

CALS Curriculum Committee Meeting

March 15, 2019

2:00 p.m.

1044 McCarty Hall D

Members: J. Brendemuhl, J.C. Bunch, D. Coenen, D. Gabriel, P. Inglett, S. Johnson, B. Kolaczowski, A. Mathews, G. Nunez, B. Pearson, W. Porter, C. Prince, K. Rose, S. Sager (Chair), M. Sharp, C. Stefanou, L. Warren, J. Weeks, C. Wilson A. Wysocki

Agenda and Index for Materials

Approve Minutes from February 15, 2018 meeting

Dr. Brendemuhl: Update from UCC

Graduate New Course Proposals

1. AOM 6XXX – Advanced Agri-food Systems Innovation (req. #13592)
2. HOS 5XXX – Root and Rhizosphere Ecology (req. #13683)
3. STA 6XXX – Multivariate Statistics for Agricultural and Life Sciences (req. #13713)

Undergraduate New Course Proposals

4. AOM 4XXX – Agri-food Systems Innovation (req. 13591)
5. PLS 3XXX – Introduction to Horticultural Therapy (req. #13569)
6. PLS 4XXX – Program Management in Horticultural Therapy (req. #13574)
7. PLS 4XXX – Techniques in Horticultural Therapy (req. #13573)

Certificate

8. Soil, Water, and Public Health Graduate Certificate (req. #13700)

Curriculum

9. Proposed termination of the Horticultural Science major specialization – Horticultural Production (req. #13716)
10. Proposed Horticultural Science specialization – Science and Technology of Horticultural Crops (req. #13720)

11. Proposed Horticultural Science specialization – Organic Horticultural Systems (req. #13721)

12. Proposed Horticultural Science specialization - Plant Biotechnology and Improvement (req. #13722)

Recycled Material

13. WIS 6XXX – Introduction to U.S. Wildlife Law, Policy, and Ethics (req. #12888)
Item previously submitted 1/11/2019. Comments as follows: A motion was made by Dr. Kolaczowski to recycle this item back to the department for required changes and resubmission. The motion was approved. Provide an external consultation form from the UF College of Law to ensure there is no excessive overlap with any existing courses. Provide a syllabus for the existing wildlife and conservation law course so the committee can see the differences. The committee suggests changing the verbs in the learning objectives section in the syllabus and on the UCC form. The verbs are acceptable but weak. There may be an issue further on in the approval process with their use considering this is a graduate level course. Also, the last objective (#7) should be explained further or removed completely. There needs to be a more substantial reading list included on the UCC form and in the syllabus for a graduate level course submission. The syllabus must contain available office hours. Condense all references to the courses make-up/late assignment policy and be sure not to contradict university policy. Check the submission for typing errors. The syllabus must contain the most recent version of the CALS syllabus statements boilerplate. This can be found at: <http://cals.ufl.edu/faculty-staff/docs/policies/CALS%20Syllabus%20Policy%202017-18.pdf>.

CALS Curriculum Committee Meeting

February 15, 2019

Submitted by James Fant (As reported by Drs. Porter and Brendemuhl)

Members Present: J. Brendemuhl, D. Coenen, D. Gabriel, B. Kolaczowski, A. Mathews, G. Nunez, W. Porter, C. Prince, K. Rose, S. Sager, C. Stefanou, L. Warren, J. Weeks, C. Wilson

Substitutes: Erica Diffenderfer for J.C. Bunch
Vanessa Hull for S. Johnson

Guests: Naim Montazeri-Djouybari
Greg MacDonald

Call to Order: The College of Agricultural and Life Sciences Curriculum Committee met on February 15, 2019 in Rm. 1044 McCarty Hall D. Scott Sager called the meeting to order at 2:00 p.m.

Previous agenda items and supporting material can be found on the CALS College Committees homepage under document archives: <https://cals.ufl.edu/faculty-staff/committees/>

Approval of Minutes: A motion was made by Dr. Wilson to approve the minutes from the January 11, 2019 meeting of the CALS CC. The motion was approved.

All items approved by the committee will be forwarded to either the Graduate Curriculum Committee (GCC), Graduate Council (GC) or the University Curriculum Committee (UCC) once any changes requested are made and the submission is complete.

Websites: Grades – <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>
Syllabus Statements – https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf
Absences & Make-Ups – <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Update from UCC: Dr. Brendemuhl noted the following items were acted upon at the UCC meeting on January 15th: A) Proposed change to undergraduate course: 1) FYC 4941 Practicum in Family, Youth and Community Sciences (recycled); B) Proposed new undergraduate course: 1) HOS 4XXXC Principles of Postharvest Horticulture (approved). He indicated the following items were on the February 19th agenda as informational: 1) Approval of the new graduate certificate in Environmental Microbiology and approval of a new graduate course SUR 6XXX Geodesy and Geodetic Positioning. Lastly, there were six courses submitted by CALS as potential pilot courses for Quest 2.

Graduate New Course Proposals

1. FOS 6XXX – Food and Environmental Virology (req. #13469)

This item was reviewed with item #7: FOS 4XXX – Food and Environmental Virology (req. #13470). All comments apply to both items unless otherwise stated. A motion was made to approve these items with required changes. The motion was approved. The co-listing explanation is listed twice on the graduate UCC form. An outside consultation is required from Microbiology and Cell Science. On the graduate UCC form there are two different times that slide sets are due, 11:59 p.m. and 5:00 p.m. Undergraduate course should not be listed as prerequisites for graduate courses. It is best to leave this section blank on the graduate UCC form and syllabus. Based on the point distribution scale in both items there is little difference between the graduate and undergraduate courses. The committee suggests providing a stand alone statement that will further explain these differences. If during this process point distribution is adjusted be sure to include this change on both items. The boilerplate statements at the end of both syllabuses need to be replaced with the most recent version. This can be found at: https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf.

2. WIS 6XXX – Biodiversity (req. #13539)

A motion was made by Dr. Porter to recycle this item back to the department for required updates and resubmission. The motion was approved. Clarify the category of instruction. A joint graduate /undergraduate course requires submission of a course at both levels (4000 & 6000). If this is a stand alone graduate course the UCC form needs to be updated. The committee had a concern that 40% of the final grade being based on participation was too high. If 40% of the final grade should in fact be based on participation you will need to provide a more in depth explanation as to how this percentage is assessed. The boilerplate statements at the end of the syllabus need to be replaced with the most recent version. This can be found at: https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf.

3. WIS 6XXX – Data Carpentry for Biologists (req. #13538)

A motion was made by Dr. Kolaczowski to recycle this item back to the department for required updates and resubmission. The motion was approved. The course description on the UCC form must match the description in the syllabus. The attendance policy is listed twice in the syllabus. The grading scale needs to include decimal points (A 93-100, A- 90-92.9, B+ 87-89.9, etc.). This will help avoid any unnecessary debate when final grades are awarded. There needs to be a greater explanation of how grades are assessed in this course. The boilerplate statements at the end of the syllabus need to be replaced with the most recent version. This can be found at: https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf. Also, the committee was concerned with the overall structure of the syllabus. Reconstruction is suggested.

Graduate Course Change Proposal

4. MCB 6781 – Archaea and Biotechnology (req. #13524)

Title change. This item was reviewed with item #10: MCB 4782 – Archaea and Biotechnology (req. #13523). A motion was made by Dr. Porter to approve these items as submitted. The motion was approved.

Undergraduate New Course Proposals

5. ALS 3XXX – Home and Community Gardening: Collegiate Master Gardener (req. #13576)

A motion was made by Dr. Nunez to recycle this item back to the department. The motion was approved. Dr. Nunez proposed that the submitter contact him directly to discuss excessive overlap with an existing HOS course.

6. FOS 3XXX – Life After Graduation (req. #13492)

A motion was made by Dr. Porter to recycle this item back to the department for required edits and resubmission. The motion was approved. The verbs used in the course objectives are unmeasurable and/or lack the expected rigor. These need to be replaced with verbs that demonstrate a higher order of thinking. There is too much credit being given to attendance in this course. The committee is very concerned that a student could have perfect attendance, do poorly on the two required projects, and still pass the class. The boilerplate statements at the end of the syllabus need to be replaced with the most recent version. This can be found at: https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf.

7. FOS 4XXX – Food and Environmental Virology (req. #13470)

See item #1.

Undergraduate Course Change Proposals

8. ALS 3203 – PC Use in Agriculture (req. #13492)

Course termination. A motion was made by Dr. Porter to approve this item as submitted. The motion was approved.

9. FAS 2024 – Global and Regional Perspectives in Fisheries (req. #13488)

Title change. Dr. Kolaczowski made a motion to approve this item with changes required. Replace “Understand” at the beginning of the third outcome with a more acceptable verb. The boilerplate statements at the end of the syllabus need to be replaced with the most recent version. This can be found at: https://cals.ufl.edu/content/PDF/Faculty_Staff/CALS-Syllabus-Policy.pdf.

10. MCB 4782 – Archaea and Biotechnology (req. #13523)

See item #4.

11. PEN 2138 – Advanced SCUBA Diving (req. #13572)

Credit change from 2 to 3. A motion was made by Dr. Kolaczowski to approve this item with a change required. The motion was approved. Correct typo in the description of request field on the cover sheet.

Certificate Proposal

12. Weed Science Graduate Certificate (req. #12696)

A motion was made by Dr. Porter to approve this item with changes required. The motion was approved. Update the language in the learning outcomes to reflect the expected rigor of a graduate level certificate.

Curriculum

13. Proposed Changes to the Agricultural Operations Management Undergraduate Curriculum (req. #13588)

A motion was made by Dr. Wilson to approve this item as submitted. The motion was approved.

14. Proposed Changes to the Family, Youth, and Community Sciences 8-Semester Plan (req. #13521)

A motion was made by Dr. Porter to approve this item as submitted. The motion was approved.

15. Proposed Changes to the Natural Resource Conservation Undergraduate Curriculum (req. #13489)

A motion was made by Dr. Porter to approve this item as submitted. The motion was approved.

Recycled Submission

16. SWS 6XXX – Modeling Land Biogeochemistry (req. #13378)

Item previously reviewed 12/14/2018. Dr. Porter made a motion to approve this item with updates required. Outside consults need to be from department chairs. Issue can be solved by requesting emails from department chairs saying they support the decision made by the faculty member.

Discussion

17. Proposed Guidelines for CALS Course Objectives

A motion was made by Dr. Porter to approve the new guidelines. The motion was approved.

The meeting was adjourned at 3:30 p.m.

Cover Sheet: Request 13592

AOM6XXX

Info

Process	Course New Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jonathan Watson jaw7385@ufl.edu
Created	2/7/2019 3:41:27 PM
Updated	2/15/2019 10:04:26 AM
Description of request	The instructor and the department want to formalize this course as it has been offered as an AOM6932 Special Topics. We request this course be approved and designated an official course code for inclusion into the University of Florida Course Catalog.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Agricultural Operations Management 514907001	Wendell Porter		2/15/2019
AOM4932_AOM6932_Agri-food Systems Innovation_Syllabus.pdf					2/7/2019
College	Pending	CALS - College of Agricultural and Life Sciences			2/15/2019
No document changes					
Graduate Curriculum Committee					
No document changes					
University Curriculum Committee Notified					
No document changes					
Statewide Course Numbering System					
No document changes					
Graduate School Notified					
No document changes					
Office of the Registrar					
No document changes					
College Notified					
No document changes					

Course|New for request 13592

Info

Request: AOM6XXX

Description of request: The instructor and the department want to formalize this course as it has been offered as an AOM6932 Special Topics. We request this course be approved and designated an official course code for inclusion into the University of Florida Course Catalog.

Submitter: Jonathan Watson jaw7385@ufl.edu

Created: 2/7/2019 3:36:14 PM

Form version: 1

Responses

Recommended Prefix AOM

Course Level 6

Number XXX

Category of Instruction Joint (Ugrad/Grad)

Lab Code None

Course Title Advanced Agri-food Systems Innovation

Transcript Title Adv. Ag-food Sys. In.

Degree Type Graduate

Delivery Method(s) On-Campus, Online

Co-Listing Yes

Co-Listing Explanation This course differs for undergraduate and graduate students regarding assignments and assessment. All students in the course participate in the same lectures, case study analyses, discussion posts, quizzes, and exams; however, graduate students are assigned an exclusive semester long project over multiple assignment. In that project, graduate students are tasked with reviewing recent literature on a topic provided by their instructor, then they are required to compile and draft a review article that will be published in a peer reviewed journal. The project is broken up over five assignment submissions which include an outline creation and identification of an appropriate journal, three draft submissions, and a final review-ready submission.

Effective Term Earliest Available

Effective Year Earliest Available

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 3

Course Description 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.

Prerequisites None

Co-requisites None

Rationale and Placement in Curriculum To my knowledge, there are currently no courses offered in the College of Agricultural and Life Sciences or at the University of Florida that present a holistic view of the food system from a reverse-chain (i.e., consumer-oriented) perspective. Although there are courses (e.g., ENT4015: The Venture Accelerator) and programs (e.g., Innovation Academy) that teach innovation concepts in the curricula in a general sense (i.e., through entrepreneurship, leadership, and ethics) none of those courses emphasize innovation as a central theme within a food systems' framework.

The Agricultural Operations Management program in the Department of Agricultural and Biological Engineering (ABE) has a broad curriculum that prepares its graduates for diverse career pathways interests. Undergraduates choose concentrations ranging from Agribusiness Management (AOM), Animal Production Management, Horticulture and Crop Management, Fishery and Aquatic Production,

Sustainable Energy and Facilities among others. The diversity of faculty and students in ABE makes AOM an ideal fit for this course as the food system is complex, dynamic and adaptive requiring critical and innovative thinking to solve humankind's most challenging issues.

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

- 1 Recognize the importance of agri-food systems innovation.
- 2 Define and describe innovation in agri-food systems, including identifying points in the system that provide opportunities as well as challenges for participants.
- 3 Analyze innovation in the agri-food industry, including current and future trends.
- 4 Apply a systems perspective to think critically about the inter-relationships within agri-food systems.
- 5 Summarize the agri-food system and discuss changes that improve efficiency, safety, affordability, profitability, and sustainability.

Course Textbook(s) and/or Other Assigned Reading Required Textbook:

- Jongen, W. M., & Meulenberg, M. (Eds.). (2005). *Innovation in agri-food systems*. Wageningen Academic Pub.
<http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-666-3>
- Price: \$75.00 (UF Bookstore or direct textbook or .pdf online)

Although the required course textbook is dated from 2005, I have yet to find a better, more comprehensive textbook that integrates multiple aspects and topics in a food systems approach as this one. Of the other textbooks that do exist, I can find none that approach the food system from a holistic perspective, focusing on the needs and importance of the consumer. In addition, this textbook has innovation as a central theme which is a major driver of change in the food systems approach.

Course pack:

- Harvard Business Publishing Case Studies.
- Access link: <https://hbsp.harvard.edu/import/577881>
- Price: \$34.00 (online only, credit card required)

Graduate Student Reading List:

- Berthet, E. T., Hickey, G. M., & Klerx, 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., Zabar, 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>

Weekly Schedule of Topics The following list contains general topic areas and modules within the course. When looked at individually, some of this material is indeed taught in other courses and departments within CALS and at UF. However, when viewed as an integrated series of topics within a single course with a central theme of innovation as its focus, there are few similar courses available to students. This integrated, holistic view is essential for students to synthesize the complex social, environmental, and economic dynamics that make up our food system.

- 6 Introduction to agri-food systems innovation

- 7 Innovation in agri-food systems marketing
- 8 Consumer behavior with regard to food innovation
- 9 New product development: principles and practices in a consumer-oriented market
- 10 Food safety and consumer behavior
- 11 Technological innovation in the food industry: product design
- 12 Food production: trends in system innovation
- 13 Nutritional aspects of food innovations: a focus
- 14 Integration of innovation in the corporate strategy of agri-food companies
- 15 Innovations in logistics in the food supply chain networks
- 16 Food quality management and innovation
- 17 Legislation and food innovation

A detailed list of these topic areas with module specific subsections can be found in the course syllabus as part of Section 11: Course Outline as well as a detailed table of activities and assignments with due dates in Section 7: Class Schedule.

Links and Policies 1 UF Undergraduate Catalog Attendance Policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

2 UF Undergraduate Catalog Grades and Grading Policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

3 Gator Rater: <https://evaluations.ufl.edu/evals/Default.aspx>

4 Student Conduct and Honors Codes: <https://sccr.dso.ufl.edu/process/student-conduct-code/>

5 Disability Resource Center: <https://disability.ufl.edu/>

6 University Counseling & Wellness Center: <https://counseling.ufl.edu/>

7 U Matter We Care: <http://www.umatter.ufl.edu/>

8 Career Resource Center: <https://career.ufl.edu/>

9 Student Complaint/Grievance Process:

https://flexible.dce.ufl.edu/media/flexibleuceufl.edu/documents/student_complaint_grievance_policy.pdf

Grading Scheme Undergraduate and graduate students have separate grading schemes for many of the activities in this course; however, students do complete many of the same activities often as group activities where groups consist of a mix of undergraduates and graduates. In the instances where they are required to complete an assignment as a group, the grading scheme is the same for all students. Yet, there are certain activities only required of the graduate students and not undergraduates. The following includes a list of all activities for the course followed by the percentage contribution for undergraduates and graduates respectively:

- 1 Class participation (15% UG, 5% G)
- 2 Discussion posts (15% UG, 5% G)
- 3 Quizzes (15% UG, 15% G)
- 4 Case Study Reviews & Assessments (25% UG, 25% G)
- 5 Exam 1 (15% UG, 15% G)
- 6 Exam 2 (15% UG, 15% G)
- 7 Review Article (0% UG, 20% G)

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%]

This grading scheme is also found in Section 13: Grading of the syllabus.

Instructor(s) Dr. Jonathan Adam Watson

AOM4932/6932
AGRI-FOOD SYSTEMS INNOVATION
SPRING 2019

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: Raminder Kaur

- a. Contact: 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, 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 manner 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:** None
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	7-Jan	1 Introduction to agri-food systems innovation	Introductions	
	8-Jan		No Class	
	9-Jan		Lecture	
	10-Jan		No Class	
	11-Jan		Lecture	Syllabus Quiz
2	14-Jan	2 Innovation in agri-food systems marketing	Lecture	
	15-Jan		No Class	
	16-Jan		Lecture	
	17-Jan		No Class	Module 2 Quiz
	18-Jan		Lecture	Module 2 Discussion Post
3	21-Jan	3 Consumer behavior with regard to food innovation	Lecture	
	22-Jan		No Class	
	23-Jan		Lecture	Case Study 1 Analysis & Self-Assessment
	24-Jan		No Class	Module 3 Quiz
	25-Jan		Lecture	Module 3 Discussion Post
4	28-Jan	4 New product development: principles and practices in a consumer-oriented market	Lecture	Case Study 1 Peer-Assessment
	29-Jan		No Class	
	30-Jan		Lecture	Case Study 2 Analysis & Self-Assessment
	31-Jan		No Class	Module 4 Quiz
	1-Feb		Lecture	Module 4 Discussion Post
5	4-Feb	5 Food safety and consumer behavior	Lecture	Case Study 2 Peer-Assessment
	5-Feb		No Class	
	6-Feb		Lecture	
	7-Feb		No Class	Module 5 Quiz
	8-Feb		Lecture	Module 5 Discussion Post
6	11-Feb	6 Technological innovation in the food industry: product design	Lecture	
	12-Feb		No Class	
	13-Feb		Lecture	Case Study 3 Analysis & Self-Assessment
	14-Feb		No Class	Module 6 Quiz
	15-Feb		Lecture	Module 6 Discussion Post
7	18-Feb	Exam Week	Review	Case Study 3 Peer-Assessment
	19-Feb		No Class	
	20-Feb		Exam 1	
	21-Feb		No Class	
	22-Feb		No Class	

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

16	22-Apr	Final Exam Prep	No Class	
	23-Apr		No Class	
	24-Apr		No Class	
	25-Apr		No Class	
	26-Apr		Reading Day	
17	29-Apr	Final Exam Week	Final Exam Date TBA	
	1-May		Final Exam Date TBA	
	3-May		Final Exam Date TBA	

8. **Material and Supply Fees:** None

9. **Textbook, Coursepack, Technology and Software:**

Required Textbook

- Jongen, W. M., & Meulenberg, M. (Eds.). (2005). Innovation in agri-food systems. Wageningen Academic Pub.
- <http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-666-3>
- Price: \$75.00 (UF Bookstore or direct textbook or .pdf online)

Course Pack

- Harvard Business Publishing Case Studies.
- Access link: <https://hbsp.harvard.edu/import/577881>
- Price: \$34.00 (online only, credit card 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.2015.01.000>
- 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., Zabaras, 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. 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

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 engage in live polling questions during lectures. It is the responsibility of the student to use the sign in sheet or 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 [UF Undergraduate Catalog Attendance Policies](#).

13. Grading:

Activity	Undergraduate Students	Graduate Students
Class Participation	15%	5%
Discussion Posts	15%	5%
Quizzes	15%	15%
Case Study Reviews & Assessments	25%	25%
Exam 1	15%	15%
Exam 2	15%	15%
Review Article	0%	20%

Class Participation Grading Rubric

Grade	Participation Criteria
120 pts (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.
114 pts (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.
108 pts (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.
102 pts (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.
96 pts (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.
90 pts (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.
84 pts	<ul style="list-style-type: none"> • Student demonstrates very little engagement in classroom participation

(70%)	<ul style="list-style-type: none"> • Student takes very little interest in answering/asking questions either verbally or through the polling software
78 pts (65%)	<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
72 pts (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 pts (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 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.

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

- 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 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](#)

- 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:

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

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.

Cover Sheet: Request 13683

HOS 5XXX Root and Rhizosphere Ecology

Info

Process	Course New Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Lorenzo Rossi l.rossi@ufl.edu
Created	2/25/2019 5:45:58 PM
Updated	2/25/2019 6:47:59 PM
Description of request	I am requesting a code for the course Root and Rhizosphere Ecology. The course has been taught last year and encountered positive feedback from the students.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Horticultural Sciences 514923000	Christine Chase		2/25/2019
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			2/25/2019
No document changes					
Graduate Curriculum Committee					
No document changes					
University Curriculum Committee Notified					
No document changes					
Statewide Course Numbering System					
No document changes					
Graduate School Notified					
No document changes					
Office of the Registrar					
No document changes					
College Notified					
No document changes					

Course|New for request 13683

Info

Request: HOS 5XXX Root and Rhizosphere Ecology

Description of request: I am requesting a code for the course Root and Rhizosphere Ecology. The course has been taught last year and encountered positive feedback from the students.

Submitter: Lorenzo Rossi l.rossi@ufl.edu

Created: 2/25/2019 5:25:19 PM

Form version: 1

Responses

Recommended Prefix HOS

Course Level 5

Number XXX

Category of Instruction Joint (Ugrad/Grad)

Lab Code None

Course Title Root and Rhizosphere Ecology

Transcript Title Rhizosphere Ecology

Degree Type Graduate

Delivery Method(s) Online

Co-Listing No

Co-Listing Explanation N/A

Effective Term Fall

Effective Year 2020

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 4.5

Course Description The course provides a complete view of the rhizosphere and its unique functioning that implies numerous, strong and complex interactions between plant roots, soil constituents and microorganisms.

Prerequisites BOT 2010 or BSC 2010

Co-requisites N/A

Rationale and Placement in Curriculum This is a new advanced course which examines the interactions between plant root apparatus and the environment. It is not being offered to other departments at UF and will allow students from different departments to identify the role of plant roots in the global context of soil development and atmosphere composition and recommend modern research techniques for field and lab studies on plant roots.

Course Objectives - To provide a review of recent research literature on root and rhizosphere biology and ecology.

- To develop an understanding of unique biochemical processes in roots and in the rhizosphere.

- To promote integration of different disciplines such as plant physiology, biochemistry, natural product chemistry, molecular biology, genomics and chemical ecology to study roots and rhizosphere processes.

- To raise awareness about environmental concerns (e.g., interaction between plant roots and heavy metals, engineered nanoparticles, BTEX, etc.).

Course Textbook(s) and/or Other Assigned Reading Recommended textbooks

- Eshel A, and Beekman T. (2013): Plant Roots: The Hidden Half, Fourth Edition. CRC Press. ISBN 978-14-398-4648-3.

- Dessaux Y, Hinsinger P, and Lemanceau P. (2010): Rhizosphere: Achievements and

Challenges. Springer. ISBN 978-94-007-3092-2

- Cardon Z, and Whitbeck J. (2007); *The Rhizosphere: An Ecological Perspective*. Academic Press (Elsevier). eBook ISBN: 978-00-804-9304-6, Hardcover ISBN: 978-01-208-8775-0
- Pinton R, Varanini Z, and Nannipieri P. (2007); *The Rhizosphere: Biochemistry and Organic Substances at the Soil-Plant Interface*, Second Edition. CRC Press. ISBN 978-08-493-3855-7

Required readings

- Jacob P. Rutten; Kirsten ten Tusscher. 2019. In *Silico Roots: Room for Growth*. Trends in Plant Science. Volume 24, issue 3, p250-262.
- Sheikh M. F. Rabbi; Matthew K. Tighe; Richard J. Flavel; Brent N. Kaiser; Chris N. Guppy; Xiaoxian Zhang; Iain M. Young. 2018. Plant roots redesign the rhizosphere to alter the three-dimensional physical architecture and water dynamics. *New Phytologist*. Volume 219, Issue 2, p542-550.
- Xiangpei Kong; Guangchao Liu; Jiajia Liu; Zhaojun Ding. 2018. The Root Transition Zone: A Hot Spot for Signal Crosstalk. Trends in Plant Science. Volume 23, Issue 5, p403-409.
- Rahul Bhosale, Jitender Giri, Bipin K. Pandey, Ricardo F. H. Giehl, Anja Hartmann, Richard Traini, Jekaterina Truskina, Nicola Leftley, Meredith Hanlon, Kamal Swarup, Afaf Rashed, Ute Voß, Jose Alonso, Anna Stepanova, Jeonga Yun, Karin Ljung, Kathleen M. Brown, Jonathan P. Lynch, Liam Dolan, Teva Vernoux, Anthony Bishopp, Darren Wells, Nicolaus von Wirén, Malcolm J. Bennett & Ranjan Swarup. 2018. A mechanistic framework for auxin dependent Arabidopsis root hair elongation to low external phosphate. *Nature communications*. Volume 9, Article number: 1409

Weekly Schedule of Topics Course organization

The module material of a given week will be made available the Friday of the week before. A first batch the assignments will be due on the Tuesday and the rest on the Friday of a given module week.

Module 0: Introduction to the course

Module 1: Definition of the rhizosphere and origin of roots

Module 2: Root structure, functions and modifications

Module 3: Regulation of root growth

Module 4: Classification and function of root derived products

Module 5: Root exudates and mineral nutrition

Module 6: Root system architecture and nutrient acquisition

Module 7: Legume-Rhizobia symbiosis

Module 8: Mycorrhizal fungi and nutrient acquisition

Module 9: Plant growth promoting rhizobacteria

Module 10: Drought and salt stress

Module 11: Heat and flooding stress

Module 12: Trace metals and emerging contaminants stress

Module 13: Stresses caused by pathogens

Module 14: Modern research techniques for field experiments

Module 15: Modern research techniques for laboratory experiments

Course schedule

8/21/2019	Week 1 – Module 0 – Introduction to canvas and distance education
8/23/2019	Week 1 – Module 0 – Introduction to the course, quiz #0 and discussion #0
8/26/2019	Week 2 – Module 1 – Definition of the Rhizosphere/1
8/28/2019	Week 2 – Module 1 – Definition of the Rhizosphere/1
8/30/2019	Week 2 – Module 1 – Quiz #1, Discussion #1
9/2/2019	Labor Day
9/4/2019	Week 3 – Module 2 – Root structure and development
9/6/2019	Week 3 – Module 2 – Quiz #2, Discussion #2
9/9/2019	Week 4 – Module 3 – Regulation of root growth/1
9/11/2019	Week 4 – Module 3 – Regulation of root growth/2
9/13/2019	Week 4 – Module 3 – Quiz #3, Discussion #3
9/16/2019	Week 5 – Module 4 – Classification and function of root derived products/1
9/18/2019	Week 5 – Module 4 – Classification and function of root derived products/2
9/20/2019	Week 5 – Module 4 – Quiz #4, Discussion #4
9/23/2019	Week 6 – Module 5 – Root exudates and mineral nutrition
9/25/2019	Week 6 – Module 5 – Quiz #5, Discussion #5
9/27/2019	First Exam (Modules 1-5)
9/30/2019	Week 7 – Module 6 – Root system architecture and nutrient acquisition/1
10/2/2019	Week 7 – Module 6 – Root system architecture and nutrient acquisition/2

10/4/2019	Week 7 – Module 6 – Quiz #6, Discussion #6
10/7/2019	Week 8 – Module 7 – Legume-Rhizobia symbiosis/1
10/9/2019	Week 8 – Module 7 – Legume-Rhizobia symbiosis/2
10/11/2019	Homecoming – Go Gators!
10/14/2019	Week 8 – Module 7 – Quiz #7, Discussion #7
10/16/2019	Week 9 – Module 8 – Mycorrhizal fungi and nutrient acquisition/1
10/18/2019	Week 9 – Module 8 – Mycorrhizal fungi and nutrient acquisition/2
10/21/2019	Week 9 – Module 8 – Quiz #8, Discussion #8
10/23/2019	Week 10 – Module 9 – Plant growth promoting rhizobacteria/1
10/25/2019	Week 10 – Module 9 – Plant growth promoting rhizobacteria/2
10/28/2019	Week 10 – Module 9 – Quiz #9, Discussion #9
10/30/2019	Week 11 – Module 10 – Drought and salt stress
11/1/2019	Week 11 – Module 10 – Quiz #10, Discussion #10
11/4/2019	Mid-Term Exam (Modules 6-10)
11/6/2019	Week 12 – Module 11 – Heath and flooding stress
11/8/2019	Week 12 – Module 11 – Quiz #11, Discussion #11
11/11/2019	Veterans Day
11/13/2019	Week 13 – Module 12 – Metals and emerging contaminants stresses
11/15/2019	Week 13 – Module 12 – Quiz #12, Discussion #12
11/18/2019	Week 14 – Module 13 – Stresses caused by pathogens
11/20/2019	Week 15 – Module 13 – Quiz #13, Online discussion #13
11/22/2019	Week 15 – Module 14 – Modern research techniques for field experiments
11/25/2019	Week 15 – Module 14 – Quiz #14, Discussion #14
11/27/2019	Holiday break
11/29/2019	Happy Thanksgiving!
12/2/2019	Week 16 – Module 15 – Modern research techniques for laboratory experiments
12/4/2019	Week 16 – Module 15 – Quiz #15, Discussion #15
12/11/2019	Final Exam (Modules 11-15)

Links and Policies Attendance and Make-up 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:

- UF Attendance policy, <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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>

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 when appropriate.

