

AOM4932/6932
AGRI-FOOD SYSTEMS INNOVATION

- 1. Catalog Description:** *3 credits.* This course is open to undergraduates and graduates alike and requires students to 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., global, national, and regional/local) perspective, identify current, innovative business and technological practices, as well as present and think critically about future trends in food.
- 2. Pre-requisites and Co-requisites:** None
- 3. 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. Use a systems perspective to think critically about the inter-relationships within agri-food systems.
 - e. Form an opinion on the state of our agri-food system and discuss changes that improve efficiency, safety, affordability, profitability, and sustainability.
- 4. Instructor:** Dr. Jonathan Adam Watson
 - a. Office location: 263 Frazier Rogers Hall
 - b. Telephone: 352-392-1864 x 263
 - c. E-mail address: jaw7385@ufl.edu
 - d. Course site: Canvas e-Learning
 - e. Office hours: MWF 4th Period (10:40am – 11:30am)
- 5. Meeting Times:** MWF 3rd Period (9:35am – 10:25am)
- 6. Class/Laboratory Schedule:** Listed assigned meeting times.

| Week | Date | Module | Activity |
|------|--------|--------|-----------------------|
| 1 | 8-Jan | 1 | Introductions |
| | 10-Jan | | Lecture |
| | 12-Jan | | Lecture |
| 2 | 15-Jan | 2 | Holiday/No Class |
| | 17-Jan | | Lecture |
| | 19-Jan | | Case Study Group Work |
| 3 | 22-Jan | 3 | Lecture |
| | 24-Jan | | Lecture |
| | 26-Jan | | Case Study Group Work |
| 4 | 29-Jan | 4 | Lecture |

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| | 31-Jan | | Lecture |
| | 2-Feb | | Case Study Group Work |
| 5 | 5-Feb | 5 | Lecture |
| | 7-Feb | | Lecture |
| | 9-Feb | | Case Study Group Work |
| 6 | 12-Feb | 6 | Lecture |
| | 14-Feb | | Lecture |
| | 16-Feb | | Case Study Group Work |
| 7 | 19-Feb | Exam Week | Review |
| | 21-Feb | | Exam 1 |
| | 23-Feb | | No Class |
| 8 | 26-Feb | 7 | Lecture |
| | 28-Feb | | Lecture |
| | 2-Mar | | Case Study Group Work |
| 9 | 5-Mar | Spring Break | No Class |
| | 7-Mar | | No Class |
| | 9-Mar | | No Class |
| 10 | 12-Mar | 8 | Lecture |
| | 14-Mar | | Lecture |
| | 16-Mar | | Case Study Group Work |
| 11 | 19-Mar | 9 | Lecture |
| | 21-Mar | | Lecture |
| | 23-Mar | | Case Study Group Work |
| 12 | 26-Mar | 10 | Lecture |
| | 28-Mar | | Lecture |
| | 30-Mar | | Case Study Group Work |
| 13 | 2-Apr | 11 | Lecture |
| | 4-Apr | | Lecture |
| | 6-Apr | | Case Study Group Work |
| 14 | 9-Apr | 12 | Lecture |
| | 11-Apr | | Lecture |
| | 13-Apr | | Case Study Group Work |
| 15 | 16-Apr | Exam Week | Review |
| | 18-Apr | | Exam 2 |
| | 20-Apr | | No Class |
| 16 | 23-Apr | Final Exam Prep | No Class |
| | 25-Apr | | No Class |
| | 27-Apr | | Reading Day |
| 17 | 30-Apr | Final Exam Week | Final Exam Date TBA |
| | 2-May | | Final Exam Date TBA |

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|--|-------|--|---------------------|
| | 4-May | | Final Exam Date TBA |
|--|-------|--|---------------------|

7. Meeting Location: 129 Frazier Rogers Hall

8. Material and Supply Fees: None

9. Textbooks and Software Required:

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

Harvard Business Publishing Case Studies. Access link:
Price:

10. Recommended Reading:

Howard, P. H. (2016). Concentration and Power in the Food System : Who Controls What We Eat? (1st ed.). Bloomsbury Academic.

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 regulator 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 Informed choice: Presentation of food products
- 12.7 Enforcement
- 12.8 Industrial property rights
- 12.9 Conclusions

12. Attendance, Expectations, and Exam Make-up Policy: Attendance (on time) at lectures is expected from all students at all times, and will be recorded at every class meeting. Students will use their cell phone, computer, or other electronic device to acknowledge their attendance by submitting so through a provided link that will temporarily activate during class hour. Otherwise, it is the responsibility of the student to make his or her presence known at the end of class to receive attendance credit. During the course of the semester, students may miss no more than three days without penalty to their attendance grade.

No make-up exams will be given except for valid medical reasons or unless prior arrangements have been made. Students may take an optional cumulative Final Exam at the end of the semester, which will replace their lowest grade from Exam 1 and Exam 2. Additional information and UF policies related to attendance, expectations, make-up exams can be found in the [Undergraduate Catalog](#).

13. Grading:

| | Undergraduate Students | Graduate Students |
|---------------------------------|-------------------------------|--------------------------|
| Class Participation | 15% | 5% |
| Discussion Posts | 15% | 5% |
| Quizzes | 15% | 15% |
| Case Study Reviews & Assessment | 25% | 25% |
| Exam 1 | 15% | 15% |

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|-------------------------|-----|-----|
| Exam 2 | 15% | 15% |
| Journal Article Reviews | 0% | 20% |

Class Participation Grading Rubric

| Grade | Participation Criteria |
|-------|---|
| 100 | <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 | <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 | <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 | <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 | <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 | <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 | <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 | <ul style="list-style-type: none"> • Student does not willingly answer/ask appropriate questions and does not engage in • Student is unwilling to follow appropriate procedures and/or rules |
| 60 | <ul style="list-style-type: none"> • Student has refused to complete or turn in a given assignment or performance-oriented task • Student is unwilling to follow appropriate procedures and/or rules |
| 0 | <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 |

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| around him/her |
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Each student will have his/her class participation evaluated multiple times during the semester. After Exam 1, students will receive a score as per the class participation grading rubric criteria and given brief feedback justifying their score. This will allow students to adjust their activity and engagement in class activities affording them the opportunity to improve their grade. The grading rubric for class participation is located in section **13. Grading**.

Graduate students enrolled in this course will be required to complete journal article reviews in addition to all other coursework listed in this syllabus. Graduate students are responsible for identifying peer-reviewed journal articles 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 paper assignments directions will be available in Canvas

14. Grading Scale:

- 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 Grades and Grading Policies section of the [UF Undergraduate Catalog](#).

15. 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 one week from when assigned. Assignments must be submitted via Canvas by 11:59 PM of due date. Assignments submitted late, but before 5:00 PM on the day following the due date, will be marked down 10 points. Assignments returned late, before 5:00 PM on the second day following the due date will be marked down 50 points. No assignments will be accepted after 5:00 PM on the third day following the due date

16. 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 [Gator Rater](#). 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 [Gator Rater](#).

- 17. 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 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](#)

- 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, [Disability Resource Center](#)

- 19. 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*, www.umatter.ufl.edu/
- [Career Resource Center](#), First Floor JWRU, 392-1601

Student Complaints:

Residential course: Dean of Students Office [UF Complaints Policy](#)

Online course: Distance Learning [Student Complaint Process](#)

- 20. Software Use:** 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.