	Quiz 4
	29-Jan		No Class	Discussion Post 4
5	30-Jan	5	No Class	
	31-Jan		Lecture	
	1-Feb		No Class	Case Study 2 Analysis
	2-Feb		Lecture	
	3-Feb		No Class	
	4-Feb		Lab	Quiz 5
	5-Feb		No Class	Discussion Post 5
	6		6-Feb	6
7-Feb		Lecture		
8-Feb		No Class		
9-Feb		Day of Gratitude		
10-Feb		No Class		
11-Feb		Lecture	Quiz 6	
12-Feb		No Class	Discussion Post 6	
7	13-Feb	Exam Week	No Class	
	14-Feb		Review	
	15-Feb		No Class	
	16-Feb		Exam 1	Exam 1
	17-Feb		No Class	
	18-Feb		No Class	
	19-Feb		No Class	
8	20-Feb	7	No Class	
	21-Feb		Lecture	
	22-Feb		No Class	
	23-Feb		Lecture	
	24-Feb		No Class	
	25-Feb		Activity	Quiz 7
	26-Feb		No Class	Discussion Post 7
9	27-Feb	8	No Class	
	28-Feb		Lecture	
	1-Mar		No Class	
	2-Mar		Lecture	
	3-Mar		No Class	
	4-Mar		No Class	Quiz 8
	5-Mar		No Class	Discussion Post 8
10	6-Mar	---	No Class	
	7-Mar		Spring Break	
	8-Mar		Spring Break	

	9-Mar		Spring Break	
	10-Mar		Spring Break	
	11-Mar		Spring Break	
	12-Mar		No Class	
11	13-Mar	9	No Class	
	14-Mar		Lecture	
	15-Mar		No Class	Case Study 3 Analysis
	16-Mar		Lecture	
	17-Mar		No Class	
	18-Mar		Lecture	Quiz 9
	19-Mar		No Class	Discussion Post 9
12	20-Mar	10	No Class	
	21-Mar		Lecture	
	22-Mar		No Class	
	23-Mar		Lecture	
	24-Mar		No Class	
	25-Mar		Activity	Quiz 10
	26-Mar		No Class	Discussion Post 10
13	27-Mar	11	No Class	
	28-Mar		Lecture	
	29-Mar		No Class	Case Study 4 Analysis
	30-Mar		Lecture	
	31-Mar		No Class	
	1-Apr		Activity	Quiz 11
	2-Apr		No Class	Discussion Post 11
14	3-Apr	12	No Class	
	4-Apr		Lecture	
	5-Apr		No Class	
	6-Apr		Lecture	
	7-Apr		No Class	
	8-Apr		Activity	Quiz 12
	9-Apr		No Class	Discussion Post 12
15	10-Apr	Presentations	No Class	
	11-Apr		Presentations	
	12-Apr		No Class	Case Study 5 Analysis
	13-Apr		Presentations	
	14-Apr		No Class	
	15-Apr		Presentations	
	16-Apr		No Class	
16	17-Apr	Exam Week	No Class	

	18-Apr		Review	Reports Due
	19-Apr		No Class	
	20-Apr		Exam 2	Exam 2
	21-Apr		Reading Day	
	22-Apr		Reading Day	
	23-Apr		No Class	
	24-Apr	Final Exam Week	No Class	
	25-Apr		No Class	
	26-Apr		No Class	
	27-Apr		No Class	
	28-Apr		No Class	
	29-Apr		No Class	
	30-Apr		No Class	

8. Materials and Supply Fees: None

9. Textbook, Coursepack, Technology and Software:

Required Course Pack

- Harvard Business Publishing Case Studies.
- Access link: <https://hbsp.harvard.edu/import/888306>
- Price: \$21.25 (online only, credit card required)

Recommended Textbook

- Jongen, W. M., & Meulenbergh, M. (Eds.). (2005). Innovation in agri-food systems. Wageningen Academic Pub.
 - Available for Free in Canvas Webpage
 - For purchase:
 - (OUT OF PRINT IN PAPER)
 - E-BOOK CAN STILL BE PURCHASED ONLINE AT:
 - <http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-666-3>
 - Price: \$75.00

Required Technology and Software

- Computer, tablet, or phone with internet access browser (e.g., Chrome, Edge, Safari, Firefox) brought to class to participate in live polling activities during lectures.
- Word processing software (e.g., Microsoft Word, Google Docs).

Graduate Student Reading List

- Berthet, E. T., Hickey, G. M., & Klerkx, L. (2018). Opening design and innovation processes in agriculture: Insights from design and management sciences and future directions. *Agricultural Systems*, 165, 111–115.

