CALS Curriculum Committee Meeting
February 26, 2021
2:00 p.m.

Via Zoom: https://ufl.zoom.us/j/355458614
Meeting ID : 355458614

Members: S. Ahn, J. Brendemuhl, D. Coenen, D. Gabriel, M. Gillen, V. Hull, P. Inglett, J. Larkin, L. Lundy, T. Martin, G. Nunez, K. Padgett-Pagliai, B. Pearson, W. Porter, N. Roberts, J. Scheffler, M. Sharp, J. Weeks (Chair), C. Wilson, A. Wysocki

Agenda and Index for Materials

Approve Minutes from January 22, 2021 meeting

Dr. Brendemuhl: Update from UCC

Graduate Course Proposals

1. ENY 6XXX – Advanced Honey Bee Biology (req. #15626)

2. FYC 6XXX – Applied Data Analysis in FYCS (req. #15838)

3. HOS 6XXX – Principles and Applications of Omics Technologies to Advance Plant Biology (req. #15725)

Graduate Course Change Proposal

4. FAS 5255C – Diseases of Warmwater Fish (req. #14645)

Undergraduate Course Proposals

5. ANS 2XXX – Survey of Veterinary Professions (req. #15678)

6. ANS 4XXXC – Discovery of Sustainable Cattle Systems (req. #15694)

7. ENY 4XXX – Honey Bee Biology (req. #15543)

Curriculum

8. Proposed Concentration for PhD Program in Youth Development and Family Science (req. #15832)

9. Proposed Modification to Food Science Major Curriculum (req. #15842)

10. Proposed Name Change to the Agricultural Communication Minor (req. #15844)

Recycled item

11. ANS 3079L – Relationship of Form to Function in Horses (req. #15551)

Item previously recycled 1/22/2021. Comments as follows: A motion was made by Dr. Porter to recycle this item back to the department for additional material. The motion was approved. The committee requires submission of the previous syllabuses for ANS3079L and the Special Topics lecture course so they may compare them to the proposed version.

CALS Curriculum Committee Meeting
January 22, 2021
Submitted by James Fant

Members Present: S. Ahn, J. Brendemuhl, D. Coenen, D. Gabriel, M. Gillen, V. Hull, P. Inglett, J. Larkin, L. Lundy, K. Padgett-Pagliai, B. Pearson, W. Porter, J. Scheffler, M. Sharp, J. Weeks, C. Wilson

Guest: Lisa House

Call to Order: The College of Agricultural and Life Sciences Curriculum Committee met via Zoom on January 22, 2021. Dr. Weeks called the meeting to order at 2:03 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. Porter to approve the minutes from the December 18, 2020 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.

Links: Grades – https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/
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
Writing Learning Objectives - https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf.

Update from UCC: Dr. Brendemuhl noted the following were **ALL APPROVED** at the **JANUARY UCC** meeting; 1) **Terminations** – BA in Plant Science; 2) **New Course** – HOS 2XXX-Fighting Food Waste and Loss; 3) **New Joint Course** – FOS 4XXX-Principles of Food and Safety Systems; and 4) **Other** – The majority of all CALS UG 8-semester plans with the addition of Quest-2 were approved. Remaining programs will be addressed at the February UCC meeting.

Undergraduate Course Change Proposal

1. ANS 3079L – Relationship of Form to Function in Horses (req. #15551)

A motion was made by Dr. Porter to recycle this item back to the department for additional material. The motion was approved. The committee requires submission of the previous syllabuses for ANS3079L and the Special Topics lecture course so they may compare them to the proposed version.

Proposed Syllabus Statements

2. Proposed final version of CALS DEI statement

A motion was made by Dr. Porter to approve this version of the statement. The motion was approved. The statement will be forwarded to Dr. Turner for her final review and edits. That version will be submitted to the CALS CC as an information item at a future meeting.

3. Proposed Lauren's Promise statement from Dr. Lisa House

A motion was made Dr. Porter to approve the concept of this item. The motion was approved. It was determined that this item needed to be forwarded to higher levels of university administration for review. Dr. House agreed and will begin the process.

The meeting was adjourned at **2:43** p.m.

Cover Sheet: Request 15626

Graduate level Honey Bee Biology course

Info

Process	Course|New|Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Cameron Jack cjack@ufl.edu
Created	12/17/2020 12:48:48 PM
Updated	1/27/2021 3:27:45 PM
Description of request	Proposal of a new undergraduate/graduate course

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Entomology and Nematology 60140000	Heather Mcauslane		1/27/2021
CALS CC Checklist_Honey Bee Biology.pdf ENY 6XXX Honey Bee Biology Fall 2021.pdf ENY 4XXX Honey Bee Biology Fall 2021.pdf					12/17/2020 12/17/2020 12/17/2020
College	Pending	CALS - College of Agricultural and Life Sciences			1/27/2021
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 15626

Info

Request: Graduate level Honey Bee Biology course
Description of request: Proposal of a new undergraduate/graduate course
Submitter: Cameron Jack cjack@ufl.edu
Created: 12/17/2020 11:51:20 AM
Form version: 1

Responses

Recommended Prefix ENY
Course Level 6
Course Number XXX
Category of Instruction Joint (Ugrad/Grad)
Lab Code None
Course Title Advanced Honey Bee Biology
Transcript Title Advanced Honey Bee Biology
Degree Type Graduate

Delivery Method(s) Online
Co-Listing Yes
Co-Listing Explanation The graduate version of the course requires five additional readings of relevant research articles, different critical thinking exercise assignments, and an additional major project.
Effective Term Fall
Effective Year 2021
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 4
Course Description This course will provide an in-depth look into the fascinating world of honey bee biology. Herein, we will explore topics including honey bee sociality, taxonomy, biogeography, behavior, anatomy, physiology, reproduction, nutrition and genetics. Additionally, these topics will be discussed via the paradigm of the honey bee superorganism.
Prerequisites BSC 2005 or BSC 2010
Co-requisites N/A
Rationale and Placement in Curriculum While the Beekeeping I and Beekeeping II courses focus primarily on the management of honey
bees, this course focuses specifically on the biology of honey bees. This course may be interesting to a wide audience of biology-related majors, as topics like evolution, behavior, physiology, genetics, etc. will all be discussed. Honey Bee Biology will become a required, foundational course in the future Apiculture Certificate.
Course Objectives 1. Compare the life-history strategies of different honey bee species and contrast the different traits of honey bee subspecies.
2. Describe the different tasks of honey bee workers and distinguish how these might change depending on conditions within the colony.
3. Identify the different structures of the honey bee anatomy and discuss how these function together as physiological systems.
4. Appraise the concept of the honey bee superorganism and argue whether or not honey bees fit this paradigm.
5. Interpret the findings from recent honey bee biology research publications and discuss the relevance they may have to beekeepers.

6. Create extension documents that will teach honey bee biology to non-scientific audiences.

Course Textbook(s) and/or Other Assigned Reading 1. Textbook: Caron, D.W. 2013 (revised from 1999). Honey Bee Biology and Beekeeping. Wicwas Press. Cheshire, CT, 368 pp.
2. American Bee Journal articles written by Dr. Jamie Ellis which are appropriate for the content of this course.
3. Robinson et al., 2008. Genes and Social Behavior. Science 322: 896-900.
4. Bustamante et al. 2020. Comparing classical and geometric morphometric methods to discriminate between the South African honey bee subspecies Apis mellifera scutellata and Apis mellifera capensis (Hymenoptera: Apidae). Apidologie, 51:123-136.
5. Simone-Finstrom et al., 2017. Propolis counteracts some threats to honey bee health. Insects 8: 46; doi:10.3390/insects8020046
6. Reyes, M. et al. 2019. Flight activity of honey bee (Apis mellifera) drones. Apidologie 50: 669-680.
7. Aamidor et al., 2020. What mechanistic factors affect thelytokous parthenogenesis in Apis mellifera caponizes queens? Apidologie 51:329–341
8. Dolezal, A.G.; Toth, A.L. 2018. Feedbacks between nutrition and disease in honey bee health. Current Opinion in Insect Science, 26: 114–119.
9. Boncristiani, H. et al., 2020. World Honey Bee Health: The Global Distribution of Western Honey Bee (Apis mellifera L.) Pests and Pathogens. Bee World, 1-5. Doi:10.1080/0005772X.2020.1800330.
10. Mortensen et al. 2018. The discovery of Varroa destructor on drone honey bees, Apis mellifera at drone congregation areas. Parasitology Research 117: 3337-3339.
11. Simone-Finstrom, M. 2017. Social Immunity and the Superorganism: Behavioral Defenses Protecting Honey Bee Colonies from Pathogens and Parasites, Bee World, 94: 21-29.

Weekly Schedule of Topics 1. Insects: Insecta, Hymenoptera, Differentiating bees and wasps, common bee groups, common
wasp groups, bee/wasp mimics
2. Sociality: What makes insects social?, Levels of sociality, Evolution of sociality
3. Honey Bee Taxonomy: Apidae, Apis, Honey bee taxonomy (Micrapis, Megapis and Apis)
4. Biogeography and Taxonomy of genus Apis: Apis florea, andreniformis, dorsata, laboriosa, nigrocinta, cerana, koshvenokvi, nuluensis, mellifera
5. Biogeography and Taxonomy of Apis mellifera: Overview of lineages, Lineage A, Lineage M, Lineage, C, Lineage O, Minor lineages
6.:The Colony and the Nest: Adult members of a honey bee colony, Immature members of honey bee colonies, Components of a nest, Life cycle of a honey bee colony
7. Honey Bee and Colony Behaviors: Tasks of a worker, Honey bee dance language, Thermoregulation, Swarm preparation, The swarm, Choosing a nest site, Queen and drone behaviors
8. External Anatomy and Physiology: Head, thorax, abdomen
9. Internal Anatomy and Physiology: Digestive, Nervous, Circulatory, Respiratory, Reproductive, Muscular, Endocrine, Immune, Exocrine
10. Honey Bee Genetics: Introduction, Haplo-diploidy, Arrhenotoky, Thelytoky
11. Honey bee nutrition: Larval diet, adult diet, Nectar and honey, Pollen, Foraging habitats
12: Honey Bee Pests and Pathogens: Major arthropod pests, Minor arthropod pests, Pathogen stressors, Other stressors, Principle stressors, Overcoming bee defenses
13. Honey Bee Mating: Sexual maturation of the queen, Sexual maturation of the drones, Drone congregation areas, Honey bee mating, Post-mating maturation
14. Superorganism: Food collection, Endocrine and exocrine systems, Respiration and thermoregulation, Immune system, Communication, Summary
Grading Scheme 1. Module assessments: 15 points each × 14 assessments, 210 points, 39%
2. Section critical thinking exercises: 45 points each × 5 exercises, 175 points, 27%
3. Subspecies report (Topic submission 10 points, peer evaluation 25 points, final draft 85 points), 115 points, 18%
4.Extension Fact Sheet Project: 100 points, 16%

See syllabus for details related to assignments and grading.
Instructor(s) Cameron Jack
Jamie Ellis
Attendance & Make-up Yes

Accomodations Yes
UF Grading Policies for assigning Grade Points Yes
Course Evaluation Policy Yes

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

CJ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

CJ You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

CJ Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

CJ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

CJ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

CJ The course schedule should be concise and include the appropriate number of weeks in the semester.

CJ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

CJ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

CJ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

CJ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

CJ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

CJ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction)

ENY 6XXX
Honey Bee Biology
Fall 2021 (3 credits)

***This course is co-taught with ENY 4XXX Honey Bee Biology.**

Lead-Instructor: Cameron Jack, PhD **E-mail:** cjack@ufl.edu
Office Room #: ENY (Bldg 964), room 114
Office Address: Steinmetz Hall, Natural Area Drive, P.O. Box 110620, Gainesville, FL 32611
Office Phone #: 352-294-6926 (*Please email to set up a phone appointment.*)

Instructor: Jamie Ellis, PhD **E-mail:** jdellis@ufl.edu
Office Room #: ENY (Bldg 964), room 116
Office Address: Steinmetz Hall, Natural Area Drive, P.O. Box 110620, Gainesville, FL 32611
Office Phone #: 352-273-3924 (*Please email to set up a phone appointment.*)
Website: www.ufhoneybee.com

TA: TBA **E-mail:**
Office Room #:
Office Address:

Special Note on Contact via Email: Due to UF privacy laws, you must use your GatorLink account or the Canvas mail system when emailing the Instructor or TA. Emails sent from other accounts (gmail, hotmail, etc.) will not be answered by the Instructor or TA.

Office Hours: Tuesday and Thursdays 1:00 – 3:00 pm in ENY (Bldg 964), room 114 or via Zoom. Please schedule by appointment.

Course Description: This course will provide an in-depth look into the fascinating world of honey bee biology. Herein, we will explore topics including honey bee sociality, taxonomy, biogeography, behavior, anatomy, physiology, reproduction, nutrition and genetics. Additionally, these topics will be discussed via the paradigm of the honey bee superorganism.

Course Learning Objectives:
1. Compare the life-history strategies of different honey bee species and contrast the different traits of honey bee subspecies.
2. Describe the different tasks of honey bee workers and distinguish how these might change depending on conditions within the colony.
3. Identify the different structures of the honey bee anatomy and discuss how these function together as physiological systems.
4. Appraise the concept of the honey bee superorganism and argue whether or not honey bees fit this paradigm.
5. Interpret the findings from recent honey bee biology research publications and discuss the relevance they may have to beekeepers.
6. Create extension documents that will teach honey bee biology to non-scientific audiences.

Required Readings:

1. Textbook: Caron, D.W. 2013 (revised from 1999). Honey Bee Biology and Beekeeping. Wicwas Press. Cheshire, CT, 368 pp.
2. American Bee Journal articles written by Dr. Jamie Ellis which are appropriate for the content of this course.
3. Robinson et al., 2008. Genes and Social Behavior. Science 322: 896-900.
4. Bustamante et al. 2020. Comparing classical and geometric morphometric methods to discriminate between the South African honey bee subspecies *Apis mellifera scutellata* and *Apis mellifera capensis* (Hymenoptera: Apidae). Apidologie, 51:123-136.
5. Simone-Finstrom et al., 2017. Propolis counteracts some threats to honey bee health. Insects 8: 46; doi:10.3390/insects8020046
6. Reyes, M. et al. 2019. Flight activity of honey bee (*Apis mellifera*) drones. Apidologie 50: 669-680.
7. Aamidor et al., 2020. What mechanistic factors affect thelytokous parthenogenesis in *Apis mellifera caponizes* queens? Apidologie 51:329–341
8. Dolezal, A.G.; Toth, A.L. 2018. Feedbacks between nutrition and disease in honey bee health. Current Opinion in Insect Science, 26: 114–119.
9. Boncristiani, H. et al., 2020. World Honey Bee Health: The Global Distribution of Western Honey Bee *(Apis mellifera* L.) Pests and Pathogens. Bee World, 1-5. Doi:10.1080/0005772X.2020.1800330.
10. Mortensen et al. 2018. The discovery of *Varroa destructor* on drone honey bees, *Apis mellifera* at drone congregation areas. Parasitology Research 117: 3337-3339.
11. Simone-Finstrom, M. 2017. Social Immunity and the Superorganism: Behavioral Defenses Protecting Honey Bee Colonies from Pathogens and Parasites, Bee World, 94: 21-29.

Lectures: This is a fully online, Canvas-based course. The website for the syllabus, all lectures, reading materials, announcements, tests, etc. will be posted on eLearning: http://elearning.ufl.edu. All lectures for this course are narrated presentations and will include videos and supplemental readings. We will provide text from all the narrated presentations.

Please note that all video clips and photographs are copyrighted and are NOT to be used outside of this class. They may be viewed and used only by students this semester. Students are prohibited from copying and/or distributing these photographs or video clips. All class notes are provided for educational use only.

Course Notifications and Communication: All course communications (assignments, announcements, test information, etc.) will be made via the Announcements in Canvas. Please ensure that your Canvas profile is set to receive notifications (i.e. please check the appropriate box to receive all notifications). To do this, click on your name in the upper right corner of the Canvas homepage after logging into Canvas. Next, click "notifications" on the left. This will take you to the Notification Preferences page. Then, click the check symbol for at least the following notifications: Due Date, Course Content, Announcement, and Grading.

Students are encouraged to post general questions on topics taught in the class under the General Questions thread. The instructor and/or the TAs will respond to the questions. Other students are also encouraged to respond to the questions. Private questions should be sent to the TA via e-mail.

The instructor and TAs will do our best to respond within 24 hours during the week and 48 hours on weekends. We will also do our best to grade assignments within one week of the due date.

Course Schedule: This course is offered via Canvas as a distance education course. To stay on track, students must adhere to the course schedule.

Module	Video Content	Weekly Readings	Module Quizzes	Critical Thinking Exercises	Subspecies Report Assignments	Extension Fact Sheet Project
Getting Started	Welcome video	Course syllabus; Tips for success	Aug. 27th			
Insects	Insecta, Hymenoptera, Differentiating bees and wasps, common bee groups, common wasp groups, bee/wasp mimics	Textbook: p. 21-26	Aug. 27th			
Sociality	What makes insects social?, Levels of sociality, Evolution of sociality	Textbook: p. 37-47 Robinson et al. 2008	Sep. 3rd			
Honey Bee Taxonomy	Apidae, Apis, Honey bee taxonomy (Micrapis, Megapis and Apis)		Sep. 10th	Sep. 10th		
Biogeography and Taxonomy of genus Apis	florea, andreniformis, dorsata, laboriosa, nigrocinta, cerana, koshvenokvi, nuluensis, mellifera	Textbook: p. 26-28	Sep. 17th			Fact Sheet Topics Sep. 17th
Biogeography and Taxonomy of Apis mellifera	Overview of lineages, Lineage A, Lineage M, Lineage, C, Lineage O, Minor lineages	Textbook: p. 28-34 ABJ: Stocks of Bees Bustamante et al. 2020	Sep. 24th	Sep. 24th	Select Subspecies Sep. 24th	
The Colony and the Nest	Adult members of a honey bee colony, Immature members of honey bee colonies, Components of a nest, Life cycle of a honey bee colony	Textbook: p. 49-57 ABJ: Members of a Colony; Components of Nests Simone-Finstrom et al. 2017	Oct. 1st			
Honey Bee and Colony Behaviors	Tasks of a worker, Honey bee dance language, Thermoregulation, Swarm preparation, The swarm, Choosing a nest site, Queen and drone behaviors	Textbook: 87-96 ABJ: Swarms; Tasks of Workers; Thermoregulation and Dance Language Reyes et al. 2019	Oct. 8th	Oct. 8th		
External Anatomy and Physiology	Head, Thorax, Abdomen	Textbook: 61-66 ABJ: External Anatomy	Oct. 15th			
Internal Anatomy and Physiology	Digestive, Nervous, Circulatory, Respiratory, Reproductive, Muscular, Endocrine, Immune, Exocrine	Textbook: 67-73 ABJ: Internal Anatomy	Oct. 22nd		1st Submission Oct. 22nd	1st Submission Oct. 22nd

Honey Bee Genetics	Introduction, Haplo-diploidy, Arrhenotoky, Thelytoky	Aamidor et al. 2020	Oct. 29th		Peer Review Oct. 29th	Peer Review Oct. 29th
Honey Bee Nutrition	Larval diet, adult diet, Nectar and honey, Pollen, Foraging habitats	Textbook: 133-145 Dolezal et al. 2018	Nov. 5th	Nov. 5th		
Honey Bee Pests and Pathogens	Major arthropod pests, Minor arthropod pests, Pathogen stressors, Other stressors, Principle stressors, Overcoming bee defenses	Textbook: 309-325 ABJ: Biotic Stressors; Other Stressors Boncristiani et al. 2020	Nov. 12th			
Mating	Sexual maturation of the queen, Sexual maturation of the drones, Drone congregation areas, Honey bee mating, Post-mating maturation	Textbook: 116-131 ABJ: Mating Biology Mortensen et al. 2018	Nov. 19th		Final Submission Nov. 19th	Final Submission Nov. 19th
Superorganism	Overview, Food collection, Endocrine and exocrine systems, Respiration and thermoregulation, Immune system, Communication, Summary	Simone-Finstrom, 2017 ABJ: Superorganisms	Dec. 3rd	Dec. 3rd		

Evaluation: The course grade is based on total points earned out of 600 possible points.

Module assessments	15 points each × 14 assessments	210 points
Section critical thinking exercises	45 points each × 5 exercises	225 points
Select Topic for Subspecies Report	10 points	10 points
Submission of your peer evaluations of two of your peers' Subspecies Reports	10 points × 2 peer reviews (you get 10 points per peer review you submit)	20 points
Final draft of your Subspecies Report	85 points	85 points
Extension Fact Sheet Project	100 points	100 points
	Total Course Points	650 points

Grades and Grade Points
For information on current UF policies for assigning grade points, see catalog.ufl.edu/UGRD/academic-regulations/grades-gradingpolicies/.

FINAL GRADING		
% grade	Letter grade	Points needed to achieve letter grade
100-93	A	≥ 605
90-92	A-	585 – 604
87-89	B+	566 – 584
83-86	B	540 – 565
80-82	B-	520 – 539
77-79	C+	501 – 519
73-76	C	475 – 500
70-72	C-	455 – 474
67-69	D+	436 – 454
63-66	D	410 – 435
60-62	D-	390 – 409
0-59	E	0 – 389

Assignments:

(1) Module Assessments: There is a 15-point assessment associated with each of the fourteen modules in this course. These assessments are ***open note*** (i.e. you ***are*** allowed to use class lectures, books, websites, etc. while taking the assessments). The assessments will be composed of true/false and multiple choice questions. **The assessments 1) open the Saturday morning after the previous section ends, 2) are timed (30 minutes each), and 3) are due on the following Friday at 11:59 pm on the date listed in the course schedule.** These are individual assessments so please do your own work and do not work in groups or share your answers. There is a large bank of test questions for each assessment and the assessment questions are selected randomly for each student. You will receive a 5-point deduction for each day a module assessment is late.

The first module assessment is a graded syllabus quiz on the "Getting Started" module. You need to read the syllabus and answer quiz questions related to it by **11:59 pm ET on the date listed in the course schedule**. You must complete the syllabus quiz before you are able to advance to the next module. This quiz will show you how your online assessments will be formatted as well as allow you to demonstrate that you understand how this course works and important due dates.

(2) Critical Thinking Exercises: The exercises are designed to encourage you to think critically about the content presented in the module lectures. The critical thinking exercises are worth 45 points each. There are

separate exercises designed for graduate students incorporating additional questions from the scientific journal articles assigned to that section. These are individual exercises so please do your own work and do not work in groups or share your answers. All of the critical thinking exercises are open note and untimed. You can close and reopen the exercise as many times as you would like until the due date (see course schedule), but you will not be able to make any changes once you have officially submitted your final exercise. **The exercises are due at 11:59 pm on the date listed in the course schedule.** You will receive a 5 deduction for each day a module assessment is late.

(3) Subspecies Report: One of the most useful skills in any profession is writing. Furthermore, one of the missions of the Land Grant Institution is extension, which means we are communicating with the general public. As such, you are required to produce an informational article which explains the biology of a specific *Apis mellifera* subspecies. This article should be written following the standard Featured Creature format. This format is available at the Featured Creatures link (http://entnemdept.ufl.edu/creatures/) under the "Format for Authors" link. Your *Apis mellifera* subspecies article should be written to have the potential for publication through the University of Florida's extension branch (Cooperative Extension Service). You **must** check with the TA before beginning your article so that they can verify that such an article does not already exist on your subspecies. The instructor or TA can provide ideas for selecting a subspecies, but the topics will be reserved on a first come first serve basis. **A grading rubric will be provided in Canvas to facilitate the development of your article.**

Here is an example of two Featured Creature articles that have been written on *Apis mellifera* subspecies.
Apis mellifera capensis: http://entnemdept.ufl.edu/creatures/misc/bees/cape_honey_bee.htm
Apis mellifera scutellata: http://entnemdept.ufl.edu/creatures/misc/bees/ahb.htm
You'll notice how the authors created figures helpful to understanding the subspecies distribution as well as including other useful figures and information.

All written reports should convey scientific information in a way that a high school student could understand. Figures are extremely helpful in extension documents, and students are encouraged to include as many figures as necessary to explain a topic. You must obtain use permission from the owner of any figures you include in your final report if the figure is not original to you. There will be an additional assignment to submit with the Final Subspecies Report called "Subspecies Report Figures and Permissions." For this assignment, you will upload the full-sized jpeg file for each figure and fill in the accompanying word document with the proof of permission for use.

There are four components of the Subspecies Report that compose the completed assignment. Due dates for each component are listed in the course schedule.

1) Report Topic Due – The student should identify and record the topic chosen for the subspecies report by completing the Canvas assignment "Subspecies Report Topic."

2) 1st Submission – This is not a rough draft, but rather is what the student considers the completed document.

3) Peer Review – The 1st submission will be shared with other students in the class who will provide a peer review of the report by the due date listed in the course schedule. Each student will peer review two reports.