Services for Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation.

Students with disabilities should follow this procedure as early as possible in the semester.

- Disability Resource Center, 0001 Reid Hall, (352) 392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being 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.

- Counseling and Wellness Center, 3190 Radio Road, 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
- Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161.
- University Police Department, 392-1111 (or 9-1-1 for emergencies), www.police.ufl.edu

Additionally, if you would like orientation on choosing a major, finding an internship, or planning your career, I encourage you to use the university's on-campus resources.

- Career Connections Center, CR-100 Reitz Union, 392-1601, <https://career.ufl.edu/>

Course Evaluation Process

Student assessment of instruction is an important part of the effort to improve teaching and learning. At the end of the semester, you 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:

- Course evaluations, www.evaluations.ufl.edu

Evaluations are typically open during the last two or three weeks of the semester. You will be notified of the specific times when evaluations for this course are open. Summary results of these assessments are available to students at:

- Evaluations summary, www.evaluations.ufl.edu/results

Student Complaints

You can file and resolve any complaints about your experience in this course in the following site:

- Student complaints in residential courses, <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>
- Student complaints in online courses, <http://distance.ufl.edu/student-complaint-process/>

Grading Scheme EVALUATION OF LEARNING

Assignment	% of grade	Points
Quizzes and Discussions due every week	70	1500
First Exam	10	250
Mid-Term Exam	10	250
Final Exam	10	250
Total	100	2250

Quizzes

At the end of each module a specific quiz will assess the students learning. 10 questions related to module will be available. Students will have 2 possible attempts. 5 points will be available for each question, for a total of 50 points per quiz.

Discussions

At the end of each week and discussion board with a specific prompt will be ready for the students. Students will not be able to read posts made by other students until after they have already completed and submitted their own post. Each submitted post should consist of 500 words or less and must address all parts of the prompt. Each student will also be expected to post a reply to at least two other students' posts in order to receive credits. Please note that points will not be assigned separately for discussion comments and discussion posts. Students will either receive all potential points for making an original post and posting two comments, or they will receive nothing for either skipping any part of the assignment. Poor quality submissions will receive partial credit.

Exams	Content covered
1) First Exam	Modules 1-5
2) Mid-Term Exam	Modules 6-10
3) Final Exam	Modules 11-15

All the three exams will have 5 questions. 50 points will be available for each question, for a total of 250 points. Students will have 7 days to start the exam and, once they started, they will have 24 hrs to complete it.

Assignment breakdown	Points x Number of assignments = Total Points
15 Quizzes	50 X 15 = 750
15 Discussions	50 X 15 = 750
3 Exams	
250 X 3 = 1500	
Total	
2250	

Critical dates		
First Exam	9/27/2019	(Modules 1-5)
Mid Term Exam	11/4/2019	(Modules 6-10)
Final Exam	12/11/2019	(Modules 11-15)

GRADING SCALE

A	=	94 - 100 %
A-	=	< 94 - 90 %
B+	=	< 90 - 87 %
B	=	< 87 - 84 %
B-	=	< 84 - 80 %
C+	=	< 80 - 77 %
C	=	< 77 - 74 %
C-	=	< 74 - 70 %

D+
= < 70 - 67 %
D
= < 67 - 64 %
D-
= < 64 - 61 %
E
= < 61 %

Passing Grade Points

A	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C	2.0
C-	1.67
D+	1.33
D	1.0
D-	0.67
S	0

Instructor(s) Dr. Lorenzo Rossi



HOS 6932: ROOT AND RHIZOSPHERE ECOLOGY

3 CREDITS

Instructor: Dr. Lorenzo Rossi

Webpage: <https://ufl.instructure.com/courses/357898>

Contact Information:

- Email: use the Canvas e-mail (the most efficient) or l.rossi@ufl.edu
- Phone: 772-577-7341.
- Office hours: online conferencing via canvas/zoom every Friday 11am-12pm (or by request)

Lectures: 100% Online course. Each week there is a block of content available with specific due dates.

Course Description: The aim of this course is to provide a complete view of the rhizosphere and its unique functioning that implies numerous, strong and complex interactions between plant roots, soil constituents and microorganisms. Furthermore, the course not only aims at addressing current knowledge and achievements but also at outlining the future challenges that stand in front of rhizosphere sciences. Topics incorporate how roots and the rhizosphere respond to different environments including multiple interactions between soils, plant roots, microbes, mycorrhizas, and fauna, soil heterogeneity, biogeochemical cycles, abiotic stresses, and emerging contaminants.

Course prerequisites: BOT 2010 or BSC 2010

Knowledge prerequisites: This is an advanced course which examines the interactions between plant root apparatus and the environment. To be successful, students should have a general knowledge of biology, botany, microbiology, and soil chemistry.

Course objectives:

- To provide a review of recent research literature on root and rhizosphere biology and ecology.
- To develop an understanding of unique biochemical processes in roots and in the rhizosphere.
- To promote integration of different disciplines such as plant physiology, biochemistry, natural product chemistry, molecular biology, genomics and chemical ecology to study roots and rhizosphere processes.
- To raise awareness about environmental concerns (e.g., interaction between plant roots and heavy metals, engineered nanoparticles, BTEX, etc.).

LEARNING OBJECTIVES

After successful completion of this course, students will be able to:

- Identify the role of plant roots in the global context of soil development and atmosphere composition.
- Classified and recognized root derived products.
- Compare different Root System Architectures.
- Describe root response to biotic and abiotic stresses.
- Explain key root-rhizosphere interactions, from beneficial microorganisms to detrimental nematodes.
- Recommend modern research techniques for field and lab studies on plant roots.

COURSE MATERIALS

Recommended textbooks

- Eshel A, and Beeckman T. (2013): **Plant Roots: The Hidden Half**, Fourth Edition. CRC Press. ISBN 978-14-398-4648-3.
- Dessaux Y, Hinsinger P, and Lemanceau P. (2010): **Rhizosphere: Achievements and Challenges**. Springer. ISBN 978-94-007-3092-2
- Cardon Z, and Whitbeck J. (2007): **The Rhizosphere: An Ecological Perspective**. Academic Press (Elsevier). eBook ISBN: 978-00-804-9304-6, Hardcover ISBN: 978-01-208-8775-0
- Pinton R, Varanini Z, and Nannipieri P. (2007): **The Rhizosphere: Biochemistry and Organic Substances at the Soil-Plant Interface**, Second Edition. CRC Press. ISBN 978-08-493-3855-7

Required readings

- Jacob P. Ruten; Kirsten ten Tusscher. 2019. **In Silico Roots: Room for Growth**. *Trends in Plant Science*. Volume 24, issue 3, p250-262.
- Sheikh M. F. Rabbi; Matthew K. Tighe; Richard J. Flavel; Brent N. Kaiser; Chris N. Guppy; Xiaoxian Zhang; Iain M. Young. 2018. **Plant roots redesign the rhizosphere to alter the three-dimensional physical architecture and water dynamics**. *New Phytologist*. Volume 219, Issue 2, p542-550.
- Xiangpei Kong; Guangchao Liu; Jiajia Liu; Zhaojun Ding. 2018. **The Root Transition Zone: A Hot Spot for Signal Crosstalk**. *Trends in Plant Science*. Volume 23, Issue 5, p403-409.
- Rahul Bhosale, Jitender Giri, Bipin K. Pandey, Ricardo F. H. Giehl, Anja Hartmann, Richard Traini, Jekaterina Truskina, Nicola Leftley, Meredith Hanlon, Kamal Swarup, Afaf Rashed, Ute Voß, Jose Alonso, Anna Stepanova, Jeonga Yun, Karin Ljung, Kathleen M. Brown, Jonathan P. Lynch, Liam Dolan, Teva Vernoux, Anthony Bishopp, Darren Wells, Nicolaus von Wirén, Malcolm J. Bennett & Ranjan Swarup. 2018. **A mechanistic framework for auxin dependent Arabidopsis root hair elongation to low external phosphate**. *Nature communications*. Volume 9, Article number: 1409

EVALUATION OF LEARNING

Assignment	% of grade	Points
1) 15 Quizzes/Discussions due every week	70	1500
2) First Exam	10	250
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At the end of each week a discussion board with a specific prompt will be ready for the students. Students will not be able to read posts made by other students until after they have already completed and submitted their own post. Each submitted post should consist of 500 words or less and must address all parts of the prompt. Each student will also be expected to post a reply to at least two other students' posts in order to receive credits. Please note that points will not be assigned separately for discussion comments and discussion posts. Students will either receive all potential points for making an original post and posting two comments, or they will receive nothing for either skipping any part of the assignment. Poor quality submissions will receive partial credit.

The grading procedures of the discussion will follow this rubric.

Criteria	Ratings	Pts
Original Response to Prompt	25.0 to >10.0 pts Response addresses all parts of the prompt in a convincing and clear manner, and consists of 500 words or less	10.0 to >0.0 pts Response only addresses some parts of the prompt and/or is significantly more than 500 words
Reply to Peers	25.0 pts Student responds to at least 2 peers with substantive comments that further the conversation	0.0 pts Student does not respond to at least 2 peers with substantive comments that further the conversation; or all expectations of discussion thread not met

Total Points: 50.0

Exams	Content covered
1) First Exam	Modules 1-5
2) Mid-Term Exam	Modules 6-10
3) Final Exam	Modules 11-15

All the three exams will have 5 questions. 50 points will be available for each question, for a total of 250 points. Students will have 7 days to start the exam and, once they started, they will have 24 hrs to complete it.

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Critical dates

First Exam	9/27/2019	(Modules 1-5)
Mid Term Exam	11/4/2019	(Modules 6-10)
Final Exam	12/11/2019	(Modules 11-15)

GRADING SCALE

A	=	94 - 100 %	C	=	< 77 - 74 %
A-	=	< 94 - 90 %	C-	=	< 74 - 70 %
B+	=	< 90 - 87 %	D+	=	< 70 - 67 %
B	=	< 87 - 84 %	D	=	< 67 - 64 %
B-	=	< 84 - 80 %	D-	=	< 64 - 61 %
C+	=	< 80 - 77 %	E	=	< 61 %

Passing Grade Points

A	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C	2.0
C-	1.67
D+	1.33
D	1.0
D-	0.67
S	0

Additional information on current UF grading policies for assigning grade points can be found here:

- *Grading policy*, www.catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Course organization

The module material of a given week will be made available the Friday of the week before. A first batch the assignments will be due on the Tuesday and the rest on the Friday of a given module week.

Module 0: Introduction to the course

Module 1: Definition of the rhizosphere and origin of roots

Module 2: Root structure, functions and modifications

Module 3: Regulation of root growth

Module 4: Classification and function of root derived products

Module 5: Root exudates and mineral nutrition

Module 6: Root system architecture and nutrient acquisition

Module 7: Legume-Rhizobia symbiosis

Module 8: Mycorrhizal fungi and nutrient acquisition

Module 9: Plant growth promoting rhizobacteria

Module 10: Drought and salt stress

Module 11: Heat and flooding stress

Module 12: Trace metals and emerging contaminants stress

Module 13: Stresses caused by pathogens

Module 14: Modern research techniques for field experiments

Module 15: Modern research techniques for laboratory experiments

Course schedule

8/21/2019	Week 1 – Module 0 – Introduction to canvas and distance education
8/23/2019	Week 1 – Module 0 – Introduction to the course, quiz #0 and discussion #0
8/26/2019	Week 2 – Module 1 – Definition of the Rhizosphere/1
8/28/2019	Week 2 – Module 1 – Definition of the Rhizosphere/1
8/30/2019	Week 2 – Module 1 – Quiz #1, Discussion #1
9/2/2019	Vacation Day
9/4/2019	Week 3 – Module 2 – Root structure and development
9/6/2019	Week 3 – Module 2 – Quiz #2, Discussion #2
9/9/2019	Week 4 – Module 3 – Regulation of root growth/1
9/11/2019	Week 4 – Module 3 – Regulation of root growth/2
9/13/2019	Week 4 – Module 3 – Quiz #3, Discussion #3
9/16/2019	Week 5 – Module 4 – Classification and function of root derived products/1
9/18/2019	Week 5 – Module 4 – Classification and function of root derived products/2
9/20/2019	Week 5 – Module 4 – Quiz #4, Discussion #4
9/23/2019	Week 6 – Module 5 – Root exudates and mineral nutrition
9/25/2019	Week 6 – Module 5 – Quiz #5, Discussion #5
9/27/2019	First Exam (Modules 1-5)
9/30/2019	Week 7 – Module 6 – Root system architecture and nutrient acquisition/1
10/2/2019	Week 7 – Module 6 – Root system architecture and nutrient acquisition/2
10/4/2019	Week 7 – Module 6 – Quiz #6, Discussion #6
10/7/2019	Week 8 – Module 7 – Legume-Rhizobia symbiosis/1
10/9/2019	Week 8 – Module 7 – Legume-Rhizobia symbiosis/2
10/11/2019	Remembrance Day 🇺🇸 🇨🇦 🇩🇪 🇫🇷 🇮🇹 🇯🇵 🇰🇷 🇸🇰 🇸🇪 🇸🇮 🇸🇯 🇹🇼 🇻🇪 🇻🇮 🇽🇰 🇿🇼
10/14/2019	Week 8 – Module 7 – Quiz #7, Discussion #7
10/16/2019	Week 9 – Module 8 – Mycorrhizal fungi and nutrient acquisition/1
10/18/2019	Week 9 – Module 8 – Mycorrhizal fungi and nutrient acquisition/2
10/21/2019	Week 9 – Module 8 – Quiz #8, Discussion #8
10/23/2019	Week 10 – Module 9 – Plant growth promoting rhizobacteria/1
10/25/2019	Week 10 – Module 9 – Plant growth promoting rhizobacteria/2

10/28/2019	Week 10 – Module 9 – Quiz #9, Discussion #9
10/30/2019	Week 11 – Module 10 – Drought and salt stress
11/1/2019	Week 11 – Module 10 – Quiz #10, Discussion #10
11/4/2019	Mid-Term Exam (Modules 6-10)
11/6/2019	Week 12 – Module 11 – Heath and flooding stress
11/8/2019	Week 12 – Module 11 – Quiz #11, Discussion #11
11/11/2019	Veterans Day
11/13/2019	Week 13 – Module 12 – Metals and emerging contaminants stresses
11/15/2019	Week 13 – Module 12 – Quiz #12, Discussion #12
11/18/2019	Week 14 – Module 13 – Stresses caused by pathogens
11/20/2019	Week 15 – Module 13 – Quiz #13, Online discussion #13
11/22/2019	Week 15 – Module 14 – Modern research techniques for field experiments
11/25/2019	Week 15 – Module 14 – Quiz #14, Discussion #14
11/27/2019	Holiday break
11/29/2019	Happy Thanksgiving!
12/2/2019	Week 16 – Module 15 – Modern research techniques for laboratory experiments
12/4/2019	Week 16 – Module 15 – Quiz #15, Discussion #15
12/11/2019	Final Exam (Modules 11-15)

COURSE POLICIES

Attendance and Make-up 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:

- *UF Attendance policy*, <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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>

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 when appropriate.

Services for Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

- *Disability Resource Center*, 0001 Reid Hall, (352) 392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being 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.

- *Counseling and Wellness Center*, 3190 Radio Road, 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
- *Sexual Assault Recovery Services (SARS)*, Student Health Care Center, 392-1161.
- *University Police Department*, 392-1111 (or 9-1-1 for emergencies), www.police.ufl.edu

Additionally, if you would like orientation on choosing a major, finding an internship, or planning your career, I encourage you to use the university's on-campus resources.

- *Career Connections Center*, CR-100 Reitz Union, 392-1601, <https://career.ufl.edu/>

Course Evaluation Process

Student assessment of instruction is an important part of the effort to improve teaching and learning. At the end of the semester, you 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:

- *Course evaluations*, www.evaluations.ufl.edu

Evaluations are typically open during the last two or three weeks of the semester. You will be notified of the specific times when evaluations for this course are open. Summary results of these assessments are available to students at:

- *Evaluations summary*, www.evaluations.ufl.edu/results

Student Complaints

You can file and resolve any complaints about your experience in this course in the following site:

- *Student complaints in residential courses*, <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>
- *Student complaints in online courses*, <http://distance.ufl.edu/student-complaint-process/>

Cover Sheet: Request 13713

STA6XXX

Info

Process	Course New Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Benjamin Baiser bbaiser@ufl.edu
Created	3/4/2019 1:20:28 PM
Updated	3/6/2019 4:33:19 PM
Description of request	I am requesting a permanent course number for Multivariate Statistics for Agricultural and Life Sciences

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Wildlife Ecology and Conservation 514947000	Eric Hellgren	This request application includes 2 letters of support from Statistics faculty members, and constitute curriculum consults for the proposed course. Dr. Baiser has taught this course several times - it has an excellent reputation, is highly desired by CALS graduate students, and is ready for a permanent course number. Eric Hellgren	3/6/2019
Letter_of_support_Dr. Michailidis.pdf					3/4/2019
Letter_of_support_Dr. Winner.pdf					3/4/2019
WIS 6934_Multivariate Statistics.pdf					3/6/2019
College	Pending	CALS - College of Agricultural and Life Sciences			3/6/2019
No document changes					
Graduate Curriculum Committee					
No document changes					
University Curriculum Committee					
Notified					
No document changes					
Statewide Course Numbering System					
No document changes					
Graduate School					
Notified					
No document changes					
Office of the Registrar					
No document changes					
College					
Notified					
No document changes					

Course|New for request 13713

Info

Request: STA6XXX

Description of request: I am requesting a permanent course number for Multivariate Statistics for Agricultural and Life Sciences

Submitter: Benjamin Baiser bbaiser@ufl.edu

Created: 10/18/2018 12:45:18 PM

Form version: 1

Responses

Recommended Prefix STA

Course Level 6

Number xxx

Category of Instruction Intermediate

Lab Code C

Course Title Multivariate Statistics for Agricultural and Life Sciences

Transcript Title Multivarstats Aglife

Degree Type Graduate

Delivery Method(s) On-Campus

Co-Listing No

Co-Listing Explanation none

Effective Term Fall

Effective Year 2019

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 3

Course Description This course provides students with a conceptual and practical understanding of the application of multivariate statistics in the agricultural and life sciences. Topics covered include ordination, clustering, and discrimination. The prerequisites are an introductory statistics course and some experience with the R language (although the latter is not strictly necessary).

Prerequisites STA 6093

Co-requisites none

Rationale and Placement in Curriculum Multivariate Statistics for Agricultural and Life Sciences is an intermediate graduate statistics course that is tailored toward students who have already collected their data. An understanding of univariate statistics and the R programming language and environment for statistical computing and graphics are necessary to get the most out of this course. This is the reasoning behind the prerequisite STA 6093.

Course Objectives The goal of this course is for students to gain proficiency in selecting appropriate multivariate analyses, implementing these analyses in R, and interpreting and disseminating results. Sample data sets from across the life sciences will be provided and students will have the opportunity to analyze their own data.

Course Textbook(s) and/or Other Assigned Reading Borcard, D., Gillet, F., & Legendre, P. (2011). Numerical ecology with R. Springer.

McGarigal, K., Cushman, S., & Stafford, S. (2000). Multivariate statistics for wildlife and ecology research. Springer, New York.

Weekly Schedule of Topics	*Lecture #	Topic
1		Intro to multivariate statistics
2		Multivariate Data: screening, transformations, distance measures
3		Ordination 1: Principal Components Analysis (PCA)

- 4 Ordination 2: Principal Coordinates Analysis (PCoA) and Correspondence Analysis, Non-Metric Multidimensional Scaling (NMDS)
- 5 Cluster Analysis 1: Clustering Methods
- 6 Cluster Analysis 2: Choosing Clustering Methods and Visualization
- 7 Testing for groups: perMANOVA, Mantel's test
- 8 Discriminant Analysis/MANOVA
- 9 Classification and Regression Trees (Cart)
- 10 Constrained Ordination
- 11 Constrained Ordination continued/Variance partitioning
- 12 Final Project Discussion
- 13 Advanced Topics
- 14 Comparison of Techniques

Links and Policies Class attendance: You are required to attend all classes and labs. You may be absent from one class (lecture or lab) without it affecting your grade. You will receive 1 pt. per lecture and lab for being present.

Class participation: You are expected to participate in lectures by answering and asking questions. You are expected to participate in lab by completing all of the required assignments. You will receive 1 pt. per lecture and lab for participating.

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

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Sexual Harassment

It is the policy of The University of Florida to provide an educational and working environment for its students, faculty, and staff that is free from sex discrimination and sexual harassment. In accordance with federal and state law, the University prohibits discrimination on the basis of sex, including sexual harassment. Sex discrimination and sexual harassment will not be tolerated, and individuals who engage in such conduct will be subject to disciplinary action. The University encourages students, faculty, staff, and visitors to promptly report sex discrimination and sexual harassment. If you believe

you have been subjected to sex discrimination or sexual harassment please report the incident to me or any University official, administrator, or supervisor. The Office of Human Resource Services investigates all complaints. Incidents should be reported as soon as possible after the time of their occurrence (larry-ellis@ufl.edu).

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.

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.

Disability Resource Center : 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

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- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching
- Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

Grading Scheme Grading:

# of points	% of Grade
Class attendance	30
25%	
Class participation	30
25%	
Projects (2)	
30	
25%	
Final Project	
30	
25%	
Total Points	
120	

100%

Grading Scale: A > 92%, A- = 90-91.9%, B+ = 87-89.9%, B = 82-86.9%, B- = 80-81.9%; C+ = 77-79.9%, C = 72-76.9%, C- = 70-71.9%; D+ = 67-69.9%, D = 62-66.9%, D- = 60-61.9%, F < 60%

Instructor(s) Benjamin Baiser

UF Informatics Institute

E251 CISE Bldg
PO Box 118545
Gainesville, FL 32611-8545
352-294-3912

January 4, 2019

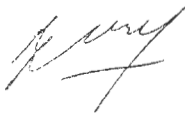
Dear Curriculum Committee,

I am writing in support of Dr. Benjamin Baiser's course "Applied Multivariate Statistics for the Agricultural and Life Sciences" (currently WIS 6934) becoming a permanent course. Dr. Baiser and I recently sat down to discuss the similarities and differences between his course and my course, STA 6707: "Analysis of Multivariate Data". It is clear that Dr. Baiser's course differs significantly from mine in several ways. To begin with, the courses serve two different portions of the student base. WIS 6934 serves students in the Agricultural and Life Sciences (e.g., Wildlife Ecology, Forestry, Fisheries, Soils and Water, Agronomy, etc.) while STA 6707 serves primarily graduate students in Statistics, Mathematics and Econometrics. Both courses are filled to capacity each time they are given, so there is clearly a need for these two different applications of multivariate statistics. Second, Dr. Baiser's course has a dedicated lab component which my course does not. Third, the types of multivariate approaches differ between the two courses. Dr. Baiser teaches several techniques that are geared towards the analysis of ecological data (e.g., Correspondence Analysis, Canonical Correlation Analysis, distance-based Redundancy Analysis). Finally, Dr. Baiser uses datasets from the agricultural and Life Sciences which facilitates the learning of students who are familiar with such types of data.

In sum, I conclude that Dr Baiser's course "Applied Multivariate Statistics for the Agricultural and Life Sciences" is a distinctly different offering from STA 6707: "Analysis of Multivariate Data" and provides important statistical training to graduate students in the life sciences that is not elsewhere available in the UF graduate curriculum.

Please contact me directly if you have any further questions.

Sincerely,



George Michailidis
Director UF Informatics Institute
Professor of Statistics and Computer Science
University of Florida

January 17, 2019

Dear Curriculum Committee,

This letter is in support of the course (currently WIS 6934) "Applied Multivariate Statistics for the Agricultural and Life Sciences" taught by Dr. Benjamin Baiser to be set up as a permanent course. I have taught the undergraduate/graduate sections of STA 4702/5701 "Multivariate Statistical Methods (4702) / Applied Multivariate Methods (5701)" in Spring 2017 and in the current semester (Spring 2019). The classes have each had approximately 50 undergraduate and 10 graduate students.

Undergraduates tend to be Statistics and Math majors along with several Business, Psychology, and Engineering students. In 2017, the graduate students were from: Agriculture (1), Education (1), Engineering (2), Health & Human Performance (1), Health Professions (1), Liberal Arts & Sciences (1), Medicine (1), and Interdisciplinary Studies (1).

This course involves a matrix based approach to multivariate methods and covers details of the distributional properties (multivariate normal distribution) of the models. The applications include: Inferences for a mean vector, comparisons among several mean vectors, multivariate linear regression, principal components analysis, factor analysis, canonical correlation analysis, discriminant analysis, and cluster analysis.

My feeling is that the courses are taught to students of different backgrounds and academic directions. Further, 4702/5701 is primarily aimed at undergraduate students in Statistics and Math, and a general cross-section of graduate students from across many colleges at UF.

Sincerely Yours,

Larry Winner

WIS 6934 Multivariate Statistics for Agricultural and Life Sciences (3 credits)

Fall 2018

Tuesday: Period 4 (McCarty B 3096), **Thursday:** Periods 3 and 4 (McCarty B 3086)

Instructor:

Benjamin Baiser

Assistant Professor

Department of Wildlife Ecology and Conservation

office: Building 116, Mowry Rd

tel: (352) 392-1947

email: bbaiser@ufl.edu

Office hours: Thursday 1-2pm

Course Description:

This course provides students with a conceptual and practical understanding of the application of multivariate statistics in the life sciences. This course consists of a one period lecture and a two period computer lab (which may also contain a lecture) where students will put to use the techniques learned in lecture using R, the open source language for statistical computing and graphics. The **prerequisites** are an introductory statistics course and some experience with the R language (although the latter is not strictly necessary).

Course Objectives:

The goal of this course is for students to gain proficiency in selecting appropriate multivariate analyses, implementing these analyses in R, and interpreting and disseminating results. Sample data sets from across the life sciences will be provided and students will have the opportunity to analyze their own data.