<https://doi.org/10.1016/J.AGSY.2018.06.004>

- Berti, G., Mulligan, C., Berti, G., & Mulligan, C. (2016). Competitiveness of Small Farms and Innovative Food Supply Chains: The Role of Food Hubs in Creating Sustainable Regional and Local Food Systems. *Sustainability*, 8(7), 616. <https://doi.org/10.3390/su8070616>
- Blay-Palmer, A., Sonnino, R., & Custot, J. (2016). A food politics of the possible? Growing sustainable food systems through networks of knowledge. *Agriculture and Human Values*, 33(1), 27–43. <https://doi.org/10.1007/s10460-015-9592-0>
- Cohen, N., & Ilieva, R. T. (2015). Transitioning the food system: A strategic practice management approach for cities. *Environmental Innovation and Societal Transitions*, 17, 199–217. <https://doi.org/10.1016/J.EIST.2015.01.00>
- Kanter, R., Walls, H. L., Tak, M., Roberts, F., & Waage, J. (2015). A conceptual framework for understanding the impacts of agriculture and food system policies on nutrition and health. *Food Security*, 7(4), 767–777. <https://doi.org/10.1007/s12571-015-0473-6>
- Matson, J., & Thayer, J. (2013). The role of food hubs in food supply chains. *Journal of Agriculture, Food Systems, and Community Development*, 3(4), 1–5. <https://doi.org/10.5304/jafscd.2013.034.004>
- Meynard, J.-M., Jeuffroy, M.-H., Le Bail, M., Lefèvre, A., Magrini, M.-B., & Michon, C. (2017). Designing coupled innovations for the sustainability transition of agrifood systems. *Agricultural Systems*, 157, 330–339. <https://doi.org/10.1016/J.AGSY.2016.08.002>
- King, T., Cole, M., Farber, J. M., Eisenbrand, G., Zabarar, D., Fox, E. M., & Hill, J. P. (2017). Food safety for food security: Relationship between global megatrends and developments in food safety. *Trends in Food Science & Technology*, 68, 160–175. <https://doi.org/10.1016/J.TIFS.2017.08.014>

10. Course Outline:

- 1 Introduction to agri-food systems innovation**
- 2 Innovation in agri-food systems marketing**
 - 2.1 Introduction
 - 2.2 The agri-food systems: A marketing framework
 - 2.3 Developments in the environment of the agri-food system
 - 2.4 Changing actors in the food marketing systems
 - 2.5 Basic strategies of agri-food systems
 - 2.6 Conclusions
- 3 Consumer behavior with regard to food innovation**
 - 3.1 Why care about consumer behavior?
 - 3.2 The Total Food Quality Model

- 3.3 Purchase motives, quality dimensions and quality cues: The vertical dimension of perceived quality
- 3.4 Quality expectations and quality experience: The horizontal dimension of perceived quality
- 3.5 Perceived quality, perceived price and decision making
- 3.6 The Total Food Quality Model and new product acceptance: Three prerequisites for the successful development of new food products
- 3.7 Social media and consumer behavior
- 3.8 Conclusions
- 4 New product development: principles and practices in a consumer-oriented market**
 - 4.1 Introduction
 - 4.2 General principles of consumer-oriented NPD
 - 4.3 Product market(ing) and consumer factors in New Product Development success
 - 4.4 Putting consumer-oriented NPD into practice
 - 4.5 Application for food quality improvement
 - 4.6 Case studies in food quality improvement
 - 4.7 Conclusions
- 5 Food safety and consumer behavior**
 - 5.1 Introduction
 - 5.2 Food risk analysis
 - 5.3 Risk Analysis = Risk Assessment + Risk Communication + Risk Management
 - 5.4 Historical perspective of risk communication
 - 5.5 Risk as a social construct
 - 5.6 Case study I: Food scares
 - 5.7 Case Study II: Genetically modified foods
 - 5.8 Case Study III: The introduction of functional foods
 - 5.9 New approaches to risk communication: Restoring trust by transparency and enhanced public involvement in decision processes
 - 5.10 Conclusions
- 6 Technological innovation in the food industry: product design**
 - 6.1 Introduction
 - 6.2 Food quality
 - 6.3 Food chains
 - 6.4 Food technology
 - 6.5 Consumer images
 - 6.6 Product design
 - 6.7 Conclusions
- 7 Food production: trends in system innovation**
 - 7.1 Introduction
 - 7.2 Developments in food processing
 - 7.3 Developing in food packaging
 - 7.4 Microtechnology: a nucleus for system innovation
 - 7.5 Conceptual process design: Towards product-oriented process design
 - 7.6 Conclusions
- 8 Nutritional aspects of food innovations: a focus on functional foods**