4) Final Submission – Students are expected to revise their reports as per the comments provided during the peer review process. The final report must be submitted by the due date shown in the course schedule. A grading rubric will be provided in Canvas to facilitate development and peer review of the Subspecies Reports. **Five points will be deducted from the final project score every day past the due dates that any of the**

information requested above is late. Please do not wait until the last minute to write your reports or meet any of the other deadlines. All points lost will be deducted from the final Subspecies Report grade.

4) Extension Project: Students enrolled in ENY 6934 are required to produce an additional project in the form of extension fact sheets. Each fact sheet should have the potential for publication through the University of Florida's extension branch (Cooperative Extension Service). You **must** check with the TA before beginning your project so that they can verify that fact sheets do not already exist on your topics. The instructor or TA can help you come up with ideas for fact sheet topics. **A grading rubric will be provided to facilitate development of your extension fact sheets.**

Each student will create 5 one to two-page fact sheets that provide basic and pertinent information regarding a topic of honey bee biology. Your five fact sheets should succinctly convey scientific information in a way that a high school student could understand. These fact sheets are designed to provide basic information about complex topics, which means that you will need to take special care to not provide too much information in a single sheet. You must obtain use permission from the owner of any figures you include in your fact sheets if the figure is not original to you. There will be an additional assignment to submit with the Final Submission called "Extension Fact Sheet Figures and Permissions." For this assignment, you will upload the full-sized jpeg file for each figure and fill in the accompanying word document with the proof of permission for use.

Here are some examples of fact sheets produced that might help you understand what we are looking for:
https://innovate.cired.vt.edu/wp-content/uploads/2015/08/CommunitiesofPractice_LS.pdf ;
http://sfyl.ifas.ufl.edu/media/sfylifasufledu/orange/hort-res/docs/pdf/008-How-to-Build-a-Raised-Bed-Garden.pdf ;
http://sfyl.ifas.ufl.edu/media/sfylifasufledu/orange/hort-res/docs/pdf/007-Living-Easter-Basket-Fact-Sheet.pdf;
http://sfyl.ifas.ufl.edu/media/sfylifasufledu/orange/hort-res/docs/pdf/012-Caladium-Fact-Sheet.pdf.

There are four components of the Extension Fact Sheet project that compose the completed assignment. Due dates for each component are listed in the course schedule.

1) Fact Sheet Topics Due – The student should identify **5** topics for the fact sheets by completing the Canvas assignment "Extension Fact Sheet Topics."

2) 1st Submission – This is not a rough draft, but rather is what the student considers the completed fact sheets.

3) Peer Review – The 1st submission will be shared with other graduate students in the class who will provide a peer reviews by the due date listed in the course schedule. Each student will peer review the fact sheets of at least two students.

4) Final Submission – Students are expected to revise the fact sheets as per the comments provided during the peer review process. The final version of the fact sheets must be submitted by the due date shown in the course schedule.

A grading rubric will be provided in Canvas to facilitate development and peer review of the Extension Fact Sheet Project. **Five points will be deducted from the final project score every day past the due dates that any of the information requested above is late, regardless of the excuse**. Please do not wait until the last minute to produce your fact sheets or meet any of the other deadlines. All points lost will be deducted from the final Extension Fact Sheet Project grade.

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

Online Course Evaluation Process: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.aa.ufl.edu/public-results/.

Academic Honesty: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (sccr.dso.ufl.edu/process/student-conduct-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 or TAs in this class.

Services for Students with Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, dso.ufl.edu/drc) 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.

Campus Resources:

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact mailto:umatter@ufl.edu, 352-392-1575, or visit umatter.ufl.edu/ to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit counseling.ufl.edu/ or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit shcc.ufl.edu/.

University Police Department: Visit police.ufl.edu/ or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; ufhealth.org/emergency-room-trauma-center.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services career.ufl.edu/.

Library Support: cms.uflib.ufl.edu/ask various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring. teachingcenter.ufl.edu/

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. writing.ufl.edu/writing-studio/

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

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

Cover Sheet: Request 15838

New Course Number for Applied Data Analysis in FYCS

Info

Process	Course|New|Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Tracy Johns tjohns@ufl.edu
Created	2/12/2021 10:43:18 AM
Updated	2/12/2021 12:29:41 PM
Description of request	A new course number for Applied Data Analysis in FYCS: This basic graduate course is designed to introduce FYCS Master's and beginning PhD students to basic quantitative analysis techniques, especially those students with little prior background in statistics and quantitative analysis. It is designed to assist students in asking critical research questions related to families, youth, and community issues; choosing proper statistical analysis techniques to answer those questions; and understanding statistical analysis output to construct responses to those questions. The course guides students in both conducting their own research (particularly for their thesis projects) and better understanding the research of others. The course is placed within the curriculum to best position students moving toward proposing and structuring their thesis projects, so as to facilitate timely completion of valid and reliable thesis research.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Family, Youth and Community Sciences 60320000	Tracy Irani		2/12/2021
SyllabusSummer21.pdf CALS CC Checklist FYCS Grad Applied Analysis.pdf					2/12/2021 2/12/2021
College	Pending	CALS - College of Agricultural and Life Sciences			2/12/2021
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					

Step	Status	Group	User	Comment	Updated
No document changes					

Course|New for request 15838

Info

Request: New Course Number for Applied Data Analysis in FYCS
Description of request: A new course number for Applied Data Analysis in FYCS:

This basic graduate course is designed to introduce FYCS Master's and beginning PhD students to basic quantitative analysis techniques, especially those students with little prior background in statistics and quantitative analysis. It is designed to assist students in asking critical research questions related to families, youth, and community issues; choosing proper statistical analysis techniques to answer those questions; and understanding statistical analysis output to construct responses to those questions. The course guides students in both conducting their own research (particularly for their thesis projects) and better understanding the research of others. The course is placed within the curriculum to best position students moving toward proposing and structuring their thesis projects, so as to facilitate timely completion of valid and reliable thesis research.
Submitter: Tracy Johns tjohns@ufl.edu
Created: 2/12/2021 10:14:06 AM
Form version: 1

Responses

Recommended Prefix FYC
Course Level 6
Course Number XXX
Category of Instruction Intermediate
Lab Code None
Course Title Applied Data Analysis in FYCS
Transcript Title Applied Data Analysis in FYCS
Degree Type Graduate

Delivery Method(s) On-Campus, Online
Co-Listing No

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 This course introduces FYCS graduate students to basic quantitative data analysis techniques that can be applied to critical social science research questions, public management and policy problems, and program evaluation. The course emphasizes proper pairing of analysis techniques to data types; application and interpretation of statistical analyses; use of data analysis in decision-making; and implementation of data analysis using computer software.
Prerequisites N/A
Co-requisites N/A
Rationale and Placement in Curriculum This basic graduate course is designed to introduce FYCS Master's and beginning PhD students to basic quantitative analysis techniques, especially those students with little prior background in statistics and quantitative analysis. It is designed to assist students in asking critical research questions related to families, youth, and community issues; choosing proper statistical analysis techniques to answer those questions; and understanding statistical analysis output to construct responses to those questions. The course guides students in both conducting their own research (particularly for their thesis projects) and better understanding the research of others. The course is placed within the curriculum to best position students moving toward

proposing and structuring their thesis projects, so as to facilitate timely completion of valid and reliable thesis research.
Course Objectives Upon successful completion of this course, students should be able to:
1. Propose questions for analysis that are pertinent to contemporary social issues and public policies and programs.
2. Formulate a step-by-step approach for analyzing these research questions.
3. Select the most appropriate methodological techniques for analyzing research questions and available data.
4. Conduct basic data analyses using the methodologies covered in the course.
5. Properly interpret the results of these analyses.

Course Textbook(s) and/or Other Assigned Reading • Required: Berman, Evan M. and XiaoHu Wang (2018). Essential Statistics for Public Managers and Policy Analysts, 4th Edition. Los Angeles, CA: SAGE|CQ Press. (Older editions are acceptable.)
• Required: Aldrich, James O. and James B. Cunningham (2016). Using IBM® SPSS® Statistics: An Interactive Hands-On Approach, 2nd Edition. Los Angeles, CA: SAGE. (or a similar SPSS guide, see Canvas)
• Recommended: Berman, Evan M. and XiaoHu Wang (2018). Exercising Essential Statistics, 4th Edition. Los Angeles, CA: SAGE|CQ Press.

Weekly Readings:
• Jones, Jennifer. 2017. "Scaffolding self-regulated learning through student-generated quizzes." Active Learning in Higher Education, 1-12. DOI: 10.1177/1469787417735610.
• Chilton, Adam S. and Mila Versteeg. 2016. "International law, constitutional law, and public support for torture." Research & Politics, 3(1):1-9. DOI: 10.1177/2053168016636413
• Gail M. Sullivan & Richard Feinn. 2012. "Using Effect Size -- or Why the P Value Is Not Enough." Journal of Graduate Medical Education.
• Burnett, Craig M. 2016. "Exploring the difference in participants' factual knowledge between online and in-person survey modes." Research & Politics, 3(2):1-7. DOI: 10.1177/2053168016654326.
• Kiesner, Jeff and Erica Fassetta. 2009. "Old friends and new friends: Their presence at substance-use initiation." International Journal of Behavioral Development, 33(4): 299-302.
• Phares, Vicky, Sherecce Fields , M. Monica Watkins-Clay, Dimitra Kamboukos & Sena Han. (2005) "Race/Ethnicity and Self-Esteem in Families of Adolescents," Child & Family Behavior Therapy, 27:3, 13-26, DOI: 10.1300/J019v27n03_02.
• Payne Purvis, Caroline; Barnett, Rosemary V.; and Forthun, Larry. (2014) "Parental Involvement during Adolescence and Contraceptive Use in College," Journal of Adolescent and Family Health: Vol. 6: Iss. 2, Article 3.
• Barnett, R. V., Payne-Purvis, C., & Culen, G. R. (2015). "Perceptions of Community and Risk Behavior Exposure for Youth in At-Risk Environments." National Youth-At-Risk Journal, 1(1). doi.org: 10.20429/nyarj.2015.010105
• Mitchell, Kristina M. W. and Jonathan Martin. 2018. "Gender Bias in Student Evaluations." PS: Political Science & Politics. doi:10.1017/S1049096518000001X.
• Mutz, D. (2016). "Harry Potter and the Deathly Donald." PS: Political Science & Politics, 49(4), 722-729. doi:10.1017/S1049096516001633

Weekly Schedule of Topics Week 1: Course overview, Intro to SPSS, Intro to Research Design, Finding Data
Week 2: Measurement & Research Design
Week 3: Descriptive Statistics – Frequencies, Central Tendency, Dispersion
Week 4: Inferential Statistics
Week 5: Hypothesis Testing, Estimating Population Proportions
Week 6: Testing Differences Between Groups – Difference of Means, t-tests
Week 7: Contingency Tables
Week 8: ANOVA
Week 9: Simple Regression / Correlations
Week 10: Controlling for a 3rd Variable
Week 11: Multiple Regression (OLS)
Week 12: In-Class Presentations; Papers Due

Grading Scheme • Weekly Assignments: You are expected to complete a series of weekly homework assignments that test your knowledge of the skills learned in class. These 10 projects are 30 points each, and taken together, account for 30% of your final grade.

• Final Research Paper: You are expected to complete a research paper that uses the data analysis skills acquired during the semester. This project should address a social science research question, policy issue, or community issue of your choice, utilizing either primary data (if you've already collected it) or secondary data. The final research project accounts for 70% of your final grade, including a preliminary research proposal (100 points, 10%), the research paper (500 points, 50%), and a final presentation (100 points, 10%). The proposal is due by June 30, the presentation is on August 4, and the paper is due by August 4 at midnight.

A	90.0% to 100.0%	C	70.0% to 77.4%
B+	87.5% to 89.9%		
D+	67.5% to 69.9%		
B	80.0% to 87.4%D	60.0% to 67.4%	
C+	77.5% to 79.9%		
E	Less than 60.0%		

Instructor(s) Tracy L. Johns, PhD
Attendance & Make-up Yes
Accomodations Yes
UF Grading Policies for assigning Grade Points Yes
Course Evaluation Policy Yes

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

TJ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

TJ You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

N/A Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

TJ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

TJ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

TJ The course schedule should be concise and include the appropriate number of weeks in the semester.

TJ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

TJ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

N/A Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

TJ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

TJ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

TJ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction)

FYC6XXX: Applied Data Analysis in FYCS

Section #XXXX, 3 credit hours
Instructor: Tracy L. Johns, Ph.D.
Office: MCCD 3041-E
e-mail: tjohns@ufl.edu

Wednesday, 4th to 6th period (12:30pm to 4:45pm)
Online: Synchronous instruction
Phone: 273-3505
Office Hours: Wednesday, 10:30am to 11:30am & by appointment

Course Description

This course introduces FYCS graduate students to basic quantitative data analysis techniques that can be applied to critical social science research questions, public management and policy problems, and program evaluation. The course emphasizes proper pairing of analysis techniques to data types; application and interpretation of statistical analyses; use of data analysis in decision-making; and implementation of data analysis using computer software.

Course Objectives

Upon successful completion of this course, students should be able to:

1. Propose questions for analysis that are pertinent to contemporary social issues and public policies and programs.
2. Formulate a step-by-step approach for analyzing these research questions.
3. Select the most appropriate methodological techniques for analyzing research questions and available data.
4. Conduct basic data analyses using the methodologies covered in the course.
5. Properly interpret the results of these analyses.

Course Materials

- Required: Berman, Evan M. and XiaoHu Wang (2018). *Essential Statistics for Public Managers and Policy Analysts*, 4th Edition. Los Angeles, CA: SAGE|CQ Press. (Older editions are acceptable.)
- Required: Aldrich, James O. and James B. Cunningham (2016). *Using IBM® SPSS® Statistics: An Interactive Hands-On Approach*, 2nd Edition. Los Angeles, CA: SAGE. (or a similar SPSS guide, see Canvas)
- Recommended: Berman, Evan M. and XiaoHu Wang (2018). *Exercising Essential Statistics*, 4th Edition. Los Angeles, CA: SAGE|CQ Press.
- Handouts and other written materials will be provided by the instructor and will be available in Canvas.

Course Requirements & Grading

- **Weekly Assignments**: You are expected to complete a series of weekly homework assignments that test your knowledge of the skills learned in class. These 10 projects are 30 points each, and taken together, account for 30% of your final grade.
- **Final Research Paper**: You are expected to complete a research paper that uses the data analysis skills acquired during the semester. This project should address a social science research question, policy issue, or community issue of your choice, utilizing either primary data (if you've already collected it) or secondary data. The final research project accounts for 70% of your final grade, including a preliminary research proposal (100 points, 10%), the research paper (500 points, 50%),

and a final presentation (100 points, 10%). The proposal is due by **June 30,** the presentation is on **August 4**, and the paper is due by **August 4 at midnight**.

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

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Weekly Projects (10, 30 points each)	300	30%
Research Project Proposal	100	10%
Research Paper	500	50%
Research Project Presentation	100	10%
Total	***1000***	***100%***

Grading

A	90.0% to 100.0%	C	70.0% to 77.4%
B+	87.5% to 89.9%	D+	67.5% to 69.9%
B	80.0% to 87.4%	D	60.0% to 67.4%
C+	77.5% to 79.9%	E	Less than 60.0%

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. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.

Readings & Attendance

You are responsible for completing all assigned readings before class, as this will facilitate your understanding of lectures, participation in discussion, and SPSS instruction. Class attendance is extremely important, and it is essential that you keep up with weekly homework assignments and readings. This is not a typical graduate seminar – each week's material builds on the previous week, and each week's class time will include lecture, discussion, and work in SPSS. In addition, you'll need to spend time honing your skills with computer software for data analysis. If you need to miss class for some reason, please contact the instructor ahead of time.

All materials will be provided asynchronously on Canvas (and the R drive), but lectures will be held on Zoom at the scheduled class time, synchronously, to explain the statistical background and methods presented in the lecture slides. Assignments will be provided and submitted via Canvas, and discussion boards for student interaction will be available there as well.

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/UGRD/academic-regulations/attendance-policies/.

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

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

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.

Student Support

Services for Students with Disability. The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation: 0001 Reid Hall, 352-392-8565, https://disability.ufl.edu/

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
  Counseling Services
  Groups and Workshops
  Outreach and Consultation
  Self-Help Library
  Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- Career Connections Center, First Floor JWRU, 392-1601, https://career.ufl.edu/.
- Student Success Initiative, http://studentsuccess.ufl.edu.

Student Complaints:
- Residential Course: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/.
- Online Course: http://www.distance.ufl.edu/student-complaint-process

Campus Resources: Academic. E-learning technical support is available at 352-392-4357 (select option 2) or by emailing learning-support @ufl.edu. Library support is available for assistance in using the libraries or finding resources at http://cms.ufllib.ufl.edu/ask.

Student Privacy. There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the Notification to Students of FERPA Rights at https://registrar.ufl.edu/ferpa/.

SPSS Statistics

This course will use SPSS Statistics 26 for data analysis, which is available via UF Apps (info.apps.ufl.edu). To use SPSS on your laptop hard drive, you may purchase the software from the HUB for $35 (helpdesk.ufl.edu/software-services/spss/) for install on your personal computer.

How to Access UFApps:

1. Go to https://apps.ufl.edu
2. Login using your Gatorlink credentials
3. Install the Citrix Receiver (or opt to use the Light Version)
4. Launch your desired application by clicking on the icon/name

Using the R Drive File

1. Once you're logged into UFApps, launch the R Drive File Storage option
2. Navigate to the Courses folder and find this course-section (FYC 6932 – 901B)
   - The Data Folder will have files related to course assignments & in-class work

- In the Student Folder, you can **create your own folder** for working on course assignments & in-class work

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

Research Paper

This project allows students to complete the research process from start to finish, applying the analysis techniques learned in class to a substantive social science research question, policy, or community problem. You'll begin with a research question, formulate hypotheses, find or gather data, conduct statistical analyses, present and interpret the results, and provide recommendations based on your findings.

In completing the research paper, students will:

- Construct a significant research question related to a social, policy, or community issue;
- Choose an appropriate dataset which includes relevant variables;
- Conduct appropriate analyses based on the data and variables chosen to properly address the research question using techniques from the course;
- Include a literature review, description of methodology and variables, statistical analysis, interpreted results, and conclusions with recommendations based on the findings.

To ensure that you remain on track, a paper proposal including your research question, proposed dependent and independent variables, and dataset choice is due by **June 30**. However, I recommend you begin this process as soon as possible for the best possible outcome.

Course Outline

The schedule below is subject to change with proper advance notice to students. Links to lecture slides and SPSS instructional slides, key ideas, handouts, and supplemental readings and materials are available on Canvas. Links to datasets used in instructional slides and lecture examples are available in the R drive.

All assignments are due, along with any supporting materials (like SPSS output), by the beginning of class, as stipulated in the Course Outline and in the Canvas Assignments section.

Course Outline

Week	Topic	Readings	Assignments Due
1 May 12	Course overview, Intro to SPSS, Intro to Research Design, Finding Data	• Berman: Chapter 1, 5 • Aldrich: Chapter 1-3	
2 May 19	Measurement & Research Design	• Berman: Chapters 2-3 • Aldrich: Chapter 4 • "Food Insecurity and Hunger in the United States" (National Research Council, 2006), Chapter 3 "Concepts and Definitions"	Assignment #1
3 May 26	Descriptive Statistics – Frequencies, Central Tendency, Dispersion	• Berman: Chapter 6-7 • Aldrich: Chapters 11, 8, 9 • Jones, Jennifer. 2017. "Scaffolding self-regulated learning through student-generated quizzes." *Active Learning in Higher Education*, 1-12. DOI: 10.1177/1469787417735610.	Assignment #2
4 June 2	Inferential Statistics	• Berman & Wang: "Sampling," pages 89-94; Pages 124-127 (the normal curve); Introduction to Section IV, pages 165-167 • Meier, Brundy, & Bohte: Chapter 11 • Chilton, Adam S. and Mila Versteeg. 2016. "International law, constitutional law, and public support for torture." *Research & Politics*, 3(1):1-9. DOI: 10.1177/2053168016636413	Assignment #3
5 June 9	Hypothesis Testing, Estimating Population Proportions	• Berman: Chapter 10, Box 7.2 (127) • Aldrich: Chapter 12 • Gail M. Sullivan & Richard Feinn. 2012. "Using Effect Size -- or Why the P Value Is Not Enough." *Journal of Graduate Medical Education*.	Assignment #4
6 June 16	Testing Differences Between Groups – Difference of Means, t-tests	• Berman: Chapter 12 • Aldrich: Chapters 13,14 • Burnett, Craig M. 2016. "Exploring the difference in participants' factual knowledge between online and in-person survey modes." *Research & Politics*, 3(2):1-7. DOI: 10.1177/2053168016654326.	Assignment #5
June 23	***Summer Break – No Class***		

7 June 30	Contingency Tables	• Berman: Chapters 8, 10, 11 • Aldrich: Chapter 25 • Kiesner, Jeff and Erica Fassetta. 2009. "Old friends and new friends: Their presence at substance-use initiation." *International Journal of Behavioral Development*, 33(4): 299-302.	Assignment #6
	Research Project Proposal Due		
8 July 7	ANOVA	• Berman: Chapter 13 • Aldrich: Chapter 15 • Phares, Vicky, Sherecce Fields , M. Monica Watkins-Clay, Dimitra Kamboukos & Sena Han. (2005) "Race/Ethnicity and Self-Esteem in Families of Adolescents," *Child & Family Behavior Therapy*, 27:3, 13-26, DOI: 10.1300/J019v27n03_02.	Assignment #7
9 July 14	Simple Regression / Correlations	• Berman: Chapter 14 • Aldrich: chapters 19 – 20 • Payne Purvis, Caroline; Barnett, Rosemary V.; and Forthun, Larry. (2014) "Parental Involvement during Adolescence and Contraceptive Use in College," *Journal of Adolescent and Family Health*: Vol. 6: Iss. 2, Article 3. • Barnett, R. V., Payne-Purvis, C., & Culen, G. R. (2015). "Perceptions of Community and Risk Behavior Exposure for Youth in At-Risk Environments." *National Youth-At-Risk Journal*, 1(1). doi.org: 10.20429/nyarj.2015.010105.	Assignment #8
10 July 21	Controlling for a 3rd Variable	• See Canvas • Mitchell, Kristina M. W. and Jonathan Martin. 2018. "Gender Bias in Student Evaluations." *PS: Political Science & Politics*. doi:10.1017/S1049096518000001X.	Assignment #9
11 July 28	Multiple Regression (OLS)	• Berman: Chapter 15 • Aldrich: Chapter 21 • Mutz, D. (2016). "Harry Potter and the Deathly Donald." *PS: Political Science & Politics*, 49(4), 722-729. doi:10.1017/S1049096516001633	Assignment #10
12 August 4	**Final Presentations Final Paper due by Midnight**		

Cover Sheet: Request 15725

HOS6932 Principles and Applications of OMICS Technologies to Advance Plant Biology

Info

Process	Course|New|Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Satya Swathi Nadakuduti s.nadakuduti@ufl.edu
Created	1/22/2021 4:08:29 PM
Updated	2/15/2021 5:08:40 PM
Description of request	HOS6932 Principles and Applications of Omics Technologies to Advance Plant Biology course is designed mainly to teach current topics of plant genome-editing and genetic transformation in plants along with introductory lectures leading to this topic as well as other omics topics. The main goals of this three-credit course are 1) To broadly review molecular technologies applied in plant science research emphasizing on recently evolving CRSIPR based gene editing applications and transformation advancements in plants and 2) Prepare graduate students to critically evaluate scientific literature and introduce the students to proposal writing. We have approval from the Environmental Horticulture department and also approved external consultation from Horticulture Sciences department that this proposed course did not find significant overlaps with the existing courses.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Environmental Horticulture 60180000	Dean Kopsell		1/22/2021
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			1/22/2021
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 15725

Info

Request: HOS6932 Principles and Applications of OMICS Technologies to Advance Plant Biology
Description of request: HOS6932 Principles and Applications of Omics Technologies to Advance Plant Biology course is designed mainly to teach current topics of plant genome-editing and genetic transformation in plants along with introductory lectures leading to this topic as well as other omics topics.

The main goals of this three-credit course are 1) To broadly review molecular technologies applied in plant science research emphasizing on recently evolving CRSIPR based gene editing applications and transformation advancements in plants and 2) Prepare graduate students to critically evaluate scientific literature and introduce the students to proposal writing.

We have approval from the Environmental Horticulture department and also approved external consultation from Horticulture Sciences department that this proposed course did not find significant overlaps with the existing courses.