Course Schedule:

Course Schedule is subject to change

*Lecture #	Topic	Readings
1	Intro to multivariate statistics	McGarigal et al., Ch. 1
2	Multivariate Data: screening, transformations, distance measures	Borcard et al. , Ch. 2 & 3 (pgs. 31-45)
3	Ordination 1: Principal Components Analysis (PCA)	McGarigal et al., Ch. 2 (pgs.19-55) Peres-Neto et al. 2003
4	Ordination 2: Principal Coordinates Analysis (PCoA) and Correspondence Analysis, Non-Metric Multidimensional Scaling (NMDS)	Borcard et al. , Ch. 5 (pgs. 132-145)
5 <i>Project Due</i>	Cluster Analysis 1: Clustering Methods	McGarigal et al., Ch. 3 (pgs. 81-104)
6	Cluster Analysis 2: Choosing Clustering Methods and Visualization	Borcard et al. , Ch. 4 (pgs. 53-79)

7	Testing for groups: perMANOVA, Mantel's test	McCune and Grace, Ch.24 & 27
8	Discriminant Analysis/MANOVA	McGarigal et al., Ch. 4
9 <i>Project Due</i>	Classification and Regression Trees (Cart)	De'ath & Fabricius 2000
10	Constrained Ordination	Borcard et al. , Ch. 6
11	Constrained Ordination continued/Variance partitioning	Borcard et al. , Ch. 6 Cushman & McGarigal 2002
12	Final Project Discussion	
13	Advanced Topics: TBD	TBD
14	Comparison of Techniques	McGarigal et al. Ch. 6

*each lecture has an associated lab

Important Dates:

Friday, September 21: Project 1 is due

Friday, October 19: Project 2 is due

Friday, December 7: Final Project is due

Course Readings:

Required:

*Borcard, D., Gillet, F., & Legendre, P. (2011). *Numerical ecology with R*. Springer.

McGarigal, K., Cushman, S., & Stafford, S. (2000). *Multivariate statistics for wildlife and ecology research*. Springer, New York.

*online version available for free from UF Library

Grading:

	# of points	% of Grade
Class attendance	30	25%
Class participation	30	25%
Projects (2)	30	25%
Final Project	30	25%
Total Points	120	100%

Grading Scale: A ≥ 92%, A- = 90-91.9%, B+ = 87-89.9%, B = 82-86.9%, B- = 80-81.9%; C+ = 77-79.9%, C = 72-76.9%, C- = 70-71.9%; D+ = 67-69.9%, D = 62-66.9%, D- = 60-61.9%, F < 60%

Class attendance: You are required to attend all classes and labs. You may be absent from one class (lecture or lab) without it affecting your grade. You will receive 1 pt. per lecture and lab for being present.

Class participation: You are expected to participate in lectures by answering and asking questions. You are expected to participate in lab by completing all of the required assignments. You will receive 1 pt. per lecture and lab for participating.

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Attendance and Make-Up Work

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/ugrad/current/regulations/info/attendance.aspx>.

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 <https://evaluations.ufl.edu>. 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 <https://evaluations.ufl.edu/results>.

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>.

Sexual Harassment

It is the policy of The University of Florida to provide an educational and working environment for its students, faculty, and staff that is free from sex discrimination and sexual harassment. In accordance with federal and state law, the University prohibits discrimination on the basis of sex, including sexual harassment. Sex discrimination and sexual harassment will not be tolerated, and individuals who engage in such conduct will be subject to disciplinary action. The University encourages students, faculty, staff, and visitors to promptly report sex discrimination and sexual harassment. If you believe you have been subjected to sex discrimination or sexual harassment please report the incident to me or any University official, administrator, or supervisor. The Office of Human Resource Services investigates all complaints. Incidents should be reported as soon as possible after the time of their occurrence (larry-ellis@ufl.edu).

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.

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.

Disability Resource Center : 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being 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/cwc/*
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Wellness Coaching

- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

Cover Sheet: Request 13591

AOM4XXX

Info

Process	Course New Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jonathan Watson jaw7385@ufl.edu
Created	2/7/2019 3:33:09 PM
Updated	2/15/2019 10:05:00 AM
Description of request	The instructor and the department want to formalize this course as it has been offered as an AOM4932 Special Topics. We request this course be approved and designated an official course code for inclusion into the University of Florida Course Catalog.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Agricultural Operations Management 514907001	Wendell Porter		2/15/2019
AOM4932_AOM6932 Agri-food Systems Innovation Syllabus.pdf					2/7/2019
College	Pending	CALS - College of Agricultural and Life Sciences			2/15/2019
No document changes					
University Curriculum Committee					
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 13591

Info

Request: AOM4XXX

Description of request: The instructor and the department want to formalize this course as it has been offered as an AOM4932 Special Topics. We request this course be approved and designated an official course code for inclusion into the University of Florida Course Catalog.

Submitter: Jonathan Watson jaw7385@ufl.edu

Created: 1/30/2019 3:48:30 PM

Form version: 1

Responses

Recommended Prefix AOM

Course Level 4

Number XXX

Category of Instruction Joint (Ugrad/Grad)

Lab Code None

Course Title Agri-food Systems Innovation

Transcript Title Ag-food Sys. In.

Degree Type Baccalaureate

Delivery Method(s) On-Campus, Online

Co-Listing Yes

Co-Listing Explanation This course differs for undergraduate and graduate students regarding assignments and assessment. All students in the course participate in the same lectures, case study analyses, discussion posts, quizzes, and exams; however, graduate students are assigned an exclusive semester long project over multiple assignments. In that project, graduate students are tasked with reviewing recent literature on a topic provided by their instructor, then they are required to compile and draft a review article that will be published in a peer reviewed journal. The project is broken up over five assignment submissions which include an outline creation and identification of an appropriate journal, three draft submissions, and a final review-ready submission.

Effective Term Earliest Available

Effective Year Earliest Available

Rotating Topic? No

Repeatable Credit? No

If repeatable, # total repeatable credit allowed 3

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 3

Course Description 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.

Prerequisites None

Co-requisites None

Rationale and Placement in Curriculum To my knowledge, there are currently no courses offered in the College of Agricultural and Life Sciences or at the University of Florida that present a holistic view of the food system from a reverse-chain (i.e., consumer-oriented) perspective. Although there are courses (e.g., ENT4015: The Venture Accelerator) and programs (e.g., Innovation Academy) that teach innovation concepts in the curricula in a general sense (i.e., through entrepreneurship, leadership, and ethics) none of those courses emphasize innovation as a central theme within a food systems' framework.

The Agricultural Operations Management program in the Department of Agricultural and Biological Engineering (ABE) has a broad curriculum that prepares its graduates for diverse career pathways interests. Undergraduates choose concentrations ranging from Agribusiness Management (AOM), Animal Production Management, Horticulture and Crop Management, Fishery and Aquatic Production,

Sustainable Energy and Facilities among others. The diversity of faculty and students in ABE makes AOM an ideal fit for this course as the food system is complex, dynamic and adaptive requiring critical and innovative thinking to solve humankind's most challenging issues.

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.

Course Textbook(s) and/or Other Assigned Reading Required Textbook:

- Jongen, W. M., & Meulenberg, M. (Eds.). (2005). Innovation in agri-food systems. Wageningen Academic Pub.
- <http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-666-3>
- Price: \$75.00 (UF Bookstore or direct textbook or .pdf online)

Although the required course textbook is dated from 2005, I have yet to find a better, more comprehensive textbook that integrates multiple aspects and topics in a food systems approach as this one. Of the other textbooks that do exist, I can find none that approach the food system from a holistic perspective, focusing on the needs and importance of the consumer. In addition, this textbook has innovation as a central theme which is a major driver of change in the food systems approach.

Course pack:

- Harvard Business Publishing Case Studies.
- Access link: <https://hbsp.harvard.edu/import/577881>
- Price: \$34.00 (online only, credit card required)

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., Zabaras, 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>

Weekly Schedule of Topics The following list contains general topic areas and modules within the course. When looked at individually, some of this material is indeed taught in other courses and departments within CALS and at UF. However, when viewed as an integrated series of topics within a

single course with a central theme of innovation as its focus, there are few similar courses available to students. This integrated, holistic view is essential for students to synthesize the complex social, environmental, and economic dynamics that make up our food system.

- 1 Introduction to agri-food systems innovation
- 2 Innovation in agri-food systems marketing
- 3 Consumer behavior with regard to food innovation
- 4 New product development: principles and practices in a consumer-oriented market
- 5 Food safety and consumer behavior
- 6 Technological innovation in the food industry: product design
- 7 Food production: trends in system innovation
- 8 Nutritional aspects of food innovations: a focus
- 9 Integration of innovation in the corporate strategy of agri-food companies
- 10 Innovations in logistics in the food supply chain networks
- 11 Food quality management and innovation
- 12 Legislation and food innovation

A detailed list of these topic areas with module specific subsections can be found in the course syllabus as part of Section 11: Course Outline as well as a detailed table of activities and assignments with due dates.

Links and Policies 1 UF Undergraduate Catalog Attendance Policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

2 UF Undergraduate Catalog Grades and Grading Policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

3 Gator Rater: <https://evaluations.ufl.edu/evals/Default.aspx>

4 Student Conduct and Honors Codes: <https://sccr.dso.ufl.edu/process/student-conduct-code/>

5 Disability Resource Center: <https://disability.ufl.edu/>

6 University Counseling & Wellness Center: <https://counseling.ufl.edu/>

7 U Matter We Care: <http://www.umatter.ufl.edu/>

8 Career Resource Center: <https://career.ufl.edu/>

9 Student Complaint/Grievance Process:

https://flexible.dce.ufl.edu/media/flexibleuceufl.edu/documents/student_complaint_grievance_policy.pdf

Grading Scheme Undergraduate and graduate students have separate grading schemes for many of the activities in this course; however, students do complete many of the same activities often as group activities where groups consist of a mix of undergraduates and graduates. In the instances where they are required to complete an assignment as a group, the grading scheme is the same for all students. Yet, there are certain activities only required of the graduate students and not undergraduates. The following includes a list of all activities for the course followed by the percentage contribution for undergraduates and graduates respectively:

- 1 Class participation (15% UG, 5% G)
- 2 Discussion posts (15% UG, 5% G)
- 3 Quizzes (15% UG, 15% G)
- 4 Case Study Reviews & Assessments (25% UG, 25% G)
- 5 Exam 1 (15% UG, 15% G)
- 6 Exam 2 (15% UG, 15% G)
- 7 Review Article (0% UG, 20% G)

This grading scheme is also found in Section 13: Grading of the syllabus.

Instructor(s) Dr. Jonathan Adam Watson

AOM4932/6932
AGRI-FOOD SYSTEMS INNOVATION
SPRING 2019

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: Raminder Kaur

- a. Contact: 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, 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:** None
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	7-Jan	1 Introduction to agri-food systems innovation	Introductions	
	8-Jan		No Class	
	9-Jan		Lecture	
	10-Jan		No Class	
	11-Jan		Lecture	Syllabus Quiz
2	14-Jan	2 Innovation in agri-food systems marketing	Lecture	
	15-Jan		No Class	
	16-Jan		Lecture	
	17-Jan		No Class	Module 2 Quiz
	18-Jan		Lecture	Module 2 Discussion Post
3	21-Jan	3 Consumer behavior with regard to food innovation	Lecture	
	22-Jan		No Class	
	23-Jan		Lecture	Case Study 1 Analysis & Self-Assessment
	24-Jan		No Class	Module 3 Quiz
	25-Jan		Lecture	Module 3 Discussion Post
4	28-Jan	4 New product development: principles and practices in a consumer-oriented market	Lecture	Case Study 1 Peer-Assessment
	29-Jan		No Class	
	30-Jan		Lecture	Case Study 2 Analysis & Self-Assessment
	31-Jan		No Class	Module 4 Quiz
	1-Feb		Lecture	Module 4 Discussion Post
5	4-Feb	5 Food safety and consumer behavior	Lecture	Case Study 2 Peer-Assessment
	5-Feb		No Class	
	6-Feb		Lecture	
	7-Feb		No Class	Module 5 Quiz
	8-Feb		Lecture	Module 5 Discussion Post
6	11-Feb	6 Technological innovation in the food industry: product design	Lecture	
	12-Feb		No Class	
	13-Feb		Lecture	Case Study 3 Analysis & Self-Assessment
	14-Feb		No Class	Module 6 Quiz
	15-Feb		Lecture	Module 6 Discussion Post
7	18-Feb	Exam Week	Review	Case Study 3 Peer-Assessment
	19-Feb		No Class	
	20-Feb		Exam 1	
	21-Feb		No Class	
	22-Feb		No Class	

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

16	22-Apr	Final Exam Prep	No Class	
	23-Apr		No Class	
	24-Apr		No Class	
	25-Apr		No Class	
	26-Apr		Reading Day	
17	29-Apr	Final Exam Week	Final Exam Date TBA	
	1-May		Final Exam Date TBA	
	3-May		Final Exam Date TBA	

8. Material and Supply Fees: None

9. Textbook, Coursepack, Technology and Software:

Required Textbook

- Jongen, W. M., & Meulenberg, M. (Eds.). (2005). Innovation in agri-food systems. Wageningen Academic Pub.
- <http://www.wageningenacademic.com/doi/book/10.3920/978-90-8686-666-3>
- Price: \$75.00 (UF Bookstore or direct textbook or .pdf online)

Course Pack

- Harvard Business Publishing Case Studies.
- Access link: <https://hbsp.harvard.edu/import/577881>
- Price: \$34.00 (online only, credit card 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., Zabaras, 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. 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

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 engage in live polling questions during lectures. It is the responsibility of the student to use the sign in sheet or 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 [UF Undergraduate Catalog Attendance Policies](#).

13. Grading:

Activity	Undergraduate Students	Graduate Students
Class Participation	15%	5%
Discussion Posts	15%	5%
Quizzes	15%	15%
Case Study Reviews & Assessments	25%	25%
Exam 1	15%	15%
Exam 2	15%	15%
Review Article	0%	20%

Class Participation Grading Rubric

Grade	Participation Criteria
120 pts (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.
114 pts (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.
108 pts (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.
102 pts (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.
96 pts (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.
90 pts (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.
84 pts	<ul style="list-style-type: none"> • Student demonstrates very little engagement in classroom participation

(70%)	<ul style="list-style-type: none"> • Student takes very little interest in answering/asking questions either verbally or through the polling software
78 pts (65%)	<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
72 pts (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 pts (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 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.

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

- 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 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](#)

- 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:

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

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.

Cover Sheet: Request 13569

PLS 3XXX

Info

Process	Course New Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Elizabeth Diehl leahdiehl@ufl.edu
Created	2/1/2019 6:33:59 PM
Updated	2/11/2019 10:22:53 AM
Description of request	This request is for the approval of a new undergraduate course. This course request should go to CALS - Environmental Horticulture

Actions

Step	Status	Group	User	Comment	Updated
Department	Transferred	CALS - Agricultural Education and Communication 514926000	Joel H Brendemuhi	Initially sen to the wrong program.	2/4/2019
HT Intro final.docx					2/1/2019
Department	Approved	CALS - Environmental Horticulture 514918000	Dean Kopsell		2/11/2019
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			2/11/2019
No document changes					
University Curriculum Committee					
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 13569

Info

Request: PLS 3XXX

Description of request: This request is for the approval of a new undergraduate course.

This course request should go to CALS - Environmental Horticulture

Submitter: Elizabeth Diehl leahdiehl@ufl.edu

Created: 2/3/2019 1:17:58 PM

Form version: 2

Responses

Recommended Prefix PLS

Course Level 3

Number XXX

Category of Instruction Intermediate

Lab Code None

Course Title Introduction to Horticultural Therapy

Transcript Title Intro to Hort Therapy

Degree Type Baccalaureate

Delivery Method(s) Online

Co-Listing No

Co-Listing Explanation NA

Effective Term Fall

Effective Year 2019

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 1.5

Course Description This course describes the profession and practice of horticultural therapy including its history, current state, and relevant literature and theories. The course will explore people-plant relationships, therapeutic methods and benefits, and populations served. Students will also be introduced to existing programs and the role of therapeutic gardens.

Prerequisites None

Co-requisites None

Rationale and Placement in Curriculum As the understanding of and interest in the positive impacts of plants and nature on health and well-being grows, it is important to provide structured academic opportunities for students to learn, practice, and explore facets of these interactions. Horticultural therapy is a professional field that combines knowledge of horticulture and health to help people work toward goals and increase quality of life.

Course Objectives Describe the history, development, and current status of horticultural therapy
Characterize the many ways plants and nature impact human life and the theories underlying their therapeutic bases

Contrast the different therapeutic models used in the profession and analyze cognitive, physical, and psychosocial benefits

Summarize research relevant to horticultural therapy and therapeutic environments

Compare relevant tools in assessing needs of the participant, program, and facility served

List the special characteristics of populations served and relate them to treatment plans and goals

Describe the use of gardens in horticultural therapy and their special design characteristics

Course Textbook(s) and/or Other Assigned Reading Haller, R.L. & Capra, C.L. (2016). Horticultural

therapy methods: Connecting people and plants in health care, human services, and therapeutic programs. (2nd ed.). Boca Raton, FL: CRC Press.

Weekly Schedule of Topics Week Module & Lecture Topic
Assignments Due

Week 1

Aug. 20-23 People-Plant Relationships
History of Plants in Human Life
Human Dimensions of Horticulture

Week 2

Aug. 26-30 People-Plant Relationships
The Value of Plants in Your Life
Intrinsic Characteristics of Plants & Nature Aug. 26: Syllabus Quiz

Aug. 28 & Sept. 1: Discussion Board Posts

Aug. 30: Self-Introduction Video

Week 3

Sept. 3-6 The Profession of Horticultural Therapy
History & Background
Current State of the Profession
Registration & Types of Practice,
Standards of Practice & Code of Ethics Sept. 3: Weeks 1 & 2 Topic Quiz
Sept. 4 & 8: Discussion Board Posts & Self-Introduction Video Responses

Week 4

Sept. 9-13 The Profession of Horticultural Therapy
Stakeholders & the People Served
Benefits of HT: Cognitive, Physical, Psycho-social, Physiological
Program Spotlight: TBA Sept. 9: Week 3 Topic Quiz

Sept. 11: 3 Minute Research Report: Program Spotlight

Sept. 15: Research Report Peer Evaluations

Week 5

Sept. 16-20 Horticultural Therapy Models & Program Types
Therapeutic Horticulture & Horticultural Therapy
Therapeutic, Vocational, Social Models
Facilities & Populations Served Sept. 16: Week 4 Topic Quiz
Sept. 18 & 22: Discussion Board Posts

Week 6

Sept. 23-27 Research & Theories Related to Horticultural Therapy
Theoretical Bases for Therapeutic Benefits
Attention-Restoration Theory
Psycho-Evolutionary Theory
Other Related Theories Sept. 23: Week 5 Topic Quiz

Sept. 25: 3 Minute Research Report: HT Research

Sept. 29: Research Report Peer Evaluations

Week 7

Sept. 30- Oct. 4 Horticultural Therapy Settings
Characteristics of Special Populations
Program Spotlight: Wilmot Gardens Sept. 30: Week 6 Topic Quiz
Oct. 2 & 6: Discussion Board Posts

Week 8

Oct. 7-11 Horticultural Therapy Settings
Characteristics of Special Populations, (con't.)
Program Spotlight: TBA Oct. 7: Week 7 Topic Quiz

Oct. 9 & 13: Discussion Board Posts

Week 9

Oct. 14-18 Horticultural Therapy in Practice
Treatment Teams
Treatment Plan Process
Program Spotlight: Misericordia Gardens Oct. 14: Week 8 Topic Quiz

Oct. 16 & 20: Discussion Board Posts

Week 10

Oct. 21-25 Horticultural Therapy in Practice

Goals & Objectives

Individual Goals vs. Group Goals

Documentation Oct. 21: Week 9 Topic Quiz

Oct 23: 3 Minute Research Report: Special Population

Oct. 27: Research Report Peer Evaluations

Week 11

Oct. 28-Nov.1 Horticultural Therapy in Practice

Treatment Activities

Settings & Resources

Task Analysis Oct. 28: Week 10 Topic Quiz

Oct. 30 & Nov. 3: Discussion Board Posts

Week 12

Nov. 4-8 Horticultural Therapy in Practice

Activity Adaptation

Activity Modification Nov. 4: Week 11 Topic Quiz

Nov. 13 & 17: Discussion Board Posts

Nov. 8: Virtual Fieldtrip Video

Week 13

Nov. 11-15 Horticultural Therapy Gardens

Therapeutic Design Characteristics

Use, Design & Accessibility

Garden Spotlight: Chicago Botanic Garden Nov. 12: Week 12 Topic Quiz

Nov. 20 & 24: Discussion Board Posts

Week 14

Nov. 18-22 Horticultural Therapy Gardens

Garden Spotlight: St. Louis Children's Hospital Garden

Garden Spotlight: Massachusetts General Hospital Nov. 18: Week 13 Topic Quiz

Nov. 20: 3 Minute Research Report: Therapeutic Gardens

Nov. 24: Research Report Peer Evaluations

Week 15

Nov. 25-26 Horticultural Therapy Gardens

Garden & Program Spotlight: Legacy Health Nov. 26: Virtual Fieldtrip Peer Response

Posts

Week 16

Dec. 2-4 Project & Review Week

Project Feedback

Review Session Dec. 2: Group Project Due

Dec. 8: Group Project Peer Evaluation

Week 17

Dec. 9-13 Exam Week

Dec. 11: Final Exam

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

Class Attendance and Make-Up Policy: No make-up quizzes or exams will be given unless the student has a university-approved reason for missing them and makes previous arrangements with the instructor or can document an university-excused absence. Missed course assignments or exams resulting from unexcused absences will receive a zero. Any requests for make-ups due to technical issues **MUST** be accompanied by the UF Computing Help Desk ticket, indicating the date and time when you reported the problem. You must e-mail the instructor within 24 hours but this is not a guarantee of receiving permission to make up the quiz/exam.

All written assignments must be submitted through Canvas, which will give it a timestamp of submission. Late assignments will not be accepted without proper documentation of an emergency or

technological problem.

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>

Academic Honesty Policy:

UF students are bound by The Honor Pledge that 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 (<http://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. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Online Course Evaluation Process:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Services for Students with Disabilities:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Campus Resources:

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.

Counseling and Wellness Center:

<https://counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling.

<https://career.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.

<http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.

<http://writing.ufl.edu/writing-studio/>

Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

On-Line Student Complaints: <http://distance.ufl.edu/student-complaint-process/>

Grading Scheme Assignments:

Videos (2 at 20 points each)

You will create and post two three-minute videos: one in Week 2 that introduces you to the class and includes information on yourself, your reason for taking this course, and your interests; and another in Week 12 that shares a nature-oriented location that you feel has therapeutic qualities. More information and a rubric will be provided within the assignment links in Canvas.

Quizzes (13 at 10 points each; lowest quiz grade dropped)

Each quiz will consist of 10 multiple-choice, matching, or fill-in-the blank questions related to the associated topic. Quizzes will be open notes, but they must be completed within a limited timeframe in one sitting. Quizzes are to be taken individually; no collaboration is allowed and they are not to be recorded or shared in any manner. Quizzes will be given at the beginning of the week based on material covered the previous week.

Discussion Board Posts & Video Responses (28 at 2 points each)

The purpose of the discussion board posts is to engage students with each other and enhance the learning environment. Each week a discussion topic or question will be posted with the expectation that you post a personal response and also respond to at least two other student's posts. The topic will be posted at the beginning of each week. Your personal post on the topic is due by Wednesday and your two responses to your peers' posts are due by Sunday. You will also be expected to respond to at least two of your peers' self-introduction video and virtual fieldtrip video.

3 Minute Research Reports (4 at 30 points each)

You will record (audio or visual) and post a three minute research report on the given topic, following the template provided in the assignment link. Your grade will be assessed on content, clarity, and delivery as detailed in the associated rubric.

Research Report Peer Evaluations (8 at 5 points each)

You are expected to listen to your classmates' research reports and post a response to two classmates (5 points each, 10 points per each of four research topics) based on the rubric provided in the assignment instructions.

Group Project (100 points)

In groups of 2-3, you will create an activity plan for a group session. The activity plan will be created based on a selected population and will emphasize therapeutic benefits applicable to that population. In addition to the written plan, a short video of the activity will be required. Each student will also include an evaluation of his/her fellow group members that will be figured into the grade. Detailed instructions are provided in the assignment link.

Group Project Peer Evaluation (25 points)

You are expected to read/watch at least one of the other Group Project submissions and submit a peer evaluation based on the rubric provided in the assignment instructions.

Final Exam (75 points)

The final exam will be comprehensive and will include multiple choice, matching, fill-in-the blank and short answer questions. There will be a review session available. The exam is to be taken individually; no collaboration is allowed. The exam is not to be recorded or shared in any way. The exam will be proctored.

Assignment	Total Points	Percent of Grade
Videos (2 at 20 pts)	40	7%
Quizzes (13 at 10 pts each; lowest score dropped)	120	21%
Discussion Board Posts (28 at 2 pts each)	56	10%
3 Minute Research Reports (4 at 30 pts each)	120	21%
Research Report Peer Evaluations (8 at 5 pts each)	40	7%
Group Project	100	17%
Group Project Peer Evaluation	25	4%
Final Exam	75	13%
Total Points	576	100%

Instructor(s) Elizabeth R.M. Diehl, RLA, HTM

Introduction to Horticultural Therapy

(PLS 3XXX)

Credits: 3

Instructor:

Elizabeth Diehl, HTM, RLA

leahdiehl@ufl.edu

(352) 294-5003

Office Hours: By appointment at Wilmot Gardens Greenhouse, 1427 Gale Lemerand Dr.

Course Description:

This course describes the profession and practice of horticultural therapy including its history, current state, and relevant literature and theories. The course will explore people-plant relationships, therapeutic methods and benefits, and populations served. Students will also be introduced to existing programs and the role of therapeutic gardens.

Course Objectives:

After completing this course students will be able to:

- Describe the history, development, and current status of horticultural therapy
- Characterize the many ways plants and nature impact human life and the theories underlying their therapeutic bases
- Contrast the different therapeutic models used in the profession and analyze cognitive, physical, and psychosocial benefits
- Summarize research relevant to horticultural therapy and therapeutic environments
- Compare relevant tools in assessing needs of the participant, program, and facility served
- List the special characteristics of populations served and relate them to treatment plans and goals
- Describe the use of gardens in horticultural therapy and their special design characteristics

Required Texts:

Haller, R.L. & Capra, C.L. (2016). *Horticultural therapy methods: Connecting people and plants in health care, human services, and therapeutic programs*. (2nd ed.). Boca Raton, FL: CRC Press.

Selected Readings:

AHTA (2015) *Code of professional ethics for horticultural therapists*.

<https://ahta.memberclicks.net/assets/docs/ahta%20code%20of%20ethics.pdf>

Hewson, M. (1998). *Horticulture as therapy: A practical guide to using horticulture as a therapeutic tool*. Enumclaw, WA: Idyll Arbor, Inc.

Journal of Therapeutic Horticulture (selected articles)

Lewis, C.A. (1996). *Green nature/human nature: The meaning of plants in our lives*. Champaign, IL: University of Illinois Press.

Relf, P.D. (1981). Dynamics of horticulture therapy. *Rehabilitation Literature* 42:147-150.

Relf, P.D. & Dorn, S. (1995). Horticulture: Meeting the needs of special populations. *HortTechnology* 5(2) 94-103.

Simson, S.P. & Straus, M.C. (2003). *Horticulture as therapy: Principles and practice*. Boca Raton, FL: CRC Press.

Course Website:

This course is conducted entirely online. Lectures can be accessed in Canvas, at UF e-learning (elearning.ufl.edu). Students should view 2 narrated lectures each week to keep up with the schedule of topics, unless otherwise indicated. The student’s UF Gatorlink username and password are necessary to log into the system.

Course Communications:

All class members are expected to follow the rules of common courtesy in all communications, written and verbal. Guidelines for these rules are available through the course Canvas site and can also be accessed at <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

General questions of relevance to the whole class should be posted to the course’s discussion board. Private questions may be sent to the instructor via email to leahdiehl@ufl.edu.