- 8.1 Introduction
- 8.2 The concept of functional foods
- 8.3 The regulatory environment
- 8.4 Expectation of future developments
- 8.5 Possibilities and challenges for the food industry
- 8.6 Consumer acceptance
- 8.7 Conclusions
- 9 Integration of innovation in the corporate strategy of agri-food companies**
 - 9.1 Introduction
 - 9.2 Innovation
 - 9.3 Strategic management
 - 9.4 Dimensions of an innovation strategy
 - 9.5 Management implications
 - 9.6 Conclusions
- 10 Innovations in logistics in the food supply chain networks**
 - 10.1 Introduction
 - 10.2 The emergence of chains and networks
 - 10.3 The evolution of logistics management
 - 10.4 The evolution of information management
 - 10.5 An overview of innovative concepts in logistics and ICT in FSCN
 - 10.6 The essence of innovations in logistics and ICT
 - 10.7 Conclusions
- 11 Food quality management and innovation**
 - 11.1 Introduction
 - 11.2 Food quality
 - 11.3 Food quality management functions
 - 11.4 Total Quality Management and innovation performance
 - 11.5 Food quality management and innovation
 - 11.6 Conclusions
- 12 Legislation and food innovation**
 - 12.1 Introduction
 - 12.2 The FDA Food Safety Modernization Act (FSMA)
 - 12.3 The Farm Bill
 - 12.4 The composition of food
 - 12.5 Food handling
 - 12.6 Packaging law
 - 12.7 Enforcement
 - 12.8 Industrial property rights
 - 12.9 Conclusions

Each module will open promptly at 12:00AM on Sunday each week in Canvas.

11 Grading:

Activity	Undergraduate Students	Graduate Students
Syllabus Quiz (1 @ 25 pts.)	2.5%	2.5%

Class Attendance (taken each lecture)	10.0%	0%
Discussion Posts* (11 @ 10 pts. each)	10.0%	10.0%
Quizzes* (11 @ 10 pts. each)	10.0%	10.0%
Case Study Review Assignments (5 @ 75 pts. each)	37.5%	37.5%
Exam 1 (1 @ 100 pts.)	10.0%	10.0%
Exam 2 (1 @ 100 pts.)	10.0%	10.0%
Food Product Development Report and Presentation (1 @ 100 pts.)	10.0%	10.0%
Literature Review (1 @ 100 pts.)	0%	10.0%

***Lowest scoring quiz and discussion post will be dropped from final grade**

- Quizzes are due Friday of each week at 11:59PM.
- Part A of the Discussion Posts is due on Saturday at 11:59PM. Part B is 48 hours later (following Monday). It is your responsibility to follow up on Discussion Posts and make sure you submit Part B on time.
- Students who have questions about their grades should contact their professor by e-mail. Do NOT contact the TA about grades assigned.

12 Grades and Grade Points:

Percent	Grade	Grade Points
93.0 - 100.0	A	4.00
90.0 - 92.9	A-	3.67
87.0 - 89.9	B+	3.33
83.0 - 86.9	B	3.00
80.0 - 82.9	B-	2.67
77.0 - 79.9	C+	2.33
73.0 - 76.9	C	2.00
70.0 - 72.9	C-	1.67
67.0 - 69.9	D+	1.33
63.0 - 66.9	D	1.00
60.0 - 62.9	D-	0.67
0 - 59.9	E	0.00

Assignments will be marked down for a sloppy presentation and, if excessive, they may be returned un-graded. All assignments must be typed and are due by the dates listed in Canvas by 11:59 PM of the due date unless alternative arrangements have been made with the instructor. Assignments will be marked down by 10% if late by one day and 50% if late by two days. Submissions will not be accepted after two days.

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

13 Attendance Policy, Class Expectations, and Make-up Policy: Requirements for class attendance and make-up exams, assignments and other work are consistent with

university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

Attendance (on time) is expected. Attendance will be recorded, and although attendance is not mandatory and directly apart of your grade, participation in the course is. It will be impossible to earn full participation points in this class without attending the lectures and engaging in the class discussions.

Acceptable reasons for absence from or failure to participate in class include illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays, and participation in official university activities such as music performances, athletic competition or debate. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused.

Laptops and mobile devices in class are permitted and encouraged. There will be several optional live polling questions during the lectures that you participate in while using your laptop or mobile device.

14 COVID-19 Response Statement: We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
 - Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.
- Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students

who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

15 Online Course Evaluation 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/>.

16 Academic Honesty: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

It is not acceptable to plagiarize in this class. Plagiarism occurs when you accidentally or purposefully do any of the following in an assignment:

- Use someone else's work or words either verbatim or almost verbatim without attribution
- Use someone else's evidence, line of thinking, idea, without attribution
- Turn in or pass someone else's work as your own, or copying someone else's paper and purchasing readymade papers and assignments
- Turn in work that has already been submitted as new without the instructor's approval

Maintaining ownership of your work is a challenging task when doing research or using information from various sources in assignments. Intentional or willful plagiarism is considered academic dishonesty. Plagiarism (accidental or willful) will be penalized by a failing grade on an assignment, failing grade in the course, and/or referral to the Dean of Students.

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action.

17 Software Use: All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

18 Services for Students with Disabilities: The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

19 Campus Helping Resources: Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available

on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu*
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>.

Student Complaints:

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

Additional information

Instructors may choose to clarify in their syllabus their teaching philosophy, expectations for classroom behavior, utilization of e-learning, and other information that will help students succeed in the course.