Submitter: Satya Swathi Nadakuduti s.nadakuduti@ufl.edu
Created: 9/23/2020 11:23:23 AM
Form version: 1

Responses

Recommended Prefix HOS
Course Level 6
Course Number 693
Category of Instruction Intermediate
Lab Code None
Course Title Principles and Applications of Omics Technologies to Advance Plant Biology
Transcript Title Omic Tech for Plant research
Degree Type Graduate

Delivery Method(s) Online
Co-Listing No

Effective Term Spring
Effective Year 2021
Rotating Topic? No
Repeatable Credit? Yes
If repeatable, # total repeatable credit allowed 3
Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 2.5
Course Description Recent advancement in technologies have revolutionized plant biology research especially in the fields of genome editing, high throughput sequencing etc., The main goals of this three-credit course are 1) To broadly review molecular technologies applied in plant science research emphasizing on recently evolving CRSIPR based gene editing applications and transformation advancements in plants and 2) Prepare graduate students to critically evaluate scientific literature and write research proposals
Prerequisites At least ONE of the undergraduate molecular and cellular biology, genetics, or biochemistry courses HOS3305, AGR3303, PCB3063, BCH3025, BCH4024, PCB4522 or equivalent
Co-requisites N/A.
Rationale and Placement in Curriculum This course is designed to build on students understanding of basic principles and foundational knowledge on plant molecular biology. Students will critically evaluate the existing knowledge in plant science community as well as identify the gaps in plant research. This course is designed

also to promote students' written and oral scientific communication skills. Each week will include two lectures on a given research topic, followed by active discussion of an assigned paper or an assignment on that topic. Students will review assigned literature and come prepared for the class discussion which includes critical analysis and dissection of the paper assigned. The lectures delivered along with assigned literature review would enable students to be current in the topics, critically be able to read and evaluate a scientific publication and be able to apply the knowledge gained to their own research. Students will also write an original research proposal on one of the discussed topics of interest and will also have opportunities to give oral presentations on student paper and defend their proposal. Examinations will be based on concepts developed in lectures and literature covered in the class, allowing students to independently think about a given research scenario and how to generate hypothesis and navigate to solve research questions. This course is designed to promote critical reading of manuscripts, think about research, and practice their oral and written skills. Students considering careers in scientific research in plants in academia or R&D in private industry will benefit from this course.

Course Objectives Students from this course will be able to:

1. Survey the plant molecular biology/genetics, functional genomics and metabolomics approaches emphasizing recent advances in plant biology. Evaluate and propose how you might use them for your own research?
2. Critically review, analyze, and evaluate scientific literature by justification, critique, and identification of gaps in the existing field of research.
3. Generate hypotheses for a given scientific problem and be able to apply and develop effective experimental approaches to test them.
4. Utilize publicly available data bases to build evidence and develop direction for your research question.
5. Gain experience in creating a research proposal, presenting, and defending it. Students identify a research problem, synthesize, and develop their original idea into an independent proposal and defend it in front of their class.
6. Practice and demonstrate effective written and oral scientific communication techniques.

Course Textbook(s) and/or Other Assigned Reading Optional textbooks: Scientific literature WILL be provided by the instructor on every topic (Lecture + papers). For basic molecular biology concepts, students can refer to textbooks
(available at UF libraries) "Lewin's Genes XI" (Jocelyn E. Krebs, Elliott S. Goldstein and Stephen T. Kilpatrick, publication date 2012-12-31, Edition 11; eBook ISBN 9781449659066) or
"Biochemistry & molecular biology of plants" (edited by Bob B. Buchanan, Wilhelm Gruissem, and Russell L. Jones; publication date 2015-08-31; Edition 2; eBook ISBN 9781118502198)
https://uf.catalog.fcla.edu/uf.jsp?st=Genes+X++Lewin&ix=kw&fl=bo&V=D&S=2151602786472052&I=1#top

https://uf.catalog.fcla.edu/uf.jsp?st=Biochemistry+and+Molecular+Biology+of+Plants+&ix=kw&fl=bo&V=D&S=2151602

Reading list: Two to four papers related to each topic being covered will be provided to students well in advance (at least a week prior to the class) out of which one will be chosen for in-depth discussion in the class. The list provided here includes background reading and papers for indepth discussion and might vary and will be updated depending on current literature and relevance to lecture topic.

classic papers:

Jarvis P, Chen LJ, Li HM, Pete CA, Fankhauser C, Chory J (1998) An Arabidopsis mutant defective in the plastid general protein import apparatus. Science 282: 100–103
Hamilton AJ, Baulcombe DC (1999) A species of small antisense RNA in posttranscriptional gene silencing in plants. Science 286: 950–952
Napoli C, Lemieux C, Jorgensen R (1990) Introduction of a Chimeric Chalcone Synthase Gene into Petunia Results in Reversible Co-Suppression of Homologous Genes in trans. Plant Cell 2: 279–289
Jinek M, Chylinski K, Fonfara I, Hauer M, Doudna JA, Charpentier E (2012) A programmable dual-RNAguided DNA endonuclease in adaptive bacterial immunity. Science 337: 816–821

Others:

Atkins PAP, Voytas DF (2020) Overcoming bottlenecks in plant gene editing. Curr Opin Plant Biol 54: 79–84
Dong OX, Yu S, Jain R, Zhang N, Duong PQ, Butler C, Li Y, Lipzen A, Martin JA, Barry KW, et al (2020) Marker-free carotenoid-enriched rice generated through targeted gene insertion using CRISPRCas9. Nat Commun 11: 1178

Debernardi JM, Tricoli DM, Ercoli MF, Hayta S, Ronald P, Palatnik JF, Dubcovsky J (2020) A GRF–GIF chimeric protein improves the regeneration efficiency of transgenic plants. Nat Biotechnol. doi: 10.1038/s41587-020-0703-0
Gaudelli NM, Komor AC, Rees HA, Packer MS, Badran AH, Bryson DI, Liu DR (2017) Programmable base editing of A*T to G*C in genomic DNA without DNA cleavage. Nature 551: 464–471
Jin S, Zong Y, Gao Q, Zhu Z, Wang Y, Qin P, Liang C, Wang D, Qiu J-L, Zhang F, et al (2019) Cytosine, but not adenine, base editors induce genome-wide off-target mutations in rice. Science. doi:10.1126/science.aaw7166
Komor AC, Kim YB, Packer MS, Zuris JA, Liu DR (2016) Programmable editing of a target base in genomic DNA without double-stranded DNA cleavage. Nature 533: 420–424
Anzalone A V, Randolph PB, Davis JR, Sousa AA, Koblan LW, Levy JM, Chen PJ, Wilson C, Newby GA, Raguram A, et al (2019) Search-and-replace genome editing without double-strand breaks or donor DNA. Nature 576: 149–157
Lin Q, Zong Y, Xue C, Wang S, Jin S, Zhu Z, Wang Y, Anzalone A V., Raguram A, Doman JL, et al (2020) Prime genome editing in rice and wheat. Nat Biotechnol 38: 582–585
Maher MF, Nasti RA, Vollbrecht M, Starker CG, Clark MD, Voytas DF (2018) Plant gene editing through de novo induction of meristems. Nat Biotechnol. doi: 10.1038/s41587-019-0337-2
Wang X, Ye L, Lyu M, Ursache R, Löytynoja A, Mähönen AP (2020) An inducible genome editing system for plants. Nat Plants 6: 766–772
Zhao D, Li J, Li S, Xin X, Hu M, Price MA, Rosser SJ, Bi C, Zhang X (2020) Glycosylase base editors enable C-to-A and C-to-G base changes. Nat Biotechnol. doi: 10.1038/s41587-020-0592-2
Zong Y, Wang Y, Li C, Zhang R, Chen K, Ran Y, Qiu JL, Wang D, Gao C (2017) Precise base editing in rice, wheat and maize with a Cas9-cytidine deaminase fusion. Nat Biotechnol 35: 438–440
Misra BB, Assmann SM, Chen S (2014) Plant single-cell and single-cell-type metabolomics. Trends Plant Sci 19: 637–646
Rich-Griffin C, Stechemesser A, Finch J, Lucas E, Ott S, Schäfer P (2020) Single-Cell Transcriptomics: A High-Resolution Avenue for Plant Functional Genomics. Trends Plant Sci 25: 186–197
Wurtzel ET, Kutchan TM (2016) Plant metabolism, the diverse chemistry set of the future. Science 353: 1232–1236

Weekly Schedule of Topics LEC WK LECTURE TOPIC HMWK/READINGS

11-Jan Basics of a Plant Cell

15-Jan Structure of DNA and analysis

Course organization and expectations - Jan 13
Eukaryotic gene structure, RNA, protein synthesis

Protein trafficking within the cell organelles

22-Jan Model organisms, Public data bases - NCBI, TAIR Assignment # 1 – Jan 20
Multiple sequence alignments and phylogenetic trees

Lightening talks

25-Jan Forward genetics approaches for plant functional genomics Assignment # 2 – Jan 27
Gene structure and function
29-Jan Mutants in model plants, Identifying mutants for a research problem, Gene discovery

Class Discussion #1
1-Feb Reverse genetics approaches for plant functional genomics

5-Feb RNA-mediated interference (RNAi) Class Discussion #2 – Feb 3
Virus Induced Gene Silencing (VIGS)

8-Feb Gene-editing by CRISPR systems and evaluating mutagenesis

12-Feb Introduction to CRISPR/Ca9: Discovery and how CRISPR works? Variants of Cas9 and multiplexing Class Discussion #3 – Feb 10

15-Feb Guide RNA design and CRISPR constructs: plant systems Assignment # 3 – Feb 17
19-Feb Methods of mutagenesis evaluation, Case studies of CRISPR success in Agricultural crop improvement CRISPR/Cas9 guide RNA design and evaluation
Review of Topics for Mid-term exam and proposal ideas Class Discussion #4
MID- TERM EXAM – FEB 24

1-Mar Base Editing - Cytosine base editors, Adenine base editors,
5-Mar glycosylase editors, Prime Editing - Case studies in plants Class Discussion #5 – Mar 3
8-Mar Advances in plant genetic transformation technologies

12-Mar Agrobacterium mediated transformation - molecular basis
Floral dip, plant tissue culture regeneration, biolistics Class Discussion #6 – Mar 10
Case studies in various crop species

15-Mar Advances in plant genetic transformation technologies Protoplasts: tool for plant research, transfection, and regeneration

19-Mar Delivery of DNA manipulation cargo bypassing tissue culture. Class Discussion #7 – Mar 17
Nanoparticles mediated delivery

22-Mar DNA sequencing - Basics and advances Assignment #4 - Mar 24
Basics of Sanger sequencing, High throughput DNA sequencing by various platforms
Oral presentation on assigned paper
26-Mar Student paper presentations

PROPOSALS DUE - March 30

29-Mar Transcriptomics and quantitative RT-PCR

Case studies: Transcriptomics data for gene discovery Class Discussion #8 – Mar 31
Gene expression and regulation

2-Apr Transcription factors and regulatory proteins

protein- DNA and protein - protein interaction experiments

Case studies: Regulatory proteins in plants

5-Apr Genomics enabled plant biochemistry research

Mass spectrometry and metabolomics approaches Class Discussion #9 – April 7

9-Apr Case studies: Metabolomics to study plant specialized metabolism

12-Apr Advances in imaging technologies for plant research

Core facilities at UF_applications and services Class Discussion #10 – April 14

Review of course material before the final exam and faculty course evaluation

Student Proposal presentations Apr 16 - Apr 21

FINAL EXAM – APRIL 28

Grading Scheme Class attendance: All students are required to attend the class and participate actively in class discussion for full participation credit.

Student Evaluation Basis Number

Points/ event Total
CLASS DISCUSSIONS 10 Class Discussions 10

100
ASSIGNMENTS

4

25

100
MID-TERM EXAM

1

100

100
FINAL EXAM 1

100

100
PROPOSAL + ORAL PRESENTATION4 1

100

100
TOTAL

500

1 Class Discussions: Will be based on journal articles provided to students on the topic being covered and will focus on: Problems addressed in the paper, research objectives, experimental design, critical data presentation (tables/figures), gaps or weaknesses, future work? Each student may be questioned on the literature reviewed for engagement. For full or partial participation credit, students are expected to come prepared to answer questions on the assigned paper and participate in the discussion.

**Assignments will be discussed in the class in their respective weeks.

2 Assignments: Four assignments in total; Students will be given one-week time to turn in.
Assignment # 1) A 5 min lightening talk on your graduate research, which must include a personal elevator pitch for 30sec, why your research is important (for broader audience), research objectives and your contribution

Assignment # 2) DNA analysis: Students will be given a gene identifier from each model organism, students will find: Gene structure, function, expression, CDS, cDNA, BLAST query, primary literature
Assignment # 3) CRISPR single guide RNA design: Students will use online programs to select spacer sequence for sgRNA design for a target gene and design strategies to evaluate mutagenesis

Assignment # 4) Student oral presentation: Students will give 10-minute oral presentation on an assigned paper of relevance to the topics being covered in the course

**Students may also be directed to participate in research seminars at UF and answering questions related to that seminar for extra credit.

3 Examination questions will be drawn from concepts developed in lectures and discussions. All assigned reading (background & in class discussion), Material covered in lecture & and Material knowledge and application (problem solving). There will be review sessions before the exams.

4 Proposal writing Student assignment will be to write an original research proposal on a topic given/ student may select a relevant topic focusing on some aspect of plant molecular biology (can't be your graduate research project). Students will be provided guidelines for writing the proposal. In general, the proposal must include: Summary (1/2 page), Introduction/background and Rationale (2 pages), specific objectives, experimental design, and methodology (up to 4 pages) and references. Student's CV must also be provided for review. Proposal will be reviewed, and recommendations provided. Students gets to orally defend their proposal in the class in the final week. The grade for proposal will be based on both written proposal submission and oral presentation.

#points	% points	Passing Grade	Grade points
450 - 500	90 - 100%	A	4.0
425 - 449	85 - 89.9%	A-	3.67
400 - 424	80 - 84.9%	B+	3.33
375 - 399	75 - 79.9%	B	3.0
350 - 374	70 - 74.9%	B-	2.67
325 - 349	65 - 69.9%	C+	2.33
300 - 324	60 - 64.9%	C	2.0
275 - 299	55 - 59.9%	C-	1.67
250 - 274	50 - 54.9%	D+	1.33
225 - 249	45 - 49.9%	D	1.0
200 - 224	40 - 44.9%	D-	0.67
0-199	0-39.9%	E	0.00

Instructor(s) Swathi Nadakuduti
Environmental Horticulture Department
1519 Fifield Hall
University of Florida
s.nadakuduti@ufl.edu
(352)-273-4575

Attendance & Make-up Yes
Accomodations Yes
UF Grading Policies for assigning Grade Points Yes
Course Evaluation Policy Yes

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is not the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

__X__ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

__X__ You MUST comply with the CALS Syllabus Policy, including items 1through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

___N/A_ Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

__X__ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

__X__ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf).Do not use the words demonstrate or understand when listing learning objectives.

__X__ The course schedule should be concise and include the appropriate number of weeks in the semester.

__X__ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

_X___ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

_X___ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

__X__ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

__X__ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

___X_ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction

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

Department	Name and Title
Horticultural Sciences	Dr. Jackie Burns, Interim Chair and Professor
Phone Number	**E-mail**
352-294-6795	jkbu@ufl.edu

Comments

Dr. Eduardo Vallejos (Horticultural Sciences Graduate Coordinator) and Dr. Gilles Basset (Director of the PMCB Program) considered Dr. Nadakuduti's proposed course and did not find significant overlaps with existing courses in our department.

Department	Name and Title
Phone Number	**E-mail**

Comments

Department	Name and Title
Phone Number	**E-mail**

Comments

Principles and Applications of Omics Technologies to Advance Plant Biology

HOS6932, 3 credits

Spring 2021

Meeting date and time: Two recorded lectures (50min each) and one synchronous on-line class on Wednesday 3:00-3:50 pm

Prerequisites:
At least **ONE** of the undergraduate molecular and cellular biology, genetics, or biochemistry courses HOS3305, AGR3303, PCB3063, BCH3025, BCH4024, PCB4522 or equivalent

Instructor:
Swathi Nadakuduti
Environmental Horticulture Department
1519 Fifield Hall
University of Florida
s.nadakuduti@ufl.edu
(352)-273-4575

Office hours – Immediately after the class every Wednesday until 5pm. Other appointments can be made on an individual basis.

Course description:
Recent advancement in technologies have revolutionized plant biology research especially in the fields of genome editing, high throughput sequencing, metabolomics etc., The main goals of this three-credit course are 1) To broadly review molecular technologies applied in plant science research emphasizing on recently evolving CRSIPR based gene editing applications and transformation advancements in plants and 2) Prepare graduate students to critically evaluate scientific literature and introduce the students to proposal writing.

Course expectations:
This course is designed to build on students understanding of basic principles and foundational knowledge on plant molecular biology. Students will critically evaluate the existing knowledge in plant science community as well as identify the gaps in plant research. This course is designed also to promote students' written and oral scientific communication skills. Each week will include two lectures on a given research topic, followed by active discussion of an assigned paper or an assignment on that topic. Students will review assigned literature and come prepared for the class discussion which includes critical analysis and dissection of the paper assigned. The lectures delivered along with assigned literature review would enable students to be current in the topics, critically be able to read and evaluate a scientific publication and be able to apply the knowledge gained to their own research. Students will also write an original research proposal on one of the discussed topics of interest and will also have opportunities to give oral presentations on student paper and defend their proposal. Examinations will be based on concepts developed in lectures and literature covered in the class, allowing students to independently think about a given research scenario and how to generate hypothesis and navigate to solve research questions. This course is designed to promote critical reading of manuscripts, think about research, and practice their oral and written skills. Students considering careers in scientific research in plants in academia or R&D in private industry will benefit from this course.

Course learning objectives:

Students from this course will be able to:

1. Survey the plant molecular biology/genetics, functional genomics and metabolomics approaches emphasizing recent advances in plant biology. Evaluate and propose how you might use them for your own research?
2. Critically review, analyze, and evaluate scientific literature by justification, critique, and identification of gaps in the existing field of research.
3. Generate hypotheses for a given scientific problem and be able to apply and develop effective experimental approaches to test them.
4. Utilize publicly available data bases to build evidence and develop direction for your research question.
5. Gain experience in creating a research proposal, presenting, and defending it. Students identify a research problem, synthesize, and develop their original idea into an independent proposal and defend it in front of their class.
6. Practice and demonstrate effective written and oral scientific communication techniques.

LEC WK	LECTURE TOPIC	HMWK/READINGS
11-Jan	**Basics of a Plant Cell**	
15-Jan	**Structure of DNA and analysis** Eukaryotic gene structure, RNA, protein synthesis Protein trafficking within the cell organelles	Course organization and expectations - **Jan 13**
22-Jan	**Model organisms**, Public data bases - NCBI, TAIR Multiple sequence alignments and phylogenetic trees	**Assignment # 1 – Jan 20** Lightening talks
25-Jan **29-Jan**	**Forward genetics approaches for plant functional genomics** Mutants in model plants, Identifying mutants for a research problem, Gene discovery	**Assignment # 2 – Jan 27** Gene structure and function Class Discussion #1
1-Feb **5-Feb**	**Reverse genetics approaches for plant functional genomics** RNA-mediated interference (RNAi) Virus Induced Gene Silencing (VIGS)	Class Discussion #2 – Feb 3
8-Feb **12-Feb**	**Gene-editing by CRISPR systems and evaluating mutagenesis** Introduction to CRISPR/Ca9: Discovery and how CRISPR works? Variants of Cas9 and multiplexing	Class Discussion #3 – Feb 10
15-Feb **19-Feb**	**Guide RNA design and CRISPR constructs: plant systems** Methods of mutagenesis evaluation, Case studies of CRISPR success in Agricultural crop improvement Review of Topics for Mid-term exam and proposal ideas	**Assignment # 3 – Feb 17** CRISPR/Cas9 guide RNA design and evaluation Class Discussion #4
MID- TERM EXAM – FEB 24		

1-Mar **5-Mar**	**Base Editing** - Cytosine base editors, Adenine base editors, glycosylase editors, **Prime Editing** - Case studies in plants	Class Discussion #5 **– Mar 3**
8-Mar **12-Mar**	**Advances in plant genetic transformation technologies** Agrobacterium mediated transformation - molecular basis Floral dip, plant tissue culture regeneration, biolistics Case studies in various crop species	Class Discussion #6 **– Mar 10**
15-Mar **19-Mar**	**Advances in plant genetic transformation technologies** Protoplasts**:** tool for plant research, transfection, and regeneration Delivery of DNA manipulation cargo bypassing tissue culture. Nanoparticles mediated delivery	Class Discussion #7 **– Mar 17**
22-Mar **26-Mar**	**DNA sequencing - Basics and advances** Basics of Sanger sequencing, High throughput DNA sequencing by various platforms **Student paper presentations**	**Assignment #4 - Mar 24** Oral presentation on assigned paper
PROPOSALS DUE - March 30		
29-Mar **2-Apr**	**Transcriptomics and quantitative RT-PCR** Case studies: Transcriptomics data for gene discovery Gene expression and regulation **Transcription factors and regulatory proteins** protein- DNA and protein - protein interaction experiments Case studies: Regulatory proteins in plants	Class Discussion #8 **– Mar 31**
5-Apr **9-Apr**	**Genomics enabled plant biochemistry research** Mass spectrometry and metabolomics approaches Case studies: Metabolomics to study plant specialized metabolism	Class Discussion #9 **– April 7**
12-Apr	**Advances in imaging technologies for plant research** Core facilities at UF_applications and services Review of course material before the final exam and faculty course evaluation	Class Discussion #10 **– April 14**
Student Proposal presentations Apr 16 - Apr 21		
FINAL EXAM – APRIL 28		

Optional textbooks: Scientific literature WILL be provided by the instructor on every topic (Lecture + papers). For basic molecular biology concepts, students can refer to textbooks (available at UF libraries)

"***Lewin's Genes XI***" (Jocelyn E. Krebs, Elliott S. Goldstein and Stephen T. Kilpatrick, publication date 2012-12-31, Edition 11; eBook ISBN 9781449659066) or

"***Biochemistry & molecular biology of plants***" (edited by Bob B. Buchanan, Wilhelm Gruissem, and Russell L. Jones; publication date 2015-08-31; Edition 2; eBook ISBN 9781118502198)

https://uf.catalog.fcla.edu/uf.jsp?st=Genes+X++Lewin&ix=kw&fl=bo&V=D&S=2151602786472052&I=1#top

https://uf.catalog.fcla.edu/uf.jsp?st=Biochemistry+and+Molecular+Biology+of+Plants+&ix=kw&fl=bo&V=D&S=2151602786472052&I=0#top

Reading list: Two to four papers related to each topic being covered will be provided to students well in advance (at least a week prior to the class) out of which one will be chosen for in-depth discussion in the class. The list provided here includes background reading and papers for in-depth discussion and might vary and will be updated depending on current literature and relevance to lecture topic.

classic papers:

Jarvis P, Chen LJ, Li HM, Pete CA, Fankhauser C, Chory J (1998) An Arabidopsis mutant defective in the plastid general protein import apparatus. Science **282**: 100–103

Hamilton AJ, Baulcombe DC (1999) A species of small antisense RNA in posttranscriptional gene silencing in plants. Science **286**: 950–952

Napoli C, Lemieux C, Jorgensen R (1990) Introduction of a Chimeric Chalcone Synthase Gene into Petunia Results in Reversible Co-Suppression of Homologous Genes in trans. Plant Cell **2**: 279–289

Jinek M, Chylinski K, Fonfara I, Hauer M, Doudna JA, Charpentier E (2012) A programmable dual-RNA-guided DNA endonuclease in adaptive bacterial immunity. Science **337**: 816–821

Others:

Atkins PAP, Voytas DF (2020) Overcoming bottlenecks in plant gene editing. Curr Opin Plant Biol **54**: 79–84

Dong OX, Yu S, Jain R, Zhang N, Duong PQ, Butler C, Li Y, Lipzen A, Martin JA, Barry KW, et al (2020) Marker-free carotenoid-enriched rice generated through targeted gene insertion using CRISPR-Cas9. Nat Commun **11**: 1178

Debernardi JM, Tricoli DM, Ercoli MF, Hayta S, Ronald P, Palatnik JF, Dubcovsky J (2020) A GRF–GIF chimeric protein improves the regeneration efficiency of transgenic plants. Nat Biotechnol. doi: 10.1038/s41587-020-0703-0

Gaudelli NM, Komor AC, Rees HA, Packer MS, Badran AH, Bryson DI, Liu DR (2017) Programmable base editing of A*T to G*C in genomic DNA without DNA cleavage. Nature **551**: 464–471

Jin S, Zong Y, Gao Q, Zhu Z, Wang Y, Qin P, Liang C, Wang D, Qiu J-L, Zhang F, et al (2019) Cytosine, but not adenine, base editors induce genome-wide off-target mutations in rice. Science. doi: 10.1126/science.aaw7166

Komor AC, Kim YB, Packer MS, Zuris JA, Liu DR (2016) Programmable editing of a target base in genomic DNA without double-stranded DNA cleavage. Nature **533**: 420–424

Anzalone A V, Randolph PB, Davis JR, Sousa AA, Koblan LW, Levy JM, Chen PJ, Wilson C, Newby GA, Raguram A, et al (2019) Search-and-replace genome editing without double-strand breaks or donor DNA. Nature **576**: 149–157

Lin Q, Zong Y, Xue C, Wang S, Jin S, Zhu Z, Wang Y, Anzalone A V., Raguram A, Doman JL, et al (2020) Prime genome editing in rice and wheat. Nat Biotechnol **38**: 582–585

Maher MF, Nasti RA, Vollbrecht M, Starker CG, Clark MD, Voytas DF (2018) Plant gene editing through de novo induction of meristems. Nat Biotechnol. doi: 10.1038/s41587-019-0337-2

Wang X, Ye L, Lyu M, Ursache R, Löytynoja A, Mähönen AP (2020) An inducible genome editing system for plants. Nat Plants **6**: 766–772

Zhao D, Li J, Li S, Xin X, Hu M, Price MA, Rosser SJ, Bi C, Zhang X (2020) Glycosylase base editors enable C-to-A and C-to-G base changes. Nat Biotechnol. doi: 10.1038/s41587-020-0592-2

Zong Y, Wang Y, Li C, Zhang R, Chen K, Ran Y, Qiu JL, Wang D, Gao C (2017) Precise base editing in rice, wheat and maize with a Cas9-cytidine deaminase fusion. Nat Biotechnol **35**: 438–440

Misra BB, Assmann SM, Chen S (2014) Plant single-cell and single-cell-type metabolomics. Trends Plant Sci **19**: 637–646

Rich-Griffin C, Stechemesser A, Finch J, Lucas E, Ott S, Schäfer P (2020) Single-Cell Transcriptomics: A High-Resolution Avenue for Plant Functional Genomics. Trends Plant Sci **25**: 186–197

Wurtzel ET, Kutchan TM (2016) Plant metabolism, the diverse chemistry set of the future. Science **353**: 1232–1236

Evaluation and Grade determination:

Class attendance: All students are required to attend the class and participate actively in class discussion for full participation credit.