Course Schedule:

Week	Module & Lecture Topic	Assignments Due
Week 1 Aug. 20-23	People-Plant Relationships <ul style="list-style-type: none"> ▪ History of Plants in Human Life ▪ Human Dimensions of Horticulture 	
Week 2 Aug. 26-30	People-Plant Relationships <ul style="list-style-type: none"> ▪ The Value of Plants in Your Life ▪ Intrinsic Characteristics of Plants & Nature 	Aug. 26: Syllabus Quiz Aug. 28 & Sept. 1: Discussion Board Posts Aug. 30: Self-Introduction Video
Week 3 Sept. 3-6	The Profession of Horticultural Therapy <ul style="list-style-type: none"> ▪ History & Background ▪ Current State of the Profession ▪ Registration & Types of Practice, ▪ Standards of Practice & Code of Ethics 	Sept. 3: Weeks 1 & 2 Topic Quiz Sept. 4 & 8: Discussion Board Posts & Self-Introduction Video Responses
Week 4 Sept. 9-13	The Profession of Horticultural Therapy <ul style="list-style-type: none"> ▪ Stakeholders & the People Served 	Sept. 9: Week 3 Topic Quiz Sept. 11: 3 Minute Research Report: Program Spotlight

	<ul style="list-style-type: none"> ▪ Benefits of HT: Cognitive, Physical, Psycho-social, Physiological ▪ Program Spotlight: TBA 	Sept. 15: Research Report Peer Evaluations
Week 5 Sept. 16-20	<p>Horticultural Therapy Models & Program Types</p> <ul style="list-style-type: none"> ▪ Therapeutic Horticulture & Horticultural Therapy ▪ Therapeutic, Vocational, Social Models ▪ Facilities & Populations Served 	Sept. 16: Week 4 Topic Quiz Sept. 18 & 22: Discussion Board Posts
Week 6 Sept. 23-27	<p>Research & Theories Related to Horticultural Therapy</p> <ul style="list-style-type: none"> ▪ Theoretical Bases for Therapeutic Benefits ▪ Attention-Restoration Theory ▪ Psycho-Evolutionary Theory ▪ Other Related Theories 	Sept. 23: Week 5 Topic Quiz Sept. 25: 3 Minute Research Report: HT Research Sept. 29: Research Report Peer Evaluations
Week 7 Sept. 30- Oct. 4	<p>Horticultural Therapy Settings</p> <ul style="list-style-type: none"> ▪ Characteristics of Special Populations ▪ Program Spotlight: Wilmot Gardens 	Sept. 30: Week 6 Topic Quiz Oct. 2 & 6: Discussion Board Posts
Week 8 Oct. 7-11	<p>Horticultural Therapy Settings</p> <ul style="list-style-type: none"> ▪ Characteristics of Special Populations, (con't.) ▪ Program Spotlight: TBA 	Oct. 7: Week 7 Topic Quiz Oct. 9 & 13: Discussion Board Posts
Week 9 Oct. 14-18	<p>Horticultural Therapy in Practice</p> <ul style="list-style-type: none"> ▪ Treatment Teams ▪ Treatment Plan Process ▪ Program Spotlight: Misericordia Gardens 	Oct. 14: Week 8 Topic Quiz Oct. 16 & 20: Discussion Board Posts
Week 10 Oct. 21-25	<p>Horticultural Therapy in Practice</p> <ul style="list-style-type: none"> ▪ Goals & Objectives ▪ Individual Goals vs. Group Goals ▪ Documentation 	Oct. 21: Week 9 Topic Quiz Oct 23: 3 Minute Research Report: Special Population Oct. 27: Research Report Peer Evaluations
Week 11 Oct. 28-Nov.1	<p>Horticultural Therapy in Practice</p> <ul style="list-style-type: none"> ▪ Treatment Activities ▪ Settings & Resources ▪ Task Analysis 	Oct. 28: Week 10 Topic Quiz Oct. 30 & Nov. 3: Discussion Board Posts
Week 12 Nov. 4-8	<p>Horticultural Therapy in Practice</p> <ul style="list-style-type: none"> ▪ Activity Adaptation ▪ Activity Modification 	Nov. 4: Week 11 Topic Quiz Nov. 13 & 17: Discussion Board Posts Nov. 8: Virtual Fieldtrip Video
Week 13	Horticultural Therapy Gardens	Nov. 12: Week 12 Topic Quiz

Nov. 11-15	<ul style="list-style-type: none"> ▪ Therapeutic Design Characteristics ▪ Use, Design & Accessibility ▪ Garden Spotlight: Chicago Botanic Garden 	Nov. 20 & 24: Discussion Board Posts
Week 14 Nov. 18-22	Horticultural Therapy Gardens <ul style="list-style-type: none"> ▪ Garden Spotlight: St. Louis Children's Hospital Garden ▪ Garden Spotlight: Massachusetts General Hospital 	Nov. 18: Week 13 Topic Quiz Nov. 20: 3 Minute Research Report: Therapeutic Gardens Nov. 24: Research Report Peer Evaluations
Week 15 Nov. 25-26	Horticultural Therapy Gardens <ul style="list-style-type: none"> ▪ Garden & Program Spotlight: Legacy Health 	Nov. 26: Virtual Fieldtrip Peer Response Posts
Week 16 Dec. 2-4	Project & Review Week <ul style="list-style-type: none"> ▪ Project Feedback ▪ Review Session 	Dec. 2: Group Project Due Dec. 8: Group Project Peer Evaluation
Week 17 Dec. 9-13	Exam Week	Dec. 11: Final Exam

Assignments:

Videos (2 at 20 points each)

You will create and post two three-minute videos: one in Week 2 that introduces you to the class and includes information on yourself, your reason for taking this course, and your interests; and another in Week 12 that shares a nature-oriented location that you feel has therapeutic qualities. More information and a rubric will be provided within the assignment links in Canvas.

Quizzes (13 at 10 points each; lowest quiz grade dropped)

Each quiz will consist of 10 multiple-choice, matching, or fill-in-the blank questions related to the associated topic. Quizzes will be open notes, but they must be completed within a limited timeframe in one sitting. Quizzes are to be taken individually; no collaboration is allowed and they are not to be recorded or shared in any manner. Quizzes will be given at the beginning of the week based on material covered the previous week.

Discussion Board Posts & Video Responses (28 at 2 points each)

The purpose of the discussion board posts is to engage students with each other and enhance the learning environment. Each week a discussion topic or question will be posted with the expectation that you post a personal response and also respond to at least two other student's posts. The topic will be posted at the beginning of each week. Your personal post on the topic is due by Wednesday and your two responses to your peers' posts are due by Sunday. You will also be expected to respond to at least two of your peers' self-introduction video and virtual fieldtrip video.

3 Minute Research Reports (4 at 30 points each)

You will record (audio or visual) and post a three minute research report on the given topic, following the template provided in the assignment link. Your grade will be assessed on content, clarity, and delivery as detailed in the associated rubric.

Research Report Peer Evaluations (8 at 5 points each)

You are expected to listen to your classmates’ research reports and post a response to two classmates (5 points each, 10 points per each of four research topics) based on the rubric provided in the assignment instructions.

Group Project (100 points)

In groups of 2-3, you will create an activity plan for a group session. The activity plan will be created based on a selected population and will emphasize therapeutic benefits applicable to that population. In addition to the written plan, a short video of the activity will be required. Each student will also include an evaluation of his/her fellow group members that will be figured into the grade. Detailed instructions are provided in the assignment link.

Group Project Peer Evaluation (25 points)

You are expected to read/watch at least one of the other Group Project submissions and submit a peer evaluation based on the rubric provided in the assignment instructions.

Final Exam (75 points)

The final exam will be comprehensive and will include multiple choice, matching, fill-in-the blank and short answer questions. There will be a review session available. The exam is to be taken individually; no collaboration is allowed. The exam is not to be recorded or shared in any way. The exam will be proctored.

Evaluation of Grades:

Assignment	Total Points	Percent of Grade
Videos (2 at 20 pts)	40	7%
Quizzes (13 at 10 pts each; lowest score dropped)	120	21%
Discussion Board Posts (28 at 2 pts each)	56	10%
3 Minute Research Reports (4 at 30 pts each)	120	21%
Research Report Peer Evaluations (8 at 5 pts each)	40	7%
Group Project	100	17%
Group Project Peer Evaluation	25	4%

Final Exam	75	13%
Total Points	576	100%

Points	Percentage	Grade	Grade Points
538 - 576	93.4-100%	A	4.00
518 - 537	90.0-93.3%	A-	3.67
499 - 517	86.7-89.9%	B+	3.33
480 - 498	83.4-86.6%	B	3.00
461 - 479	80.0-83.3%	B-	2.67
442 - 460	76.7-79.9%	C+	2.33
423 - 443	73.4-76.6%	C	2.00
403 - 422	70.0-73.3%	C-	1.67
384 - 402	66.7-69.9%	D+	1.33
365 - 383	63.4-66.6%	D	1.00
345 - 364	60.0-D-63.3%	D-	0.67

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

Class Attendance and Make-Up Policy: No make-up quizzes or exams will be given unless the student has a university-approved reason for missing them and makes previous arrangements with the instructor or can document an university-excused absence. Missed course assignments or exams resulting from unexcused absences will receive a zero. Any requests for make-ups due to technical issues **MUST** be accompanied by the UF Computing Help Desk ticket, indicating the date and time when you reported the problem. You must e-mail the instructor within 24 hours but this is not a guarantee of receiving permission to make up the quiz/exam.

All written assignments must be submitted through Canvas, which will give it a timestamp of submission. Late assignments will not be accepted without proper documentation of an emergency or technological problem.

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>

Academic Honesty Policy:

UF students are bound by The Honor Pledge that 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 (<http://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. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Online Course Evaluation Process:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Services for Students with Disabilities:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Campus Resources:

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.

Counseling and Wellness Center:

<https://counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>

Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

Cover Sheet: Request 13574

PLS 4XXX Program Management in Horticultural Therapy

Info

Process	Course New Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Elizabeth Diehl leahdiehl@ufl.edu
Created	2/3/2019 1:48:39 PM
Updated	2/11/2019 10:22:25 AM
Description of request	This is a request for a new course

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Environmental Horticulture 514918000	Dean Kopsell		2/11/2019
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			2/11/2019
No document changes					
University Curriculum Committee					
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 13574

Info

Request: PLS 4XXX Program Management in Horticultural Therapy

Description of request: This is a request for a new course

Submitter: Elizabeth Diehl leahdiehl@ufl.edu

Created: 2/3/2019 1:25:28 PM

Form version: 1

Responses

Recommended Prefix PLS

Course Level 4

Number XXX

Category of Instruction Advanced

Lab Code None

Course Title Program Management in Horticultural Therapy

Transcript Title Hort Therapy Mngmt

Degree Type Baccalaureate

Delivery Method(s) Online

Co-Listing No

Co-Listing Explanation NA

Effective Term Summer

Effective Year 2020

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 150

Course Description This course prepares students to develop, manage, and evaluate horticultural therapy programs in diverse environments. Strategies for program proposals and funding will be explored, along with recruitment of clients and required regulations and documentation. Staff/volunteer management will be discussed, as will plant materials, gardens, and other program resources.

Prerequisites PLS 3XXX Introduction to Horticultural Therapy (C-) & PLS 4XXX Techniques in Horticultural Therapy (C-)

Co-requisites NA

Rationale and Placement in Curriculum This is the third course in the series of horticultural therapy courses. In this course students will synthesize skills and knowledge from the previous two courses to plan, develop, and evaluate horticultural therapy programs that successfully respond to the clients' and facility's needs. The content aligns with the curriculum requirements of the American Horticultural Therapy Association for HT practice.

Course Objectives Formulate a horticultural therapy program, including mission/vision, funding, marketing, and recruitment

§ Describe the influence of staff/volunteers on program success and the importance of their training and management

§ Explain the management of the program and its facility, inventory, budget, and maintenance

§ Discuss the growth and maintenance of plant materials on site, including managements of pests and diseases

§ Summarize relevant facility regulations and record-keeping, including HIPPA, IRB, and other documentation requirements as well as safety issues related to program environment

§ Articulate how a horticultural therapist integrates with other healthcare delivery specialists and teams

Course Textbook(s) and/or Other Assigned Reading Haller, R.L. & Capra, C.L. (2016). Horticultural therapy methods: Connecting people and plants in health care, human services, and therapeutic programs. (2nd ed.). Boca Raton, FL: CRC Press.

Weekly Schedule of Topics Week Module & Lecture Topic Assignments Due

Week 1

May 11-15, 2019

Program Development Overview

§ Understanding Facility Needs

§ Horticultural Therapy Niche

§ Developing a Mission & Vision

May 15: Syllabus Quiz

Week 2

May 18-22, 2019

Program Development - Institutional

§ Budget: Funding & Fundraising

§ Facilities Available

§ Recruitment

May 18: Self-Introduction Video

May 18: Week 1 Topic Quiz

May 20: Peer Video Responses

May 20 & 25: Discussion Board Posts

Week 3

May 26-29, 2019

Program Development - Institutional

§ Regulations & Record Keeping

§ Program Evaluation

May 26: Weeks 2 Topic Quiz

May 28 & 31: Discussion Board Posts

Week 4

June 1-5, 2019

Program Development – Private Practice

§ Community Niche

§ Business Model & Plan

§ Marketing

June 1: Week 3 Topic Quiz

June 3: 3 Minute Research Report: TBA

June 7: Research Report Peer Evaluations

Week 5

June 8-12, 2019

Integrating with Allied Groups

§ Allied Therapies

§ Community Groups & Gardens

§ Recruiting Participants

June 8: Week 4 Topic Quiz

June 10 & 14: Discussion Board Posts

Week 6

June 15-19, 2019

Staff & Volunteers

§ Recruiting & Training

§ The Role of Students

§ Ongoing Management

June 15: Week 5 Topic Quiz

June 17: 3 Minute Research Report: TBA

June 17 & 21: Discussion Board Posts

June 21: Research Report Peer Evaluations

Week 7

June 22-26, 2019

Summer Break

Week 8

June 29-July 2, 2019

Management of Facilities

§ Equipment & Supplies

§ Program Sites: Indoor/Outdoor

June 29: Week 6 Topic Quiz

July 1 & 5: Discussion Board Posts

Week 9

July 6-10, 2019

Plants in Horticultural Therapy

§ Plant Selection & Management

§ Pest Management

July 6: Week 8 Topic Quiz

July 8: 3 Minute Research Report: TBA

July 12: Research Report Peer Evaluations

Week 10

July 13-17, 2019

Plants in Horticultural Therapy

§ Basic Horticulture Knowledge

§ Basic Plant Propagation

July 13: Week 9 Topic Quiz

July 15 & 19: Discussion Board Posts

Week 11

July 20-24, 2019

Evaluation

§ Review of Client Assessment

§ Review of Task & Activity Analysis

§ Program Output & Documentation

July 20: Week 10 Topic Quiz

July 22: 3 Minute Research Report: TBA

July 22 & 26: Discussion Board Posts

July 26: Research Report Peer Evaluations

Week 12

July 27-31, 2019

Other Topics

§ Research

§ Grant Writing

§ TBA

July 27: Week 11 Topic Quiz

July 29 & Aug. 2: Discussion Board Posts

July 29: Virtual Fieldtrip Video

Week 13

Aug. 3-7, 2019

Project & Review Week

§ Project Feedback

§ Review Session

Aug. 3: Group Project Due

Aug. 4: Peer Video Responses

Aug. 6: Final Exam

Links and Policies Class Attendance and Make-Up Policy: No make-up quizzes or exams will be given unless the student has a university-approved reason for missing them and makes previous arrangements with the instructor or can document an university-excused absence. Missed course assignments or exams resulting from unexcused absences will receive a zero. Any requests for make-ups due to technical issues **MUST** be accompanied by the UF Computing Help Desk ticket, indicating the date and time when you reported the problem. You must e-mail the instructor within 24 hours but this is not a guarantee of receiving permission to make up the quiz/exam.

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Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling.

<https://career.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

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<http://writing.ufl.edu/writing-studio/>

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Grading Scheme Assignments:

Videos (2 at 20 points each)

You will create and post two three-minute videos: one in Week 2 that introduces you to the class and includes information on yourself, your reason for taking this course, and your interests; and another in

Week 12 that responds to a selected prompt. More information and a rubric will be provided within the assignment links in Canvas.

Quizzes (11 at 10 points each; lowest quiz grade dropped)

Each quiz will consist of 10 multiple-choice, matching, or fill-in-the blank questions related to the associated topic. Quizzes will be open notes, but they must be completed within a limited timeframe in one sitting. Quizzes are to be taken individually; no collaboration is allowed and they are not to be recorded or shared in any manner. Quizzes will be given at the beginning of the week based on material covered the previous week.

Discussion Board Posts & Video Responses (24 at 2 points each)

The purpose of the discussion board posts is to engage students with each other and enhance the learning environment. Each week a discussion topic or question will be posted with the expectation that you post a personal response and also respond to at least two other student's posts. The topic will be posted at the beginning of each week. Your personal post on the topic is due by Wednesday and your two responses to your peers' posts are due by Sunday. You will also be expected to respond to at least two of your peers' self-introduction video and virtual fieldtrip video.

3 Minute Research Reports (4 at 30 points each)

You will record (audio or visual) and post a three minute research report on the given topic, following the template provided in the assignment link. Your grade will be assessed on content, clarity, and delivery as detailed in the associated rubric.

Research Report Peer Evaluations (8 at 5 points each)

You are expected to listen to your classmates' research reports and post a response to two classmates (5 points each, 10 points per each of four research topics) based on the rubric provided in the assignment instructions.

Group Project (150 points)

In groups of 2-3, you will create a program proposal for a horticultural therapy or therapeutic horticulture program. The comprehensive proposal will be based on a particular facility and population and will include facility and client information, recommended assessments, task and activity analyses, activity examples, and therapeutic goals. Each student will also include an evaluation of his/her fellow group members that will be figured into the grade. Detailed instructions are provided in the assignment link.

Final Exam (100 points)

The final exam will be comprehensive and will include multiple choice, matching, fill-in-the blank and short answer questions. There will be a review session available. The exam is to be taken individually; no collaboration is allowed. The exam is not to be recorded or shared in any way. The exam will be proctored.

Evaluation of Grades:

Assignment Total Points Percent of Grade

Videos (2 at 20 pts)

40 7%

Quizzes (11 at 10 pts each; lowest score dropped)

100 17%

Discussion Board Posts (28 at 2 pts each)

48 8%

3 Minute Research Reports (4 at 30 pts each)

120 19%

Research Report Peer Evaluations (8 at 5 pts each)

40 7%

Group Project

150 25%

Final Exam

100 17%

Total Points 598 100%

Points Percentage Grade Grade Points

559 - 598 93.4-100% A 4.00

538 - 558 90.0-93.3% A- 3.67
518 - 537 86.7-89.9% B+ 3.33
499 - 517 83.4-86.6% B 3.00
478 - 498 80.0-83.3% B- 2.67
459 - 477 76.7-79.9% C+ 2.33
439 - 458 73.4-76.6% C 2.00
419 - 438 70.0-73.3% C- 1.67
399 - 418 66.7-69.9% D+ 1.33
379 - 398 63.4-66.6% D 1.00
359 - 378 60.0-63.3% D- 0.67

For information on current UF policies for assigning grade points, see:
<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>
Instructor(s) Elizabeth R.M. Diehl, RLA, HTM

Program Management in Horticultural Therapy

(PLS 4XXX)

Credits: 3

Instructor:

Elizabeth Diehl, HTM, RLA

leahdiehl@ufl.edu

(352) 294-5003

Office Hours: By appointment at Wilmot Gardens Greenhouse, 1427 Gale Lemerand Dr.

Course Description:

This course prepares students to plan, develop, manage, and evaluate horticultural therapy programs in diverse environments. Strategies for program proposals and funding will be explored, as well the recruitment of clients and the regulations and documentation required. Staff, volunteer, and student recruitment and management will be discussed, as will the management of plant materials, gardens, and other program resources.

Course Objectives:

After completing this course successfully, students will be able to:

- Formulate a horticultural therapy program, including mission/vision, funding, marketing, and recruitment
- Describe the influence of staff/volunteers on program success and the importance of their training and management
- Explain the management of the program and its facility, inventory, budget, and maintenance
- Discuss the growth and maintenance of plant materials on site, including managements of pests and diseases
- Summarize relevant facility regulations and record-keeping, including HIPPA, IRB, and other documentation requirements as well as safety issues related to program environment
- Articulate how a horticultural therapist integrates with other healthcare delivery specialists and teams

Required Prerequisite Courses:

PLS 3XXX - Introduction to Horticultural Therapy

PLS 4XXX – Techniques in Horticultural Therapy

Required Texts:

Haller, R.L. & Capra, C.L. (2016). *Horticultural therapy methods: Connecting people and plants in health care, human services, and therapeutic programs*. (2nd ed.). Boca Raton, FL: CRC Press.

Course Website:

This course is conducted entirely online. Lectures can be accessed in Canvas, at UF e-learning (elearning.ufl.edu). Students should view 2 narrated lectures each week to keep up with the schedule of topics, unless otherwise indicated. The student's UF Gatorlink username and password are necessary to log into the system.

Course Communications:

All class members are expected to follow the rules of common courtesy in all communications, written and verbal. Guidelines for these rules are available through the course Canvas site and can also be accessed at <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

General questions of relevance to the whole class should be posted to the course's discussion board. Private questions may be sent to the instructor via email to leahdiehl@ufl.edu

Course Schedule:

Week	Module & Lecture Topic	Assignments Due
Week 1 May 11-15, 2019	Program Development Overview <ul style="list-style-type: none">▪ Understanding Facility Needs▪ Horticultural Therapy Niche▪ Developing a Mission & Vision	May 15: Syllabus Quiz
Week 2 May 18-22, 2019	Program Development - Institutional <ul style="list-style-type: none">▪ Budget: Funding & Fundraising▪ Facilities Available▪ Recruitment	May 18: Self-Introduction Video May 18: Week 1 Topic Quiz May 20: Peer Video Responses May 20 & 25: Discussion Board Posts
Week 3 May 26-29, 2019	Program Development - Institutional <ul style="list-style-type: none">▪ Regulations & Record Keeping▪ Program Evaluation	May 26: Weeks 2 Topic Quiz May 28 & 31: Discussion Board Posts
Week 4 June 1-5, 2019	Program Development – Private Practice <ul style="list-style-type: none">▪ Community Niche▪ Business Model & Plan▪ Marketing	June 1: Week 3 Topic Quiz June 3: 3 Minute Research Report: TBA June 7: Research Report Peer Evaluations
Week 5 June 8-12, 2019	Integrating with Allied Groups <ul style="list-style-type: none">▪ Allied Therapies▪ Community Groups & Gardens▪ Recruiting Participants	June 8: Week 4 Topic Quiz June 10 & 14: Discussion Board Posts
Week 6	Staff & Volunteers	June 15: Week 5 Topic Quiz

June 15-19, 2019	<ul style="list-style-type: none"> ▪ Recruiting & Training ▪ The Role of Students ▪ Ongoing Management 	June 17: 3 Minute Research Report: TBA June 17 & 21: Discussion Board Posts June 21: Research Report Peer Evaluations
Week 7 June 22-26, 2019	Summer Break	
Week 8 June 29-July 2, 2019	Management of Facilities <ul style="list-style-type: none"> ▪ Equipment & Supplies ▪ Program Sites: Indoor/Outdoor 	June 29: Week 6 Topic Quiz July 1 & 5: Discussion Board Posts
Week 9 July 6-10, 2019	Plants in Horticultural Therapy <ul style="list-style-type: none"> ▪ Plant Selection & Management ▪ Pest Management 	July 6: Week 8 Topic Quiz July 8: 3 Minute Research Report: TBA July 12: Research Report Peer Evaluations
Week 10 July 13-17, 2019	Plants in Horticultural Therapy <ul style="list-style-type: none"> ▪ Basic Horticulture Knowledge ▪ Basic Plant Propagation 	July 13: Week 9 Topic Quiz July 15 & 19: Discussion Board Posts
Week 11 July 20-24, 2019	Evaluation <ul style="list-style-type: none"> ▪ Review of Client Assessment ▪ Review of Task & Activity Analysis ▪ Program Output & Documentation 	July 20: Week 10 Topic Quiz July 22: 3 Minute Research Report: TBA July 22 & 26: Discussion Board Posts July 26: Research Report Peer Evaluations
Week 12 July 27-31, 2019	Other Topics <ul style="list-style-type: none"> ▪ Research ▪ Grant Writing ▪ TBA 	July 27: Week 11 Topic Quiz July 29 & Aug. 2: Discussion Board Posts July 29: Virtual Fieldtrip Video
Week 13 Aug. 3-7, 2019	Project & Review Week <ul style="list-style-type: none"> ▪ Project Feedback ▪ Review Session 	Aug. 3: Group Project Due Aug. 4: Peer Video Responses Aug. 6: Final Exam

Assignments:

Videos (2 at 20 points each)

You will create and post two three-minute videos: one in Week 2 that introduces you to the class and includes information on yourself, your reason for taking this course, and your interests; and another in Week 12 that responds to a selected prompt. More information and a rubric will be provided within the assignment links in Canvas.

Quizzes (11 at 10 points each; lowest quiz grade dropped)

Each quiz will consist of 10 multiple-choice, matching, or fill-in-the blank questions related to the associated topic. Quizzes will be open notes, but they must be completed within a limited timeframe in one sitting. Quizzes are to be taken individually; no collaboration is allowed and they are not to be recorded or shared in any manner. Quizzes will be given at the beginning of the week based on material covered the previous week.

Discussion Board Posts & Video Responses (24 at 2 points each)

The purpose of the discussion board posts is to engage students with each other and enhance the learning environment. Each week a discussion topic or question will be posted with the expectation that you post a personal response and also respond to at least two other student’s posts. The topic will be posted at the beginning of each week. Your personal post on the topic is due by Wednesday and your two responses to your peers’ posts are due by Sunday. You will also be expected to respond to at least two of your peers’ self-introduction video and virtual fieldtrip video.

3 Minute Research Reports (4 at 30 points each)

You will record (audio or visual) and post a three minute research report on the given topic, following the template provided in the assignment link. Your grade will be assessed on content, clarity, and delivery as detailed in the associated rubric.

Research Report Peer Evaluations (8 at 5 points each)

You are expected to listen to your classmates’ research reports and post a response to two classmates (5 points each, 10 points per each of four research topics) based on the rubric provided in the assignment instructions.

Group Project (150 points)

In groups of 2-3, you will create a program proposal for a horticultural therapy or therapeutic horticulture program. The comprehensive proposal will be based on a particular facility and population and will include facility and client information, recommended assessments, task and activity analyses, activity examples, and therapeutic goals. Each student will also include an evaluation of his/her fellow group members that will be figured into the grade. Detailed instructions are provided in the assignment link.

Final Exam (100 points)

The final exam will be comprehensive and will include multiple choice, matching, fill-in-the blank and short answer questions. There will be a review session available. The exam is to be taken individually; no collaboration is allowed. The exam is not to be recorded or shared in any way. The exam will be proctored.

Evaluation of Grades:

Assignment	Total Points	Percent of Grade
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Videos (2 at 20 pts)	40	7%
Quizzes (11 at 10 pts each; lowest score dropped)	100	17%
Discussion Board Posts (28 at 2 pts each)	48	8%
3 Minute Research Reports (4 at 30 pts each)	120	19%
Research Report Peer Evaluations (8 at 5 pts each)	40	7%
Group Project	150	25%
Final Exam	100	17%
Total Points	598	100%

Points	Percentage	Grade	Grade Points
559 - 598	93.4-100%	A	4.00
538 - 558	90.0-93.3%	A-	3.67
518 - 537	86.7-89.9%	B+	3.33
499 - 517	83.4-86.6%	B	3.00
478 - 498	80.0-83.3%	B-	2.67
459 - 477	76.7-79.9%	C+	2.33
439 - 458	73.4-76.6%	C	2.00
419 - 438	70.0-73.3%	C-	1.67
399 - 418	66.7-69.9%	D+	1.33
379 - 398	63.4-66.6%	D	1.00
359 - 378	60.0-D-63.3%	D-	0.67

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

Class Attendance and Make-Up Policy: No make-up quizzes or exams will be given unless the student has a university-approved reason for missing them and makes previous arrangements with the instructor or can document an university-excused absence. Missed course assignments or exams resulting from unexcused absences will receive a zero. Any requests for make-ups due to technical issues **MUST** be accompanied by the UF Computing Help Desk ticket, indicating the date and time when you reported the problem. You must e-mail the instructor within 24 hours but this is not a guarantee of receiving permission to make up the quiz/exam.

All written assignments must be submitted through Canvas, which will give it a timestamp of submission. Late assignments will not be accepted without proper documentation of an emergency or technological problem.

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>

Academic Honesty Policy:

UF students are bound by The Honor Pledge that 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 (<http://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. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Online Course Evaluation Process:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Services for Students with Disabilities:

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Campus Resources:

Health and Wellness

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If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.

Counseling and Wellness Center:

<https://counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>

Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

Cover Sheet: Request 13573

PLS 4XXX Techniques in Horticultural Therapy

Info

Process	Course New Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Elizabeth Diehl leahdiehl@ufl.edu
Created	2/3/2019 1:09:29 PM
Updated	2/11/2019 10:21:58 AM
Description of request	I am requesting the approval of a new course

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Environmental Horticulture 514918000	Dean Kopsell		2/11/2019
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			2/11/2019
No document changes					
University Curriculum Committee					
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 13573

Info

Request: PLS 4XXX Techniques in Horticultural Therapy

Description of request: I am requesting the approval of a new course

Submitter: Elizabeth Diehl leahdiehl@ufl.edu

Created: 2/3/2019 1:11:22 PM

Form version: 2

Responses

Recommended Prefix PLS

Course Level 4

Number XXX

Category of Instruction Advanced

Lab Code None

Course Title Techniques in Horticultural Therapy

Transcript Title Hort Ther Techniques

Degree Type Baccalaureate

Delivery Method(s) Online

Co-Listing No

Co-Listing Explanation NA

Effective Term Spring

Effective Year 2020

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 150

Course Description This course examines the effectiveness of horticultural therapy across a diverse range of client populations, programs, and environments, describing the physical, cognitive, and psychosocial implications. Therapeutic, vocational, and social modalities employing plants will be explored, as well as task analysis, activity analysis and tool and site adaptations.

