

AOM4060/6061
AGRI-FOOD SYSTEMS INNOVATION
SPRING 2020

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. Jonathan Adam Watson
 - a. Office location: 263 Frazier Rogers Hall
 - b. Telephone: 352-294-6740
 - c. E-mail address: jaw7385@ufl.edu
 - d. Course site: Canvas e-Learning
 - e. Office hours: MWF 7th and 8th Periods (1:55pm – 3:50pm) or by appointment

Teaching Assistant: N/A

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
5. **Pre-requisites and Co-requisites:** AOM or ABE or PKG, junior standing or by instructor approval
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.

7. Class Schedule: Listed assigned meeting times.

Week	Date	Module	Activity	Assignment Due
1	6-Jan	1 Introduction to agri-food systems innovation	Introductions	
	7-Jan		No Class	
	8-Jan		Lecture	
	9-Jan		No Class	
	10-Jan		Lecture	Syllabus Quiz
2	13-Jan	2 Innovation in agri-food systems marketing	Lecture	
	14-Jan		No Class	
	15-Jan		Lecture	
	16-Jan		No Class	
	17-Jan		Lecture	Quiz 2/Discussion Post 2
3	20-Jan	3 Consumer behavior with regard to food innovation	No Class/Holiday	
	21-Jan		No Class	Case Study Analysis 1
	22-Jan		Lecture	Case Study 1 Self/Peer Assessment
	23-Jan		No Class	
	24-Jan		Lecture	Quiz 3/Discussion Post 3
4	27-Jan	4 New product development: principles and practices in a consumer-oriented market	Lecture	
	28-Jan		No Class	Case Study Analysis 2
	29-Jan		Lecture	Case Study 2 Self/Peer Assessment
	30-Jan		No Class	
	31-Jan		Lecture	Quiz 4/Discussion Post 4
5	3-Feb	5 Food safety and consumer behavior	Lecture	
	4-Feb		No Class	
	5-Feb		Lecture	
	6-Feb		No Class	
	7-Feb		Lecture	Quiz 5/Discussion Post 5
6	10-Feb	6 Technological innovation in the food industry: product design	Lecture	
	11-Feb		No Class	Case Study Analysis 3
	12-Feb		Lecture	Case Study 3 Self/Peer Assessment
	13-Feb		No Class	
	14-Feb		Lecture	Quiz 6/Discussion Post 6
7	17-Feb	Exam Week	Review	
	18-Feb		No Class	
	19-Feb		Exam 1	Exam 1
	20-Feb		No Class	
	21-Feb		No Class	

8	24-Feb	7 Food production: trends in systems innovation	Lecture	
	25-Feb		No Class	Case Study Analysis 4
	26-Feb		Lecture	Case Study 4 Self/Peer Assessment
	27-Feb		No Class	
	28-Feb		Lecture	Quiz 7/Discussion Post 7
9	2-Mar	Spring Break	No Class	
	3-Mar		No Class	
	4-Mar		No Class	
	5-Mar		No Class	
	6-Mar		No Class	
10	9-Mar	8 Nutritional aspects of food innovations: a focus on functional foods	Lecture	
	10-Mar		No Class	Case Study Analysis 5
	11-Mar		Lecture	Case Study 5 Self/Peer Assessment
	12-Mar		No Class	
	13-Mar		Lecture	Quiz 8/Discussion Post 8
11	16-Mar	9 Integration of innovation in the corporate strategy of agri-food companies	Lecture	
	17-Mar		No Class	
	18-Mar		Lecture	
	19-Mar		No Class	
	20-Mar		Lecture	Quiz 9/Discussion Post 9
12	23-Mar	10 Innovation in logistics in the food supply chain networks	Lecture	
	24-Mar		No Class	Case Study Analysis 6
	25-Mar		Lecture	Case Study 6 Self/Peer Assessment
	26-Mar		No Class	
	27-Mar		Lecture	Quiz 10/Discussion Post 10
13	30-Mar	11 Food quality management and innovation	Lecture	
	31-Mar		No Class	
	1-Apr		Lecture	
	2-Apr		No Class	
	3-Apr		Lecture	Quiz 11/Discussion Post 11
14	6-Apr	12 Legislation and food innovation	Lecture	
	7-Apr		No Class	Case Study Analysis 7
	8-Apr		Lecture	Case Study 7 Self/Peer Assessment
	9-Apr		No Class	
	10-Apr		Lecture	Quiz 12/Discussion Post 12
15	13-Apr	Exam Week	Review	
	14-Apr		No Class	
	15-Apr		Exam 2	Exam 2
	16-Apr		No Class	
	17-Apr		No Class	

16	20-Apr	Final Exams Prep	No Class	
	21-Apr		No Class	
	22-Apr		No Class	
	23-Apr		Reading Day	
	24-Apr		Reading Day	
17	27-Apr	Final Exam Week	No Final Exam in This Course	
	28-Apr			
	29-Apr			
	30-Apr			
	1-May			

8. Material 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/689812>
- Price: \$29.75 (online only, credit card required)

Recommended Textbook

- Jongen, W. M., & Meulenbergh, M. (Eds.). (2005). Innovation in agri-food systems. Wageningen Academic Pub. (**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

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., Zabararas, 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/L.TIFS.2017.08.014>

10. Recommended Reading:

None

11. 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

13 Attendance and Make-up: Attendance (on time) is expected. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: [UF Attendance Policies](#).