Student Evaluation Basis	Number	Points/ event	Total
CLASS DISCUSSIONS[1]	10 Class Discussions	10	100
ASSIGNMENTS[2]	4	25	100
MID-TERM EXAM[3]	1	100	100
FINAL EXAM[3]	1	100	100
PROPOSAL + ORAL PRESENTATION[4]	1	100	100
TOTAL			500

[1] **Class Discussions:** Will be based on journal articles provided to students on the topic being covered and will focus on: Problems addressed in the paper, research objectives, experimental design, critical data presentation (tables/figures), gaps or weaknesses, future work? Each student may be questioned on the literature reviewed for engagement. For full or partial participation credit, students are expected to come prepared to answer questions on the assigned paper and participate in the discussion.

***Assignments will be discussed in the class in their respective weeks.*

[2] **Assignments**: Four assignments in total; Students will be given one-week time to turn in.

Assignment # 1) A 5 min lightening talk on your graduate research, which must include a personal elevator pitch for 30sec, why your research is important (for broader audience), research objectives and your contribution

Assignment # 2) DNA analysis: Students will be given a gene identifier from each model organism, students will find: Gene structure, function, expression, CDS, cDNA, BLAST query, primary literature
Assignment # 3) CRISPR single guide RNA design: Students will use online programs to select spacer sequence for sgRNA design for a target gene and design strategies to evaluate mutagenesis

Assignment # 4) Student oral presentation: Students will give 10-minute oral presentation on an assigned paper of relevance to the topics being covered in the course

***Students may also be directed to participate in research seminars at UF and answering questions related to that seminar for extra credit.*

[3] **Examination** questions will be drawn from concepts developed in lectures and discussions. All assigned reading (background & in class discussion), Material covered in lecture & and Material knowledge and application (problem solving). There will be review sessions before the exams.

[4] **Proposal writing** Student assignment will be to write an original research proposal on a topic given/ student may select a relevant topic focusing on some aspect of plant molecular biology (can't be your graduate research project). Students will be provided guidelines for writing the proposal. In general, the proposal must include: Summary (1/2 page), Introduction/background and Rationale (2 pages), specific objectives, experimental design, and methodology (up to 4 pages) and references. Student's CV must also be provided for review. Proposal will be reviewed, and recommendations provided. Students gets to orally defend their proposal in the class in the final week. The grade for proposal will be based on both written proposal submission and oral presentation.

#points	% points	Passing Grade	Grade points
450 - 500	90 - 100%	A	4.0
425 - 449	85 - 89.9%	A-	3.67
400 - 424	80 - 84.9%	B+	3.33
375 - 399	75 - 79.9%	B	3.0
350 - 374	70 - 74.9%	B-	2.67
325 - 349	65 - 69.9%	C+	2.33
300 - 324	60 - 64.9%	C	2.0
275 - 299	55 - 59.9%	C-	1.67
250 - 274	50 - 54.9%	D+	1.33
225 - 249	45 - 49.9%	D	1.0
200 - 224	40 - 44.9%	D-	0.67
0-199	0-39.9%	E	0.00

For information on current UF policies for assigning grade points, see:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx (Undergrads)
http://gradcatalog.ufl.edu/content.php?catoid=2&navoid=762#grades (Graduate students)

Class Policies that students MUST follow:

Attendance: Your attendance at all classes is a strong expectation, but if you are ill or an emergency occurs, contact your instructor PRIOR TO the scheduled class time. Participation credit can be earned in every class discussion. Student shall lose points for Class Discussion if absent for the class. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/.

Preparation for class: Please come to class prepared by reading the assigned literature. This can help you not only for this class but for your future semesters and your research as well.

Late Assignments: Assignments will NOT be accepted after the due date. If communicated ahead of time, late assignments may be considered with a late penalty of 25%.

Makeup Exams: Special permission is required ahead of time to accommodate makeup exam. This will be made possible only under reasonable circumstances but NOT for all requests.

Expectations for classroom behavior: Please do not talk privately during the lectures or multitask (i.e. doing work for other courses or research, using your computer, cell phone or other electronic devices for web surfing or email). Ask questions and be involved in the class.

COVID Response Statements:
Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who unmute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

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 expectedto provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email, they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/. students will be given specific time in the class to fulfill this requirement.

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.

** Please DO NOT borrow the writing of others – this is called Plagiarism. If you do not understand what this means, ask your instructor to clarify. If you are presenting others' thoughts or writing including diagrams/pictures you must cite them. Instructors will do the same!

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

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.

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. Dean of Students Office (CARE team) https://care.dso.ufl.edu/

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc 352-392-1575

Sexual Assault Recovery Services (SARS) Student Health Care Center, 352-392-1161

University Police Department at 352-392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/

Academic Resources

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

Career Connections Center, First Floor JWRU, 392-1601, 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. https://teachingcenter.ufl.edu/

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

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

University of Florida Complaints Policy
The University of Florida believes strongly in the ability of students to express concerns regarding their experiences at the University. The University encourages its students who wish to file a written complaint to submit that complaint directly to the department that manages that policy.

A student who is unsure as to the official responsible for handling his or her particular complaint may contact the Ombuds office or the Dean of Students Office. For complaints that are not satisfactorily resolved at the department level or which seem to be broader than one department, students are encouraged to submit those complaints to one of the following locations: Ombuds: http://www.ombuds.ufl.edu/ 31 Tigert Hall, 352-392-1308

The purpose of the Ombuds office is to assist students in resolving problems and conflicts that arise in the course of interacting with the University of Florida. By considering problems in an unbiased way, the Ombuds works to achieve a fair resolution and works to protect the rights of all parties involved. Dean of Students Office: http: //www.dso.ufl.edu/ 202 Peabody Hall, 352-392-1261

The Dean of Students Office works with students, faculty, and families to address a broad range of complaints either through directly assisting the student involved to resolve the issue, working with the student to contact the appropriate personnel, or referring the student to resources or offices that can directly address the issue. Follow up is provided to the student until the situation is resolved. Additionally, the University of Florida regulations provide a procedure for filing a formal grievance in Regulation 4.012: http://regulations.ufl.edu/regulations/uf-4-student-affairs

Cover Sheet: Request 14645

FAS5255

Info

Process	Course|Modify|Grad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Jennifer Vogel alpha32605@ufl.edu
Created	1/24/2020 11:39:26 AM
Updated	2/15/2021 9:52:51 AM
Description of request	Changing FAS5255C to FAS5255 to reflect changes in actual course delivery

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Forest Resources and Conservation 60460000	Terrell Baker III		1/29/2021
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			1/29/2021
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|Modify for request 14645

Info

Request: FAS5255
Description of request: Changing FAS5255C to FAS5255 to reflect changes in actual course delivery
Submitter: Jennifer Vogel alpha32605@ufl.edu
Created: 2/15/2021 9:48:35 AM
Form version: 2

Responses

Current Prefix FAS
Course Level 5
Number 525
Lab Code C
Course Title Diseases of Warmwater Fish
Effective Term Earliest Available
Effective Year Earliest Available
Requested Action Other (selecting this option opens additional form fields below)
Change Course Prefix? No

Change Course Level? No

Change Course Number? No

Change Lab Code? Yes
Current Lab Code C
Proposed Lab Code None
Change Course Title? No

Change Transcript Title? No

Change Credit Hours? No

Change Variable Credit? No

Change S/U Only? No

Change Contact Type? No

Change Rotating Topic Designation? No

Change Repeatable Credit? No

Maximum Repeatable Credits 0
Change Course Description? Yes
Current Course Description Intensive, 2-week course (80 contact hours) in methodology for diagnosing and treating parasitic, bacterial, viral, nutritional, and environmental diseases of warmwater food fish and aquarium species. Offered summer term in even-numbered years.
Proposed Course Description (50 words max) Instruction in the methodology of diagnosis, treatment and management of parasitic, bacterial, viral, nutritional, and environmental diseases of

warm water food and aquarium species. Fish biology and general husbandry, aquatic systems and water quality management, infectious agents, treatment plans, and biosecurity, quarantine and regulatory issues relevant to fish health.
Change Prerequisites? No

Change Co-requisites? No

Rationale This course is no longer offered as a two-week session in even summers, and is instead an online course with a separate and optional face-to-face experience (FAS 6932). The C designation needs to be removed to reflect this change.

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

__X__ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

___X_ You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

__X__ Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

__X__ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

__X__ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

__X__ The course schedule should be concise and include the appropriate number of weeks in the semester.

___X_ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

___na_ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

__na__ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

___X_ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

___X_ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

__X__ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction)

Diseases of Warm Water Fish - FAS 5255

1 Overview

Instruction in the methodology of diagnosis, treatment and management of parasitic, bacterial, viral, nutritional, and environmental diseases of warm water food fish and aquarium species. Fish biology and general husbandry, aquatic systems and water quality management, infectious agents, treatment plans, and biosecurity, quarantine and regulatory issues relevant to fish health.

- 3 credits
- Summer C
- 100% online
- http://elearning.ufl.edu/

Course Prerequisites: none

Instructor: Dr. Ruth Francis-Floyd, rffloyd@ufl.edu, (386) 643.8904.

- Please use the Canvas message/Inbox feature for fastest response.
- Office hours: available by email or phone M-F 8am-5pm; office visits available by appointment.

Co-Instructors: Dr. Denise Petty, pettyd@windstream.net, (386) 344.8363. Dr. Roy Yanong, rpy@ufl.edu, (813) 671.5230.

- Please use the Canvas message/Inbox feature for fastest response.
- Office hours: available by email or phone; office visits available by appointment.

Guest Lecturers:

Dr. Elizabeth Arnett-Chinn – Naples Zoo at Caribbean Gardens
Dr. Stephen Cassle - U.S. Army Veterinary Corps
Dr. Tonya Clauss – Georgia Aquarium
Ms. Debbi Crain – Consultant
Dr. Claire Erlacher-Reid – Sea World of Florida
Dr. Mark Flint – The Ohio State University
Ms. Theresa Floyd-Rump – Brammer Bio (Alachua, Florida)
Dr. Kathleen Hartman – USDA-APHIS
Dr. Jeff Hill – Tropical Aquaculture Lab, University of Florida
Dr. Kathy Heym – Florida Aquarium
Mr. Jim Kinsler – Sea World of Florida
Dr. Ed Noga – Southeastern Aquatechnologies
Dr. Andy Stamper – Disney Animal Programs
Dr. Natalie Steckler – Seastar Communications and Consulting LLC
Mr. Craig Watson – Tropical Aquaculture Laboratory, University of Florida
Dr. James Wellehan – University of Florida

Textbook(s) and/or readings: All students must have access to Dr. Noga's text, listed below. Some of the homework exercises may be difficult or impossible to complete without this text. Most of you will likely want to retain this book as part of your personal library. Dr. Roberts book is also strongly recommended.

REQUIRED:

- Fish Disease: Diagnosis and Treatment, Second Edition*. By E.J. Noga, 2010. Wiley- Blackwell, Ames Iowa.

RECOMMENDED:

- Fundamentals of Ornamental Fish Health, H.E. Roberts (Editor), 2010, Wiley-Blackwell, Ames, IA.
- Merck Veterinary Manual, Eleventh Edition, S.E. Aiello (Editor-In-Chief), 2016, Merck & Company Inc, Pp 1743-1814.
- Zoo and Wildlife Medicine, Current Therapy, Seventh Edition, by E. Miller and M.E. Fowler (Eds), 2012, Elsevier. Pp 170-209.

SUPPLEMENTAL:

- Bacterial Diseases of Fish, by Inglis, Roberts and Bromages (Eds). 1993. Blackwell.
- BSAVA Manual of Ornamental Fish, Second Edition, by Wildgoose (Ed), 2002, Wiley (for British Small Animal Veterinary Association).
- Fish Diseases and Disorders, Volume 1: Protozoan and Metazoan Infections, by Woo (Ed), 1995, CAB International.
- Fish Diseases and Disorders, Volume 2: Non-Infectious Diseases, by Leatherland and Woo (Eds), 1998, CAB International.
- Fish Diseases and Disorders, Volume 3: Viral, Bacterial, and Fungal Infections, by Woo and Bruno (Eds), 1999, CAB International.
- Fish Medicine, by Stoskopf (Ed), 1993, Saunders.
- Health Management and Principal Microbial Diseases of Cultured Fishes, by J.A. Plumb, 1999, Iowa State University Press.

2 Learning Outcomes

The goal of this class is to introduce students to basic concepts of fish health management including diagnosis of common infectious and non-infectious diseases, strategies for control of infectious disease and preventive health care for captive fish populations. Students will also be expected to develop a basic understanding of zoonotic diseases common in aquarium and cultured fish. Students will be expected to have a fundamental understanding of fish husbandry, disease prevention, be able to interpret findings of infectious disease, be familiar with regulated diseases of fish, understand principles of biosecurity, and quarantine, and appropriate treatment management, including regulations pertaining to use of drugs and chemicals by the time they complete the class.

At the end of this course, each student will be able to:

- Recognize normal and abnormal appearance of common families of warm water fish

- Describe common disease processes in major families of warm water fish, with emphasis on freshwater species.
- Compare normal physiologic processes of fish and how these may be altered by a diseased state.
- Evaluate normal anatomy (internal and external) of common species of warm water fish.
- Identify normal radiographic anatomy of common species of warm water fish.
- Apply diagnostic techniques used for basic examination of fish. This will include physical examination as well as routine tissue biopsies (gill, skin and fin) and techniques for microbial culture.
- Remember anatomical sites used for blood collection in common species of fish.
- Calculate proper treatment dosages for treating common fish diseases.
- Identify common fish parasites.
- Identify and describe common bacterial, fungal and viral diseases of warm water fish.
- Create reasonable management and treatment plans to prevent or mitigate disease processes.
- Understand the basic components of a biosecurity program and apply these to quarantine protocols.
- Analyze water quality testing data.
- Create a problem list in which they define multiple factors contributing to a fish disease outbreak. They should be able to rank these factors in terms of the threat they pose to the affected population.
- Interpret regulations that pertain to use of drugs and chemicals for treatment of fish diseases in the United States. This includes familiarity with the Food and Drug Administration's web-bases resources that support U.S. aquaculture industries.
- Interpret regulations that pertain to infectious diseases of fish including species of concern, screening techniques, and required reporting.
- Remember zoonotic diseases of concern for aquarium and cultured warm water fish. They will also understand basic principles of personal protection.

3 Course Logistics

The on-line course will focus on delivery of didactic information using recorded lectures, discussion sections, assigned readings and projects. Lecture and course materials will be available on the course E-learning website.

Technology Requirements:

- A computer or mobile device with high-speed internet connection.
- A headset and/or microphone and speakers; a web cam is suggested.
- Latest version of web browser. Canvas supports only the two most recent versions of any given browser. What browser am I using?

3.1 Assignments & Deliverables

The course has been divided into six week-long modules. There will be required homework and discussion sections for students along the way. There will be a quiz at the end of each module, and a final comprehensive exam at the end of the course. All assignments are open book.

Homework

- There are 10 total homework assignments, one due each week except for the first and last week of the class. Problems consist of a mixture of multiple choice, true/ false and short answer including math problems.

Discussion Participation

- There is one "live discussion" for each module. Each "live discussion" is two hours and includes review of assignments, general discussion or material, and a short image quiz embedded in the program. Students are not required to participate "live" though it is recommended. The session is recorded and students unavailable to participate live can watch the recording and submit answers to the embedded assignment to Dr. Francis-Floyd.

Quizzes & Exams

- There is one quiz included at the end of each of the first five modules. All quizzes are open-book.
- There is a final comprehensive assignment that has been divided into three independent quizzes: one multiple choice, one image, and one short answer and problem solving. Each of these is open-book, however these three assignments are timed.

Group Project

- Students will be divided into groups of three or four by course instructors. Group assignments will be based on experience of individual students so that groups are as balanced as possible. For example, we try to include students with very little background in the field with students who may have several years of employment and substantial experience. We also work to blend veterinary and non-veterinary perspectives and experiences.

3.2 Grades & Grading Scale

20% Homework

10% Discussion Participation

30% Quizzes

Final Exam:

- Multiple choice exam (10%)
- Image exam (10%
- Short answer and problem solving exam (10%)

10% Group Project

Grading Scale (%)
89.5% or higher = A
85.5 – 89.49% = B+
79.5 – 85.49% = B
75.5 – 79.49% = C+
69.5 – 75.49% = C
65.5 – 69.49% = D+
59.5 – 65.49% = D
< 59.5% = E

This course adheres to UF policies on grades and grade points:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

4 Course Content

Learning Modules

Module 1: Anatomy, Physiology and Taxonomy May 11-25, 2020

Homework 1 due May 18, 2020

Voicethread introduction due May 20, 2020

Discussion May 21, 2020; 3-5 pm; Asynchronous assignment due May 25, 2020

Quiz 1 due May 26, 2020

Module 2: Treatment Options and Management Plans May 25- Jun 8, 2020

Homework 2 due May 29, 2020

Homework 3 due Jun 5, 2020

Discussion Jun 4, 2020 3-5 pm; Asynchronous assignment due Jun 8, 2020

Quiz 2 due Jun 9, 2020

Module 3: Water Quality Analysis and Aquatic Systems Jun 8-22, 2020

Homework 4 due Jun 12, 2020

Homework 5 due Jun 19, 2020

Discussion Jun 18 3-5 pm, Asynchronous assignment due Jun 21, 2020

Quiz 3 due Jun 23, 2020

Summer Break: Jun 22-Jul 6, 2020

Module 4: Nutrition, Husbandry and Biosecurity Jul 6-Jul 20, 2020

Homework 6 due Jul 10, 2020

Homework 7 due 17, 2020

Discussion Jul 16 3-5 pm; Asynchronous assignment due Jul 20, 2020

Quiz 4 due Jul 21, 2020

Module 5: Parasitic Diseases Jul 20- Aug 3, 2020

Homework 8 due Jul 24, 2020

Homework 9 due Jul 31, 2020

Discussion Jul 30, 2020 3-5 pm; Asynchronous assignment due Aug 3, 2020

Quiz 5 due Aug 4, 2020

Module 6: Bacterial and Viral Diseases Aug 3 – 14, 2020

Homework 10 due Aug 7, 2020

Discussion Aug 10, 2020 3-5 pm; Asynchronous assignment due Aug 12, 2020

Final (comprehensive) multiple choice quiz due Aug 14, 2020

Final (comprehensive) image quiz due Aug 14, 2020

Final (comprehensive) short answer and problem solving quiz due Aug 14, 2020

Group Projects

Part 1 (water quality/ husbandry) due Jun 12, 2020

Part 2 (infectious disease/ treatment or management plan) due Aug 7, 2020

5 Policies and Requirements

This syllabus represents current plans and objectives for this course. As the semester progresses, changes may need to be made to accommodate timing, logistics, or to enhance learning. Such changes, communicated clearly, are not unusual and should be expected.

5.1 Late Submissions & Make-up Requests

It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course.

Assignments turned in late lose 10% per day, 50% at a week, and are not accepted after one week except as provided by University policy. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx . Arrangements for late submission without penalty are routinely offered but must be negotiated in advance on a case-by-case basis with Dr. Francis-Floyd.

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration.

For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352- 392-4357 (option 2).

5.2 Semester Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning.

At approximately the mid-point of the semester, the School of Forest Resources & Conservation will request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required, but encouraged. This is not the UF Faculty Evaluation!

At the end of the semester, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

5.3 Netiquette: Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Failure to do so may result in loss of participation points and/or referral to the Dean of Students' Office. http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.docx

5.4 Academic Honesty Policy

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 them 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 or 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.

5.5 Inclusive Learning Environment

This course embraces the University of Florida's Non-Discrimination Policy, which reads,

The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act.

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: http://multicultural.ufl.edu.

5.6 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/

5.7 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.

6 Campus Helping Resources

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- Learning-support@ufl.edu | (352) 392-HELP - select option 2 | http://elearning.ufl.edu
- Library Help Desk support http://cms.uflib.ufl.edu/ask
- SFRC Academic Hub https://ufl.instructure.com/courses/303721

6.1 Student Life, Wellness, and Counseling Help

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 resources http://www.counseling.ufl.edu/cwc/
- U Matter, We Care http://www.umatter.ufl.edu/
- Career Connections Center http://career.ufl.edu/
- Other resources are available at http://www.distance.ufl.edu/getting-help for online students.

6.2 Student Complaint Process

The School of Forest Resources & Conservation cares about your experience and we will make every effort to address course concerns. We request that all of our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered.

If you have a more urgent concern, your first point of contact should be the SFRC Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- Students in online courses: http://www.distance.ufl.edu/student-complaint-process
- Students in face-to-face courses: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

Cover Sheet: Request 15678

5

ANS2XXX: Survey of Veterinary Professions

Info

Process	Course|New|Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Amie Imler amie.taylor@ufl.edu
Created	1/13/2021 3:41:42 PM
Updated	2/17/2021 8:45:38 AM
Description of request	New course request

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Animal Sciences 60090000	Saundra Tenbroeck	This course has been offered for two years originally as a one credit but now as a two credit special topics. The students have indicated that the information and interactions have been invaluable to them in their pursuit of a career in veterinary medicine. I strongly support this request as it serves a critical need in our program.	1/22/2021
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			1/22/2021
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 15678

Info

Request: ANS2XXX: Survey of Veterinary Professions
Description of request: New course request
Submitter: Amie Imler amie.taylor@ufl.edu
Created: 2/15/2021 3:29:56 PM
Form version: 3

Responses

Recommended Prefix ANS
Course Level 2
Number XXX
Category of Instruction Introductory
Lab Code None
Course Title Survey of Veterinary Professions
Transcript Title Survey Vet Profession
Degree Type Baccalaureate

Delivery Method(s) On-Campus, Online
Co-Listing No

Effective Term Fall
Effective Year 2020
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 2
Course Description An introduction to careers in the veterinary medicine profession with discussions related to career exploration, career preparation, and the procedure of job placement.
Prerequisites None
Co-requisites None
Rationale and Placement in Curriculum Currently, the Department of Animal Sciences offers one career and professional development course (ANS 3934: Careers in the Livestock Industries). ANS 3934 focuses on exposing Animal Sciences majors and non-majors to the wide variety of careers in the animal industries, particularly those outside of veterinary medicine. ANS 3934 is a required course for two specializations in the ANS major, which are specializations geared towards students who do not plan to pursue veterinary medicine or another professional school post-graduation. ANS 3934 is an approved elective for the pre-professional specialization within ANS (composed primarily of pre-vet students). As an elective, ANS 3934 exposes pre-vet students to careers outside of veterinary medicine so they can formulate parallel and/or alternative career plans. With the vast majority of ANS students pursuing veterinary medicine, there is (has been) a clear need to expose students to the variety of career paths within veterinary medicine. Many pre-vet students have a very limited view of veterinary medicine and/or have misconceptions about career areas within the professions. This course is designed to broaden student understanding of veterinary medicine and their options within the field. Career field outlooks are discussed so students also know which areas of veterinary medicine have jobs currently or will show growth. Additionally, the veterinary profession faces many challenges including, but not limited to student debt load and suicide. Various professional development topics are included in the course to address managing student debt, promoting wellness, and adopting healthy work-life balance (among others). This course also focuses on helping students improve professional development skills to make them more competitive applicants and successful professionals.