Prerequisites PLS 3XXX Introduction to Horticultural Therapy

Co-requisites NA

Rationale and Placement in Curriculum This course follows the introductory horticultural therapy course, and will go into depth for students interested in the practices and techniques of the horticultural therapy profession. This course will cover material that aligns with the requirements of the American Horticultural Therapy Association's curriculum requirements for horticultural therapy practice.

Course Objectives Compare the array of treatment modalities and methods in horticultural therapy settings and apply methods to assess therapeutic outcomes and benefits

§ Characterize treatment plans, goals and objectives, treatment analysis, and related documentation

§ List the distinct characteristics and therapeutic needs of diverse populations served in horticultural therapy programming, including unique adaptations

§ Describe the importance of plant selection and horticulture techniques in designing individual and group activities and treatment plans

§ Describe adaptive gardening strategies, plant selection criteria, and safety consideration for both indoor and outdoor settings

§ Demonstrate basic horticulture knowledge common to horticultural therapy settings

Course Textbook(s) and/or Other Assigned Reading Haller, R.L. & Capra, C.L. (2016). Horticultural therapy methods: Connecting people and plants in health care, human services, and therapeutic programs. (2nd ed.). Boca Raton, FL: CRC Press.

Weekly Schedule of Topics Week Module & Lecture Topic Assignments Due

Week 1

Jan. 6-10

The Therapist's Role

- Concepts of Therapeutic Relationships
- Adjunctive Therapies & Philosophies

Week 2

Jan. 13-17 The Therapist's Role

- Group Dynamics
- Leadership
- Motivation & Behavior Management

Jan. 13: Syllabus Quiz

Jan. 15 & 19: Discussion Board Posts

Jan. 17: Self-Introduction Video

Week 3

Jan. 21-24 The Therapist's Role

- Ethics & Professionalism
- Evidence-Based Practice

Jan. 21: Weeks 1 & 2 Topic Quiz

Jan. 22 & 26: Discussion Board Posts & Self-Introduction Video Responses

Week 4

Jan. 27-31 Individual & Group Treatment Plans

- Treatment Teams
- Intake assessments

Jan. 27: Week 3 Topic Quiz

Jan. 29: 3 Minute Research Report: Therapeutic Method

Feb. 2: Research Report Peer Evaluations

Week 5

Feb. 3-7 Individual & Group Treatment Plans

- Goal Setting
- Treatment Process
- Documentation

Feb. 3: Week 4 Topic Quiz

Feb. 5 & 9: Discussion Board Posts

Week 6

Feb. 10-14 Treatment Session Planning

- Programming Inventory
- Goals & Objectives

Feb. 10: Week 5 Topic Quiz

Feb. 12 & 16: Discussion Board Posts

Week 7

Feb. 17-21 Treatment Session Planning

- Task Analysis
- Activity Adaptation & Modification

Feb. 17: Week 6 Topic Quiz

Feb. 19: 3 Minute Research Report: Education Method

Feb. 23: Research Report Peer Evaluations

Week 8

Feb. 24-28 Treatment Session Planning

- Activity Selection Process
- Activity as a Tool
- Consideration of Program Types & Goals

Feb. 24: Week 7 Topic Quiz

Feb. 26 & March 1: Discussion Board Posts

Week 9

March 2-6 Spring Break
Week 10
March 9-13 Treatment Session Planning

- Session Structure & Process
- Resource Needs

March 9: Week 8 Topic Quiz
March 11: 3 Minute Research Report: TBA
March 15: Research Report Peer Evaluations

Week 11
March 16-20 Treatment Session Planning

- Session Review & Evaluation
- Resource Planning

March 16: Week 10 Topic Quiz
March 18 & 22: Discussion Board Posts

Week 12
March 23-27 Plant Use in Programming

- Choosing Plants
- Education, Creativity, Sensory Stimulation
- Linking Activities

March 23: Week 11 Topic Quiz
March 25 & 29: Discussion Board Posts
March 27: Virtual Fieldtrip Video

Week 13
March 30-April 3 Plant Use in Programming

- Outdoor Gardening
- Activity Ideas

March 30 Week 12 Topic Quiz
April 1 & 5: Discussion Board Posts

Week 14
April 6-10 Plant Use in Programming

- Greenhouse Gardening
- Activity Ideas

April 6: Week 13 Topic Quiz
April 8: 3 Minute Research Report: TBA
April 12: Research Report Peer Evaluations

Week 15
April 13-17 Plant Use in Programming

- Greenhouse Gardening
- Activity Ideas

April 13: Week 14 Topic Quiz
April 15: Virtual Fieldtrip Peer Response Posts
April 15 & 19: Discussion Board Posts

Week 16
April 20-22 Project & Review Week

- Project Feedback
- Review Session

April 20: Group Project Due
April 26: Group Project Peer Evaluations

Week 17
April 27-30 Exam Week
April 29: Final Exam

Links and Policies For information on current UF policies for assigning grade points, see:
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<http://teachingcenter.ufl.edu/>

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On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

Grading Scheme Assignments:

Videos (2 at 20 points each)

You will create and post two three-minute videos: one in Week 2 that introduces you to the class and includes information on yourself, your reason for taking this course, and your interests; and another in Week 12 that responds to a selected prompt. More information and a rubric will be provided within the assignment links in Canvas.

Quizzes (13 at 10 points each; lowest quiz grade dropped)

Each quiz will consist of 10 multiple-choice, matching, or fill-in-the blank questions related to the associated topic. Quizzes will be open notes, but they must be completed within a limited timeframe in one sitting. Quizzes are to be taken individually; no collaboration is allowed and they are not to be recorded or shared in any manner. Quizzes will be given at the beginning of the week based on material covered the previous week.

Discussion Board Posts & Video Responses (31 at 2 points each)

The purpose of the discussion board posts is to engage students with each other and enhance the learning environment. Each week a discussion topic or question will be posted with the expectation that you post a personal response and also respond to at least two other student's posts. The topic will be posted at the beginning of each week. Your personal post on the topic is due by Wednesday and your two responses to your peers' posts are due by Sunday. You will also be expected to respond to at least two of your peers' self-introduction video and virtual fieldtrip video.

3 Minute Research Reports (4 at 30 points each)

You will record (audio or visual) and post a three-minute research report on the given topic, following the template provided in the assignment link. Your grade will be assessed on content, clarity, and delivery as detailed in the associated rubric.

Research Report Peer Evaluations (8 at 5 points each)

You are expected to listen to your classmates' research reports and post a response to two classmates (5 points each, 10 points per each of four research topics) based on the rubric provided in the assignment instructions.

Group Project (125 points)

In groups of 2-3, you will create a sample treatment plan based on a case study of a client that includes two long-term goals each with three short-term objectives. You will propose an activity that incorporates the goals accompanied by a task analysis and activity analysis and modification. A short video of the activity illustrating the benefits is required. Each student will also include an evaluation of his/her fellow group members that will be figured into the grade. Detailed instructions are provided in the assignment link.

Group Project Peer Evaluation (40 points)

You are expected to read/watch at least two of the other Group Project submissions and submit a peer evaluation based on the rubric provided in the assignment instructions.

Final Exam (75 points)

The final exam will be comprehensive and will include multiple choice, matching, fill-in-the blank and short answer questions. There will be a review session available. The exam is to be taken individually; no collaboration is allowed. The exam is not to be recorded or shared in any way. The exam will be proctored.

Assignment

Total Points Percent of Grade

Videos (2 at 20 points each)

40	6%		
Quizzes (13 at 10 points each; lowest score dropped)			
120	20%		
Discussion Board/Video Posts (31 at 2 points each)	62	10%	
3 Minute Research Reports (4 at 30 points each)			
120	20%		
Research Report Peer Evaluations (8 at 5 points each)	40	6%	
Group Project			
125	20%		
Group Project Peer Evaluation (2 at 20 points each)	40	6%	
Final Exam			

75 12%
Total Points 622 100%

Points Percentage Grade Grade Points
581 - 622

93.4-100% A 4.00
560 - 580

90.0-93.3% A- 3.67
539 - 559

86.7-89.9% B+ 3.33
519 - 538

83.4-86.6% B 3.00
498 - 518

80.0-83.3% B- 2.67
477 - 497

76.7-79.9% C+ 2.33
457 - 476

73.4-76.6% C 2.00
435 - 456

70.0-73.3% C- 1.67
415 - 434

66.7-69.9% D+ 1.33
394 - 414

63.4-66.6% D 1.00
373 - 393

60.0-63.3%

D- 0.67

Instructor(s) Elizabeth R.M. Diehl, RLA, HTM

Techniques in Horticultural Therapy

(PLS 4XXX)

Credits: 3

Instructor:

Elizabeth Diehl, HTM, RLA

leahdiehl@ufl.edu

(352) 294-5003

Office Hours: By appointment at Wilmot Gardens Greenhouse, 1427 Gale Lemerand Dr.

Course Description:

This course examines the effectiveness of horticultural therapy across a diverse range of client populations, programs, and environments, describing the physical, cognitive, and psychosocial implications. Therapeutic, vocational, and social modalities employing plants will be explored, as well as task analysis, activity analysis and tool and site adaptations.

Course Objectives:

After completing this course students will be able to:

- Compare the array of treatment modalities and methods in horticultural therapy settings and apply methods to assess therapeutic outcomes and benefits
- Characterize treatment plans, goals and objectives, treatment analysis, and related documentation
- List the distinct characteristics and therapeutic needs of diverse populations served in horticultural therapy programming, including unique adaptations
- Describe the importance of plant selection and horticulture techniques in designing individual and group activities and treatment plans
- Describe adaptive gardening strategies, plant selection criteria, and safety consideration for both indoor and outdoor settings
- Demonstrate basic horticulture knowledge common to horticultural therapy settings

Required Prerequisite Course:

PLS 3XXX - Introduction to Horticultural Therapy

Required Texts:

Haller, R.L. & Capra, C.L. (2016). *Horticultural therapy methods: Connecting people and plants in health care, human services, and therapeutic programs*. (2nd ed.). Boca Raton, FL: CRC Press.

Course Website:

This course is conducted entirely online. Lectures can be accessed in Canvas, UF online e-learning (elearning.ufl.edu). Students should view 2 narrated lectures each week to keep up

with the schedule of topics, unless otherwise indicated. The student's UF Gatorlink username and password are necessary to log into the system.

Course Communications:

All class members are expected to follow the rules of common courtesy in all communications, written and verbal. Guidelines for these rules are available through the course Canvas site and can also be accessed at <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

General questions of relevance to the whole class should be posted to the course's discussion board. Private questions may be sent to the instructor via email to leahdiehl@ufl.edu.

Course Schedule:

Week	Module & Lecture Topic	Assignments Due
Week 1 Jan. 6-10	The Therapist's Role <ul style="list-style-type: none"> ▪ Concepts of Therapeutic Relationships ▪ Adjunctive Therapies & Philosophies 	
Week 2 Jan. 13-17	The Therapist's Role <ul style="list-style-type: none"> ▪ Group Dynamics ▪ Leadership ▪ Motivation & Behavior Management 	Jan. 13: Syllabus Quiz Jan. 15 & 19: Discussion Board Posts Jan. 17: Self-Introduction Video
Week 3 Jan. 21-24	The Therapist's Role <ul style="list-style-type: none"> ▪ Ethics & Professionalism ▪ Evidence-Based Practice 	Jan. 21: Weeks 1 & 2 Topic Quiz Jan. 22 & 26: Discussion Board Posts & Self-Introduction Video Responses
Week 4 Jan. 27-31	Individual & Group Treatment Plans <ul style="list-style-type: none"> ▪ Treatment Teams ▪ Intake assessments 	Jan. 27: Week 3 Topic Quiz Jan. 29: 3 Minute Research Report: Therapeutic Method Feb. 2: Research Report Peer Evaluations
Week 5 Feb. 3-7	Individual & Group Treatment Plans <ul style="list-style-type: none"> ▪ Goal Setting ▪ Treatment Process ▪ Documentation 	Feb. 3: Week 4 Topic Quiz Feb. 5 & 9: Discussion Board Posts
Week 6 Feb. 10-14	Treatment Session Planning <ul style="list-style-type: none"> ▪ Programming Inventory ▪ Goals & Objectives 	Feb. 10: Week 5 Topic Quiz Feb. 12 & 16: Discussion Board Posts

Week 7 Feb. 17-21	Treatment Session Planning <ul style="list-style-type: none"> ▪ Task Analysis ▪ Activity Adaptation & Modification 	Feb. 17: Week 6 Topic Quiz Feb. 19: 3 Minute Research Report: Education Method Feb. 23: Research Report Peer Evaluations
Week 8 Feb. 24-28	Treatment Session Planning <ul style="list-style-type: none"> ▪ Activity Selection Process ▪ Activity as a Tool ▪ Consideration of Program Types & Goals 	Feb. 24: Week 7 Topic Quiz Feb. 26 & March 1: Discussion Board Posts
Week 9 March 2-6	Spring Break	
Week 10 March 9-13	Treatment Session Planning <ul style="list-style-type: none"> ▪ Session Structure & Process ▪ Resource Needs 	March 9: Week 8 Topic Quiz March 11: 3 Minute Research Report: TBA March 15: Research Report Peer Evaluations
Week 11 March 16-20	Treatment Session Planning <ul style="list-style-type: none"> ▪ Session Review & Evaluation ▪ Resource Planning 	March 16: Week 10 Topic Quiz March 18 & 22: Discussion Board Posts
Week 12 March 23-27	Plant Use in Programming <ul style="list-style-type: none"> ▪ Choosing Plants ▪ Education, Creativity, Sensory Stimulation ▪ Linking Activities ▪ 	March 23: Week 11 Topic Quiz March 25 & 29: Discussion Board Posts March 27: Virtual Fieldtrip Video
Week 13 March 30- April 3	Plant Use in Programming <ul style="list-style-type: none"> ▪ Outdoor Gardening ▪ Activity Ideas 	March 30 Week 12 Topic Quiz April 1 & 5: Discussion Board Posts
Week 14 April 6-10	Plant Use in Programming <ul style="list-style-type: none"> ▪ Greenhouse Gardening ▪ Activity Ideas 	April 6: Week 13 Topic Quiz April 8: 3 Minute Research Report: TBA April 12: Research Report Peer Evaluations
Week 15 April 13-17	Plant Use in Programming <ul style="list-style-type: none"> ▪ Greenhouse Gardening ▪ Activity Ideas 	April 13: Week 14 Topic Quiz April 15: Virtual Fieldtrip Peer Response Posts April 15 & 19: Discussion Board Posts

Week 16 April 20-22	Project & Review Week <ul style="list-style-type: none"> ▪ Project Feedback ▪ Review Session 	April 20: Group Project Due April 26: Group Project Peer Evaluations
Week 17 April 27-30	Exam Week	April 29: Final Exam

Assignments:

Videos (2 at 20 points each)

You will create and post two three-minute videos: one in Week 2 that introduces you to the class and includes information on yourself, your reason for taking this course, and your interests; and another in Week 12 that responds to a selected prompt. More information and a rubric will be provided within the assignment links in Canvas.

Quizzes (13 at 10 points each; lowest quiz grade dropped)

Each quiz will consist of 10 multiple-choice, matching, or fill-in-the blank questions related to the associated topic. Quizzes will be open notes, but they must be completed within a limited timeframe in one sitting. Quizzes are to be taken individually; no collaboration is allowed and they are not to be recorded or shared in any manner. Quizzes will be given at the beginning of the week based on material covered the previous week.

Discussion Board Posts & Video Responses (31 at 2 points each)

The purpose of the discussion board posts is to engage students with each other and enhance the learning environment. Each week a discussion topic or question will be posted with the expectation that you post a personal response and also respond to at least two other student's posts. The topic will be posted at the beginning of each week. Your personal post on the topic is due by Wednesday and your two responses to your peers' posts are due by Sunday. You will also be expected to respond to at least two of your peers' self-introduction video and virtual fieldtrip video.

3 Minute Research Reports (4 at 30 points each)

You will record (audio or visual) and post a three-minute research report on the given topic, following the template provided in the assignment link. Your grade will be assessed on content, clarity, and delivery as detailed in the associated rubric.

Research Report Peer Evaluations (8 at 5 points each)

You are expected to listen to your classmates' research reports and post a response to two classmates (5 points each, 10 points per each of four research topics) based on the rubric provided in the assignment instructions.

Group Project (125 points)

In groups of 2-3, you will create a sample treatment plan based on a case study of a client that includes two long-term goals each with three short-term objectives. You will propose an

activity that incorporates the goals accompanied by a task analysis and activity analysis and modification. A short video of the activity illustrating the benefits is required. Each student will also include an evaluation of his/her fellow group members that will be figured into the grade. Detailed instructions are provided in the assignment link.

Group Project Peer Evaluation (40 points)

You are expected to read/watch at least two of the other Group Project submissions and submit a peer evaluation based on the rubric provided in the assignment instructions.

Final Exam (75 points)

The final exam will be comprehensive and will include multiple choice, matching, fill-in-the blank and short answer questions. There will be a review session available. The exam is to be taken individually; no collaboration is allowed. The exam is not to be recorded or shared in any way. The exam will be proctored.

Evaluation of Grades:

Assignment	Total Points	Percent of Grade
Videos (2 at 20 points each)	40	6%
Quizzes (13 at 10 points each; lowest score dropped)	120	20%
Discussion Board/Video Posts (31 at 2 points each)	62	10%
3 Minute Research Reports (4 at 30 points each)	120	20%
Research Report Peer Evaluations (8 at 5 points each)	40	6%
Group Project	125	20%
Group Project Peer Evaluation (2 at 20 points each)	40	6%
Final Exam	75	12%
Total Points	622	100%

Points	Percentage	Grade	Grade Points
581 - 622	93.4-100%	A	4.00
560 - 580	90.0-93.3%	A-	3.67

539 - 559	86.7-89.9%	B+	3.33
519 - 538	83.4-86.6%	B	3.00
498 - 518	80.0-83.3%	B-	2.67
477 - 497	76.7-79.9%	C+	2.33
457 - 476	73.4-76.6%	C	2.00
435 - 456	70.0-73.3%	C-	1.67
415 - 434	66.7-69.9%	D+	1.33
394 - 414	63.4-66.6%	D	1.00
373 - 393	60.0-D-63.3%	D-	0.67

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

Class Attendance and Make-Up Policy: No make-up quizzes or exams will be given unless the student has a university-approved reason for missing them and makes previous arrangements with the instructor or can document an university-excused absence. Missed course assignments or exams resulting from unexcused absences will receive a zero. Any requests for make-ups due to technical issues MUST be accompanied by the UF Computing Help Desk ticket, indicating the date and time when you reported the problem. You must e-mail the instructor within 24 hours but this is not a guarantee of receiving permission to make up the quiz/exam.

All written assignments must be submitted through Canvas, which will give it a timestamp of submission. Late assignments will not be accepted without proper documentation of an emergency or technological problem.

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>

Academic Honesty Policy:

UF students are bound by The Honor Pledge that 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 (<http://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. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Online Course Evaluation Process:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Services for Students with Disabilities:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Campus Resources:

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.

Counseling and Wellness Center:

<https://counseling.ufl.edu/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. <https://career.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>

Student Complaints On-Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

On-Line Students Complaints: <http://distance.ufl.edu/student-complaint-process/>

Cover Sheet: Request 13700

Graduate Certificate in Soil, Water, and Public Health

Info

Process	Certificate New Grad Revised
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Michael Sisk mjsisk@ufl.edu
Created	2/28/2019 9:05:15 AM
Updated	2/28/2019 9:24:01 AM
Description of request	The Departments of Soil and Water Sciences in the College of Agricultural and Life Sciences and Environmental and Global Health in the College of Public Health and Health Professions are requesting to create a new graduate certificate in Soil, Water, and Public Health. This certificate administered by Soil and Water Sciences Department and will be offered to both for on-campus graduate and distance education graduate students. We will work with the UF Distance Learning Office to start the process of getting self-funded/off-book approval for this graduate certificate once this request is pending over at UF Graduate School. This graduate certificate has been approved by both academic unit's curriculum committees.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Soil and Water Science 514921000	Matthew Whiles		2/28/2019
Soil, Water, and Public Health Graduate Certificate_2_26_19.pdf					2/28/2019
UF_PHPHP_UCC_Consult_Soil_Water_&_Public_Health_Grad_Certificate_11_20_18.pdf					2/28/2019
UF_PHPHP_UCC_Consult_Soil_Water_&_Public_Health_Grad_Certificate_11_20_18.pdf					2/28/2019
College	Pending	CALS - College of Agricultural and Life Sciences			2/28/2019
No document changes					
OIPR					
No document changes					
Graduate Council					
No document changes					
Graduate School Notified					
No document changes					
University Curriculum Committee Notified					
No document changes					
Office of the Registrar					
No document changes					
OIPR Notified					
No document changes					
Academic Assessment Committee Notified					
No document changes					

Certificate|New for request 13700

Info

Request: Graduate Certificate in Soil, Water, and Public Health

Description of request: The Departments of Soil and Water Sciences in the College of Agricultural and Life Sciences and Environmental and Global Health in the College of Public Health and Health Professions are requesting to create a new graduate certificate in Soil, Water, and Public Health. This certificate administered by Soil and Water Sciences Department and will be offered to both for on-campus graduate and distance education graduate students. We will work with the UF Distance Learning Office to start the process of getting self-funded/off-book approval for this graduate certificate once this request is pending over at UF Graduate School. This graduate certificate has been approved by both academic unit's curriculum committees.

Submitter: Michael Sisk mjsisk@ufl.edu

Created: 10/31/2018 8:46:18 AM

Form version: 1

Responses

Certificate Name Soil, Water, and Public Health

Transcript Title Soil, Water, and Public Health

Credits 12

Level Graduate

CIP Code 60210000

Degree Program Soil and Water Sciences

Effective Term Fall

Effective Year 2019

Certificate Description Soil and water quality are critical to ecological health, and less obviously, but intimately, linked to public health. Learn the various simple and complex ways soils, water, and public health interact, and how the interactions can be predicted, quantified, and manipulated.

Requirements for Admission Applicants must have earned a Bachelor's degree. Students wishing to enroll in one of these graduate certificate programs should have a bachelor's degree from an accredited college or university with a major in soil and water science or an equivalent degree in an allied field such as geology, natural resources, biology, ecology, hydrology, microbiology, environmental science, horticultural science, environmental engineering, agricultural engineering or agronomy. If your bachelor's degree is not in soil and water science or you don't have an equivalent degree in an allied field, you will generally have to complete pre-requisite courses at a local institution before applying for admission to the graduate certificate program. It is not necessary to be admitted to the Graduate School to earn a certificate, but students who later enroll in a graduate program may petition to transfer up to 15 UF graduate-level credit hours (grade B or better) to their graduate degree program.

Requirements for Completion The courses for the certificate are already approved and part of the UF curriculum:

A total of four courses, 3 core courses (9 credits), 1 elective course (3 credits) are required, see below for further:

Core (Required):

PHC 6313 Environmental Health Concepts in Public Health – 3 Credits – Letter Graded – (Taught Every Fall Semester On-Campus; Taught Via Distance Education Every Spring Semester & Even Year – Summer C Semester)

SWS 5308 Ecology of Waterborne Pathogens – 3 Credits – Letter Graded - (Taught Every Spring Semester On-Campus & Via Distance Education)

SWS 5551 Soils, Water, and Public Health – 3 Credits – Letter Graded - (Taught Every Spring Semester On-Campus & Via Distance Education)

Elective (Choose One):

PHC 6052 Introduction to Biostatistical Methods- 3 credits – Letter Graded- (Taught Every Fall

Semester via Blended Format).

SWS 6262 Soil Contamination and Remediation – 3 Credits – Letter Graded - (Taught Every Fall Semester On-Campus & Via Distance Education)

SWS 6366 Biodegradation and Bioremediation – 3 Credits – Letter Graded - (Taught Every Spring Semester On-Campus & Via Distance Education)

SWS 6992 Aquatic Toxicology: Science and Applications – 3 Credits – Letter Graded - (Taught Every Spring Semester On-Campus & Via Distance Education)

To qualify for a certificate, students must have an overall GPA of 3.0 or better for the entire program. A grade of C in one course only will be accepted, providing the overall 3.0 average is maintained. No grade below C will be accepted. The student must complete an on-line competency examination with a grade of 80% or better.

Rationale and Place in Curriculum Students of soil and water science and of public health typically become well versed in their individual disciplines, but rarely appreciate the extent to which the disciplines overlap. The appreciation is further limited by meager knowledge of each other's science and terminology. The recent development and growth of the One Health concept and program at UF makes these deficiencies unacceptable. This unique interdisciplinary certificate program not only focuses on the numerous examples of discipline overlap but develops skills necessary for competency and communication among the disciplines. Emphasis is on how the physical, chemical, and biological components of soils and water determine, or can be manipulated to determine, if the soil is a public health threat or savior, and to expressing the impact via risk assessment.

Student Learning Outcomes Student Learning Outcomes (SLOs):

Students earning the certificate will be able to:

1. Describe the disciplines of public and environmental health and soils and water science, and to discuss issues/legislation that shape the fields.
2. Describe various physical/chemical/biological hazards to human and environmental health.
3. Describe basic soil and water characteristics and physical/chemical/biological processes that affect contaminant fate and transport.
4. Describe the various steps/processes involved in risk assessment (RA), and how RA aides in the development of standards/guidelines/regulations for contaminants.
5. Describe strategies and techniques from the field of soil and water sciences that minimize risks, and that promote human and environmental health.

Assessments:

Instructors of all courses available in the certificate program will submit a minimum of 10 questions to assess student competency for the SLOs itemized above. Questions from courses selected for the certificate will be combined into a single on-line "competency exam" by the Certificate Program Contact. Students are required to score a minimum of 80% to pass the exam. The exam may be taken repeatedly. In addition to the "competency exam", student competency will also be assessed as described in the individual course syllabi (e.g., course exams, term papers/projects, presentations, etc.)

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department Environmental and Global Health	Name and Title Sabo-Attwood, Tara, PhD - Associate Professor & Dept Chair
Phone Number (352) 294-5293	E-mail sabo@phhp.ufl.edu
<p>Comments</p> <p>This certificate is a nice merging of major concepts in soil water science and environmental public health. One required course is a survey of environmental public health concepts, providing a broad base of public health knowledge that can be applied to the soil water science principles that are the focus of the certificate. The Dept of EGH is supportive of these efforts.</p>	

Department	Name and Title
Phone Number	E-mail
<p>Comments</p>	

Department	Name and Title
Phone Number	E-mail
<p>Comments</p>	

Cover Sheet: Request 13716

Termination - Horticultural Production

Info

Process	Specialization New/Modify/Close Ugrad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Gerardo Nunez Villegas g.nunez@ufl.edu
Created	3/5/2019 10:23:18 AM
Updated	3/5/2019 5:11:51 PM
Description of request	We request to terminate the Horticultural Production specialization in the Horticultural Science major.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Horticultural Sciences 514923000	Christine Chase		3/5/2019
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			3/5/2019
No document changes					
Associate Provost for Undergraduate Affairs					
No document changes					
University Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Specialization|Close for request 13716

Info

Request: Termination - Horticultural Production

Description of request: We request to terminate the Horticultural Production specialization in the Horticultural Science major.

Submitter: Gerardo Nunez Villegas g.nunez@ufl.edu

Created: 3/5/2019 10:10:00 AM

Form version: 1

Responses

Termination Date Earliest available

Phase-Out Date Spring 2020

Specialization Name(s) Horticultural Production

Rationale for Request This course of study is redundant with other specializations in the Horticultural Science major. This has caused confusion among students, faculty, and staff.

Impact on Other Programs No impacts on other programs are expected.

Steps Taken to Inform Students and Faculty The proposed change was socialized among faculty during our monthly departmental meeting. A favorable faculty vote was obtained. Students were the original proponents of this change.

Teach-Out Plan All required courses for this specialization will continue to be taught for the foreseeable future, as they are in common with our other specializations.

Accommodation of Faculty The proposed specialization termination will not affect course offerings. Thus, no accommodation of faculty will be necessary.