14 Grading:

Activity	Undergraduate Students	Graduate Students
Class Participation	15%	5%
Discussion Posts*	15%	15%
Quizzes*	15%	15%
Case Study Reviews & Peer Assessments	15%	15%

Exam 1	20%	15%
Exam 2	20%	15%
Literature Review	0%	20%

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

Class Participation Grading Rubric

Grade	Participation Criteria
100 pts	<ul style="list-style-type: none"> • Student demonstrates the highest level of engagement in class participation, through either verbal or digital communication/interaction. • Offers analysis, synthesis, and evaluation of case material; for example, puts together pieces of the discussion to develop new approaches that take the class further.
95 pts	<ul style="list-style-type: none"> • Student eagerly volunteers to ask/answer questions and promotes a healthy discussion amongst peers. • Demonstrates good preparation: knows case or reading facts well, has thought through implications of them.
90 pts	<ul style="list-style-type: none"> • Student attitude is positive and productive for him/her and those students around him/her. • Student demonstrates satisfactory levels of engagement in class participation but lacks the effort to be truly excellent.
85 pts	<ul style="list-style-type: none"> • Student is willing to answer/ask questions and engage in course dialogue with fellow classmates. • Demonstrates consistent ongoing involvement and using polling software to provide feedback.
80 pts	<ul style="list-style-type: none"> • Student attitude is generally positive without fault to students around him/her. • Offers interpretations and analysis of case material (more than just facts) to class.
75 pts	<ul style="list-style-type: none"> • Student work ethic or attitude reveals apathy and/or much room for improvement. • Student is demonstrating a level of engagement in class participation but could make some improvement.
70 pts	<ul style="list-style-type: none"> • Student demonstrates very little engagement in classroom participation • Student takes very little interest in answering/asking questions either verbally or through the polling software
65 pts	<ul style="list-style-type: none"> • Student does not willingly answer/ask appropriate questions and does not engage in discussion • Student is unwilling to follow appropriate procedures and/or rules
60 pts	<ul style="list-style-type: none"> • Student has refused to complete or turn in a given assignment or performance-oriented task

	<ul style="list-style-type: none"> • Student is unwilling to follow appropriate procedures and/or rules
0 pts	<ul style="list-style-type: none"> • Student has demonstrated no involvement in classroom participation or discussion. • Student has failed to remain awake or intentionally disturbs those around him/her

Each student will have his/her class participation evaluated at the end of the semester. The grading rubric for class participation is in section **13. Grading**. Graduate students enrolled in this course will be required to draft a review article in addition to all other coursework listed in this syllabus. Graduate students are responsible for identifying peer-reviewed journal articles as source literature that focus on innovation in the agri-food system. Topics may include novel or new technologies that improve food safety, distribution logistics, or shelf life or articles that identify and propose alternative supply chain models (e.g., community support agriculture, farmers' markets, food hubs, etc.). Review article assignment directions will be available in Canvas. The intent is that we will produce a paper for publication with your names on it!

Students who have questions about their grades should contact their professor by e-mail. Do NOT contact the TA about grades assigned.

15 Grades and Grade Points:

- A [100.00 – 93.00%]
- A- [92.99 – 90.00%]
- B+ [89.99 – 87.00%]
- B [86.99 – 83.00%]
- B- [82.99 – 80.00%]
- C+ [79.99 – 77.00%]
- C [76.99 – 73.00%]
- C- [72.99 – 70.00%]
- D+ [69.99 – 67.00%]
- D [66.99 – 63.00%]
- D- [62.99 – 60.00%]
- E [59.99 – 0.00%]

For information on current UF policies for assigning grade points, see the [UF Undergraduate Catalog Grades and Grading Policies](#).

- 16 Assignments:** 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 otherwise specified by the instructor. For information on current UF grading policies, see the [UF Undergraduate Catalog Grades and Grading Policies](#).

17 Online Course Evaluation Process: Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at [GatorRater UF Evaluations](#). Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at [GatorRater UF Evaluations Summary Results](#).

18 Academic Honesty Policy: All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others. All work must be original and completed individually.

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 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. For more information view the [Student Conduct and Honor Codes](#).

19 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, [Disability Resource Center](#)

20 Campus Helping Services: 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,
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching
- *U Matter We Care*, <http://www.umatter.ufl.edu/>
- [Career Resource Center](#), First Floor JWRU, 392-1601

Student Complaints:

Student Complaint/Grievance Process [UF Complaints Policy](#)

21 Software Use and Technology Assistance: All faculty, staff and student 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. If you are having issues with technology and software including the Canvas site, please contact the [UF Help Desk](#) to resolve any matters. Additional information and resources about technology assistance and technical help can be found in the Canvas site on the page titled Technical Help.