This course fills a need both within the Department of Animal Sciences as well as across campus.

Currently, other professional development and career-oriented courses offered do not address the specific and unique aspects of veterinary medicine, veterinary school application, and pre-vet students.
Course Objectives Evaluate the broad scope of disciplines and opportunities that exist within veterinary medicine.
Become a competitive and realistic candidate when applying to veterinary school.
Develop an appreciation for the diverse career opportunities within veterinary medicine
Outline the requirements and internal characteristics needed for success in each veterinary medical profession.
Assess lifestyle and career values to determine the best fit for your future career.
Design a plan for professional development and evaluate current readiness for positions in veterinary medicine.
Increase mental health awareness and financial literacy related to careers in the professional health industry.
Course Textbook(s) and/or Other Assigned Reading None required. Reference texts are available if you wish, which include: https://education.vetmed.ufl.edu/wordpress/files/2019/06/How-To-Get-Into-Vet-School.pdf and https://vetmed-education-a2.sites.medinfo.ufl.edu/wordpress/files/2020/11/IntervieweBook.pdf. Additional readings may be assigned or suggested throughout the semester. In those cases, links will be provided in the appropriate module on the course homepage.
Weekly Schedule of Topics Week 1: Course Introduction
Week 2: Admissions Overview - the VMCAS Application
Week 3; Careers and Finances
Week 4: Staying Well in Vet School
Week 5: Equine General Practice; Work-Life Balance De-brief
Week 6: Food Animal General Practice; Rural Animal Medicine Exploration
Week 7: Government and Public Health - USDA, One Health
Week 8: Residents, Interns and Specialty Faculty Panel
Week 9: Academia - Training Veterinary Students; Seeking Undergraduate Teaching and Leadership
Week 10: Wildlife Veterinary Medicine; Military Service
Week 11: Research and Lab Animal Medicine; Seeking Undergraduate Research
Week 14: Small Animal General Practice; Mixed Animal General Practice
Week 13: Admissions Panel
Week 14: Course Wrap-up and De-brief
Links and Policies CLASS ATTENDANCE & 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/UGRD/academic-regulations/attendance-policies/.

GRADES AND GRADE POINTS

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

DIVERSITY, INCLUSION AND EQUITY

The University of Florida's College of Agricultural and Life Sciences as well as College of Veterinary Medicine support the University of Florida's commitment to diversity, inclusion, and equity. By fostering a sense of belonging for students, staff and faculty while leveraging the uniqueness of the people who study and work at the university, we believe our campus community is enriched and enhanced by diversity, including but not limited to race, ethnicity, national origin, gender, gender identity, sexuality, class, and religion. Our course will help foster an understanding of the diversity of our campus community as well as our veterinary medicine, agricultural and natural resource communities, locally and globally.

We will strive to create a learning environment for our students that support a diversity of thoughts, perspectives, and experiences while honoring your identities. To accomplish this, please let us know:

If you have a name and/or set of pronouns that differ from those that appear in your official university records

If you believe your performance in the class is being impacted by your experiences outside of class. Do not hesitate to reach out and talk with us. We want to be a resource for you. Anonymous feedback may be submitted, which may lead us to make a general announcement to the class, if necessary, to address your concerns.

We, like many people, are still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that makes you feel uncomfortable, please talk to us about it.

Contact us with any concerns regarding inclusion and equity, including accessibility of learning materials, equipment, and software.

Page Break

Academic Honesty, Software Use, Campus Helping Resources, Services for Students with Disabilities?

Student Honor Code??

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 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.??

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center.?Clickhere to get started with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.?

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

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.?

Health and Wellness:??

U Matter, We Care: If you or someone you know is in distress, please contact?umatter@ufl.edu,?352-392-1575, or visit?UMatter, We Care website?torefer or report a concern and a team member will reach out to the student in distress.?

Counseling and Wellness Center:?Visitthe Counseling and Wellness Center website?orcall 352-392-1575 for information on crisis services as well as non-crisis services.?

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or?visitthe Student Health Care Center website.?

University Police Department:?VisitUF Police Department website?orcall 352-392-1111 (or 9-1-1 for emergencies).?

UF Health?Shands?EmergencyRoom / Trauma Center:?Forimmediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608;?Visitthe UF Health Emergency Room and Trauma Center website.?

Academic Resources:?

E-learning technical support: Contact the?UFComputing Help Desk?at352-392-4357 or via e-mail at?helpdesk@ufl.edu.?

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.?

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.?

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.??

Writing Studio:?2215Turlington Hall,?352846-1138. Help brainstorming, formatting, and writing papers.?

Student Complaints On-Campus:?Visitthe Student Honor Code and Student Conduct Code webpage for more information.??

On-Line Students Complaints:?Viewthe Distance Learning Student Complaint Process.?

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. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.
Grading Scheme GRADING SYSTEM

*Detailed assignment instructions and due dates can be found in Canvas.

In-Class Speaker Note Sheets: 480
12 Invited Speaker Days @ 40 points each

Out-of-Class Assignments: 520

Welcome to Survey of Vet Med Reflection @ 5 points

Welcome to Survey of Vet Med Discussion @ 5 points

Podcast Listen and Reflect Assignments (3) @ 10 points each

Financial Literacy Plan @ 50 points

LinkedIn Learning Training @ 20 points

Professional Communication & Marketing (TED Talk) @ 50 points

Professional Communication & Marketing Peer Review @ 10 points

Letter of Recommendation Draft @ 50 points

Wellness Plan @ 50 points

One-on-One meeting with Academic Advisor @ 25 points

Resume Review (draft 1 with editor comments) @ 40 points

Final Resume @ 40 points

One-on-One meeting with UF Pre-Vet Advisor @ 25 points

Leadership Activity @ 20 points

Mid-Term Professional Self-Evaluation @ 5 points

End-of-Term Professional Self-Evaluation @ 5 points

Veterinary School Admission Plan @ 100 points

1010 total points

Final grade averages will be computed as follows:

> 90.0%	A
> 80.0% - < 90.0%	B
> 70.0% - < 80.0%	C
> 60.0% - < 70.0%	D
< 60.0%	E

*Please Note: Missing 3 or more invited speakers for unexcused reasons will drop your course grade

by at least one letter grade. Attendance and participation in class is essential to success in this course.

Late Policy: Late assignments will not be accepted. This policy reflects the VMCAS application policy of no late applications accepted and is considered an exercise in professional development. Students have access to all assignments at the beginning of the semester and are expected to manage their time and plan assignment submissions accordingly. Considerations for extenuating circumstances are allowed and must be discussed with the professors.
Instructor(s) Amie Imler, Lecturer Department of Animal Sciences
Alex Avelino, Pre-Vet Advisor UF College of Veterinary Medicine

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

X___ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

X___ You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

N/A Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

X___ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

X___ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

X___ The course schedule should be concise and include the appropriate number of weeks in the semester.

N/A All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

N/A Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

N/A Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

X Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

X The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

X The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction)

ANS 4932

Survey of Veterinary Medicine Professions

Please Note: This course will be ***taught using a hyflex format, which combines online and classroom-based learning environments so face-to-face and online learners can be taught simultaneously*** to accomplish student learning objectives. As such, some students in this course have a face-to-face meeting requirement (until university policy deems otherwise). Regardless of learning environment (online or face-to-face), if you fall ill during the semester, you must notify your instructors in a timely fashion so we can provide you with an alternative instructional option.

COURSE FORMAT

Support materials will be presented by instructors and discussed with students during the first few weeks. Guest speakers from various veterinary careers will participate in panel discussions. Many speakers will be part of the UF CVM community.

- ***If you are enrolled in the face-to-face section, you are expected to arrive to the classroom on time and dressed professionally with a face covering. Cell phones, laptops and other digital devices should remain silenced and away as a sign of respect for invited speakers.***
- ***If you are enrolled in the online section, you will receive the Zoom link each week and will be expected to participate in a live format with your personal cameras on. As such, you are expected to wear professional dress and be in a stationary location with a professional and non-distracting background. Microphones may be unmuted as needed to participate in class and to ask questions. Additionally, the chat feature may be employed to interact with guest speakers. No class sessions will be recorded.***

COVID-19 Policies and Requirements: In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

You are required to wear approved face coverings at all times during class, within buildings, and outdoors while on UF property. Following and enforcing these policies and requirements are all our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.

- Face coverings are to be supplied by you (the student).
- If you (the student) forget your face covering, then one may be provided by the instructors if available. ***If one is not available, then you will be asked to leave.***
- Instructors and teaching assistants will supply their own face coverings and wear them throughout the duration of the face-to-face synchronous session.

Social distancing must be observed throughout the duration of the face-to-face synchronous session – this is defined as maintaining a minimum physical distance of 6 feet between yourself (the student), your peers, instructors, and teaching assistants.

- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements.
- Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.

Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.

- **Upon entering the classroom, students, instructors, and teaching assistants will be required to wash their hands for a minimum of 20 seconds.** When handwashing stations are not available, hand sanitizer will be used instead.
- Hand sanitizer will be supplied by the university, but you (the student) are strongly encouraged to bring your own hand sanitizer for personal use.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.

If you (the student) do not feel well and/or are running a fever or displaying any other symptoms of illness, do NOT come to the face-to-face synchronous session. Instead, you will attend the online synchronous session that will be streamed from the face-to-face session. If you are too ill to attend and participate in the online synchronous session, please notify the instructors for alternative instructional options.

- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.
- Likewise, if an instructor or teaching assistant does not feel well and/or is running a fever or displaying other symptoms of illness, they will not attend the face-to-face synchronous session.

ANS 4932
Survey of Veterinary Medicine Professions

INSTRUCTORS

Ms. Alex Avelino
Veterinary Academic Building
352-294-8254
aavelino@ufl.edu

Ms. Amie Imler
231E Bldg 459
352-392-0133
amie.taylor@ufl.edu
Office Hours: Mondays 3:00 – 4:00 PM via Zoom (ID: 481-418-9771 and passcode: Amie)
or by appointment: *https://amieufansci.youcanbook.me/*

Undergraduate Teaching Assistants
Kyle Fox
Emily Lesnette
Jeffrey Young

OFFICE HOURS

Our schedules are variable so please email or call to make an office appointment. We are willing to work with you to accommodate your schedule. Due to Covid19, spring student consultations will be handled via phone, email or Zoom. If the University's guidelines permit, face to face meetings will be welcomed with an appointment.

All types of appointments should be made using Amie or Alex's online appointment calendars:

- Amie's appointment calendar: https://amieufansci.youcanbook.me/
- Alex's appointment calendar: https://calendly.com/aavelino/survey-of-veterinary-professions

COURSE DESCRIPTION

An introduction to careers in the veterinary medicine profession with discussions related to career exploration, career preparation, and the procedure of job placement.

SCHEDULE

Monday
Period 6-7 (12:50 PM to 2:45 PM)
Class Number 24159 Location: ANS 151
Class Number 27650 Location: Virtually via Zoom – links provided in Canvas

COURSE OBJECTIVES

- Evaluate the broad scope of disciplines and opportunities that exist within veterinary medicine.
- Become a competitive and realistic candidate when applying to veterinary school.
- Develop an appreciation for the diverse career opportunities within veterinary medicine
- Outline the requirements and internal characteristics needed for success in each veterinary medical profession.
- Assess lifestyle and career values to determine the best fit for your future career.
- Design a plan for professional development and evaluate current readiness for positions in veterinary medicine.
- Increase mental health awareness and financial literacy related to careers in the professional health industry.

CLASS ATTENDANCE & EXPECTATIONS

Attendance and active participation are mandatory and necessary for educational success, especially on days of invited speakers.

- ***If you are enrolled in the face-to-face section, you are expected and required to attend class face-to-face and not via zoom.***
- ***If you are enrolled in the online section, you are expected and required to attend class via zoom. Due to social distancing and classroom capacities, you are not allowed to come in-person.***

An unexcused absence will have a negative impact on your grade. Requests for an excused absence must be received in advance of missing class by contacting Ms. Avelino and Mrs. Imler.

If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.

Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

Dress Code

- On days of invited speakers, dress code is business casual. ***No sleeveless shirts, t-shirts, caps, or hats.***
- If you are online, consider what is visible on your camera's view; however, full business causal dress is recommended. ***No sleeveless shirts, t-shirts, caps, or hats.***

Cell Phones & Laptops

- Please have your cellphones ***SILENCED*** & away.
- For online students, your laptop should only have your zoom browser open.

*****MARK YOUR CALENDARS – 2020 IMPORTANT DATES*****

NO CLASS

- September 7 – Labor Day

Last Day of Classes

- December 7, 2020

GRADING SYSTEM

Detailed assignment instructions and due dates can be found in Canvas.

In-Class Speaker Note Sheets:	***480***
12 Invited Speaker Days @ 40 points each	
Out-of-Class Assignments:	***520***
Welcome to Survey of Vet Med Reflection @ 5 points	
Welcome to Survey of Vet Med Discussion @ 5 points	
Podcast Listen and Reflect Assignments (3) @ 10 points each	
Financial Literacy Plan @ 50 points	
LinkedIn Learning Training @ 20 points	
Professional Communication & Marketing (TED Talk) @ 50 points	
Professional Communication & Marketing Peer Review @ 10 points	
Letter of Recommendation Draft @ 50 points	
Wellness Plan @ 50 points	
One-on-One meeting with Academic Advisor @ 25 points	
Resume Review (draft 1 with editor comments) @ 40 points	
Final Resume @ 40 points	
One-on-One meeting with UF Pre-Vet Advisor @ 25 points	
Leadership Activity @ 20 points	
Mid-Term Professional Self-Evaluation @ 5 points	
End-of-Term Professional Self-Evaluation @ 5 points	
Veterinary School Admission Plan @ 100 points	
1010 total points	

Final grade averages will be computed as follows:

≥ 90.0%	**A**
≥ 80.0% - < 90.0%	**B**
≥ 70.0% - < 80.0%	**C**
≥ 60.0% - < 70.0%	**D**
< 60.0%	**E**

Please Note: Missing 3 or more invited speakers for unexcused reasons will drop your course grade by at least one letter grade. Attendance and participation in class is essential to success in this course.

Late Policy: Late assignments will not be accepted. This policy reflects the VMCAS application policy of no late applications accepted and is considered an exercise in professional development. Students have access to all assignments at the beginning of the semester and are expected to manage their time and plan assignment submissions accordingly. Considerations for extenuating circumstances are allowed and must be discussed with the professors.

CLASS ATTENDANCE & 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/UGRD/academic-regulations/attendance-policies/.

GRADES AND GRADE POINTS

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

DIVERSITY, INCLUSION AND EQUITY

The University of Florida's College of Agricultural and Life Sciences as well as College of Veterinary Medicine support the University of Florida's commitment to diversity, inclusion, and equity. By fostering a sense of belonging for students, staff and faculty while leveraging the uniqueness of the people who study and work at the university, we believe our campus community is enriched and enhanced by diversity, including but not limited to race, ethnicity, national origin, gender, gender identity, sexuality, class, and religion. Our course will help foster an understanding of the diversity of our campus community as well as our veterinary medicine, agricultural and natural resource communities, locally and globally.

We will strive to create a learning environment for our students that support a diversity of thoughts, perspectives, and experiences while honoring your identities. To accomplish this, please let us know:

- If you have a name and/or set of pronouns that differ from those that appear in your official university records
- If you believe your performance in the class is being impacted by your experiences outside of class. Do not hesitate to reach out and talk with us. We want to be a resource for you. Anonymous feedback may be submitted, which may lead us to make a general announcement to the class, if necessary, to address your concerns.
- We, like many people, are still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that makes you feel uncomfortable, please talk to us about it.

Contact us with any concerns regarding inclusion and equity, including accessibility of learning materials, equipment, and software.

Academic Honesty, Software Use, Campus Helping Resources, Services for Students with Disabilities

Student Honor Code

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 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.

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. Click here to get started with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

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

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.

Health and Wellness:

- *U Matter, We Care*: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.
- *Counseling and Wellness Center*: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.
- *Student Health Care Center*: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.
- *University Police Department*: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).
- *UF Health Shands Emergency Room / Trauma Center:* For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

Academic Resources:

- *E-learning technical support*: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- *Career Connections Center*: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- *Library Support*: Various ways to receive assistance with respect to using the libraries or finding resources.
- *Teaching Center*: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- *Writing Studio:* 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- *Student Complaints On-Campus*: Visit the Student Honor Code and Student Conduct Code webpage for more information.
- *On-Line Students Complaints*: View the Distance Learning Student Complaint Process.

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. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.

TENTATIVE COURSE SCHEDULE

Date	***Subject***	***Speaker***
Jan. 11	Introduction to Survey of Veterinary Medicine	Alex Avelino Amie Imler
Jan. 18	***No Class – MLK Jr.***	----------
Jan. 25	Admissions Overview	Admissions Application
Feb. 1	Careers & Finances	Katelyn Jerles Lana Marshall
Feb. 8	Staying Well in Vet School	Student Panel Alex Avelino
Feb. 15	Equine General Practice Work/Life Balance Debrief	Dr. Liz Steele Steele Equine Veterinary Services & Performance Horse Center http://www.steele-equine.com/
Feb. 22	Food Animal Practice Rural Exploration	Dr. LuJean Waters Heartland Large Animal Services http://heartlandvet.blogspot.com/
March 1	USDA/Government One Health	Dr. Sabrina Wiggins USDA/FSIS/OFO
March 8	Academic Training Programs Panel Debrief	UF Residents, Interns, and Faculty
March 15	Academia Undergrad Teaching & Leadership	Dr. Sarah Beatty Clinical Assistant Professor, UF CVM
March 22	Wildlife Medicine & Military Service Scholarship Plans	Dr. Mark Cunningham FWC and US Army Reserves
March 29	Small Animal Practice Mixed Animal Practice	Dr. Jennifer Farmer Chief of Staff, Banfield Pet Hospital Dr. Will Sapp Perry Animal Hospital, Owner
April 5	Research, Lab Animal Medicine Seeking Academic Research	Dr. Brittany Southern
April 12	Admissions Panel	VetMed Admissions Panelists
April 19	Last Day of Class	Alex Avelino Amie Imler

Cover Sheet: Request 15694

6

Approval of Sustainable Cattle Systems, ANS4XXXC

Info

Process	Course|New|Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Corwin Nelson cdnelson@ufl.edu
Created	1/15/2021 11:05:14 AM
Updated	2/17/2021 5:51:12 PM
Description of request	This is a new course request. The course was developed as part of the Field & Fork program to be an experiential learning course in the College of Agriculture and Life Sciences.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Animal Sciences 60090000	Saundra Tenbroeck	This course has been offered two springs and is well received. It may be a good candidate for a Quest course at the junior level.	1/22/2021
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			1/22/2021
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 15694

Info

Request: Approval of Sustainable Cattle Systems, ANS4XXXC
Description of request: This is a new course request. The course was developed as part of the Field & Fork program to be an experiential learning course in the College of Agriculture and Life Sciences.
Submitter: Corwin Nelson cdnelson@ufl.edu
Created: 1/15/2021 9:19:18 AM
Form version: 1

Responses

Recommended Prefix ANS
Course Level 4
Course Number XXX
Category of Instruction Advanced
Lab Code C
Course Title Discovery of Sustainable Cattle Systems
Transcript Title Sustainable Cattle Systems
Degree Type Baccalaureate

Delivery Method(s) On-Campus
Co-Listing No

Effective Term Fall
Effective Year 2021
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 2

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 2
Course Description Multidisciplinary experiential learning course focused on development of sustainable practices through comprehension and critique of cattle production systems. The course will encompass multiple aspects related to cattle systems, including agronomy, human and animal health and nutrition, sociology, and soil science. A key element of the course is the hands-on learning experience where students select a project to carry out on one of the UF/IFAS beef or dairy units.
Prerequisites Junior level or above for all CALS majors.
Co-requisites N/A
Rationale and Placement in Curriculum Development of sustainable food systems is critically needed in our world. As such, students need to be learning how to appraise sustainability, critique current systems and practices, and develop solutions to become more sustainable. Cattle systems are perhaps the largest contributors to many of the biggest issues surrounding sustainability today, i.e., GHG emissions, antimicrobial resistance, land use and water quality. Therefore, it is urgent to offer a course that prepares them to effectively contribute to improving sustainable cattle systems. This course was originally designed as part of the Field & Fork Fellows program to serve as an experiential learning course. Its inclusion in Animal Sciences and CALS curriculum is intended to further the education students' classroom and laboratory knowledge through participating in real-world hands-on learning projects. A prerequisite of junior level or above for CALS majors is requested so that students enter the course with a preliminary understanding of issues surrounding sustainable food systems collectively gained from lower level courses, such as climate and environmental issues and current agricultural production systems.
Course Objectives Upon completion of the course, students will be able to:

- Identify factors that define sustainability of cattle production in three key areas: people, profit, and planet
- Compare and contrast current practices of cattle production systems

- Evaluate costs and benefits of common and alternative practices of cattle systems to society, environment and economics
- Develop novel approaches to improve sustainability of cattle production systems

The objectives will be accomplished through 1) discussion and assessing comprehension of lectures and assigned readings, 2) completing exercises and writing assignments that emphasize critical thinking skills and 3) conducting experiential learning projects that immerse the student in the farm experience and facilitate creative thinking.

Course Textbook(s) and/or Other Assigned Reading Sustainable Animal Agriculture, (2014) E. Krebeab, Editor, CABI, Boston, MA, ISBN: 1780640420

Weekly Schedule of Topics Week Date(F21) Topic

1	8/23	Course introduction - Defining sustainability
2	8/30	

Role of Animal Sourced Foods in Human Societies

3	9/6	Labor Day, no lecture, Start group projects
4	9/13	Domestication of Cattle
5	9/20	Dairy Systems I
6	9/27	Dairy Systems II
7	10/4	Beef Systems I
8	10/11	Beef Systems II
9	10/18	Grazing and forage management
10	10/25	Soil, water and manure management
11	11/1	Life Cycle Assessments
12	11/8	Antibiotics and hormones
13	11/15	Biotechnology
14	11/22	Current societal issues
15	11/29	Future of Cattle Systems
16	12/6	Group project reports

Grading Scheme Percentage Grade

93 - 100	A
90 – 92.99	A-
87 – 89.99	B+
83 – 86.99	B
80 – 82.99	B-
77 – 79.99	C+
73 – 76.99	C
70 – 72.99	C-
67 – 69.99	D+
63 – 66.99	D
60 – 62.99	D-
< 60	E

Instructor(s) Corwin Nelson
Attendance & Make-up Yes
Accomodations Yes
UF Grading Policies for assigning Grade Points Yes
Course Evaluation Policy Yes

Couldn't create PDF for ANS 3XXX – Discovery of Sustainable Cattle Systems F2021.pdf

Download PDF here

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

___ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

___ You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

___ Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

___ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

___ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

___ The course schedule should be concise and include the appropriate number of weeks in the semester.

__✓__ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

__✓__ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

__✓__ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

__✓__ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

__✓__ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

__✓__ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction)

Discovery of Sustainable Cattle Systems

ANS 3XXXC

Monday Period 8 (Lecture, 3:00 – 3:50 pm) and Wednesday Period 6-8 (Lab, 12:50-3:50 pm)
Dairy Science Room 210
Dr. Corwin Nelson
cdnelson@ufl.edu

CATALOG DESCRIPTION: CREDIT: 2; Junior level standing or above, or instructor consent.

Multidisciplinary experiential learning course focused on development of sustainable practices through comprehension and critique of cattle production systems. The course will encompass multiple aspects related to cattle systems, including agronomy, engineering, human and animal health and nutrition, sociology, and soil science. A key element of the course is the hands-on learning experience where students select a project to carry out on one of the UF beef or dairy units over the course of the semester.

COURSE FORMAT: This is a two-credit course that will meet once per week for lecture, and once per week for discussion and hands-on learning projects. Students are expected to assess and critique current farming practices as they conduct their project and develop solutions that aim to improve sustainability.

COURSE LEARNING OBJECTIVES:
Upon completion of the course, students will be able to:

- Identify factors that define sustainability of cattle production in three key areas: people, profit, and planet
- Compare and contrast current practices of cattle production systems
- Evaluate costs and benefits of common and alternative practices of cattle systems to society, environment and economics
- Develop novel approaches to improve sustainability of cattle production systems

The objectives will be accomplished through 1) discussion and assessing comprehension of lectures and assigned readings, 2) completing exercises and writing assignments that emphasize critical thinking skills and 3) conducting experiential learning projects that immerse the student in the farm experience and facilitate creative thinking.

OFFICE HOURS: Mondays 2:00-3:00 or by appointment.

REQUIRED TEXTBOOKS: None.