Cover Sheet: Request 13720

Science and Technology of Horticultural Crops

Info

Process	Specialization New/Modify/Close Ugrad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Gerardo Nunez Villegas g.nunez@ufl.edu
Created	3/5/2019 11:39:55 AM
Updated	3/5/2019 5:13:28 PM
Description of request	We request to: 1) modify the 8-semester plan of our existing specialization Horticultural Science, 2) change specialization name to "Science and Technology of Horticultural Crops", and 3) update semesters 7-8 critical tracking courses.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Horticultural Sciences 514923000	Christine Chase		3/5/2019
Science and Technology of Horticultural Crops - For upload.docx					3/5/2019
HOS curriculum revision support letter.pdf					3/5/2019
College	Pending	CALS - College of Agricultural and Life Sciences			3/5/2019
No document changes					
Associate Provost for Undergraduate Affairs					
No document changes					
University Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Specialization|Modify for request 13720

Info

Request: Science and Technology of Horticultural Crops

Description of request: We request to: 1) modify the 8-semester plan of our existing specialization Horticultural Science, 2) change specialization name to "Science and Technology of Horticultural Crops", and 3) update semesters 7-8 critical tracking courses.

Submitter: Gerardo Nunez Villegas g.nunez@ufl.edu

Created: 3/5/2019 11:43:33 AM

Form version: 2

Responses

Specialization Name Horticultural Science

Specialization Code HSC

Effective Term Earliest Available

Effective Year Earliest Available

Is this an Undergraduate Innovation Academy Program No

Current Curriculum for Specialization SEMESTER 1

IDS 1161 What is the Good Life (Gen Ed Humanities) 3

MAC 1147 Precalculus Algebra and Trigonometry (Critical Tracking; State Core Gen Ed Mathematics)
4

State Core Gen Ed Composition; Writing Requirement 3

State Core Gen Ed Social and Behavioral Sciences 3

Elective2

Credits 15

SEMESTER 2

Select one: 3-4

AEB 2014 Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)

ECO 2013 Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)

ECO 2023 Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)

CHM 2045

& 2045L General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; State Core Gen Ed Biological Sciences and Physical Sciences) 4

State Core Gen Ed Humanities 3

Electives 5

Credits 15-16

SEMESTER 3

AEC 3033C Research and Business Writing in Agricultural and Life Sciences (Writing Requirement) 3

Select one: 3-4

BOT 2010C Introductory Botany (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)

BSC 2010

& 2010L Integrated Principles of Biology 1

and Integrated Principles of Biology Laboratory 1 (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)

Gen Ed Composition; Writing Requirement 3

Gen Ed Mathematics 2

Electives 4

Credits 15-16

SEMESTER 4

AEC 3030C Effective Oral Communication 3

Select one: 4

BOT 2011C Plant Diversity (Critical Tracking; Gen Ed Biological Sciences)
 BSC 2011
 & 2011L Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2
 (Critical Tracking; Gen Ed Biological Sciences)
 Select one: 3
 PHY 2004 Applied Physics 1 (Critical Tracking; Gen Ed Physical Sciences)
 PHY 2020 Introduction to Principles of Physics (Critical Tracking; Gen Ed Physical Sciences)

Electives 5
 Credits 15

SEMESTER 5

HOS 3020C Principles of Horticultural Crop Production 4
 ORH 3513C Environmental Plant ID 3
 Pest management course
 3-4
 Approved electives
 5
 Credits 15

SEMESTER 6

HOS 4933 Professional Development in Horticulture 1
 HOS 3430C Nutrition of Horticultural Crops 3
 Pest management course
 3-4
 Approved electives
 8
 Credits 15-16

SEMESTER 7

HOS 4304 Horticultural Physiology 3
 AGR 3303 Genetics 3
 Approved electives
 9
 Credits 15

SEMESTER 8

HOS 4341
 Advanced Horticultural Physiology 3
 SWS 3022
 Intro to Soils in the Environment 3
 SWS 3022L
 Intro to Soils Lab 1
 PLS3223 Plant Propagation 2
 PLS3223L Plant Propagation Lab 1
 Approved electives
 5
 Credits 15

Proposed Changes NEW SPECIALIZATION NAME:
 Science and Technology of Horticultural Crops

No changes in semesters 1-4

SEMESTER 5

HOS 3020C Principles of Horticultural Crop Production (Critical Tracking) 4
 SWS 3022 Intro to Soils in the Environment 3
 SWS 3022L Intro to Soils Lab 1
 PLP 3002C Fundamentals of Plant Pathology 4
 STA 2023 Introduction to Statistics I 3
 Credits 15

SEMESTER 6

HOS 3430C	Nutrition of Horticultural Crops	3	
HOS 4933	Professional Development in Horticulture (Critical Tracking)		1
PLS 3223	Plant Propagation	2	
PLS 3223L	Plant Propagation Lab	1	
ENY 3005	Principles of Entomology	2	
ENY 3005L	Principles of Entomology Lab	1	
	Practical experience electives	2-3	
	Approved electives	3	
	Credits	15-16	

SEMESTER 7

HOS 4304	Horticultural Physiology	3	
AGR 3303	Genetics	3	
PLS 4601C	Principles of Weed Science	3	
HOS 4918	Capstone Planning (Critical Tracking)		1
	Approved electives	6	
	Credits	16	

SEMESTER 8

HOS 3222C	Greenhouse and Protected Agriculture	3	
HOS 4XXXC	Principles of Postharvest Horticulture	3	
HOS 4921	Horticultural Sciences Capstone (Critical Tracking)		2-4
	Approved electives	6	
	Credits	14-16	

Pedagogical Rationale/Justification We propose renaming our "Horticultural Science" specialization "Science and Technology of Horticultural Crops". We also propose updating the required courses for this specialization.

Changes reflect overall hiring trends in the horticulture industry where entry-level jobs now require more quantitative skills (STA2023 was added), technological savviness (electives were added), and familiarity with control environment production (HOS3222C was added) and postharvest storage (HOS4XXXC was added) conditions. Additionally, changes include the addition of courses in our capstone sequence, which are focused on providing meaningful horticulture experience to our graduates.

Impact on Other Programs No impacts on other programs are foreseen, as the majority of these courses are taught in-house.

Assessment Data Review Proposed changes do not affect Student Learning Outcomes.

Academic Learning Compact and Academic Assessment Plan Proposed changes do not affect the Academic Learning Compact or Academic Assessment Plan.



Institute of Food and Agricultural Sciences
Horticultural Sciences Department

1253 Fifield Hall
PO Box 110690
Gainesville, FL 32611-0690
352-392-1928

February 11, 2019

To: Plant Science Department Chairs

From: Chris Chase, Interim Chair, Horticultural Sciences (HOS) Department

Re: HOS undergraduate curriculum revision

The HOS faculty has voted to sunset our undergraduate curriculum when and if a new Plant Science Undergraduate Curriculum is developed by a joint committee of HOS and Plant Science faculty and approved by a majority vote of faculty members in the participating departments. Due to the relatively long time-frame for this joint venture we would, at this point, like to implement proposed revisions to our departmental undergraduate curriculum. We have spent the last 18 months developing these revisions, and we anticipate that many of these revisions will find their way into the new Plant Science curriculum.

The proposed HOS undergraduate curriculum revision is presented in detail below. It includes ten new courses, several revised courses, and a requirement for an e-portfolio. Our aim is to become the national standard for quality education in horticultural sciences while addressing current and future needs of students and industry. We developed new courses and revised existing courses to incorporate experiential and evidence-based learning, aligning our course offerings with recommendations for undergraduate science education from AAAS and NSF [<http://visionandchange.org/reports/>]. Our semester 5-8 tracking courses position us as a model for the adoption of UF-QUEST curricula in the future. Our capstone sequence was designed with the Model for the Integration of Experiential Learning into Capstone Courses framework [Andreasen NACTA Journal 48:52] in mind. Additionally, by connecting our unique network of academic and industry horticulturists, we have designed a capstone experience that will promote critical thinking and problem solving, increase educational quality, and enhance student career-readiness.

Implementation of the revised HOS curriculum would be advantageous for the proposed new joint Plant Science degree since it would give us the opportunity to pilot the newly developed courses, the revised courses, and the e-portfolio. All of the required new and revised courses for the proposed curriculum have been approved by the CALS and University Curriculum Committees and the revised curriculum was approved by unanimous vote of Horticultural Sciences Department Faculty. Our next step will be submitting our proposed curriculum revision to the CALS Curriculum Committee. We ask that you sign below to indicate your support for our curriculum revision as we work toward development of a new joint Plant Sciences curriculum proposal that leverages and combines the strengths of our respective academic programs. Thanks in advance for your support.

The Foundation for The Gator Nation

APPROVALS

<u>Department</u>	<u>Chair</u>	<u>Signature</u>	<u>Date</u>
Environmental Horticulture	Dean Kopsell	<i>Dean A. Kopsell</i>	_____
Plant Pathology	Rose Loria	<i>Rosemary Loria</i>	_____
Agronomy	Diane Rowland	<i>Diane Rowland</i>	_____
Entomology/Nematology	Blair Siegfried	<i>Blair Siegfried</i>	_____
Soil & Water Sciences	Matthew Whiles	<i>Matthew Whiles</i>	_____

Bachelor of Science in Horticultural Sciences

Specialization in Horticultural Science (Current)

Commented [NG1]: New specialization name: Science and Technology of Horticultural Crops

Semester 1		
IDS 1161	What is the Good Life (Gen Ed Humanities)	3
MAC 1147	^{TC} Precalculus Algebra and Trigonometry (State Core Gen Ed Mathematics)	4
	State Core Gen Ed Composition; Writing Requirement	3
	State Core Gen Ed Social and Behavioral Sciences	3
	Elective	2
	Credits	15
Semester 2		
	Select one:	3-4
AEB 2014	Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)	
ECO 2013	Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)	
ECO 2023	Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)	
CHM 2045 & 2045L	^{TC} General Chemistry 1 and General Chemistry 1 Laboratory (State Core Gen Ed Biological Sciences and Physical Sciences)	4
	State Core Gen Ed Humanities	3
	Electives	5
	Credits	15-16
Semester Three		
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)	3
	Select one:	3-4
BOT 2010C	^{TC} Introductory Botany (Gen Ed Biological Sciences and Physical Sciences)	
BSC 2010 & 2010L	^{TC} Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Gen Ed Biological Sciences and Physical Sciences)	
	Gen Ed Composition; Writing Requirement	3
	Gen Ed Mathematics	2
	Electives	4
	Credits	15-16
Semester 4		
AEC 3030C	Effective Oral Communication	3
	Select one:	4
BOT 2011C	^{TC} Plant Diversity (Gen Ed Biological Sciences)	
BSC 2011 & 2011L	^{TC} Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (Gen Ed Biological Sciences)	
	Select one:	3

PHY 2004	TC Applied Physics 1 (Gen Ed Physical Sciences)	
PHY 2020	TC Introduction to Principles of Physics (Gen Ed Physical Sciences)	
	Electives	5
	Credits	15
Semester 5		
HOS 3020C	TC Principles of Horticultural Crop Production	4
ORH 3513C	Environmental Plant ID	3
	Pest management course	3-4
	Approved electives	5
	Credits	15
Semester 6		
HOS 4933	TC Professional Development in Horticulture	1
HOS 3430C	Nutrition of Horticultural Crops	3
	Pest management course	3-4
	Approved electives	8
	Credits	15-16
Semester 7		
HOS 4304	TC Horticultural Physiology	3
AGR 3303	Genetics	3
	Approved electives	9
	Credits	15
Semester 8		
HOS 4341	TC Advanced Horticultural Physiology	3
SWS 3022	Intro to Soils in the Environment	3
SWS 3022L	Intro to Soils Lab	1
PLS3223	Plant Propagation	2
PLS3223L	Plant Propagation Lab	1
	Approved electives	5
	Credits	15

Commented [NG2]: Replaced by PLP3002C – Fundamental of Plant Pathology (4 credits)

Commented [NG3]: Replaced by STA2023 - Introduction to Statistics I (3 credits)

Commented [NG4]: Replaced by ENY3005 + L – Principles of Entomology and Lab (3 credits)

Commented [NG5]: 2-3 credits must be practical experience electives

Commented [NG6]: New courses added:
PLS4601C – Principles of Weed Science (3 credits)
HOS 4918 – Capstone Planning (1 credit)

Commented [NG7]: Replaced by HOS3222C – Greenhouse and Protected Agriculture (3 credits)

Commented [NG8]: Moved to fifth semester

Commented [NG9]: Moved to fifth semester

Commented [NG10]: New courses added:
HOS4XXX – Principles of Postharvest Horticulture (3 credits). Request no. 13001
HOS4921– Horticultural Sciences Capstone (2-4 credits)
Technology electives (3 credits)

Bachelor of Science in Horticultural Sciences

Specialization in Science and Technology of Horticultural Crops (Proposed)

No changes in semesters 1-4.

	Courses	Credit
Semester 5		
HOS 3020C	^{TC} Principles of Horticultural Crop Production	4
SWS 3022	Intro to Soils in the Environment	3
SWS 3022L	Intro to Soils Lab	1
PLP 3002C	Fundamentals of Plant Pathology	4
STA 2023	Introduction to Statistics I	3
	Credits	15
Semester 6		
HOS 3430C	Nutrition of Horticultural Crops	3
HOS 4933	^{TC} Professional Development in Horticulture	1
PLS 3223	Plant Propagation	2
PLS 3223L	Plant Propagation Lab	1
ENY 3005	Principles of Entomology	2
ENY 3005L	Principles of Entomology Lab	1
	Practical experience electives	2-3
	Approved electives	3
	Credits	15-16
Semester 7		
HOS 4304	Horticultural Physiology	3
AGR 3303	Genetics	3
PLS 4601C	Principles of Weed Science	3
HOS 4918	^{TC} Capstone Planning	1
	Approved electives	6
	Credits	16
Semester 8		
HOS 3222C	Greenhouse and Protected Agriculture	3
HOS 4XXXC	Principles of Postharvest Horticulture	3
HOS 4921	^{TC} Horticultural Sciences Capstone	2-4
	Approved electives	6
	Credits	14-16

^{TC} Semester tracking course



Cover Sheet: Request 13721

Organic Horticultural Systems

Info

Process	Specialization New/Modify/Close Ugrad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Gerardo Nunez Villegas g.nunez@ufl.edu
Created	3/5/2019 12:18:26 PM
Updated	3/5/2019 5:14:24 PM
Description of request	We request to: 1) modify the 8-semester plan of our existing specialization Organic Crop Production 2) change specialization name to "Organic Horticultural Systems ", and 3) update semesters 7-8 critical tracking courses.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Horticultural Sciences 514923000	Christine Chase		3/5/2019
Organic Horticultural Systems - For upload.docx					3/5/2019
HOS curriculum revision support letter.pdf					3/5/2019
College	Pending	CALS - College of Agricultural and Life Sciences			3/5/2019
No document changes					
Associate Provost for Undergraduate Affairs					
No document changes					
University Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Specialization|Modify for request 13721

Info

Request: Organic Horticultural Systems

Description of request: We request to: 1) modify the 8-semester plan of our existing specialization Organic Crop Production 2) change specialization name to "Organic Horticultural Systems ", and 3) update semesters 7-8 critical tracking courses.

Submitter: Gerardo Nunez Villegas g.nunez@ufl.edu

Created: 3/5/2019 11:58:21 AM

Form version: 1

Responses

Specialization Name Organic Crop Production

Specialization Code OCP

Effective Term Earliest Available

Effective Year Earliest Available

Is this an Undergraduate Innovation Academy Program No

Current Curriculum for Specialization SEMESTER 1

IDS 1161 What is the Good Life (Gen Ed Humanities) 3

MAC 1147 TC Precalculus Algebra and Trigonometry (State Core Gen Ed Mathematics)
4

State Core Gen Ed Composition; Writing Requirement 3

State Core Gen Ed Social and Behavioral Sciences 3

Elective2

Credits 15

SEMESTER 2

Select one: 3-4

AEB 2014 Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)

ECO 2013 Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)

ECO 2023 Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)

CHM 2045

& 2045L TC General Chemistry 1 and General Chemistry 1 Laboratory (State Core Gen Ed Biological Sciences and Physical Sciences) 4

State Core Gen Ed Humanities 3

Electives 5

Credits 15-16

SEMESTER 3

AEC 3033C Research and Business Writing in Agricultural and Life Sciences (Writing Requirement) 3

Select one: 3-4

BOT 2010C TC Introductory Botany (Gen Ed Biological Sciences and Physical Sciences)

BSC 2010

& 2010L TC Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Gen Ed Biological Sciences and Physical Sciences)

Gen Ed Composition; Writing Requirement 3

Gen Ed Mathematics 2

Electives 4

Credits 15-16

SEMESTER 4

AEC 3030C Effective Oral Communication 3

Select one: 4

BOT 2011C TC Plant Diversity (Gen Ed Biological Sciences)
 BSC 2011
 & 2011L TC Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2
 (Gen Ed Biological Sciences)
 Select one: 3
 PHY 2004 TC Applied Physics 1 (Gen Ed Physical Sciences)
 PHY 2020 TC Introduction to Principles of Physics (Gen Ed Physical Sciences)

Electives 5
 Credits 15

SEMESTER 5
 HOS 3020C Principles of Horticultural Crop Production 4
 ENY 3005
 Principles of Entomology 2
 ENY 3005L
 Principles of Entomology Lab 1
 PLP 3002C
 Fundamentals of Plant Pathology 4
 Commodity or approved elective
 5
 Credits 16

SEMESTER 6
 HOS 3430C Nutrition of Horticultural Crops 3
 AGR 3303 Genetics 3
 AGR 4212
 Alternative Cropping Systems 3
 Commodity or approved elective 6
 Credits 15

SEMESTER 7
 HOS 4304 Horticultural Physiology 3
 HOS 3281C Principles of Organic and Sustainable Crop Production 3
 SWS 3022
 Intro to Soils in Environment 3
 SWS 3022L
 Intro to Soils Lab 1
 Commodity or approved elective
 3
 Practical experience electives 1-3
 Credits 14-16

SEMESTER 8
 HOS 4341
 Advanced Horticultural Physiology 3
 HOS 4283C Advanced Organic and Sustainable Crop Production 3
 HOS 4933
 Professional Development in Horticulture 1
 Commodity or approved elective
 6
 Pest management course
 3
 Credits 15

Proposed Changes No changes in semesters 1-4.

SEMESTER 5
 HOS 3020C Principles of Horticultural Crop Production (Tracking course) 4
 ALS 3153 Agricultural Ecology 3
 SWS 3022 Intro to Soils in Environment 3

SWS 3022L	Intro to Soils Lab	1	
STA 2023	Introduction to Statistics I	3	
HOS 3XXX	The Organic Debate: Organic Agriculture Dev. & Reg.	1	
Total		15	

SEMESTER 6

HOS 3430C	Nutrition of Horticultural Crops	3	
HOS 4933	Professional Development in Horticulture (Tracking Course)	1	
AGR 3303	Genetics	3	
ENY 3005	Principles of Entomology	2	
ENY 3005L	Principles of Entomology Lab	1	
	Approved electives	5	
Total		15	

SEMESTER 7

HOS 4304	Horticultural Physiology	3	
HOS 3281C	Principles of Organic & Sustainable Crop Production	3	
PLP 3002C	Fundamentals of Plant Pathology	4	
HOS 4918	Capstone Planning (Tracking Course)	1	
	Practical experience electives	1-2	
	Approved electives	3	
Total		15-16	

SEMESTER 8

HOS 4283C	Advanced Organic & Sustainable Crop Production	3	
HOS 4XXX	Organic Weed Management	3	
HOS 4XXXC	Principles of Postharvest Horticulture	3	
HOS 4921	Horticultural Sciences Capstone (Tracking Course)	2-4	
	Approved electives	4	
Total		15-17	

Pedagogical Rationale/Justification We propose renaming our "Organic Crop Production" specialization "Organic Horticultural Systems". We also propose updating the required courses for this specialization. Changes reflect needs for courses in the regulation of organic production (HOS3XXX was added), organic weed management (HOS4XXX was added), and postharvest storage conditions (HOS4XXXC was added). Additionally, changes include the addition of courses in our capstone sequence, which are focused on providing meaningful horticulture experience to our graduates.

Impact on Other Programs No impacts on other programs are foreseen, as the majority of these courses are taught in-house.

Assessment Data Review Proposed changes do not affect Student Learning Outcomes.

Academic Learning Compact and Academic Assessment Plan Proposed changes do not affect the Academic Learning Compact or Academic Assessment Plan.



Institute of Food and Agricultural Sciences
Horticultural Sciences Department

1253 Fifield Hall
PO Box 110690
Gainesville, FL 32611-0690
352-392-1928

February 11, 2019

To: Plant Science Department Chairs

From: Chris Chase, Interim Chair, Horticultural Sciences (HOS) Department

Re: HOS undergraduate curriculum revision

The HOS faculty has voted to sunset our undergraduate curriculum when and if a new Plant Science Undergraduate Curriculum is developed by a joint committee of HOS and Plant Science faculty and approved by a majority vote of faculty members in the participating departments. Due to the relatively long time-frame for this joint venture we would, at this point, like to implement proposed revisions to our departmental undergraduate curriculum. We have spent the last 18 months developing these revisions, and we anticipate that many of these revisions will find their way into the new Plant Science curriculum.

The proposed HOS undergraduate curriculum revision is presented in detail below. It includes ten new courses, several revised courses, and a requirement for an e-portfolio. Our aim is to become the national standard for quality education in horticultural sciences while addressing current and future needs of students and industry. We developed new courses and revised existing courses to incorporate experiential and evidence-based learning, aligning our course offerings with recommendations for undergraduate science education from AAAS and NSF [<http://visionandchange.org/reports/>]. Our semester 5-8 tracking courses position us as a model for the adoption of UF-QUEST curricula in the future. Our capstone sequence was designed with the Model for the Integration of Experiential Learning into Capstone Courses framework [Andreasen NACTA Journal 48:52] in mind. Additionally, by connecting our unique network of academic and industry horticulturists, we have designed a capstone experience that will promote critical thinking and problem solving, increase educational quality, and enhance student career-readiness.

Implementation of the revised HOS curriculum would be advantageous for the proposed new joint Plant Science degree since it would give us the opportunity to pilot the newly developed courses, the revised courses, and the e-portfolio. All of the required new and revised courses for the proposed curriculum have been approved by the CALS and University Curriculum Committees and the revised curriculum was approved by unanimous vote of Horticultural Sciences Department Faculty. Our next step will be submitting our proposed curriculum revision to the CALS Curriculum Committee. We ask that you sign below to indicate your support for our curriculum revision as we work toward development of a new joint Plant Sciences curriculum proposal that leverages and combines the strengths of our respective academic programs. Thanks in advance for your support.

APPROVALS

<u>Department</u>	<u>Chair</u>	<u>Signature</u>	<u>Date</u>
Environmental Horticulture	Dean Kopsell	Dean <u>A. Kopsell</u>	_____
Plant Pathology	Rose Loria	Rosemary <u>Loria</u>	_____
Agronomy	Diane Rowland	Diane <u>Rowland</u>	_____
Entomology/Nematology	Blair Siegfried	Blair <u>Siegfried</u>	_____
Soil & Water Sciences	Matthew Whiles	Matthew <u>Whiles</u>	_____

Bachelor of Science in Horticultural Sciences

Specialization in ~~Organic Crop Production~~ (Current)

Commented [NG1]: New specialization name:
Organic Horticultural Systems

Semester 1		
IDS 1161	What is the Good Life (Gen Ed Humanities)	3
MAC 1147	^{TC} Precalculus Algebra and Trigonometry (State Core Gen Ed Mathematics)	4
	State Core Gen Ed Composition; Writing Requirement	3
	State Core Gen Ed Social and Behavioral Sciences	3
	Elective	2
	Credits	15
Semester 2		
	Select one:	3-4
AEB 2014	Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)	
ECO 2013	Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)	
ECO 2023	Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)	
CHM 2045 & 2045L	^{TC} General Chemistry 1 and General Chemistry 1 Laboratory (State Core Gen Ed Biological Sciences and Physical Sciences)	4
	State Core Gen Ed Humanities	3
	Electives	5
	Credits	15-16
Semester 3		
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)	3
	Select one:	3-4
BOT 2010C	^{TC} Introductory Botany (Gen Ed Biological Sciences and Physical Sciences)	
BSC 2010 & 2010L	^{TC} Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Gen Ed Biological Sciences and Physical Sciences)	
	Gen Ed Composition; Writing Requirement	3
	Gen Ed Mathematics	2
	Electives	4
	Credits	15-16
Semester 4		
AEC 3030C	Effective Oral Communication	3
	Select one:	4
BOT 2011C	^{TC} Plant Diversity (Gen Ed Biological Sciences)	
BSC 2011 & 2011L	^{TC} Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (Gen Ed Biological Sciences)	
	Select one:	3

PHY 2004	TC Applied Physics 1 (Gen Ed Physical Sciences)	
PHY 2020	TC Introduction to Principles of Physics (Gen Ed Physical Sciences)	
	Electives	5
	Credits	15
Semester 5		
HOS 3020C	Principles of Horticultural Crop Production	4
ENY 3005	Principles of Entomology	2
ENY 3005L	Principles of Entomology Lab	1
PLP 3002C	Fundamentals of Plant Pathology	4
	Commodity or approved elective	5
	Credits	16
Semester 6		
HOS 3430C	Nutrition of Horticultural Crops	3
AGR 3303	Genetics	3
AGR 4212	Alternative Cropping Systems	3
	Commodity or approved elective	6
	Credits	15
Semester 7		
HOS 4304	Horticultural Physiology	3
HOS 3281C	Principles of Organic and Sustainable Crop Production	3
SWS 3022	Intro to Soils in Environment	3
SWS 3022L	Intro to Soils Lab	1
	Commodity or approved elective	3
	Practical experience electives	1-3
	Credits	14-16
Semester 8		
HOS 4341	Advanced Horticultural Physiology	3
HOS 4283C	Advanced Organic and Sustainable Crop Production	3
HOS 4933	Professional Development in Horticulture	1
	Commodity or approved elective	6
	Pest management course	3
	Credits	15

Commented [NG2]: Moved to sixth semester

Commented [NG3]: Moved to sixth semester

Commented [NG4]: Moved to seventh semester

Commented [NG5]: New courses added:
HOS3XXX – The Organic Debate: Organic Agriculture Dev. & Reg. (1 credit); Request no. 12997
ALS3153 – Agricultural Ecology (3 credits)
STA2023 – Introduction to Statistics 1 (3 credits)

Commented [NG6]: Moved to approved electives

Commented [NG7]: Moved to fifth semester

Commented [NG8]: Moved to fifth semester

Commented [NG9]: New course added:
HOS4918 – Capstone Planning (1 credit)

Commented [NG10]: Changed to 1-2 credits

Commented [NG11]: Moved to approved elective

Commented [DL12]: Moved to sixth semester

Commented [NG13]: New courses added:
HOS4XXX – Organic Weed Management (3 credits); Request no. 12981
HOS4921 – Horticultural Sciences Capstone (2-4 credits)
HOS4XXXC – Principles of Postharvest Horticulture (3 credits); Request no. 13001

Commented [NG14]: Replaced by approved electives (4 credits)

Bachelor of Science in Horticultural Sciences

Specialization in Organic Horticultural Systems (Proposed)

No changes in semesters 1-4.

Semester 5		
HOS 3020C	^{TC} Principles of Horticultural Crop Production	4
ALS 3153	Agricultural Ecology	3
SWS 3022	Intro to Soils in Environment	3
SWS 3022L	Intro to Soils Lab	1
STA 2023	Introduction to Statistics I	3
HOS 3XXX	The Organic Debate: Organic Agriculture Dev. & Reg.	1
	Total	15
Semester 6		
HOS 3430C	Nutrition of Horticultural Crops	3
HOS 4933	^{TC} Professional Development in Horticulture	1
AGR 3303	Genetics	3
ENY 3005	Principles of Entomology	2
ENY 3005L	Principles of Entomology Lab	1
	Approved electives	5
	Total	15
Semester 7		
HOS 4304	Horticultural Physiology	3
HOS 3281C	Principles of Organic & Sustainable Crop Production	3
PLP 3002C	Fundamentals of Plant Pathology	4
HOS 4918	^{TC} Capstone Planning	1
	Practical experience electives	1-2
	Approved electives	3
	Total	15-16
Semester 8		
HOS 4283C	Advanced Organic & Sustainable Crop Production	3
HOS 4XXX	Organic Weed Management	3
HOS 4XXXC	Principles of Postharvest Horticulture	3
HOS 4921	^{TC} Horticultural Sciences Capstone	2-4
	Approved electives	4
	Total	15-17

^{TC} Semester tracking course

Cover Sheet: Request 13722

Plant Biotechnology and Improvement

Info

Process	Specialization New/Modify/Close Ugrad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Gerardo Nunez Villegas g.nunez@ufl.edu
Created	3/5/2019 12:52:06 PM
Updated	3/5/2019 5:09:20 PM
Description of request	We request to: 1) modify the 8-semester plan of our existing specialization Plant Molecular and Cellular Biology, 2) change specialization name to "Plant Biotechnology and Improvement", and 3) update semesters 7-8 critical tracking courses.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Horticultural Sciences 514923000	Christine Chase		3/5/2019
Plant Biotechnology and Improvement - For upload.docx					3/5/2019
HOS curriculum revision support letter.pdf					3/5/2019
College	Pending	CALS - College of Agricultural and Life Sciences			3/5/2019
No document changes					
Associate Provost for Undergraduate Affairs					
No document changes					
University Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Specialization|Modify for request 13722

Info

Request: Plant Biotechnology and Improvement

Description of request: We request to: 1) modify the 8-semester plan of our existing specialization Plant Molecular and Cellular Biology, 2) change specialization name to "Plant Biotechnology and Improvement", and 3) update semesters 7-8 critical tracking courses.