Recommended Reading:

Sustainable Animal Agriculture, (2014) E. Krebeab, Editor, CABI, Boston, MA, ISBN: 1780640420

http://www.fao.org/fileadmin/user_upload/animalwelfare/20133419221_2.pdf

COURSE SCHEDULE: (1 hour lecture/discussion on Mondays via zoom, 3 hour lab various times and locations)

Week	Date	Topic	Reading	Assignment
1	8/23	Course introduction - Defining sustainability	Ch. 1 & 2, Sustainable Anim. Ag.,	Defining sustainability essay
2	8/30	Role of Animal Sourced Foods in Human Societies		Select group project/Dietary requirements
3	9/6	Labor Day, no lecture, Start group projects	Eat Lancet & Same Table	Role of ASF Essay
4	9/13	Domestication of Cattle		Quiz 1
5	9/20	Dairy Systems I		
6	9/27	Dairy Systems II		Dairy Production worksheet
7	10/4	Beef Systems I		
8	10/11	Beef Systems II		Beef production worksheet
9	10/18	Grazing and forage management		Quiz 2
10	10/25	Soil, water and manure management	Ch. 7&11	Soil nutrient worksheet
11	11/1	Life Cycle Assessments	Ch. 14	Quiz 3
12	11/8	Antibiotics and hormones	Ch 17	Antibiotic worksheet
13	11/15	Biotechnology	Ch. 5 &18	Production comparison worksheet
14	11/22	Current societal issues	Ch. 4&13	Issues Essay
15	11/29	Future of Cattle Systems	Ch. 18	Quiz 4
16	12/6	Group project reports		Final project report

CRITICAL DATES: Problem sets and essays are due one week after they are assigned. Quizzes and final project reports are due on the dates indicated in the schedule above.

EXPERIENTIAL LEARNING:
A key component of the course is to learn through experiences. The farm tours and hands on activities are designed to help the student learn about three key elements of sustainability: People, Profit and Planet. Students will be expected to document their learning experiences from the tours and activities in a journal (described below) and to use those learning experiences to evaluate current practices, identify opportunities to improve sustainability, and

develop and evaluate approaches that maximize sustainability of cattle production given in the form of group project reports (described below).

Activities include:

- Feeding and care of cattle
- Milking cows
- Study of cropping and grazing management systems
- Study of water and nutrient management
- Study of food processing and distribution of cattle products

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

Students will be graded on completion of:

- **Essays and problem sets** (12 at 5 pts each)
- **Experiential learning participation and journal** (60 pts)
- **Group project reports** (20 pts)
- **Quizzes** (20 pts)
- **150 points total**

Experiential learning and journal entries: You are required to participate in 30 h (10 – 3 h periods) of on-farm activities over the course of the semester. The hours must be documented by the farm supervisor/staff you that will supervise your activities (2 pt/h). Along with the participation, you are required to keep a journal of your activities. These are intended to document your learning experiences from activities. Each entry should contain three main elements: Farm activity (what you did), what you learned, and impressions of sustainability in regards to the activity.

Problem sets and essays: Students will be required to complete essays or worksheets regarding the lecture topics and readings. For example, calculations for land and energy requirements, production outputs, soil nutrient requirements (manure application) and estimates for global capacity.

Group Projects: Students will select an on-farm group project (from activities listed above) and work on the project for the semester. The purpose is for the student to gain a better understanding of the inputs of each system and to gain a connection with actual practices on farm. Students are expected to keep a journal of their on-farm experiences. Students also will need to do further study on the sustainability issues (societal, economic and environmental issues) regarding their on-farm activity. At the end of the semester, students will give a 10-minute presentation on their group project experiences. The report will be formed with input from journal entries, worksheets, class discussions, and further reading. The reports should include two key elements: 1) evaluation of current practices and 2) an approach, or evaluation of approaches, to maximize sustainability. Reports will be graded on coherence and clarity.

Quizzes: Students will be quizzed on assigned readings and lecture materials. There will be four quizzes worth five points each for a total of 20 points. Quizzes will be administered via Canvas.

Students will receive a letter grade based on the following scale:

Percentage	Grade
93 - 100	**A**
90 – 92.99	**A-**
87 – 89.99	**B+**
83 – 86.99	**B**
80 – 82.99	**B-**
77 – 79.99	**C+**
73 – 76.99	**C**
70 – 72.99	**C-**
67 – 69.99	**D+**
63 – 66.99	**D**
60 – 62.99	**D-**
< 60	**E**

The percentage is calculated from points earned from assignments out of a total of 100 possible points.

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/UGRD/academic-regulations/attendance-policies/

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

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

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our

responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.

- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

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. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.

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

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

- Counseling Services
- Groups and Workshops
- Outreach and Consultation
- Self-Help Library
- Wellness Coaching

U Matter We Care, **www.umatter.ufl.edu/.**

Career Connections Center, First Floor JWRU, 392-1601, https://career.ufl.edu/.

Student Success Initiative, http://studentsuccess.ufl.edu.

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

ANIMAL CONTACT AND RISK

Direct animal contact is not required as part of this course, but the student's choice of project may require animal contact or work around farm equipment. **Students are required to complete Dairy Cattle Safety and Beef Cattle Safety courses (ANS 800 and ANS801 in MyUFL training) in the first week of class.** The farm environment presents health and physical risks from contact with farm animals and farm equipment. Any concerns or questions should be brought to the attention of the Instructor. Despite efforts to make students aware of potential risks, not all situations or events can be foreseen or prevented. The University of Florida is not liable for illness or injuries to students participating in coursework and, per University policy, students are required to purchase the Student Health Insurance Plan or comparable coverage. See: http://healthcompliance.shcc.ufl.edu/insurance

Cover Sheet: Request 15543

Honey Bee Biology course

Info

Process	Course|New|Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Cameron Jack cjack@ufl.edu
Created	12/4/2020 10:07:45 AM
Updated	12/4/2020 11:32:42 AM
Description of request	Proposal of a new undergraduate/graduate course

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Entomology and Nematology 60140000	Heather Mcauslane		12/4/2020
ENY 4XXX Honey Bee Biology Fall 2021.pdf ENY 6XXX Honey Bee Biology Fall 2021.pdf CALS CC Checklist_Honey Bee Biology.pdf					12/4/2020 12/4/2020 12/4/2020
College	Pending	CALS - College of Agricultural and Life Sciences			12/4/2020
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 15543

Info

Request: Honey Bee Biology course
Description of request: Proposal of a new undergraduate/graduate course
Submitter: Cameron Jack cjack@ufl.edu
Created: 12/1/2020 3:48:42 PM
Form version: 1

Responses

Recommended Prefix ENY
Course Level 4
Course Number XXX
Category of Instruction Joint (Ugrad/Grad)
Lab Code None
Course Title Honey Bee Biology
Transcript Title Honey Bee Biology
Degree Type Baccalaureate

Delivery Method(s) Online
Co-Listing Yes
Co-Listing Explanation The graduate version of the course requires five additional readings of relevant research articles, different critical thinking exercise assignments, and an additional major project.
Effective Term Fall
Effective Year 2021
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 4
Course Description This course will provide an in-depth look into the fascinating world of honey bee biology. Herein, we will explore topics including honey bee sociality, taxonomy, biogeography, behavior, anatomy, physiology, reproduction, nutrition and genetics. Additionally, these topics will be discussed via the paradigm of the honey bee superorganism.
Prerequisites BSC 2005 or BSC 2010
Co-requisites N/A
Rationale and Placement in Curriculum While the Beekeeping I and Beekeeping II courses focus primarily on the management of honey bees, this course focuses specifically on the biology of honey bees. This course may be interesting to a wide audience of biology-related majors, as topics like evolution, behavior, physiology, genetics, etc. will all be discussed. Honey Bee Biology will become a required, foundational course in the future Apiculture Certificate.
Course Objectives 1. Compare the life-history strategies of different honey bee species and contrast the different traits of honey bee subspecies.
2. Describe the different tasks of honey bee workers and distinguish how these might change depending on conditions within the colony.
3. Identify the different structures of the honey bee anatomy and discuss how these function together as physiological systems.
4. Appraise the concept of the honey bee superorganism and argue whether or not honey bees fit this paradigm.
5. Interpret the findings from recent honey bee biology research publications and discuss the relevance they may have to beekeepers.

Course Textbook(s) and/or Other Assigned Reading 1. Textbook: Caron, D.W. 2013 (revised from 1999). Honey Bee Biology and Beekeeping. Wicwas Press. Cheshire, CT, 368 pp.

2. American Bee Journal articles written by Dr. Jamie Ellis which are appropriate for the content of this course.
3. Aamidor et al., 2020. What mechanistic factors affect thelytokous parthenogenesis in Apis mellifera caponizes queens? Apidologie 51:329–341.
4. Simone-Finstrom et al., 2017. Propolis counteracts some threats to honey bee health. Insects 8: 46; doi:10.3390/insects8020046
5. Boncristiani, H. et al., 2020. World Honey Bee Health: The Global Distribution of Western Honey Bee (Apis mellifera L.) Pests and Pathogens. Bee World, 1-5. Doi:10.1080/0005772X.2020.1800330.
6. Mortensen et al. 2018. The discovery of Varroa destructor on drone honey bees, Apis mellifera at drone congregation areas. Parasitology Research 117: 3337-3339.
Weekly Schedule of Topics 1. Insects: Insecta, Hymenoptera, Differentiating bees and wasps, common bee groups, common wasp groups, bee/wasp mimics
2. Sociality: What makes insects social?, Levels of sociality, Evolution of sociality
3. Honey Bee Taxonomy: Apidae, Apis, Honey bee taxonomy (Micrapis, Megapis and Apis)
4. Biogeography and Taxonomy of genus Apis: Apis florea, andreniformis, dorsata, laboriosa, nigrocinta, cerana, koshvenokvi, nuluensis, mellifera
5. Biogeography and Taxonomy of Apis mellifera: Overview of lineages, Lineage A, Lineage M, Lineage, C, Lineage O, Minor lineages
6.:The Colony and the Nest: Adult members of a honey bee colony, Immature members of honey bee colonies, Components of a nest, Life cycle of a honey bee colony
7. Honey Bee and Colony Behaviors: Tasks of a worker, Honey bee dance language, Thermoregulation, Swarm preparation, The swarm, Choosing a nest site, Queen and drone behaviors
8. External Anatomy and Physiology: Head, thorax, abdomen
9. Internal Anatomy and Physiology: Digestive, Nervous, Circulatory, Respiratory, Reproductive, Muscular, Endocrine, Immune, Exocrine
10. Honey Bee Genetics: Introduction, Haplo-diploidy, Arrhenotoky, Thelytoky
11. Honey bee nutrition: Larval diet, adult diet, Nectar and honey, Pollen, Foraging habitats
12: Honey Bee Pests and Pathogens: Major arthropod pests, Minor arthropod pests, Pathogen stressors, Other stressors, Principle stressors, Overcoming bee defenses
13. Honey Bee Mating: Sexual maturation of the queen, Sexual maturation of the drones, Drone congregation areas, Honey bee mating, Post-mating maturation
14. Superorganism: Food collection, Endocrine and exocrine systems, Respiration and thermoregulation, Immune system, Communication, Summary
Grading Scheme 1. Module assessments: 15 points each × 14 assessments, 210 points, 42%
2. Section critical thinking exercises: 35 points each × 5 exercises, 175 points, 35%
3. Subspecies report (Topic submission 10 points, peer evaluation 25 points, final draft 85 points) 115 points, 23%

See syllabus for details related to assignments and grading.
Instructor(s) Cameron Jack
Jamie Ellis
Attendance & Make-up Yes
Accomodations Yes
UF Grading Policies for assigning Grade Points Yes
Course Evaluation Policy Yes

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE INITIAL OR MARK N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

CJ It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

CJ You MUST comply with the CALS Syllabus Policy, including items 1 through 8 and all standard syllabus statements. This document can be viewed at the committee site(https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

CJ Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

CJ The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

CJ The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

CJ The course schedule should be concise and include the appropriate number of weeks in the semester.

CJ All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

CJ Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

CJ Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

CJ Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

CJ The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

CJ The most recent version of the CALS Syllabus Statements boiler plate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers. The submission must include intended catalog copy. (Contact Dr. Joel Brendemuhl (brendj@ufl.edu) for further instruction)

ENY 4XXX
Honey Bee Biology
Fall 2021 (3 credits)

***This course is co-taught with ENY 6XXX Honey Bee Biology.**

Lead-Instructor: Cameron Jack, PhD **E-mail:** cjack@ufl.edu
Office Room #: ENY (Bldg 964), room 114
Office Address: Steinmetz Hall, Natural Area Drive, P.O. Box 110620, Gainesville, FL 32611
Office Phone #: 352-294-6926 (*Please email to set up a phone appointment.*)

Instructor: Jamie Ellis, PhD **E-mail:** jdellis@ufl.edu
Office Room #: ENY (Bldg 964), room 116
Office Address: Steinmetz Hall, Natural Area Drive, P.O. Box 110620, Gainesville, FL 32611
Office Phone #: 352-273-3924 (*Please email to set up a phone appointment.*)
Website: www.ufhoneybee.com

TA: TBA **E-mail:**
Office Room #:
Office Address:

Special Note on Contact via Email: Due to UF privacy laws, you must use your GatorLink account or the Canvas mail system when emailing the Instructor or TA. Emails sent from other accounts (gmail, hotmail, etc.) will not be answered by the Instructor or TA.

Office Hours: Tuesday and Thursdays 1:00 – 3:00 pm in ENY (Bldg 964), room 114 or via Zoom. Please schedule by appointment.

Course Description: This course will provide an in-depth look into the fascinating world of honey bee biology. Herein, we will explore topics including honey bee sociality, taxonomy, biogeography, behavior, anatomy, physiology, reproduction, nutrition and genetics. Additionally, these topics will be discussed via the paradigm of the honey bee superorganism.

Course Learning Objectives:
1. Compare the life-history strategies of different honey bee species and contrast the different traits of honey bee subspecies.
2. Describe the different tasks of honey bee workers and distinguish how these might change depending on conditions within the colony.
3. Identify the different structures of the honey bee anatomy and discuss how these function together as physiological systems.
4. Appraise the concept of the honey bee superorganism and argue whether or not honey bees fit this paradigm.
5. Interpret the findings from recent honey bee biology research publications and discuss the relevance they may have to beekeepers.

Required Readings:

1. Textbook: Caron, D.W. 2013 (revised from 1999). Honey Bee Biology and Beekeeping. Wicwas Press. Cheshire, CT, 368 pp.
2. American Bee Journal articles written by Dr. Jamie Ellis which are appropriate for the content of this course.
3. Aamidor et al., 2020. What mechanistic factors affect thelytokous parthenogenesis in *Apis mellifera caponizes* queens? Apidologie 51:329–341.
4. Simone-Finstrom et al., 2017. Propolis counteracts some threats to honey bee health. Insects 8: 46; doi:10.3390/insects8020046
5. Boncristiani, H. et al., 2020. World Honey Bee Health: The Global Distribution of Western Honey Bee *(Apis mellifera* L.) Pests and Pathogens. Bee World, 1-5. Doi:10.1080/0005772X.2020.1800330.
6. Mortensen et al. 2018. The discovery of *Varroa destructor* on drone honey bees, *Apis mellifera* at drone congregation areas. Parasitology Research 117: 3337-3339.

Lectures: This is a fully online, Canvas-based course. The website for the syllabus, all lectures, reading materials, announcements, tests, etc. will be posted on eLearning: http://elearning.ufl.edu. All lectures for this course are narrated presentations and will include videos and supplemental readings. We will provide text from all the narrated presentations.

Please note that all video clips and photographs are copyrighted and are NOT to be used outside of this class. They may be viewed and used only by students this semester. Students are prohibited from copying and/or distributing these photographs or video clips. All class notes are provided for educational use only.

Course Notifications and Communication: All course communications (assignments, announcements, test information, etc.) will be made via the Announcements in Canvas. Please ensure that your Canvas profile is set to receive notifications (i.e. please check the appropriate box to receive all notifications). To do this, click on your name in the upper right corner of the Canvas homepage after logging into Canvas. Next, click "notifications" on the left. This will take you to the Notification Preferences page. Then, click the check symbol for at least the following notifications: Due Date, Course Content, Announcement, and Grading.

Students are encouraged to post general questions on topics taught in the class under the General Questions thread. The instructor and/or the TAs will respond to the questions. Other students are also encouraged to respond to the questions. Private questions should be sent to the TA via e-mail.

The instructor and TAs will do our best to respond within 24 hours during the week and 48 hours on weekends. We will also do our best to grade assignments within one week of the due date.

Course Schedule: This course is offered via Canvas as a distance education course. To stay on track, students must adhere to the course schedule.

Module	Video Content	Weekly Readings	Module Quizzes	Critical Thinking Exercises	Subspecies Report Assignments
Getting Started	Welcome video	Course syllabus; Tips for success	Aug. 27th		
Insects	Insecta, Hymenoptera, Differentiating bees and wasps, common bee groups, common wasp groups, bee/wasp mimics	Textbook: p. 21-26	Aug. 27th		
Sociality	What makes insects social?, Levels of sociality, Evolution of sociality	Textbook: p. 37-47	Sep. 3rd		
Honey Bee Taxonomy	Apidae, Apis, Honey bee taxonomy (Micrapis, Megapis and Apis)		Sep. 10th	Sep. 10th	
Biogeography and Taxonomy of genus Apis	florea, andreniformis, dorsata, laboriosa, nigrocinta, cerana, koshvenokvi, nuluensis, mellifera	Textbook: p. 26-28	Sep. 17th		
Biogeography and Taxonomy of Apis mellifera	Overview of lineages, Lineage A, Lineage M, Lineage, C, Lineage O, Minor lineages	Textbook: p. 28-34 ABJ: Stocks of Bees	Sep. 24th	Sep. 24th	Select Subspecies Sep. 24th
The Colony and the Nest	Adult members of a honey bee colony, Immature members of honey bee colonies, Components of a nest, Life cycle of a honey bee colony	Textbook: p. 49-57 ABJ: Members of a Colony; Components of Nests Simone-Finstrom et al. 2017	Oct. 1st		
Honey Bee and Colony Behaviors	Tasks of a worker, Honey bee dance language, Thermoregulation, Swarm preparation, The swarm, Choosing a nest site, Queen and drone behaviors	Textbook: 87-96 ABJ: Swarms; Tasks of Workers; Thermoregulation and Dance Language	Oct. 8th	Oct. 8th	
External Anatomy and Physiology	Head, Thorax, Abdomen	Textbook: 61-66 ABJ: External Anatomy	Oct. 15th		
Internal Anatomy and Physiology	Digestive, Nervous, Circulatory, Respiratory, Reproductive, Muscular, Endocrine, Immune, Exocrine	Textbook: 67-73 ABJ: Internal Anatomy	Oct. 22nd		1st Submission Oct. 22nd
Honey Bee Genetics	Introduction, Haplo-diploidy, Arrhenotoky, Thelytoky	Aamidor et al. 2020	Oct. 29th		Peer Review Oct. 29th

Honey Bee Nutrition	Larval diet, adult diet, Nectar and honey, Pollen, Foraging habitats	Textbook: 133-145	Nov. 5th	Nov. 5th	
Honey Bee Pests and Pathogens	Major arthropod pests, Minor arthropod pests, Pathogen stressors, Other stressors, Principle stressors, Overcoming bee defenses	Textbook: 309-325 ABJ: Biotic Stressors; Other Stressors Boncristiani et al. 2020	Nov. 12th		
Mating	Sexual maturation of the queen, Sexual maturation of the drones, Drone congregation areas, Honey bee mating, Post-mating maturation	Textbook: 116-131 ABJ: Mating Biology Mortensen et al. 2018	Nov. 19th		Final Submission Nov. 19th
Superorganism	Overview, Food collection, Endocrine and exocrine systems, Respiration and thermoregulation, Immune system, Communication, Summary	ABJ: Superorganisms	Dec. 3rd	Dec. 3rd	

Evaluation: The course grade is based on total points earned out of 500 possible points.

Module assessments	15 points each × 14 assessments	210 points
Section critical thinking exercises	35 points each × 5 exercises	175 points
Select Topic for Subspecies Report	10 points	10 points
Submission of your peer evaluations of two of your peers' Subspecies Reports	10 points × 2 peer reviews (you get 10 points per peer review you submit)	20 points
Final draft of your Subspecies Report	85 points	85 points
	Total Course Points	500 points

Grades and Grade Points
For information on current UF policies for assigning grade points, see catalog.ufl.edu/UGRD/academic-regulations/grades-gradingpolicies/.

FINAL GRADING		
% grade	Letter grade	Points needed to achieve letter grade
100-93	A	≥ 465
90-92	A-	450 – 464
87-89	B+	435 – 449
83-86	B	415 – 434
80-82	B-	400 – 414
77-79	C+	385 – 399
73-76	C	365 – 384
70-72	C-	350 – 364
67-69	D+	335 – 349
63-66	D	315 – 334
60-62	D-	300 – 314
0-59	E	0 – 299

Assignments:

(1) Module Assessments: There is a 15-point assessment associated with each of the fourteen modules in this course. These assessments are ***open note*** (i.e. you ***are*** allowed to use class lectures, books, websites, etc. while taking the assessments). The assessments will be composed of true/false and multiple choice questions. **The assessments 1) open the Saturday morning after the previous section ends, 2) are timed (30 minutes each), and 3) are due on the following Friday at 11:59 pm on the date listed in the course schedule.** These are individual assessments so please do your own work and do not work in groups or share your answers. There is a large bank of test questions for each assessment and the assessment questions are selected randomly for each student. You will receive a 5-point deduction for each day a module assessment is late.

The first module assessment is a graded syllabus quiz on the "Getting Started" module. You need to read the syllabus and answer quiz questions related to it by **11:59 pm ET on the date listed in the course schedule**. You must complete the syllabus quiz before you are able to advance to the next module. This quiz will show you how your online assessments will be formatted as well as allow you to demonstrate that you understand how this course works and important due dates.

(2) Critical Thinking Exercises: These exercises are designed to encourage you to think critically about the content presented in the module lectures. The critical thinking exercises are worth 35 points each. These are individual exercises so please do your own work and do not work in groups or share your answers. All of the

critical thinking exercises are open note and untimed. You can close and reopen the exercise as many times as you would like until the due date (see course schedule), but you will not be able to make any changes once you have officially submitted your final exercise. **The exercises are due at 11:59 pm on the date listed in the course schedule.** You will receive a 5 deduction for each day a module assessment is late.

(3) Subspecies Report: One of the most useful skills in any profession is writing. Furthermore, one of the missions of the Land Grant Institution is extension, which means we are communicating with the general public. As such, you are required to produce an informational article which explains the biology of a specific *Apis mellifera* subspecies. This article should be written following the standard Featured Creature format. This format is available at the Featured Creatures link (http://entnemdept.ufl.edu/creatures/) under the "Format for Authors" link. Your *Apis mellifera* subspecies article should be written to have the potential for publication through the University of Florida's extension branch (Cooperative Extension Service). You **must** check with the TA before beginning your article so that they can verify that such an article does not already exist on your subspecies. The instructor or TA can provide ideas for selecting a subspecies, but the topics will be reserved on a first come first serve basis. **A grading rubric will be provided in Canvas to facilitate the development of your article.**

Here is an example of two Featured Creature articles that have been written on *Apis mellifera* subspecies.
Apis mellifera capensis: http://entnemdept.ufl.edu/creatures/misc/bees/cape_honey_bee.htm
Apis mellifera scutellata: http://entnemdept.ufl.edu/creatures/misc/bees/ahb.htm
You'll notice how the authors created figures helpful to understanding the subspecies distribution as well as including other useful figures and information.

All written reports should convey scientific information in a way that a high school student could understand. Figures are extremely helpful in extension documents, and students are encouraged to include as many figures as necessary to explain a topic. You must obtain use permission from the owner of any figures you include in your final report if the figure is not original to you. There will be an additional assignment to submit with the Final Subspecies Report called "Subspecies Report Figures and Permissions." For this assignment, you will upload the full-sized jpeg file for each figure and fill in the accompanying word document with the proof of permission for use.

There are four components of the Subspecies Report that compose the completed assignment. Due dates for each component are listed in the course schedule.

1) Report Topic Due – The student should identify and record the topic chosen for the subspecies report by completing the Canvas assignment "Subspecies Report Topic."

2) 1st Submission – This is not a rough draft, but rather is what the student considers the completed document.

3) Peer Review – The 1st submission will be shared with other students in the class who will provide a peer review of the report by the due date listed in the course schedule. Each student will peer review two reports.

4) Final Submission – Students are expected to revise their reports as per the comments provided during the peer review process. The final report must be submitted by the due date shown in the course schedule. A grading rubric will be provided in Canvas to facilitate development and peer review of the Subspecies Reports. **Five points will be deducted from the final project score every day past the due dates that any of the information requested above is late.** Please do not wait until the last minute to write your reports or meet any of the other deadlines. All points lost will be deducted from the final Subspecies Report grade.

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

Online Course Evaluation Process: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.aa.ufl.edu/public-results/.

Academic Honesty: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (sccr.dso.ufl.edu/process/student-conduct-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 or TAs in this class.

Services for Students with Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, dso.ufl.edu/drc) 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.

Campus Resources:

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact mailto:umatter@ufl.edu, 352-392-1575, or visit umatter.ufl.edu/ to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit counseling.ufl.edu/ or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit shcc.ufl.edu/.

University Police Department: Visit police.ufl.edu/ or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; ufhealth.org/emergency-room-trauma-center.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services career.ufl.edu/.

Library Support: cms.uflib.ufl.edu/ask various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring. teachingcenter.ufl.edu/

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. writing.ufl.edu/writing-studio/

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

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

Cover Sheet: Request 15832

Clinical & Translational Science Institute Concentration within YDFS PhD Program

Info

Process	Concentration|New/Modify/Close|Grad/Pro/Interdisciplinary
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Kate Fogarty kfogarty@ufl.edu
Created	2/10/2021 5:50:51 PM
Updated	2/10/2021 6:29:50 PM
Description of request	In our PhD program in Youth Development and Family Science we are requesting a concentration for our PhD students who apply to and are accepted into the UF Clinical and Translational Science Institute (a multidisciplinary program) and who receive the TL1 Training Grant (see https://www.ctsi.ufl.edu/education/ph-d-students/tl1-predoctoral-training-2/) to take a minimum of 19 credit hours within their course of PhD study in YDFS. Our YDFS PhD program currently entails 42 credit hours of electives with 18 credit hours of research, that courses in the TL1 program can easily fit into (3-6 credits of research and 13-16 credit hours within the elective). We have one 2nd-year YDFS PhD student accepted into and funded by the program who started the program in fall 2020 (and is currently taking program coursework from a large selection of available courses in the program) and another 1st-year PhD student working with a group of interdisciplinary (outside department and some outside college) PhD students on an application to this program (to be notified in June 2021 if accepted for fall 2021). This concentration is required within department (FYCS) in order for the currently enrolled student to graduate and we anticipate having more students in the YDFS PhD program applying and accepted to the TL1 Clinical and Translational Training Program.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Family, Youth and Community Sciences 60320000	Tracy Irani		2/10/2021
Approval document_CTS-Certif-Conc-Revision Final 11-6-17.pdf Curric Plan - Clinical & Translational Sci Sample.pdf					2/10/2021 2/10/2021
College	Pending	CALS - College of Agricultural and Life Sciences			2/10/2021
No document changes					
Graduate Council					
No document changes					
Graduate School Notified					
No document changes					
Office of the Registrar					
No document changes					
College Notified					
No document changes					

Concentration|New for request 15832

Info

Request: Clinical & Translational Science Institute Concentration within YDFS PhD Program
Description of request: In our PhD program in Youth Development and Family Science we are requesting a concentration for our PhD students who apply to and are accepted into the UF Clinical and Translational Science Institute (a multidisciplinary program) and who receive the TL1 Training Grant (see https://www.ctsi.ufl.edu/education/ph-d-students/tl1-predoctoral-training-2/) to take a minimum of 19 credit hours within their course of PhD study in YDFS. Our YDFS PhD program currently entails 42 credit hours of electives with 18 credit hours of research, that courses in the TL1 program can easily fit into (3-6 credits of research and 13-16 credit hours within the elective). We have one 2nd-year YDFS PhD student accepted into and funded by the program who started the program in fall 2020 (and is currently taking program coursework from a large selection of available courses in the program) and another 1st-year PhD student working with a group of interdisciplinary (outside department and some outside college) PhD students on an application to this program (to be notified in June 2021 if accepted for fall 2021). This concentration is required within department (FYCS) in order for the currently enrolled student to graduate and we anticipate having more students in the YDFS PhD program applying and accepted to the TL1 Clinical and Translational Training Program.
Submitter: Kate Fogarty kfogarty@ufl.edu
Created: 2/10/2021 5:07:18 PM
Form version: 1

Responses

Proposed Action Begin Participating in a Concentration

Concentration Name Clinical & Translational Science
Credits 19
Effective Term Earliest Available
Effective Year 2021
Students 3
Percentage of Credits Available Fully Online <50%
Percentage of Credits Available Off-Campus <25%
Is this an additional (secondary) concentration? Yes
All Department/Degree/Majors Adding Concentration Family, Youth and Community Sciences: Ph.D. in Youth Development and Family Sciences
Rationale for Proposed Concentration The Clinical & Translational Science (CTS) training program is sponsored by the UF Clinical & Translational Science Institute and is a multidisciplinary effort at UF with the purpose of supporting future career goals related to clinical and translational research for Ph.D. students. Rather than establishing a stand-alone PhD program in CTS, they established an interdisciplinary concentration in CTS, providing additional credentials that would be beneficial to UF PhD graduates in a variety of disciplines. The core curriculum for the CTS training program is a combination of courses in several disciplines with new courses having been developed and implemented and Ph.D. students in other disciplines being required to have 19 hours of CTS concentration courses within their major. The UF Clinical & Translational Science Institute has recently proposed to allow all PhD students (in disciplines outside CTS) to participate in the program. In order to do so, the discipline that a PhD student who is accepted to the training program must propose this concentration within their department. In our case the Department of Family, Youth and Community Sciences, within the College of Agricultural and Life Sciences, Ph.D. Program in Youth Development and Family Sciences (YDFS) requires a CTS concentration for students (1 currently accepted as of fall 2020, 1 applying for fall 2021) accepted to the CTS training program to be awarded within the student's discipline in YDFS.

Impacts on Other Programs The PhD program in YDFS currently requires 42 elective credit hours plus 18 credit hours of research. The CTS training program concentration entails up to 6 credit hours of research and up to 13 credit hours that can be applied to electives in the YDFS PhD program. YDFS PhD students who are accepted into and participate in the CTS training program concentration will have ample space in their plan of study (as part of the 90 required credit hours for the program) to

pursue selected CTS program courses. For more information on CTS program courses and requirements see https://www.ctsi.ufl.edu/education/ph-d-students/tl1-predoctoral-training-2/.

REVISIONS TO:

Clinical & Translational Science Interdisciplinary Concentration

Clinical & Translational Science Certificate Program

Background & Rationale for Changes

The Clinical & Translational Science (CTS) training program sponsored by the UF Clinical & Translational Science Institute was designed to provide PhD scientists in a variety of disciplines with the knowledge, skills and attitudes to support future career goals related to clinical and translational research. Rather than establishing a stand-alone PhD program in CTS, we established both a graduate certificate and an interdisciplinary concentration in CTS, providing additional credentials that would be beneficial to PhD graduates in a variety of disciplines.

The original core curriculum was a combination of existing and new graduate courses. Over time we realized that the existing courses did not exactly meet program goals, and additional new courses have been developed and implemented. In addition, feedback from students and faculty suggested that the numbers of required credits, which were higher than the minimum number required by the Graduate School, was excessive and posed a significant barrier to participation. We have therefore reduced the minimum number of credits required for the CTS certificate and interdisciplinary concentration.

The original proposal listed "partner programs" that limited eligibility of PhD students to specific graduate programs. Students from several other programs have begun taking classes and expressed the desire to complete the CTS certificate or interdisciplinary program. Rather than adding additional partner programs, we would like to simply remove the restriction and allow all UF PhD students interested in clinical and translational research to participate in the program.

Curriculum Requirements

The CTS Interdisciplinary Concentration and CTS Certificate Program will be available to graduate students in all UF students, regardless of major, emphasizing the interdisciplinary nature of CTS. The CTS training components and requirements are summarized in Table 1. Students must follow all other rules and regulations as described in the UF Graduate Catalog.

Table 1	**CTS Certificate**		**CTS Interdisciplinary Concentration**	
	Original	**New**	Original	**New**
Degree Level	MS or PhD	**MS or PhD**	PhD	**PhD**
Core Courses	11 credits	**8 credits**	11 credits	**8 credits**
Electives	6 credits	**3 credits**	8 credits	**6 credits**
Dual mentoring by basic & clinician scientists	n/a	**n/a**	Required	**Dropped**
CTS-related Specific Aim	n/a	**n/a**	Required	**Required**
Annual research presentation at CTSI Research Symposium	n/a	**n/a**	Required	**At least one presentation**

The CTS core curriculum consists of four required courses with a total of 8 credits *vs.* the original of 11 credits (Table 2A). A more extensive advanced curriculum is now available (Table 2B), and the minimum requirement will be 6 (instead of 8) additional elective credits for the CTS interdisciplinary concentration or 3 (instead of 6) additional elective credits for the CTS certificate. Elective courses have been categorized into three groups:

Elective Group A = Experimental Design
Elective Group B = Quantitative Skills
Elective Group C = Professional Development

For the CTS interdisciplinary concentration students must take at least one course (regardless of number of credits) from each of the three elective groups A-C, with a total of at least 6 elective credits. For the CTS certificate students must take at least one course from elective group A, with a total of at least 3 credits. All courses must be passed with an "S" or a letter grade of "B" or better to count toward the CTS interdisciplinary concentration or CTS certificate.

Table 2A. CTS Core Courses

Change	Course Title	Course Number	Credits
New course	Translational Research & Therapeutics: Bench, Bedside, Community, & Policy	GMS6847	3
New course	Team Science	GMS6945	1
	Responsible Conduct of Biomedical Research (course number has changed from GMS 7003)	GMS 7877	1
	CTS Seminar	GMS 6893	2
	CTS Journal Club	GMS 6895	1
May count as Group A elective	Introduction to Clinical & Translational Science	GMS 7093	2
May count as Group C elective	Ethical, Regulatory, and Practical Conduct of Clinical Research (course number has changed from GMS 6931)	GMS 6875	2
Dropped from curriculum	Clinical & Translational Research Practicum (PhD students)	GMS 6845	3
May count as Group A elective	***or*** General Clinical Research Practicum (MD-PhD students)	BMS 6882	3

Table 2B. CTS Elective Courses

Group	Course Title	Course Number	Credits
A*	Advanced Epidemiology Methods III	PHC 6937	3
A	Applied Survival Analysis	PHC 6937	3
A	Applied Survival Analysis	STA 6177	3
A*	Applied Topics in Clinical Effectiveness Research	GMS 6854	2
A*	Biology and Epidemiology of HIV/AIDS	PHC 6009	3
A*	Cancer Epidemiology	PHC 7007	3
A	Clinical Trials Methods	PHC 6020	3
A*	Community Engaged Res for Clin Effectiveness …	GMS 6852	2
A	Design and Conduct of Clinical Trials	PHC 6937	3
A*	Epidemiology & Prevention of Chronic Diseases	PHC 6003	3
A*	Epidemiology Methods II	PHC 6011	3

Table 2B. CTS Elective Courses (continued)

Group	Course Title	Course Number	Credits
A*	Epidemiology of Infectious Disease	PHC 6002	3
A*	Epidemiology Research Methods I	PHC 6000	3
A	Experim & Quasi-exp Res Des Commun Settings	GMS 6844	2
A	Foundations of Qualitative Health Research	NGR 6815	3
A	Gene Therapy From Bench To Bedside	GMS 6059	1
A*	General Clinical Research Practicum	BMS 6882	3
A*	Health Care Policy and Vulnerable Populations	GMS 6833	3
A*	Health Disparities in the United States	PHC 6441	3
A*	Health Outcomes Research	GMS 6851	2
A*	Human Health Risk Assessment	VME 6607	4
A*	Introduction to CTS	GMS 7093	2
A	Longitudinal Research Design	GMS 6829	2
A*	Measurement in Epidemiology & Outcomes Res	PHC 6711	3
A*	Molecular Epidemiology	PHC 7595	3
A	Nursing Sci Health Disparities Vulnerable Pop	NGR 7661	3
A	Population-Based Research on Aging	GMS 6485	3
A	Principles of Epidemiology in Public Health	PHC 6001	3
A*	Psychiatric Epidemiology	PHC 7038	3
A*	Public Health Concepts in Infectious Disease	PHC 6517	3
A	Quant Res Design and Measurement in Nursing	NGR 7816	3
A*	Research Designs in Health Outcomes and Policy	GMS 6885	3
A*	Social Epidemiology	PHC 6016	3
A*	Survey Research Methods	PHC 6716	3
B	Adv Applications of Bioinformatics in Genetics	GMS 6232	1
B*	Advanced Biostatistical Methods I	PHC 7090	3
B*	Advanced Biostatistical Methods II	PHC 7091	3
B*	Analytic Methods of Infectious Diseases	PHC 6937	3
B	Applications of Bioinformatics to Genetics	GMS 6014	1
B	Applied Biostatistics I	GMS 6861	3
B*	Applied Multivariate Methods	CLP 6529	3
B	Applied Statistical Analysis I	NGR 6840	3
B	Applied Statistical Analysis II	NGR 6845	3
B*	Best Methods for the Analysis of Change	CLP 7525	3
B*	Biostatistical Computing	PHC 6068	3
B	Biostatistical Computing Using R	PHC 6055	1
B*	Biostatistical Computing Using SAS	PHC 6937	3
B*	Biostatistical Consulting	PHC 6063	3
B	Biostatistical Methods I	PHC 6050C	3
B	Biostatistical Methods II	PHC 6051	3
B*	Critical Skills in Epidemiologic Data Management	PHC 7065	2
B*	Data Science for Clinical Research	GMS 6803	3
B	Design & Analysis Translational Res in Biomed Sci	GMS 6841	2
B*	Foundations of Biomedical Informatics	GMS 6850	3
B*	Genetic Data Analysis	PHC 6937	3
B	Genomics and Bioinformatics	GMS 6231	3
B	Introduction to Biostatistical Methods	PHC 6052	3
B*	Introduction to Biostatistical Theory	PHC 6092	3
B*	Large Sample Theory	PHC 7066	3

Table 2B. CTS Elective Courses (continued)

Group	Course Title	Course Number	Credits
B*	Measurement, Design and Statistics I	CLP 6527	3
B*	Measurement, Design and Statistics II	CLP 6528	3
B	Mixed Methods	NGR 6807	3
B*	Quantitative Literacy	GMS 6865	2
B	Regression Methods for the Health and Life Sciences	PHC 6053	3
B*	SAS for Public Health Analysis	PHC 6081	1
B*	SAS for Public Health Data	PHC 6080	1
B*	Statistical Methods Health Science I	PHC 6050	3
B*	Translational Bioinformatics	GMS 6804	3
C*	Ethical, Regul, and Practical Conduct of Clin Research	GMS 6875	2
C	Ethics in Genetics	GMS 6221	1
C*	Ethics in Population Science	PHC 7427	2
C*	Fundamentals of Biomedical Science Education	GMS 7950	1
C	Grant Writing (Special Topics)	GMS 5905	1
C*	Grant Writing Skills for Clinical and Health Research	PHC 7727	2
C*	Intro to NIH Grant Writing for Biomedical Sciences	GMS 6096	1
C*	Writing Circle for Population Science	PHC 7902	1

*new elective

Repeat participation in the CTS Journal Club will no longer count as an elective. The selection of elective courses will be made by individual students in consultation with their mentors and supervisory committees, and approved by the CTSI Training Advisory Committee (TAC). They are intended to supplement the student's major concentration and support the clinical and/or translational research component of the student's doctoral research. Additional elective courses not already listed may be approved by the TAC.

Matriculation

CTS trainees will be welcome from all UF graduate programs. The designation of "partner programs" is dropped. PhD students may apply for admission to the CTS interdisciplinary concentration during their first or second year of graduate study. MS and PhD students must apply for the CTS Certificate program no later than two years prior to their anticipated graduation date, following other rules for certificate programs. Combined degree students (*e.g.*, MD-PhD) are welcome to participate, and must apply no later than during their first year of graduate studies. Participants in the CTS Certificate and Interdisciplinary Concentration since 2009 are summarized in Table 3.

As noted above in Table 1, CTS concentration students and mentors will prepare a hypothesis-driven thesis/dissertation project that includes at least one specific aim of the doctoral dissertation research must involve clinical research, defined by the NIH as patient-oriented research, epidemiologic and behavioral studies, and outcomes research and health services research (https://grants.nih.gov/grants/glossary.htm).

As also noted above in Table 1, doctoral students in the CTS Interdisciplinary Concentration will be expected to present their research findings via poster or oral presentation at least once at a CTSI Annual Research Symposium.

Table 3. Participation in CTS Programs

CTS Certificate

College	Major	# Participants
AG	Nutritional Sciences (NUT)	1
HH	Health Education and Behavior (HEB)	1
HP	Public Health (PHL)	1*
MD	Molecular Cell Biology (MSM)	2
MD	Physiology and Pharmacology (MSP)	3
NR	Nursing Sciences (NRS)	2

CTS Interdisciplinary Concentration

College	Major	# Participants
AG	Food Science (FSC)	2*
AG	Microbiology & Cell Science (MCB)	1*
EG	Biomedical Engineering (BME)	6
EG	Electrical and Computer Engineering (ECE)	1*
HP	Clinical & Health Psychology (PSY)	2
HP	Epidemiology (EPI)	1
HP	Public Health (PHL)	1*
HP	Rehabilitation Science (RSD)	2
LS	Anthropology (APY)	2*
MD	Biochemistry (MSB)	4
MD	Cancer Biology (MSA)	3*
MD	Genetics (MSG)	3
MD	Genetics and Genomics (GEN)	2
MD	Immunology and Microbiology (MSI)	3
MD	Molecular Cell Biology (MSM)	1
MD	Neuroscience (MSN)	6
MD	Physiology and Pharmacology (MSP)	2
NR	Nursing Sciences (NRS)	3
PH	Pharmaceutical Sciences (MC)	1
PH	Pharmaceutical Sciences (PHO)	1
PH	Pharmaceutical Sciences (PHS)	1
VM	Veterinary Medical Sciences (VMS)	1

*Majors not previously identified as partner PhD programs.

Effective Date

Because we already have students interested in the CTS interdisciplinary concentration and certificate from graduate programs other than the originally designated partner PhD programs, we request that the effective date be made immediately (as soon as possible).

UF Clinical and Translational Science Institute
UNIVERSITY of FLORIDA

Curriculum Plan for Clinical & Translational Science Ph.D. Students

Student Name: _ UFID: Date: draft 7/28/20

PhD Major/Concentration: Agricultural and Life Sciences-Family Youth and Community Sciences

CTS Program: ✓ Interdisciplinary Concentration (min. 6 elective credits, 1 course per group) ____ CTS Certificate (min. 3 elective credits)

Course Number	Course Title	# Credits	Semester and Year	Required for Major	Elective for Major	Required for CTS	Elective for CTS
CORE CURRICULUM							
GMS 6847	Translational Research & Therapeutics: Bench, Bedside, Community, & Policy	3	F 2020		X	X	
GMS 6945	Team Science	1	F 2020		X	X	
GMS 7877	Responsible Conduct of Biomedical Research (or VME 6767 or PHC 7427)	1	Sp 2021		X	X	
GMS 6893	CTS Seminar	2	F 2021		X	X	
GMS 6895	CTS Journal Club	1	F 2021		X	X	
ELECTIVES							
Group A – Experimental Design							
GMS 6833	Health Care Policy and Vulnerable Populations	3	Sp 2022		X		X
Group B – Quantitative Skills							
CLP 6527	Measurement, Design and Statistics I	3	F 2019		X		X
CLP 6528	Measurement, Design and Statistics II	3	Sp 2020		X		X
Group C – Professional Development							
PHC 7727	Grant Writing Skills for Clinical and Health Research	2	Su 2021		X		X

Reviewed by: _____ Date: _____

Completion Date: _____ CTS Mentor Signature: _____

Supervisory Chair: _____

Cover Sheet: Request 15842

Modifications to Required Curriculum for Food Science Major

Info

Process	Major Curriculum|Modify|Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Laura Acosta ljacosta@ufl.edu
Created	2/12/2021 3:30:23 PM
Updated	2/12/2021 3:45:54 PM
Description of request	We are proposing a change in the Physics requirement, the addition of a new required "Life After Graduation" course, and substitution of the current Food Engineering course with an "Introduction to Unit Operations in Food Processing" course taught within our department.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Food Science and Human Nutrition 60150000	Susan Percival	department note: vetted by undergraduate committee, food science faculty and all FSHN faculty	2/12/2021
FOOD SCIENCE Proposed Curriculum Update 8-semester plan.docx Email from Dr. Ingersent Confirming Availability of Seats in PHY2053 and PHY2053L.pdf					2/12/2021 2/12/2021
College	Pending	CALS - College of Agricultural and Life Sciences			2/12/2021
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					
Academic Assessment Committee Notified					
No document changes					
College Notified					
No document changes					

Major|Modify_Curriculum for request 15842

Info

Request: Modifications to Required Curriculum for Food Science Major
Description of request: We are proposing a change in the Physics requirement, the addition of a new required "Life After Graduation" course, and substitution of the current Food Engineering course with an "Introduction to Unit Operations in Food Processing" course taught within our department.
Submitter: Laura Acosta ljacosta@ufl.edu
Created: 2/12/2021 3:20:24 PM
Form version: 1

Responses

Major Name Food Science
Major Code FOS
Degree Program Name B.S. (Bachelor of Science)
Undergraduate Innovation Academy Program No
Effective Term Earliest Available
Effective Year Earliest Available
Current Curriculum for Major 1. Currently, PHY2004/PHY2004L is the physics requirement for the major, and is suggested for Semester 3 in the 8-semester plan. There is also a 1 credit elective listed on the 8-semester plan for Semester 3.
2. In Semester 5, there is a 4 credit elective on the 8-semester plan.
3. We currently require AOM4062 (Principles of Food Engineering). This course is recommended for Semester 7 on the 8-semeter plan.

Proposed Curriculum Changes 1. In Semester 3, the Physics course will change from PHY2004/PHY2004L to PHY2053/PHY2053L. The 1 credit Elective that semester will be removed.
2. In Semester 5, the new 1 credit "Life After Graduation" course (FOS3060) will be required. The Elective that semester will be reduced from 4 credits to 3 credits.
3. In Semester 7, AOM4062 (Principles of Food Engineering) will be replaced with FOS4410C (Introduction to Unit Operations in Food Processing).
UF Online Curriculum Change No
Pedagogical Rationale/Justification 1. The rationale for the change from PHY2004/PHY2004L to PHY2053/PHY2053L is that PHY2053 is a higher-level physics course. This higher-level physics is necessary to provide the foundation for FOS4410C (Introduction to Unit Operations in Food Processing), the course we are proposing to replace AOM4062 in Semester 7. PHY2053/PHY2053L is a pre-requisite for FOS4410C. We are proposing to remove the 1 credit Elective from Semester 3 because PHY2053/PHY2053L is 5 credits, whereas the currently-required PHY2004/PHY2004L is only 4 credits.
2. The rationale for the addition of Life After Graduation (FOS3060) as a requirement in Semester 5 that students need a structured course to prepare for the next steps (internships, industry careers) after they graduate. Students had been requesting such a course, and there was strong faculty consensus that this was a needed addition to our curriculum.
3. The rationale for replacing AOM4062 (Principles of Food Engineering) with FOS4410C (Introduction to Unit Operations in Food Processing) is to improve cohesion with FOS4427C (Principles of Food Processing) which is required in Semester 8. FOS4410C and FOS4427C will function as a two-semester sequence.
Impact on Enrollment, Retention, Graduation We do not anticipate any impact on students who are currently in the major. For the past several semesters, we have been recommending our students to take PHY2053/PHY2053L, Life After Graduation (FOS3060), and Introduction to Unit Operations in Food Processing (FOS4410C). The proposed catalog changes will formalize these changes, which are strengthening the academic foundation for our graduates.
Assessment Data Review We do not anticipate these changes will affect our SLOs. (None of the courses we are proposing to change are courses in which we measure our SLOs.)

The proposed changes support our Academic Program Goals in many ways.
Program Goal #1: Graduate students who successfully enter graduate or professional school, or pursue food, nutrition or health-related careers.
Life After Graduation (FOS3060) is designed to bridge the gap between academic life and

professional life, and promote successful entry into the workforce post-graduation.

Program Goal #2: Foster development of critical-thinking and problem-solving skills relevant to food science.
As a higher-level physics course, PHY2053/PHY2053L will promote deeper and more complex critical thinking.

Program Goal #3: Maintain and enhance the quality of instruction in the department.
The change from AOM4062 (Principles of Food Engineering) with FOS4410C (Introduction to Unit Operations in Food Processing) will improve the quality of instruction by creating a more seamless and cohesive flow from FOS4410C to FOS4427C (Principles of Food Processing).

Program Goal #4: Provide effective advising to students.
As a team-taught course, Life After Graduation (FOS3060) provides connection with multiple faculty members in Food Science, to provide advising on a career and professional level.
Academic Learning Compact and Academic Assessment Plan No changes anticipated.
Catalog Copy Yes

Re: PHY2053/L

Ingersent,Kevin <ingersent@ufl.edu>

Wed 2/10/2021 5:19 PM

To: Acosta, Laura <ljacosta@ufl.edu>
Cc: Johnson,Herschel D <hdjohnson@ufl.edu>; Grogan,Jenna L <jgrogan@ufl.edu>; Goodrich,Renee M <goodrich@ufl.edu>; Percival,Susan S <percival@ufl.edu>

Dear Laura:

We will be able to accommodate 5-10 additional students per semester in PHY 2053/L.

I am tied up through Friday with an NSG panel review. Please let me know the date by which you will a letter from me?