Submitter: Gerardo Nunez Villegas g.nunez@ufl.edu

Created: 3/5/2019 12:43:46 PM

Form version: 1

Responses

Specialization Name Plant Molecular and Cell Biology

Specialization Code PMB

Effective Term Earliest Available

Effective Year Earliest Available

Is this an Undergraduate Innovation Academy Program No

Current Curriculum for Specialization SEMESTER 1

BSC 2010

& 2010L Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1
(Critical Tracking; State Core Gen Ed Biological and Physical Sciences) 4

IDS 1161 What is the Good Life (Gen Ed Humanities) 3

MAC 1147 Precalculus Algebra and Trigonometry (State Core Gen Ed Mathematics)

4

State Core Gen Ed Composition; Writing Requirement 3

Credits 14

SEMESTER 2

BSC 2011

& 2011L Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2
(Critical Tracking; Gen Ed Biological Sciences and Physical Sciences) 4

Select one: 4-5

PHY 2053

& 2053L Physics 1 and Laboratory for Physics 1 (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)

PHY 2048

& 2048L Physics with Calculus 1 and Laboratory for Physics with Calculus 1 (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)

State Core Gen Ed Social and Behavioral Sciences 3

Elective3

Credits 14-15

SEMESTER 3

AEC 3033C Research and Business Writing in Agricultural and Life Sciences (Writing Requirement) 3

CHM 2045

& 2045L General Chemistry 1

and General Chemistry 1 Laboratory (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences) 4

MAC 2311 Analytic Geometry and Calculus 1 (Critical Tracking; Gen Ed Mathematics)

4

State Core Gen Ed Humanities 3

Elective2

Credits 16

SEMESTER 4

Select one: 3-4

AEB 2014 Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)

ECO 2013 Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)

ECO 2023 Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)

AEC 3030C Effective Oral Communication 3

CHM 2046

& 2046L General Chemistry 2

and General Chemistry 2 Laboratory (Critical Tracking) 4

Gen Ed Composition; Writing Requirement 3

Elective 3

Credits 16-17

SEMESTER 5

HOS 3020C Principles of Horticultural Crop Production 4

CHM 2210 Organic Chemistry 1 3

HOS 3305

Intro. to Plant Molecular Biology 3

HOS4313C

Lab Methods in Plant Mol. Biology 2

AGR 3303 Genetics 3

Total

15

SEMESTER 6

CHM 2211 Organic Chemistry 2 3

CHM 2211L Organic Chemistry Lab 2

HOS 4933 Professional Development in Horticulture 1

Approved electives

9

Total 15

SEMESTER 7

HOS 4304 Horticultural Physiology 3

PLP 3002C

Fundamentals of Plant Pathology 4

BCH 3025

Fundamentals of Biochemistry (or BCH 4024) 4

Approved electives

3

Total 14

SEMESTER 8

MCB 3020

Basic Biology of Microorganisms 3

MCB 3002L

Basic Biology of Microorganisms Lab 1

AGR 4320

Genetic Improvement of Plants 3

Approved electives

9

Total 16

Proposed Changes No changes in semesters 1-4.

SEMESTER 5

HOS 3020C TC Principles of Horticultural Crop Production 4

CHM 2210	Organic Chemistry 1	3	
STA 2023	Introduction to Statistics I		3
AGR3303	Genetics	3	
	Approved electives	2	
	Total	15	

SEMESTER 6

STA 3024	Introduction to Statistics II		3
AGR 4320			

	Genetic Improvement of Plants	3	
HOS 4933	TC Professional Development in Horticulture		1
CHM 2211	Organic Chemistry 2	3	
CHM 2211L	Organic Chemistry Lab	2	
	Approved electives	3	
	Total	15	

SEMESTER 7

HOS 4304	Horticultural Physiology	3	
HOS 3305	Intro. to Plant Molecular Biology	3	
HOS 4313C	Lab Methods in Plant Mol. Biology		2
HOS 4918	TC Capstone Planning	1	
BCH 4024	Biochemistry	4	
	Approved electives	2	
	Total	15	

SEMESTER 8

HOS 4241C	Genetics & Breeding of Vegetable Crops		3
HOS 4921	TC Horticultural Sciences Capstone	2 - 4	
	Approved electives	10	
	Total	15	

Pedagogical Rationale/Justification We propose renaming our Plant Molecular and Cell Biology specialization "Plant Biotechnology and Improvement". We also propose updating the required courses for this specialization. Changes reflect overall hiring and admission trends in the plant science disciplines where graduates require more quantitative skills (STA2023 and STA 3024 were added) and plant breeding courses (HOS4241C was added). Additionally, changes include the addition of courses in our capstone sequence, which are focused on providing meaningful horticulture experience to our graduates.

Impact on Other Programs No impacts on other programs are foreseen, as the majority of these courses are taught in-house.

Assessment Data Review Proposed changes do not affect Student Learning Outcomes.

Academic Learning Compact and Academic Assessment Plan Proposed changes do not affect the Academic Learning Compact or Academic Assessment Plan.



Institute of Food and Agricultural Sciences
Horticultural Sciences Department

1253 Fifield Hall
PO Box 110690
Gainesville, FL 32611-0690
352-392-1928

February 11, 2019

To: Plant Science Department Chairs

From: Chris Chase, Interim Chair, Horticultural Sciences (HOS) Department

Re: HOS undergraduate curriculum revision

The HOS faculty has voted to sunset our undergraduate curriculum when and if a new Plant Science Undergraduate Curriculum is developed by a joint committee of HOS and Plant Science faculty and approved by a majority vote of faculty members in the participating departments. Due to the relatively long time-frame for this joint venture we would, at this point, like to implement proposed revisions to our departmental undergraduate curriculum. We have spent the last 18 months developing these revisions, and we anticipate that many of these revisions will find their way into the new Plant Science curriculum.

The proposed HOS undergraduate curriculum revision is presented in detail below. It includes ten new courses, several revised courses, and a requirement for an e-portfolio. Our aim is to become the national standard for quality education in horticultural sciences while addressing current and future needs of students and industry. We developed new courses and revised existing courses to incorporate experiential and evidence-based learning, aligning our course offerings with recommendations for undergraduate science education from AAAS and NSF [<http://visionandchange.org/reports/>]. Our semester 5-8 tracking courses position us as a model for the adoption of UF-QUEST curricula in the future. Our capstone sequence was designed with the Model for the Integration of Experiential Learning into Capstone Courses framework [Andreasen NACTA Journal 48:52] in mind. Additionally, by connecting our unique network of academic and industry horticulturists, we have designed a capstone experience that will promote critical thinking and problem solving, increase educational quality, and enhance student career-readiness.

Implementation of the revised HOS curriculum would be advantageous for the proposed new joint Plant Science degree since it would give us the opportunity to pilot the newly developed courses, the revised courses, and the e-portfolio. All of the required new and revised courses for the proposed curriculum have been approved by the CALS and University Curriculum Committees and the revised curriculum was approved by unanimous vote of Horticultural Sciences Department Faculty. Our next step will be submitting our proposed curriculum revision to the CALS Curriculum Committee. We ask that you sign below to indicate your support for our curriculum revision as we work toward development of a new joint Plant Sciences curriculum proposal that leverages and combines the strengths of our respective academic programs. Thanks in advance for your support.

APPROVALS

<u>Department</u>	<u>Chair</u>	<u>Signature</u>	<u>Date</u>
Environmental Horticulture	Dean Kopsell	<u>Dean D. Kopsell</u>	_____
Plant Pathology	Rose Loria	<u>Rosemary Loria</u>	_____
Agronomy	Diane Rowland	<u>Diane Rowland</u>	_____
Entomology/Nematology	Blair Siegfried	<u>Blair Siegfried</u>	_____
Soil & Water Sciences	Matthew Whiles	<u>Matthew Whiles</u>	_____

Bachelor of Science in Horticultural Sciences
 Specialization in Plant Molecular and Cell Biology (Current)

Commented [NG1]: New specialization name:
 Plant Biotechnology and Improvement

Semester 1		
BSC 2010 & 2010L	Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (Critical Tracking; State Core Gen Ed Biological and Physical Sciences)	4
IDS 1161	What is the Good Life (Gen Ed Humanities)	3
MAC 1147	Precalculus Algebra and Trigonometry (State Core Gen Ed Mathematics)	4
	State Core Gen Ed Composition; Writing Requirement	3
	Credits	14
Semester 2		
BSC 2011 & 2011L	Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)	4
	Select one:	4-5
PHY 2053 & 2053L	Physics 1 and Laboratory for Physics 1 (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)	
PHY 2048 & 2048L	Physics with Calculus 1 and Laboratory for Physics with Calculus 1 (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)	
	State Core Gen Ed Social and Behavioral Sciences	3
	Elective	3
	Credits	14-15
Semester 3		
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)	3
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry 1 Laboratory (Critical Tracking; Gen Ed Biological Sciences and Physical Sciences)	4
MAC 2311	Analytic Geometry and Calculus 1 (Critical Tracking; Gen Ed Mathematics)	4
	State Core Gen Ed Humanities	3
	Elective	2
	Credits	16
Semester 4		
	Select one:	3-4
AEB 2014	Economic Issues, Food and You (Gen Ed Social and Behavioral Sciences)	

ECO 2013	Principles of Macroeconomics (Gen Ed Social and Behavioral Sciences)	
ECO 2023	Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)	
AEC 3030C	Effective Oral Communication	3
CHM 2046 & 2046L	General Chemistry 2 and General Chemistry 2 Laboratory (Critical Tracking)	4
	Gen Ed Composition; Writing Requirement	3
	Elective	3
	Credits	16-17
Semester 5		
HOS 3020C	Principles of Horticultural Crop Production	4
CHM 2210	Organic Chemistry 1	3
HOS 3305	Intro. to Plant Molecular Biology	3
HOS4313C	Lab Methods in Plant Mol. Biology	2
AGR 3303	Genetics	3
	Total	15
Semester 6		
CHM 2211	Organic Chemistry 2	3
CHM 2211L	Organic Chemistry Lab	2
HOS 4933	Professional Development in Horticulture	1
	Approved electives	9
	Total	15
Semester 7		
HOS 4304	Horticultural Physiology	3
PLP 3002C	Fundamentals of Plant Pathology	4
BCH 3025	Fundamentals of Biochemistry (or BCH 4024)	4
	Approved electives	3
	Total	14
Semester 8		
MCB 3020	Basic Biology of Microorganisms	3
MCB 3002L	Basic Biology of Microorganisms Lab	1
AGR 4320	Genetic Improvement of Plants	3
	Approved electives	9
	Total	16

Commented [NG2]: Moved to seventh semester

Commented [NG3]: Moved to seventh semester

Commented [NG4]:
Approved electives (2 credits)
STA2023 – Introduction to Statistics 1 (3 credits)

Commented [NG5]: New courses added:
STA3024 – Introduction to Statistics II (3 credits)
Approved electives (2 credits)

Commented [NG6]: Moved to approved electives

Commented [NG7]: Replaced by BCH4024 - Biochemistry

Commented [NG8]: New courses added:
Approved electives (2 credits)
HOS4918 – Capstone Planning (1 credit)

Commented [NG9]: Replaced by new course:
HOS4241C – Genetics & Breeding Veg Crops (3 credits)

Commented [NG10]: Moved to approved electives

Commented [NG11]: Moved to sixth semester

Commented [NG12]: New courses added:
HOS4921 – Horticultural Sciences Capstone (2-4 credits)

Bachelor of Science in Horticultural Sciences
 Specialization in Plant Biotechnology and Improvement (Proposed)

No changes in semesters 1-4.

Semester 5		
HOS 3020C	^{TC} Principles of Horticultural Crop Production	4
CHM 2210	Organic Chemistry 1	3
STA 2023	Introduction to Statistics I	3
AGR3303	Genetics	3
	Approved electives	2
	Total	15
Semester 6		
STA 3024	Introduction to Statistics II	3
AGR 4320	Genetic Improvement of Plants	3
HOS 4933	^{TC} Professional Development in Horticulture	1
CHM 2211	Organic Chemistry 2	3
CHM 2211L	Organic Chemistry Lab	2
	Approved electives	3
	Total	15
Semester 7		
HOS 4304	Horticultural Physiology	3
HOS 3305	Intro. to Plant Molecular Biology	3
HOS 4313C	Lab Methods in Plant Mol. Biology	2
HOS 4918	^{TC} Capstone Planning	1
BCH 4024	Biochemistry	4
	Approved electives	2
	Total	15
Semester 8		
HOS 4241C	Genetics & Breeding of Vegetable Crops	3
HOS 4921	^{TC} Horticultural Sciences Capstone	2 - 4
	Approved electives	10
	Total	15

^{TC} Semester tracking course

Cover Sheet: Request 12888

new graduate course US Wildlife Law, Policy, & Ethics

Recycled

Info

Process	Course New Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jason Byrd jhbyrd@ufl.edu
Created	8/1/2018 10:14:13 AM
Updated	2/20/2019 12:56:56 PM
Description of request	Create new graduate course focusing on US wildlife laws, policies, and ethics.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Wildlife Ecology and Conservation 514947000	Eric Hellgren		12/20/2018
No document changes					
College	Recycled	CALS - College of Agricultural and Life Sciences	Joel H Brendenuhl	Recycled at the CALS CG meeting in January. Please do not approve until all issues identified by the CALS CC have been addressed.	1/29/2019
uccconsult domestic wildlife law mjangelo.pdf					
Department	Approved	CALS - Wildlife Ecology and Conservation 514947000	Eric Hellgren		2/20/2019
UFL_WILDLIFE-US-LAW_SYLLABUS_Final_track_cnt_2-15-19.docx					
UFL_WILDLIFE-US-LAW_SYLLABUS_Final_track_cnt_2-15-19_accepted changes.docx					
College	Pending	CALS - College of Agricultural and Life Sciences			2/20/2019
No document changes					
Graduate Curriculum Committee					
No document changes					
University Curriculum Committee Notified					
No document changes					
Statewide Course Numbering System					
No document changes					
Graduate School Notified					
No document changes					
Office of the Registrar					
No document changes					

Step	Status	Group	User	Comment	Updated
College Notified					
No document changes					

Course|New for request 12888

Info

Request: new graduate course US Wildlife Law, Policy, & Ethics

Description of request: Create new graduate course focusing on US wildlife laws, policies, and ethics.

Submitter: Jason Byrd jhbyrd@ufl.edu

Created: 8/1/2018 10:03:09 AM

Form version: 1

Responses

Recommended Prefix WIS

Course Level 6

Number XXX

Category of Instruction Intermediate

Lab Code None

Course Title Introduction to U.S. Wildlife Law, Policy & Ethics

Transcript Title US Wildlife Law & Pol

Degree Type Graduate

Delivery Method(s) Online

Co-Listing No

Co-Listing Explanation No co-listing

Effective Term Earliest Available

Effective Year 2019

Rotating Topic? No

Repeatable Credit? No

Amount of Credit 3

S/U Only? No

Contact Type Regularly Scheduled

Weekly Contact Hours 3

Course Description Upon successful completion of this course students will possess a thorough understanding of the U.S. legal system governing fish and wildlife conservation as it relates to wildlife management and will develop the skills necessary to analyze the complex stakeholder motivations affecting U.S. wildlife conservation policies from multiple perspectives.

Prerequisites None

Co-requisites None

Rationale and Placement in Curriculum The current wildlife conservation and law course attempts to cover both domestic and international law. Due to the volume of information in both areas of wildlife law, the current course will be refocused on international law and this new course will focus on domestic wildlife laws, policy, and ethics.

Course Objectives 1. Demonstrate an ability to review, decipher and discuss primary sources, including statutes and cases relevant to the course topics.

2. Explain the Constitutional framework, levels of government and forms of law, the courts' role in resolving conflicts and the potential barriers to bringing cases and requesting relief on behalf of wildlife.

3. Articulate traditional and contemporary approaches to wildlife management in the United States, including the North American Model and the public trust doctrine, and apply ethical frameworks for identifying and analyzing related ethical concerns.

4. Describe key U.S. treatises, federal statutes and agencies involved in the conservation of fish and wildlife, protection of endangered species and the public's role in affecting policy formulation, implementation and government accountability.

5. Demonstrate critical thinking and analysis skills in discussions of the goals, objectives, strengths and weaknesses of existing statutes, non-governmental recommendations and the role of NEPA environmental impact assessments for affecting positive changes in endangered and threatened species protection.

6. Identify and analyze tensions between stakeholder interests, differentiating between ethical, cultural, societal and other contextual perspectives in resolving controversies associated with protection of endangered species and habitats.
7. Apply their learning in their field of study or in their professional/personal interests.

Course Textbook(s) and/or Other Assigned Reading Text: There are NO required texts for this course. Readings and other information media from relevant sources will be provided on the course website.

Texts frequently used throughout the course instruction include:

- Goble, D., Freyfogle, E. T., Biber, E., Cheever, F., & Wiersema, A. (2016). *Wildlife law: Cases and materials* (3rd ed.). Foundation Press.
- American Bar Association. (2017). *Wildlife law & ethics: A U.S. perspective*. Y. In Eisenstein & B. A. In Wagman (Eds.). NY: Author.
- D'Silva, J., & Turner, J. (Eds.). (2012). *Animals, ethics and trade: The challenge of animal sentience*. Baltimore, MD: Taylor and Francis.
- Freyfogle, E., T. & Goble, D. (2009). *Wildlife law: A primer*. Island Press.

Websites frequently used:

- <https://ecos.fws.gov/ecp/>
- <https://www.endangeredspecieslawandpolicy.com/>

Weekly Schedule of Topics Week 1: Overview and Intro

Week 2. Variations of Use, Ethics.

Week 3. Case studies

Week 4. Acquiring property in wildlife

Week 5. Public trust

Week 6. Treatise rights

Week 7. Fish and Game Agencies

Week 8. The Lacey Act

Week 9. Break

Week 10. CITES

Week 11. Climate change

Week 12. US wildlife special topics.

Week 13. Citizen Power

Week 14. Course review.

Links and Policies No additional policies.

Grading Scheme Grading Breakdown:

Midterm Exam: 70 points (7%)

Final Exam: 70 points (7%)

Discussion Question (3): DB1 = 4; DB2 = 6; DB7 = 15 points. Total Discussion = 25 points

(3%)

Ethical Analysis Papers (3): 30 points each = 90 points (9%)

Think about It papers (5): 15 points each = 75 points (8%)

Projects (3): Project #1 = 270 points; Project #2 = 150 points; Project #3 = 200 points.

Total Project = 620 points (66%)

Total for the Course: 950 points/100%

Grades will be assigned as follows:

100-93.4% A

93.3-90.0% A-

89.9-86.7% B+

86.6-83.4% B

83.3-80.0% B-

79.9-76.7% C+

76.6-73.4% C

73.3-70.0% C-

69.9-66.7% D+

66.6-63.4% D

63.3-60.0% D-

<59.9% and below = E

Instructor(s) Charis Nick-Torok, MS, Esq.

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department College of Law	Name and Title Mary Jane Angelo, Professor of Law, Director ELULP
Phone Number 352-273-0944	E-mail angelo@law.ufl.edu
<p>Comments</p> <p>Wildlife Law, Policy & Ethics:</p> <p>1) The law school already has a distance education course on this topic. So far, it has not been offered frequently, but I plan to offer it more and to open it to other parts of UF. The law school course was developed, by Jacki Lopez, a nationally-respected expert on wildlife law and me.</p> <p>2) The course syllabus tries to cover too many topics, so it would seem each topic would receive onyl superficial treatment.3) T-shirts and poems are not appropriate assignments for a law class.</p>	

Department	Name and Title
Phone Number	E-mail
<p>Comments</p>	

Department	Name and Title
Phone Number	E-mail
<p>Comments</p>	

Introduction to U.S. Wildlife Law, Policy & Ethics
WIS-6XXX
Course Syllabus

Instructor: Charis Nick-Torok, MS, Esq.

Office hours: (remote via Canvas Chat): Monday 6:00pm to 7:00pm; Wednesday 8:00am – 10:00am; to Friday 12:00pm – 1:00pm. In addition to the posted hours, please contact the instructor via email within the CANVAS course with any concerns, general issues or to schedule a phone or online chat appointment if necessary. Responses will be provided within 24-48 hours.

Email: (UF email is pending adjunct faculty appointment which is pending for approval of this course)

Phone: 352-294-4091

Website: www.forensicscience.ufl.edu

READING:

Text: There are **NO required** texts for this course.

Journals, news articles, videos and websites: In addition to specific court cases and/or briefs and legislative or agency acts and rules, readings will be selected and assigned from the following list, which may change as more recent or subject specific materials become available and those on the list become less relevant. On average, not including lectures, there will be 30-40 pages of reading per week. *Readings and other information media, including videos from relevant sources will be provided on the course website.*

1. American Wild Horse Preservation Campaign, et al. v. Ken Salazar, et al., Case No. 1:11-cv-02222 (D.C. Cir. 2011)
2. Bridgett Huber, “These Gory New Hunting Competitions Have Taken the Country by Storm,” MOTHER JONES (Mar. 10, 2015), available at <http://www.motherjones.com/environment/2015/03/killing-coyotes-bobcats-andfoxes->
3. Bruskotter, J. T., & Enzler, Sherry A. (2011, September 30). Rescuing Wolves from Politics: Wildlife as a Public Trust Resource. Science. Retrieved from faculty.nelson.wisc.edu/treves/pubs/BruskotterJT_2011.pdf
4. Camilla H. Fox and Marc Bekof, (2011) Integrating Values and Ethics into Wildlife Policy and Management—Lessons from North America Animals (Basel). 2011 Mar; 1(1): 126–143
5. CARNEY ANNE NASSER, Welcome to the Jungle: How Loopholes in the Federal Endangered Species Act and Animal Welfare Act are Feeding a Tiger Crisis in America, 9 Albany Gov. Law Rev. 194 (2016), available at <http://www.albanygovernmentlawreview.org/Articles/Vol09-1/5.pdf>.

6. Carol Hardy Vincent, (2017, March 3). Federal Land Ownership: Overview and Data, CRS Report for Congress, R42346
7. Challenge to DOI's, BOEMRE'S, and FWS's environmental reviews of the Cape Wind offshore wind project under NEPA, ESA, and MBTA) (Dist. Ct. D.C. 2014) available at https://www.gpo.gov/fdsys/pkg/USCOURTS-dcd-1_10-cv-01067/pdf/USCOURTS-dcd-1_10-cv-01067-0.pdf.
8. CHAPRON G, TREVES A., "Blood does not buy goodwill: allowing culling increases poaching of a large carnivore.," Proc. R. Soc. B 20152939 (2016), available at <http://dx.doi.org/10.1098/rspb.2015.2939>.
9. David Favre, Living Property: A New Status for Animals Within the Legal System, 93 MARQ. L. REV. 1021 (2010)
10. DAVID N. CASSUTO, Legal Standing for Animals and Advocates, 13 ANIMAL LAW 61 (2006) available at <http://digitalcommons.pace.edu/lawfaculty/512/>.
11. Endangered Species Act (Selected sections)
Episode 73, April 21, 2017, available at <https://oceanservice.noaa.gov/podcast/apr11/mw042111.mp3>.
12. Erin Eastwood, *Can Wildlife Adapt to Climate Change?* TEDEd, available at
13. Final Rule Removing the Yellowstone Ecosystem Population of Grizzly Bears from the Federal List of Threatened and Endangered Wildlife, 50 CFR Part 17, Vol. 81, No. 48 (2016) available at <http://www.federalregister.gov> fun-and-profit/.
14. Geoffrey Wandesforde-Smith & Lynette A. Hart (2015) Exploring the Borderlands Between Wild and Non-Wild Animals: Wildlife Law and Policy in Transition, Journal of International Wildlife Law & Policy, 18:4, 269-275, DOI: 10.1080/13880292.2015.1111708
15. John Frederick Walker, (Oct. 13, 2014). The Case For a Legal Ivory Trade: It Could Help Stop the Slaughter, Yale Law e360, [http://e360.yale.edu/features/ ...http://e360.yale.edu/features/point_the_case_for_a_legal_ivory_trade_it_could_help_stop_the_slaughter](http://e360.yale.edu/features/...http://e360.yale.edu/features/point_the_case_for_a_legal_ivory_trade_it_could_help_stop_the_slaughter).
16. Isacat, B. (2015). How-to-do-animal-Rights: Legally and with confidence (2nd ed.). <http://www.animalethics.org.uk/How-to-Do-Animal-Rights-2015.pdf> (selected pgs)
17. It's Not About the Fox: The Untold History of Pierson v. Post - Duke Law Journal 2006
18. James R. Heffelfinger (2013, May 29). The role of hunting in North American wildlife conservation, International Journal of Environmental Studies, Volume 70, 2013 - Issue 3
19. JESSICA F. GREEN, "Do We Really Need a New U.N. Oceans Treaty? Yes, and Here's Why," WASH. POST (April 25,2016)
20. Kathleen Rogers; James A. Moore, Revitalizing the Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere: Might Awakening a Visionary but Sleeping Treaty be the Key to Preserving Biodiversity and Threatened Natural Areas in the Americas, 36 Harv. Int'l. L. J. 465 (1995)
21. KRISTIN HUGO, Environmental Groups Sue USDA for "Barbaric" Killing of Millions of Wild Animals, NEWSWEEK, Sept. 11, 2017, available at <http://www.newsweek.com/usda-sued-barbaric-killing-coyotes-wild-animals-663227>

22. Lisa Kemmerer (2016) Ethics and Eating Fishes, *Journal of International Wildlife Law & Policy*, *Wild Animals and Justice* 19: 3.
23. Macaulay, L. (2016). The role of wildlife-associated recreation in private land use and conservation: Providing the missing baseline. *Land Use Policy*, 58, 218-233. doi:10.1016/j.landusepol.2016.06.024
24. Manuel Velasquez, Claire Andre, Thomas Shanks, S.J., and Michael J. Meyer (2016), *Thinking Ethically*, <https://www.scu.edu/ethics/ethics-resources/ethical-decision-making/thinking-ethically/>
25. MARY RICE, *The Case Against a Legal Ivory Trade: It Will Lead to More Killing of Elephants*, *Yale Law e360*, Oct. 13, 2014, available at http://e360.yale.edu/features/counterpoint_the_case_against_a_legal_ivory_trade_it_will_lead_to_more_killing_of_elephants.
26. NOAA Fact Sheet, *Deepwater Horizon Oil Spill Natural Resource Damage Assessment: Sea Turtle Early Restoration* (2015), available at http://www.gulfspillrestoration.noaa.gov/sites/default/files/wpcontent/uploads/150454_dwh_factsheet_seaturtle.pdf.
27. NOAA Office of Response & Restoration Podcast, *Deepwater Horizon: One Year Later*, Pages 603-606.
28. *Public Employees for Environmental Responsibility v. Tommy P. Beaudreau, et al.*, Case No. 1:10-cv-01067-RBW Public Radio (Feb. 19, 2016) (audio file)
29. *Reversing America's Wildlife Crisis*. (n.d.). Retrieved from <https://www.nwf.org/ReversingWildlifeCrisis>
30. RICHARD M. FRANK, *The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future*, 45 *U.C. DAVIS LAW REV.* 665 (2012), available at https://lawreview.law.ucdavis.edu/issues/45/3/Topic/45-3_Frank.pdf.
31. T. M. Newsome and W. J. Ripple, *A continental scale trophic cascade from wolves through coyotes to foxes*, *J. Anim. Ecol.*, 84(1):49–59, 2015 DOI, available at <https://doi.org/10.1111/1365-2656.12258>
32. *The Pioneer Spirit and the Public Trust: The American Rule of Capture and State Ownership of Wildlife - Environmental Law* 2005
33. Werner Scholtz, (2017) *Injecting Compassion into International Wildlife Law: From Conservation to Protection?* *Transnational Environmental Law*, Page 1 of 21
34. *Wild Animals and Ethical perspectives*, In Marc Bekoff, ed., *Encyclopedia of Animal Rights and Animal Welfare* Second edition: Santa Barbara, CA: Greenwood Press, ABC Clio, 2010.
35. Francine Madden (2008) *The Growing Conflict Between Humans and Wildlife: Law and Policy as Contributing and Mitigating Factors*, *Journal of Wildlife Law & Policy*, 11:189–206.

Suggested Texts:

- 🌐 Goble, D., Freyfogle, E. T., Biber, E., Cheever, F., & Wiersema, A. (2016). *Wildlife law: Cases and materials* (3rd ed.). Foundation Press.
- 🌐 Isacat, B. (2015). *How-to-do-animal-Rights: Legally and with confidence* (2nd ed.).

<http://www.animaethics.org.uk/How-to-Do-Animal-Rights-2015.pdf> (available as free .PDF 275 pgs) Texts frequently used throughout the course instruction are listed below, but the list may change as updates become available: Students will be notified of any major changes at the beginning of the semester:

- ④ Goble, D., Freyfogle, E. T., Biber, E., Cheever, F., & Wiersema, A. (2016). *Wildlife law: Cases and materials* (3rd ed.). Foundation Press.
- ④ American Bar Association. (2017). *Wildlife law & ethics: A U.S. perspective*. Y. In Eisenstein & B. A. In Wagman (Eds.). NY: Author.
- ④ Columbia University Press (2006). *A Communion of subjects: Animals in religion, science, and ethics*, Paul Waldau and Kimberley Patton (Eds). NY
- ④ D'Silva, J., & Turner, J. (Eds.). (2012). *Animals, ethics and trade: The challenge of animal sentience*. Baltimore, MD: Taylor and Francis.
- ④ Freyfogle, E., T. & Goble, D. (2009). *Wildlife law: A primer*. Island Press.

Websites frequently used:

- <https://ecos.fws.gov/ecp/>

<https://www.endangeredspecieslawandpolicy.com/>

Course Description:

Upon successful completion of this course students will possess a thorough understanding of the U.S. legal system governing fish and wildlife conservation as it relates to wildlife management and will develop the skills necessary to analyze the complex stakeholder motivations affecting U.S. wildlife conservation policies from multiple perspectives.

Course Structure:

The course is divided into three parts. Part one provides a robust overview of the history and evolving nature of U.S. fish and wildlife conservation law and the associated legal and regulatory systems in general. Students will gain awareness of key agencies governing wildlife conservation management and a basic understanding of the rule-making process. Additionally, students will acquire basic skills for reading and deciphering primary sources such as case law and statutes. Key ethical theories regarding wildlife and animals in general will be introduced and an ethics' framework for analysis provided.

Part two will explore specific concepts, laws and oversight of fish and wildlife conservation and management in the United States. Topics include but are not limited to wildlife as public and private property; limits on capture and ownership; relationships between state; federal; tribal and foreign governments; hunting and trapping; inland fisheries; state authority over gaming laws; and key laws and treatise affecting U.S. wildlife trade and enforcement measures. Intense focus will be paid to understanding the laws, legal mechanisms and requirements for classifying and protecting threatened or endangered species under the Endangered Species Act. Additional focus will be on marine mammals, wild horses and burros, the national park systems and other critical habitats, and the expanding role of science and environmental law in influencing protection decisions.

Part three of the course expands upon the knowledge gained in the previous two parts and provides opportunities to analyze and assess contemporary and controversial wildlife conservation and management concerns. Examples include, captive wildlife, restoration ecology versus reintroduction of individual species, game ranching, illegal wildlife trade and exotics, impact of feral animals on native wildlife, among others. New approaches to wildlife conservation law are explored, including the inclusion of non-law related disciplines in assessing resolutions, acknowledging the critical role NGO's, education, and citizen advocacy to inform and shape fish and wildlife conservation management laws.

Primary Course Objectives:

Upon successful completion of the course, students will be able to:

1. Review, decipher and discuss primary sources, including statutes and cases relevant to the course topics.
2. Describe the Constitutional framework, levels of government and forms of law, the courts' role in resolving conflicts and the potential barriers to bringing cases and requesting relief on behalf of wildlife.
3. Critique traditional and contemporary approaches to wildlife management in the United States, including the North American Model and the public trust doctrine, and apply ethical frameworks for identifying and analyzing related ethical concerns.
4. Identify key U.S. treatises, federal statutes and agencies involved in the conservation of fish and wildlife, protection of endangered species and the public's role in affecting policy formulation, implementation and government accountability.
5. Compare and contrast the goals, objectives, strengths and weaknesses of existing statutes, non-governmental recommendations and the role of environmental conservation efforts for affecting positive changes in wildlife protection.
6. Identify and analyze tensions between stakeholder interests, differentiating between ethical, cultural, societal and other contextual perspectives in resolving controversies associated with protection of endangered species and habitats.

Course Topics and Assignment Schedule:

Each module will generally follow the same structure when introducing the material: a statement of the issues, the related laws, the historic context for the laws, the stakeholders affected, specific cases and examples and a starting point for ethical evaluation of the law and outcomes.

The goal is to assist the student with gaining the critical thinking skills and confidence necessary for identifying and analyzing the strengths, weaknesses and disparities between a law's stated objectives and demonstrated consequences. Ethical analysis is included in each module to provide students practice analyzing problems and solutions through an ethical lens.

THE SYLLBUS TOPICS AND ORDER OF ARRANGEMENT ARE SUBJECT TO CHANGE

COURSE TOPICS AND ASSIGNMENT SCHEDULE			
MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
Module 1: (WEEK 1) GETTING STARTED	Overview & Introductions <ul style="list-style-type: none"> - Course goals and objectives, E-learning tools, structure and flow of the course, assignments, expectations Check Your Toolkit <ul style="list-style-type: none"> - Critical Thinking - Informed vs. informal opinion - Common logical fallacies - Basic Taxonomy We Begin: laying the Foundation for U.S. Perspectives <ul style="list-style-type: none"> - What is and isn't "Wildlife" in the U.S.? - What is "law?" - What are the historic and evolving goals and objectives of U.S. wildlife law? 	<u>M1DB #1:</u> Introduce yourself! Respond to 2 Classmates <u>M1DB #2:</u> Fun Logical Fallacies Respond to 2 classmates	 (2) (1) (5) (2)

COURSE TOPICS AND ASSIGNMENT SCHEDULE

MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
<p>MODULE 2:</p> <p>(Week 2)</p> <p>OUR RELATIONSHIP TO WILD ANIMALS: U.S. & ETHICAL PERSPECTIVES</p>	<p>Variations of Use</p> <ul style="list-style-type: none"> - Human Survival (basic needs; medicinal; economics; research, etc.) - Cultural - Religious - Muse (entertainment, status, human-animal bonds, animal therapy, etc.) <p>The Ethical Dimension</p> <ul style="list-style-type: none"> - Introduction to some key ethical theories and principles often used to explain our perception of wildlife and justify our actions, including: Deontology, Anthropocentrism, extrinsic value, Utilitarianism, inherent value and animal welfare, intrinsic value and animal rights, others - Ethical frameworks for analyzing complex scenarios involving wildlife <p>Wildlife Exploitation and the Evolution of U.S. Wildlife Conservation theories & perspectives</p>	<p>M2: Ethical Analysis Essay #1</p> <p>TOPIC: "The Elephant in the Livingroom"</p>	<p>(30)</p>

COURSE TOPICS AND ASSIGNMENT SCHEDULE

MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
<p>MODULE 3</p> <p>(Week 3)</p> <p><i>U.S. Law Overview – the Basics</i></p>	<p>Reading cases & statutes – the Rosetta Stone</p> <p>Constitutional Framework</p> <p>Levels of Government</p> <p>Forms of Law</p> <ul style="list-style-type: none"> - <i>Review: How does a bill become a law?</i> <p>Judicial review</p> <ul style="list-style-type: none"> - <i>Requirements</i> - <i>Barriers</i> 	<p>M3 DISCUSSION BOARD#3</p> <p>Topic: TBD</p> <p>Response to two classmates</p>	<p>(8)</p> <p>(2)</p>
<p>MODULE 4</p> <p>(Week 4)</p> <p>Private Interests in Wildlife & Land</p>	<p>Acquiring Property in Wildlife</p> <ul style="list-style-type: none"> - Allocation of rights to wildlife - The right to hunt - Limits on power to capture & ownership - Game Ranchers <p>Wildlife & Private Property in Land</p> <ul style="list-style-type: none"> - Capture on private land - Hunting easements - Trespass, nuisance & negligence - Damage caused by wildlife <p>Inland Fisheries</p>	<p>M4: “</p> <p>DISCUSSION BOARD#4”</p> <p>Topic: Animal Welfare & the future of hunting</p> <p>Respond to two classmates</p>	<p>(8)</p> <p>(2)</p>

COURSE TOPICS AND ASSIGNMENT SCHEDULE

MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
MODULE 5 (Week 5) Wildlife as a Public Resource	The Public Trust Doctrine State Property & Sovereign Powers to Protect Wildlife Affirmative Federal Power over Wildlife Federal Constitutional Limits on State Powers Wildlife on Federal Lands	M5: DISCUSSION BOARD#5 Topic: TBD Response to two classmates Project #1, "Lobby Day!" opens. Part I & II are due by the end of Week 8	(8) (2) (275)
MODULE 6 (Week 6) Native American Treaty Rights	The Third Sovereign – Treatise Rights <ul style="list-style-type: none"> - <i>General Principles</i> - <i>Limitations of Private Rights</i> - <i>Dissimilar Rights</i> - <i>Limitations on State Powers</i> - <i>Federal Power to limit Treaty rights</i> - <i>State Regulatory Powers</i> - <i>Tribes as Wildlife Managers</i> 	M6: "DISCUSSION BOARD#6" TBD Response to two classmates	(8) (2)

COURSE TOPICS AND ASSIGNMENT SCHEDULE

MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
MODULE 7 (Week 7) State Game Laws & Liability for Harm	Fish & Game Agencies <ul style="list-style-type: none"> - <i>Limits of Authority</i> - <i>Rule Making Process</i> - <i>Common Challenges to Regulations</i> - <i>Procedural Misconduct</i> - U.S. Wildlife Services – special mention Hunting <ul style="list-style-type: none"> - <i>Defining wrongful conduct</i> - <i>Challenges to prosecuting wrongful conduct</i> - <i>Fairness v.s. enforceability</i> Limits on Law Enforcement Harmful Wildlife <ul style="list-style-type: none"> - <i>Personal injury</i> - <i>Property Damage</i> - <i>Government Liability</i> 	M7: DISCUSSION BOARD #7 “TBD” Response to two classmates	(8) (2)
MODULE 8 (Week 8) Federal Wildlife Laws: <i>The Power of “Lacey” and specific Bird and Terrestrial Species Protections</i>	The Lacey Act Migratory Bird Treaty Act of 1918 Bald and Golden Eagle Protection Act Wild Free-Roaming Horses & Burros Act	Project #1: LOBBY DAY!!! Parts I & II are due <u>Mid-Term</u>	(70)
Week 9 MID-TERM BREAK	No Lecture		

COURSE TOPICS AND ASSIGNMENT SCHEDULE

MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
Module 9 (Week 10) Federal Protection Laws: Marine Mammals & Fish	Marine Mammal Protection Act Magnuson -Stevens Fisheries Conservation & Management Act of 1976 Non indigenous Aquatic Nuisance Prevention and Control Act of 1990	M9: " DISCUSSION BOARD#8 Respond to two classmates Topic: Northern Right Whale Project #1: "LOBBY DAY" Part III is due	(8) (2)
MODULE 10 (2 weeks) (Week 11 & 12) Endangered Species: Illegal Wildlife trafficking & Federal Protections	<i>CITES – Brief Overview</i> <i>The Endangered Species Act – Introduction</i> Specific Sections <ul style="list-style-type: none"> - <i>Section 4</i> - <i>Section 7</i> - <i>Section 9</i> - <i>Section 11</i> <i>Assessing the ESA (strengths/weaknesses)</i> The Future of the ESA	Project #2 – "4-d Petition" opens (due at the end of week 13) Project #3 – "Spread the Word!" opens. (Part I & II due at the end of week 15, Part III due by the end of week 16)	(150) (185)
MODULE 11 (Week 13) <i>The goals & Challenges of Habitat and Landscape Conservation</i>	Wildlife Refuges National Park System Multiple -use lands of the National Forest Service & Bureau of Land Management National Forest Service <i>National Environmental Policy Act</i> <i>Federal regulatory Protection of Habitat</i>	M11: " DISCUSSION BOARD#9" Topic: TBD Respond to two classmates	(8) (2)

COURSE TOPICS AND ASSIGNMENT SCHEDULE

MODULE	PRIMARY TOPIC	ASSIGNMENT	PTS
Module 12 (Week 14)	<p>U.S. Wildlife Special Topics:</p> <ul style="list-style-type: none"> - Captive wildlife - Roadside Zoos - Research - Nuisance Predators (coyotes, wolves) - Wildlife Management methods - Animals in Entertainment - Animals in documentaries - 	<p>M12: "Ethical Analysis Essay #2"</p> <p>Topic: TBD</p>	(30)
Module 13 (Week 15)	<p>Citizen Power!</p> <ul style="list-style-type: none"> - What is advocacy - What is lobbying? - The Federal Register & Comment Periods (revisited) - Contact representatives - Educate others - Attend lobby days - ... <p>New Approaches to Wildlife law & Conservation</p> <ul style="list-style-type: none"> - Social science & 2nd Wave Animal Law - The role & Effectiveness of NGO's 	<p>Project #3, "<u>Spread the Word!</u>"</p> <p>Part I & II due. Part III due by the end of week 16.</p>	
Module 14 (Week 16)	Course Wrap Up	<p>Final Exam</p> <p>Project #3, "<u>Spread the Word!</u>" Part III (Responses)</p>	(80)

Grading:

Exams: Mid-Term = 70 pts; Final = 80 pts

The Mid-Term and the Final Exam are designed to assess your engagement with fundamental fact-based concepts and promote critical thinking via essays of the more esoteric concerns. The exams are timed (three hours each) and consist of 25 questions(mid-term) & 30 questions (final)worth two points each, and two short essays each worth 10 points. The exams will open on a Monday morning (EST) and be due by 11:59 PM EST the following Sunday.

To provide you the best opportunity to learn the material, remove the stress of uncertainty and ace the exams, you will be provided an exam preparation packet in Module 1. The packet consists of 60 unanswered questions (multiple choice, matching, fill-in the blank type questions and four short essay questions). Two of the essays relate to the first half of the course, and the 2nd set relate to the final half of the course.

Completing the packet is **OPTIONAL** and there are **no points** for doing so, but it is **strongly** recommended as **ALL OF THE EXAM QUESTIONS WILL COME FROM THE PACKET—NO SUPPRISES!** For the essays, if you fill them out ahead of time, you can simply cut/paste your answers into the exam.

You can work together on the packets using the “**STARS & STRIPES CAFE**” forum on the course website to exchange questions and ideas. Uploading documents will be disabled, but otherwise, feel free to discuss.

** Exams are timed. See above notes in the Exam section.

MAKE UP EXAMS WILL **NOT** BE GIVEN UNLESS ARRANGEMENTS ARE MADE PRIOR TO THE EXAM DATE AND ONLY ON A CASE-BY-CASE BASIS—THERE IS NO GUARNETEE THAT THE EXAM DATE WILL BE EXTENDED IN THE EVENT OF AN EMERGENCY AND YOU ARE UNABLE TO TAKE THE EXAM ON THE DATE IT IS ADMINISTERED TO THE CLASS, A DOCTOR’S NOTE MUST BE PROVIDED IN ORDER TO BE ABLE TO TAKE THE EXAM AFTER THE DUE DATE

Other Assignments:

Each module will have any of the following: Discussion Questions (10 points); Ethical Analysis Essays (30 points)

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Discussion Board Questions require posting and participation. The posts should be no longer than 200 to 300 words. Points are awarded for the quality of the initial post. Three points are awarded for responding substantively to two classmate’s posts.

Discussion Board questions will open on Monday morning (EST) of the corresponding lecture material. Initial responses to discussion questions or submissions of the short papers will be due by 11:59 PM EST the following Sunday. Peer responses must be posted by 11:59 PM EST the following Monday. The discussions will remain open for the duration of the semester, but: you must post at least one response by the following Sunday to receive credit, and **you MUST POST AT LEAST ONE RESPONSE TO A PEER’S POSTING by the following Monday.**

Ethical Analysis Essays (2) apply the ethical analysis framework to a question prompt to develop a response. The papers are more formal than a post but short – no more than 400-500 words. Citations are required and the paper is submitted to the Dropbox. “Ethical Analysis Papers” will open on Monday morning (EST) of the corresponding lecture material and are due by 11:59 PM EST the following Sunday.

PROJECTS:

The instructions below may be subject to minor revisions. Details for the projects will be available when the assignment opens. **No point values will be altered.**

The projects span multiple weeks, so keep an eye on due dates.

** Each project or assignment will have an accompanying rubric explaining the breakdown of how the points are to be distributed.

Project #1 – LOBBY DAY! (275 pts)

Part I: 150

Part II: 100

Part III: 25

(3 weeks)

- **Theory to practice—lobbying for change:**

Part I: Students will search for a pending federal or state bill (using Government.Gov for federal legislation, or their state legislative websites) regarding a specific wildlife species or wildlife issue of interest to them. In anticipation of “**Lobby Day**,” they will develop a lobbying “fact sheet” (2 pages based upon a template) regarding the bill and the concern. The fact sheet should be presentation-style, i.e. with a picture and ease of readability.

Part II: Lobby Day! Each student will post their formatted fact sheet for a “Legislator’s” review. Additionally, the student will include a 2-4-minute recorded message explaining their issue.

Part III: Acting as a Legislator (state or federal depending on the post selected) students will select 1 classmates’ post and engage in informed discussion, asking relevant questions and providing a substantive reason why they will or will not support the bill. When selecting a lobbying post to respond to, students acting as legislators are encouraged to ensure that every students’ lobbying effort is addressed by at least one legislator

LOBBY DAY will take place at the end of Week 13

- **PROJECT 2– ESA Citizen’s Petition** (150)

Team Project (2 weeks)

Individual Grade: (75 points)

Team Grade: (75 points)

Extra Credit: (5 points)

Part I: Students will sign up to assist one of three fictional NGO's with creating a 4-d Petition. Each NGO is in the process of drafting their petition to either have a pre-selected species listed as endangered or threatened, a Distinct Population Segment defined, challenge the appropriate Secretary's' declassification of a species, or address another timely issue TBD. To the extent possible, the issues presented will represent real scenarios.

Part II: Working as a team for their chosen NGO, the students will draft a short (template provided) support paper that the NGO can include in its petition. After initial discussions, each team member will document their agreement to complete a portion of the template using the tracking feature. Team members can communicate within or outside the course. Each team member will submit a copy of the draft version (with the tracked features) to the dropbox for an individual grade. The final support paper (with tracking removed) will be posted on the DB.

NOTE: Members of other teams may comment on the final papers to earn extra credit.

Students are provided an individual grade for their contribution to the paper, and a team grade for the final document.

- **Project #3: "Spreading the Word"**(185 points)

Part I = 100 points

Part II = 75 points

Part III = 10 points

Part I: Students will choose an animal of their choice from the ESA, a non-protected animal, an animal relate issue (i.e. captive wildlife) or a conservation topic of concern to them (i.e. plastic pollution in the oceans, habitat loss for a specific species,) and write a one-page fact sheet based upon the template provided. The fact sheet should be posted to the drop box.

EXTRA CREDIT OPTION: Animals/issues from Project #2 may be used for Project # 3. If you choose to pick a different animal/issue you will **receive an extra 25 points for the project.**

Part II: Based upon the animal or issue chosen, students will do one of the projects below, or upon my approval, may define another option. Students will post their project to the DB.

Project Options:

- Write a short poem about the animal that includes taxonomy, basic facts, range, habitat, threats and protections
- Write a short story for children (1-2 pages w//pictures) about your selected animal/topic, providing facts, habitat, threats and suggestions that children can do to support the animal

- Make up a poster with facts, information, suggestions for conservation, pictures, etc.
- Create a photo-book with 7-10 annotated pictures that describes the animal/issue, the threats to survival, population, interesting habits, etc.
- Create a brochure that provides a summary of the animal/issue, the laws governing its protection, threats and suggestions on ways to support its survival or promote the issue
- Create a short (3-5 minute) PowerPoint presentation about the animal or issue with a voice thread, including basic facts, threats, laws, etc.
- *Other ideas may be posted in the instructions as they become available*

PART III: Comment on two classmates' projects

Late Policy:

I realize that we are all professionals and sometimes "Life Happens," but I also know we are on a tight schedule with a lot of work to complete. Consequently, I will generally not grant credit for late discussion board posts unless we have communicated prior the due date and there are significant extenuating circumstances, or you have a doctor's note. Extensions are not guaranteed--it is important to reach out sooner than later, so we can try to keep you on track. I will not accept late assignments without a doctor's note.

Grading Breakdown:

- Midterm Exam: 70 points (7%)
- Final Exam: 80 points (7%)
- Discussion Questions (9); DB1 = 3; DB2 = 7; DB3-DB9 = 10 points each. Total Discussion Board Points = 80 (%)
- Ethical Analysis Essays (2): 30 points each = 60 points (%)
- Projects (3): Project #1 = 275 points; Project #2 = (150) points; Project #3 = (185) points.

Total Project = (610) points (%)

Total Course Points: (900)/100%

Grades will be assigned as follows:

100-93.4% A
 93.3-90.0% A-
 89.9-86.7% B+
 86.6-83.4% B
 83.3-80.0% B-
 79.9-76.7% C+
 76.6-73.4% C
 73.3-70.0% C-
 69.9-66.7% D+
 66.6-63.4% D

63.3-60.0% D-
<59.9% and below = E

Registrar's Grade Policy regulations at
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Registrar's Grade Policy regulations at
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

This course is instructed online via the UF Canvas system. Students will be graded based on a combination of their participation in weekly discussion boards or short assignments, module assessments, a mid-term and a final exam or assignment. All written answers must be completed in your own words. Copying from other sources is not acceptable and will be considered plagiarism unless proper sources are cited. Failure to complete an assignment in your own words may result in you receiving a score of 0 (zero) for the assignment. If you lose your internet connection during your exam time and scores are not recorded simply email the instructor for assistance. Always include your name when communicating with the course instructor. Students will receive individual feedback on points lost on the assignments. The comments of the TA or professor can be viewed on the assignment submission page for the corresponding module found on the last page of each module. Students can check their progress in the course by viewing their grade records via the course interface.

Required Equipment:

Computer with reliable, high speed internet access; your preferred web browser; video player with ability to play MP4 videos; speakers and/or headphones and working sound; PDF reader. For more information on hardware and software necessary to run Canvas, visit <https://community.canvaslms.com/docs/DOC-2059> (Links to an external site.). Canvas offers mobile applications for both [Apple](#) (Links to an external site.) and [Android](#) (Links to an external site.) products. These apps may be downloaded in the respective app stores. Depending on the device and your equipment, not all Canvas features may be available on the app at this time. For more information on Canvas apps, visit <https://community.canvaslms.com/docs/DOC-1542> (Links to an external site.).

Getting Started:

This course is instructed in Canvas. To get started, briefly introduce yourself via the discussion board located in the left-hand menu on the homepage of the course. Once you have responded to the Introduction you will then go to the first module. Read through the course content and any required reading listed in the module introduction. Do not hesitate to contact your instructor at any time if you need guidance; if you are unsure about the focus of the assignment; if you have assignment questions or questions relating to the course content. If you don't tell us you need help, we can't help you!

Revision and Notes:

As you go through the semester, keep copies of important emails, bulletins and assignments you may use for revision as these will be purged from the course at the end of the semester. We recommend you make a copy of the course modules since this will be the only access you will get to these materials. We will not be able to provide you with copies of course content once the course is removed from your account.

Course Assignments:

This class consists of a large amount of material. Each week there will be either two discussion questions or a short project assigned emphasizing what I feel are the most important aspects of that week's lessons. Please participate in the online discussions/projects.

Assignment Deadlines:

Please review the information regarding the policy for missed deadlines in the section on Instructional Policies. In some courses content modules may be released before the scheduled calendar date to help those who need to work ahead because of work commitments, court appearances, and work related travel. If a module is released ahead of time, the deadline for the assignment and exam will remain the same as it is on the course calendar.

Communication:

Course Email, not the discussion board, should always be used to contact the faculty or staff if you have a problem of a personal nature. If you are having technical problems with the course content (downloads, etc) or you are unable to access your course interface, please contact the UF Help Desk. We don't want any of you to be offline for any length of time. Contact us as soon as you can so we can check it out and help you. If you are experiencing difficulty with your access to course email then please email your course instructor directly via regular email. In that email, make sure you give your name and the name of your course. Please respond to all emails from your instructor or TA. When we email you we are usually contacting you because we want to help you. If you have a question about your grade, an exam, or assignment question, please email us and we'll be happy to help you.

Bulletin Board:

The course bulletin board can be used to post content related questions and assignment materials when necessary. Please ask me questions any time; I am here to help you. Please do not use the community forum to ask specific questions about your current course content, assignments etc. It's VERY important that you read all the discussion bulletins that have been posted. I will use this site to post important information relating to content or exam changes, deadlines etc. Since postings can accumulate quickly, please login each day to stay on top of these postings or you may miss important information.

Makeup Policy:

Students are responsible for satisfying all academic objectives as defined by the instructor. Absences count from the first class meeting.

In general, 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. Other reasons also may be approved.

Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence.

Students cannot participate in classes unless they are registered officially or approved to audit with evidence of having paid audit fees. The Office of the University Registrar provides official class rolls to instructors.

If a student does not participate in at least one of the first two class meetings of a course or laboratory in which they are registered, and he or she has not contacted the department to indicate his or her intent, the student can be dropped from the course. Students must not assume that they will be dropped, however. The department will notify students if they have been dropped from a course or laboratory.

The university recognizes the right of the individual professor to make attendance mandatory. After due warning, professors can prohibit further attendance and subsequently assign a failing grade for excessive absences.

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Grade Changes:

Grades will be changed only when a grading error has been made. If you think an error has been made, you should email the instructor as soon as possible. Your entire assignment will then be re-graded.

Instructional Policy:

This course is part of the distance education program at the University of Florida. Instead of traditional lecture format, the medium for communication between course instructors, teaching assistants and students will be via Canvas, a user friendly Web-based classroom management tool.

Attendance Policy: Students must participate in the bulletin board discussions, and are required to visit the course website daily for important updates and bulletins. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Class Participation: Students are expected to constructively join in bulletin board discussions with appropriate preparation, to post interesting and relevant information on the class bulletin board, and to interact professionally with their classmates.

Performance Expectations: Students are expected to produce quality work of a standard comparable to any graduate level didactic course. Bulletin postings and discussions must be legible, constructive and appropriate. Students are required to think for themselves and will be expected to complete assignments that require the application of logic and reasoning skills when the answer may not be found in a book or the course notes.

Plagiarism: Plagiarism includes any attempt to take credit for another person's work. This includes quoting directly from a book or web site, without crediting the source. Sources should always be referenced, a link to the website added, or quotation marks placed around the material. However, we expect more than simply cutting and pasting in this graduate level course. Students are expected to review, evaluate and comment on material they research, rather than simply copying relevant material. Your work will be graded accordingly.

Assignments: While we understand that our students have other work and personal commitments, we expect every effort to be made to meet these deadlines. If for some reason, because of circumstances beyond your control, you are unable to meet an assignment deadline, students should e-mail the professor and explain the situation in advance. Being consistently late in submitting assignments disrupts the discussion of topics on the bulletin board and will therefore result in loss of marks for that assignment up to a full letter grade. If you email us we will work with you around the deadline. If you have outstanding assignments at the end of the semester we will send you a follow up email as a reminder and as a means to determine your plans for completion. If you do not respond to us before the final day of classes you will be assigned a grade based on the completed assignments.

Drop Dates: consult the UF Calendar of Critical Dates at <http://www.forensicscience.ufl.edu/Students/Dates.asp>

Students must inform us that they are withdrawing from a course to ensure appropriate tuition reimbursement. Deleting yourself from the course roster does not officially withdraw you from a course.

Important Dates:

For Assignment deadlines - see the course Calendar in Canvas.

For other important dates, consult the UF Calendar of Critical Dates and

<http://www.registrar.ufl.edu/>

Additional information on the University of Florida Grades and Grading Policies may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

“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 the accommodation”

University's Honesty Policy (cheating and use of copyrighted materials)

Academic Integrity – Students are expected to act in accordance with the University of Florida policy on academic integrity (see Student Conduct Code, the Graduate Student Handbook or this web site for more details:

www.dso.ufl.edu/judicial/procedures/academicguide.php).

Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

*We, the members of the University of Florida community,
pledge to hold ourselves and our peers to the
highest standards of honesty and integrity.*

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>.

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, www.dso.ufl.edu/drc/

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 <https://evaluations.ufl.edu>. 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 <https://evaluations.ufl.edu/results>.

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/cwc/

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, **www.crc.ufl.edu/***

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Student Complaints:

☐ Residential Course: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

☐ Online Course: <http://www.distance.ufl.edu/student-complaint-process>