Best,

Kevin

On 2/9/2021 11:11 AM, Acosta, Laura wrote:

> Hello Dr. Ingersent,
>
> My name is Laura Acosta, and I am the undergraduate coordinator for the
> Food Science and Human Nutrition Department.I am writing because in our
> Food Science curriculum, we are changing a requirement from PHY2004/L to
> PHY2053/L. There are a variety of reasons for this change, but
> ultimately, a new food processing course (FOS4410C) will require
> PHY2053/L as a pre-requisite.
>
> On the UF Approval portal, it says that we need “supporting documents
> from other colleges indicating availability of seats in their courses
> that are required for the program.”Our Food Science major is small, so
> the number of students needing a seat in PHY2053/L would probably be no
> more than 5-10 per semester.Would your department be able to accommodate
> these additional students in PHY2053/L?If so, would you be able to
> provide a brief written statement that I can upload as supporting
> documentation on the Approval portal?
>
> Please do let me know if there are any concerns with this request.
>
> Thank you for your consideration!
>
> Laura
>
>
>
>

> *Laura Acosta, MS, RDN, LD/N*
> Lecturer in Dietetics and Undergraduate Coordinator
> Food Science and Human Nutrition Department
> University of Florida
> ljacosta@ufl.edu
> 914-523-7224 (cell)

FOOD SCIENCE

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

SEMESTER ONE		CREDITS
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry 1 Laboratory (**Critical Tracking**; State Core Gen Ed Biological and Physical Sciences)	4
MAC 2311	Analytic Geometry and Calculus 1 (**Critical Tracking**; State Core Gen Ed Mathematics)	4
State Core Gen Ed Composition; Writing Requirement		3
State Core Gen Ed Humanities		3
AEB 3114L	Introduction to Agricultural Computer Applications	1
	Credits	**15**
SEMESTER TWO		
Select one:		3-4
AEB 2014	Economic Issues, Food and You	

AEB 3103	Principles of Food and Resource Economics	
ECO 2013	Principles of Macroeconomics	
ECO 2023	Principles of Microeconomics (Gen Ed Social and Behavioral Sciences)	
CHM 2046 & 2046L	General Chemistry 2 and General Chemistry 2 Laboratory (**Critical Tracking**; Gen Ed Physical Sciences)	4
Quest 1 (Gen Ed Humanities)		3
Electives		3
	Credits	**13-14**
SEMESTER THREE		
BSC 2010 & 2010L	Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory 1 (**Critical Tracking**; Gen Ed Biological Sciences)	4
PHY ~~20042053~~ & ~~20042053L~~	~~Applied~~ Physics 1 and Laboratory ~~for Applied~~ Physics 1 (Gen Ed Physical Sciences)	45
Gen Ed Composition; Writing Requirement		3
State Core Gen Ed Social and Behavioral Sciences		3
~~Elective~~		~~1~~
	Credits	**15**
SEMESTER FOUR		

Formatted Table

BSC 2011 & 2011L	Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (**Critical Tracking**; Gen Ed Biological Sciences)	4
CHM 2210	Organic Chemistry 1 (minimum grade of C within two attempts, including withdrawals) [1]	3
FOS 3042	Introductory Food Science	3
STA 2023	Introduction to Statistics 1 (Gen Ed Mathematics)	3
Quest 2		3
	Credits	**16**
SEMESTER FIVE		
AEC 3030C	Effective Oral Communication	3
CHM 2211 & 2211L	Organic Chemistry 2 and Organic Chemistry Laboratory	5
FOS 4722C	Quality Control in Food Systems (**Critical Tracking**)	3
FOS3060 Life After Graduation		1
Elective		43
	Credits	**15**
SEMESTER SIX		
FOS 4311 & 4311L	Food Chemistry and Food Chemistry Laboratory (**Critical Tracking**)	4

FOS 4731	Government Regulations and the Food Industry	2
HUN 2201	Fundamentals of Human Nutrition	3
MCB 2000 & 2000L	Microbiology and Microbiology Laboratory	4
Elective		3
	Credits	**16**
SEMESTER SEVEN		
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)	3
~~AOM 4062~~ FOS4410C	~~Principles of Food Engineering~~ Introduction to Unit Operations in Food Processing	4
BCH 3025	Fundamentals of Biochemistry	4
FOS 4321C	Food Analysis (**Critical Tracking**)	4
	Credits	**15**
SEMESTER EIGHT		
FOS 4222 & 4222L	Food Microbiology and Food Microbiology Laboratory	5
FOS 4427C	Principles of Food Processing	4
FOS 4435C	Food Product Development (**Critical Tracking**)	3

Formatted Table

Elective	3
Credits	**15**
Total Credits	**120**

Plan of Study Grid

[1] Take (CHM 2210 and CHM 2211/CHM 2211L) or (MAC 2312 and CHM 2200/CHM 2200L).

Additional electives may be needed to complete the 120 credits required for graduation.

Cover Sheet: Request 15844

Name change for AGC minor

Info

Process	Minor|Modify/Ugrad
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Lisa Lundy lisalundy@ufl.edu
Created	2/15/2021 10:33:22 AM
Updated	2/15/2021 10:36:19 AM
Description of request	Change minor name from "Agricultural Communication minor" to "Agricultural and Natural Resource Communication minor."

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Agricultural Education and Communication 514926000	Brian Myers		2/15/2021
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			2/15/2021
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					

Minor|Modify for request 15844

Info

Request: Name change for AGC minor
Description of request: Change minor name from "Agricultural Communication minor" to "Agricultural and Natural Resource Communication minor."
Submitter: Lisa Lundy lisalundy@ufl.edu
Created: 2/15/2021 10:22:28 AM
Form version: 1

Responses

Name Agricultural Communication Minor
Code AGC
Effective Term Earliest Available
Effective Year Earliest Available
Proposed Changes Change name of minor from "Agricultural Communication Minor" to "Agricultural and Natural Resource Communication Minor"
Pedagogical Rationale/Justification Many minors in CALS are named to reflect the range of disciplines in CALS (Ex: AGRICULTURAL AND NATURAL RESOURCE ETHICS AND POLICY and AGRICULTURAL AND NATURAL RESOURCE LAW). Our goal is for this minor to also reflect the range of disciplines in CALS as we have students throughout the college who seek to complete this minor.
Impact on Other Programs We are not changing the courses required, so there shouldn't be an impact on other programs or departments.
Catalog Copy Yes

Current Catalog description:

Open to all students, the Agricultural Communication minor provides an opportunity to gain a basic understanding of and to develop a skill level for communication techniques in agriculture and natural resources.

Proposed Catalog description:

Open to all students, the Agricultural and Natural Resource Communication minor provides an opportunity to gain a basic understanding of and to develop a skill level for communication techniques in agriculture and natural resources.

No changes are proposed to the required courses.

Cover Sheet: Request 15551

ANS 3079L course revision

Info

Process	Course|Modify|Ugrad/Pro
Status	Pending at CALS - College of Agricultural and Life Sciences
Submitter	Saundra Tenbroeck sht@ufl.edu
Created	12/7/2020 3:13:18 PM
Updated	2/1/2021 3:57:50 PM
Description of request	ANS 3079L is a critical course for our Equine Specialization ANS students as well as Biology specialization ANS students planning to focus on equine practice as a DVM. Two single period lectures and a two period lab would provide a more complete coverage of the material and would better reflect what the course has morphed into. We have departmentally controlled registration for this course and have required completion of ANS 3043 as a prerequisite. It is logical to make this a C designation warranting 3 credit hours and a 4000 level number based on the degree of rigor and the prerequisite. ANS 3043.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Animal Sciences 60090000	Saundra Tenbroeck		1/6/2021
SYLLABUS ANS 4XXXC Relationship of Form to Function.docx CALS CC Checklist ANS 3079L.pdf					1/6/2021 1/6/2021
College	Pending	CALS - College of Agricultural and Life Sciences			1/6/2021
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|Modify for request 15551

Info

Request: ANS 3079L course revision
Description of request: ANS 3079L is a critical course for our Equine Specialization ANS students as well as Biology specialization ANS students planning to focus on equine practice as a DVM. Two single period lectures and a two period lab would provide a more complete coverage of the material and would better reflect what the course has morphed into. We have departmentally controlled registration for this course and have required completion of ANS 3043 as a prerequisite. It is logical to make this a C designation warranting 3 credit hours and a 4000 level number based on the degree of rigor and the prerequisite. ANS 3043.
Submitter: Saundra Tenbroeck sht@ufl.edu
Created: 1/6/2021 12:52:52 PM
Form version: 2

Responses

Current Prefix ANS
Course Level 3
Number 079
Lab Code L
Course Title Relationship of Form to Function in Horses
Effective Term Spring
Effective Year 2022
Requested Action Other (selecting this option opens additional form fields below)
Change Course Prefix? No

Change Course Level? Yes
Current Level 3
Proposed Level 4
Change Course Number? No

Change Lab Code? Yes
Current Lab Code L
Proposed Lab Code C
Change Course Title? No

Change Transcript Title? No

Change Credit Hours? Yes
Current Credit Hours 2
Proposed Credit Hours 3
Change Variable Credit? No

Change S/U Only? No

Change Contact Type? No

Change Rotating Topic Designation? No

Change Repeatable Credit? No

Change Course Description? No

Change Prerequisites? Yes
Current Prerequisites None
Proposed Prerequisites ANS3043 Growth and Development of Farm Animals or (APK 2100C Applied Human Anatomy & APK 2105C Applied Human Physiology)
Change Co-requisites? No

Rationale The course includes significant Anatomy and Physiology. Growth and Development in Farm Animals, a required course in our major, will provide necessary baseline of information to build upon in Relationship of Form to Function in Horses.

CALS Curriculum Committee
Submission Checklist

NOTE: This checklist must be included with all course and certificate submissions.

The checklist below is intended to facilitate course and certificate submissions to the University of Florida Academic Approval Tracking System (https://approval.ufl.edu/). The checklist consists of the most common items that can cause a submission to require changes or be recycled. Contrary to information provided on the UF approval site, the CALS Curriculum Committee requires a syllabus be submitted with each new course or course modification request. Please note that submitters are encouraged to attend the CALS CC meeting at which their item is being reviewed. This allows the submitter to answer any potential questions that may arise that could cause the item to not be approved. Also, be aware that when completing the UCC form the section Description of Request is asking for a brief statement about what you are doing. This is **not** the place for a course description. A statement such as "Proposal of a new undergraduate course" is all that is needed. Please do not submit documents in pdf format. All documents should be submitted in Word to facilitate editing on our end if necessary.

CHECKLIST: PLEASE MARK DONE OR N/A FOR EACH STATEMENT TO INDICATE YOUR COMPLIANCE.

Done It is required when making a submission that you consult your department's representative to the CALS CC. A list of current members can be found on the committee site located at: https://cals.ufl.edu/faculty-staff/committees/.

Done Review the CALS Syllabus Policy. This document can be viewed at the committee site (https://cals.ufl.edu/faculty-staff/committees/) by clicking on the Curriculum Committee – Information & Documents heading and scrolling down to Forms, Checklists, and Other documents. The other items included here are all very helpful when making a curriculum submission. Some will be mentioned in other checklist items below.

N/A Joint course submissions must include both graduate and undergraduate syllabuses and a separate statement outlining the substantial (more than one) differences in assignments between the two courses. These assignments must account for at least a 15% difference in graded material between the two levels. If this is a new course submission both courses must be submitted for approval simultaneously.

Done The Course Description is the catalog copy and cannot exceed 50 words. The course description on the UCC form and in the syllabus must match. Any other information you wish to include needs to be under a different heading such as background or additional information.

Done The course learning objectives must be consistent with Bloom's taxonomy. Please see the following link at the CALS Curriculum site. (https://cals.ufl.edu/content/PDF/Faculty_Staff/cals-course-objectives.pdf). Do not use the words demonstrate or understand when listing learning objectives.

Done The course schedule should be concise and include the appropriate number of weeks in the semester.

N/A All graduate course submissions must include a reading list if a textbook is not required. The reading list should include at least some current readings (within the last 5 years). All readings do not need to be current.

N/A Outside consultations are required if there is a possibility of the proposed course covering material taught in another department or college on campus. There must be a consult form completed by the chair of the department from who you are seeking the consult. Instructors may provide additional consults. The form can be found at: https://registrar.ufl.edu/pdf/uccconsult.pdf.

Done Prerequisite courses are required for 3000 and 4000 level courses. This line of the approval form cannot be "none" or left blank. Junior or senior standing is an acceptable option. A phrase such as "a course in basic biology" is not acceptable.

Done Decimal points must be included in the grading scale if grade cut-offs are based on percentages. While this is not a university policy it is a CALS standard practice to avoid any confusion when final grades for the course are determined.

Done The attendance and make-up policy in a syllabus cannot contradict the university's policy. Do not include any additional wording to this policy. A statement and link regarding this is included in the CALS Syllabus Statements. For the approval process the college suggests a less is more view when it comes to this policy.

Done The most recent version of the CALS Syllabus Statements boilerplate must be included in all syllabuses. This document is included in the CALS Syllabus Policy and can be copied and pasted to the syllabus. Do not use the boilerplate statements from an old syllabus as they are likely to be out of date.

Certificates

If proposing a new undergraduate or graduate level certificate that includes any courses outside of the submitters department a statement regarding any possible impact on those courses needs to be included. An email from the instructor is acceptable. Also, any courses required for the certificate must have permanent prefixes and course numbers.

ANS 3079L
Relationship of Form to Function in Horses
Course Syllabus

Principal Instructor:
Dr. Saundra Ten Broeck 231C Building 459 (352) 392-2789 sht@ufl.edu

Class Meetings:
Horse Teaching Unit Classroom, Tuesdays and Thursdays 8-9th period.

Course Description
ANS 3079L is a two-credit course focused on the principles of conformation and performance evaluation and the relationship of form to function. Consideration of the physiological and environmental factors that influence the development of the equine as an athlete will be explored.

Instructional Objectives
1. Students will gain an appreciation for the unique design of the horse as an athlete.
2. Students will learn to evaluate conformation for correctness and faults that relate to the biomechanics of equine movement.
3. Students will learn basic anatomy and physiology of the equine as a foundation for learning to evaluate and think critically about the horse as an athlete.
4. Students will develop the ability to confidently evaluate several different types, disciplines and events in the horse industry for the purposes of purchasing, marketing, judging, and/or breeding horses.
5. Students will learn to design and evaluate conditioning programs specific to the athletic event for which the horse was selected.

Course Format
This course will consist of lecture, hands-on exercises, handouts, short videos, and practice judging classes. There will be three (3) 100 point exams and a cumulative final exam. Homework assignments will be given throughout the semester and there will be a special problem worth 50 points. Class attendance is highly correlated with course success.

Policy on absences and missed work
Permission for making up missed exams and coursework will be granted only for authorized absences arranged in **ADVANCE** of the absence or in case of emergency.

Grading Breakdown

Three Exams	300 pts
Final Exam	100 pts
Homework	100 pts
Special Problem	50 pts

Grades will be calculated as a percentage of 550 possible points.
There is NO grading curve.

You will have one week after the return of any assignments or exams to resolve any questions. After that, all grades are final.
You should retain all graded items until a final course grade has been assigned.
Extra credit opportunities may become available throughout the semester. Due dates will be strictly adhered to.

Letter grades will be determined by course average as follows:

A = 90.0 – 100%	C = 70-73%
A- = 87-89%	C- = 67-69%
B+ = 84-86%	D+ = 64-66%
B = 80-83%	D = 60-63%
B- = 77-79%	D- = 57-59
C+ = 74-76%	E = <57

Exams:
Exams will consist of 100 points written. These questions can be multiple choice, short answer, matching, or short essay. *Note: Exams may be given in an alternate classroom during regularly scheduled class meeting times.*

Final Exam:
The final exam will be comprehensive and consist of 100 points written. The Final exam will be held **Friday April 30th 8:00 A.M.**

Homework
There will typically be a homework assignment each week that there is not a test. Homework must be submitted in person. If this is not possible then arrangements must be made with the instructor prior to the due date.

Special Problem
The special problem can consist of attending any one of the following activities:

1. Ocala Breeders Sales February 16, March 16 or April 19, 2010
2. State Fair Judging Contest in Tampa on Feb 6, 2010 or State 4-H Judging Contest in Gainesville April 10, 2010
3. Little Everglades International Combined Driving Event Jan 28-31 http://littleevergladesranch.com/Driving_Event.html
4. Florida Horse Festival and Carriage Festival February 19-21 http://www.fcmr.org
5. Live Oak Driving Event March 23-28, 2010 www.cailiveoak.com
6. Other event as approved by instructor.

After attending your selected equestrian activity you must design a conditioning program for a horse in that discipline. A written report about how the evaluation methods we have learned in class might be applied to the event you attended. A written contract must be submitted to the instructor on February 2nd stating the event that you will attend. This is a binding contract and will not be negotiated. Proof must be given that you attended the event such as a marked catalog, show bill, or written note from event coordinator. A separate handout will provide detail for the conditioning program.

Course Outline

January5	Introduction to Course, What Kind of Animal is the Horse?
January 7	Conformation Evaluation
January 12	Conformation Measurements
January 14	The Hoof
January 19	Faults/Blemishes/Unsoundnesses; Tendons & Ligaments
January 21	Bone – Gross Anatomy
January 26	Joints, examine legs
January 28	Leg Dissection
February 2	Leg Dissection – ***Contract Due***
February 4	**Exam 1**
February 9	Saddle Fitting
February 11	Form to Function (Defining Type as it relates to Function)
February 16	Defining Gaits/Defects in Gaits – Amira at HTU
February 18	Evaluating Quality of Movement
February 23	Hunter Under Saddle/ Working Hunter/Hunter Hack
February 25	Western Pleasure
March 2	Western Riding/Cutting
March 4	Reining
March 8-12	**Spring Break**
March 16	Roping/Working Cow Horse/Versatility
March 18	Saddle Type Performance Evaluation
March 23	**Exam 2**
March 25	Exercise and the Respiratory System
March 30	Exercise and the Cardiovascular System
April 1	Exercise as it Relates to Environmental Factors
April 6	Adaptations to Training
April 8	Conditioning Programs
April 13	Evaluating Fitness lab
April 15	Pedigree Analysis - Sire and Dam Lines
April 20	**Exam 3**
April 30	**Final Exam 8:00 A.M.**

The Equine Athlete

ANS 4905

Course Syllabus

Instructors

Dr. Saundra TenBroeck
Anim Sci Bldg, Office 231C
392-2789
tenbroeck@ufl.edu

Dr. Lori Warren
Anim Sci Bldg, Office 210F
392-1957
LKWarren@ufl.edu

Sarah Reed, M.S.
Anim Sci Bldg, Office XXX
392-XXXX
XXX@ufl.edu

Office Hours

By appointment only.
See us after class or email to make an appointment.

Course Description

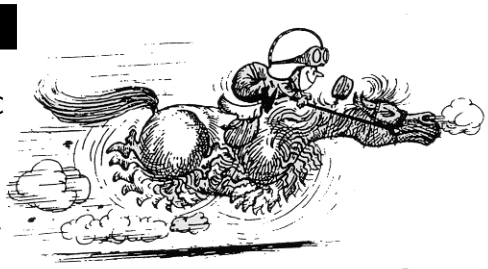
"The Equine Athlete" is an overview of equine anatomy and physiology as they relate to the horse's athletic potential and performance. Consideration of the physiological and environmental factors that influence the development of the equine as an athlete will be explored.

Time & Location

Tues	Wed	Thurs
Per 6	Per 6/7	Per 6/7
12:50 – 1:40 PM	12:50 – 2:45 PM	12:50 – 2:45 PM
Rm 102	Rm 155 or HTU	Rm 155

Course Format

Tuesdays will be lectures. Wednesdays and Thursdays will be a mixture of lectures and labs using live horses, harvested tissues, and other activities to enhance learning.



Course Objectives

- ✓ To gain an appreciation for the unique design of the horse as an athlete.
- ✓ To evaluate conformation for correctness and faults and relate it to the biomechanics of equine movement.
- ✓ To develop a detailed understanding of equine anatomy at the cellular, tissue and systems level.
- ✓ To learn the mechanisms involved in the development and function of muscular, skeletal, cardiovascular, respiratory, nervous, endocrine, renal and support systems in the horse and the response of these systems to training.
- ✓ To develop the ability to design and evaluate conditioning programs specific to the athletic event for which the horse was selected.

Required Textbook

Equine Science, 2nd Ed.
Authors: Pilliner and Davies
Copyright 2004
Blackwell Publishing
ISBN 1-4051-1944-6
Approx. $50.00

Grading Policy

Grade distribution:

Exam 1	100 pts
Exam 2	100 pts
Exam 3	100 pts
Exam 4	100 pts
Assignments	150 pts

Extra credit opportunities may become available throughout the semester.

Grading Scale:

A = 90 – 100 %
B+ = 85 – 89.9 %
B = 80 – 84.9 %
C+ = 75 – 79.9 %
C = 70 – 74.9 %
D+ = 65 – 69.9 %
D = 60 – 64.9 %
E = 59 % or less

- There is NO grading curve.
- You will have one week after the return of any assignments or exams to resolve any questions. After that, all grades are final.
- You should retain all graded items until a final course grade has been assigned.

ACADEMIC HONESTY:

As a result of completing the registration form at the University of Florida, every student has signed the following statement: ***"I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."***

Course Policies and Activities

WebCT

The course website is located on WebCT Vista:

- **http://lss.at.ufl.edu/**
- Login with your Gatorlink ID and password.
- If you have never used WebCT, you need to check your web browser configuration. Information on how to do this is provided on the WebCT login page.

WebCT will contain:

- ✓ Lecture notes *(NOTE: NOT all lectures will have notes available on WebCT)*
- ✓ Assignment descriptions
- ✓ Resource links & articles
- ✓ Announcements
- ✓ Your grades

Attendance Policy

Regular attendance and active participation will be necessary for successful completion of this course.

Valid absences include:

1) Medical emergency *(a written & signed note from a medical doctor is required)*
2) Participation in a UF-sanctioned activity *(a letter from the supporting faculty is required PRIOR to the absence)*
3) Other emergencies or conflicts must be cleared through the instructors.

★ If you miss a class, it is YOUR responsibility to obtain any information announced in class ★

NO cell phones!

Cell phones must be turned completely off during class period.
NO ringing!
NO vibrating!

Appropriate Dress is REQUIRED

You are expected to come to class dressed in a professional manner. Unsafe footwear (flip flops, open-toed shoes) will NOT be allowed. You are also encouraged not to wear anything that exposes lots of "skin." Not only may it be distracting to some, it may be unsafe during lab activities.

Lab Activities

You will be participating in a lab activity approximately once per week. Each activity is designed to supplement and enhance your understanding of lecture material. Labs will consist of live animal evaluations, dissection and study of harvested tissues, DVD/video discussions, guest speakers and other activities. Some labs may have assignments associated with them.

Exams

There will be 4 exams in this course. Exams 1, 2 & 3 will be held during regular class time. Exam 4 will be given during finals week. Each exam will cover lecture and lab material presented since the previous exam.

EXAM DATES:

1. **Thurs, Jan 25**
2. **Tues, Feb 20**
3. **Tues, Mar 27**
4. **Mon, Apr 30**

General Exam Format:

- ✓ Multiple choice
- ✓ Matching
- ✓ True/False
- ✓ Short answer
- ✓ Essay

Assignments

There are three primary assignments in this course:

1. Your Favorite Athlete

Write a 1 to 2 page (typed) paper about your favorite equine athlete. Give some history, accomplishments, & records and explain what made this horse so athletic.

DUE: Tues, Feb 13

2. Muscle Biomechanics

Write a report explaining the muscle biomechanics of a specific athletic maneuver (eg, jumping, sliding stop, spin, piaffe, crow hop, etc.) Specific requirements will be provided at a later date.

DUE: Tues, March 20

3. Conditioning program

Design a training program appropriate for an equine event of your choosing. Specific requirements will be provided at a later date.

DUE: Tues, April 24

★ NO LATE ASSIGNMENTS will be accepted ★

Extra Credit

Attend 3 Equine Events

Attend three different equine athletic events (eg, roping, HITS, combined driving, polo, steeple chase, 3-day event…) and write a 2 to 4 page report (typed) which includes a discussion of the event & the performance objectives (ie, what athleticism is required of the horse?) Various events will be announced weekly in class.

Additional extra credit opportunities may be come available during the semester.

Tentative Schedule*

Week of:	Tuesday	Wednesday	Thursday
Jan 9 – 11	Introduction Defining the Horse	Conformation *★Lab at HTU★* *READING: Ch 14*	Conformation faults blemish,unsoundness
Jan 16 – 18	Gaits, biomechanics	Gaits, biomechanics *★Lab at HTU★*	Gaits, biomechanics Overview of the Cell *READING: Ch 1*
Jan 23 – 25	Tissue Types	Bone *READING: Ch 3*	**EXAM 1**
Jan 30 – Feb 1	Bone	Bone	Bone
Feb 6 – 8	Joints *READING: pp 30-34*	Hoof *READING: pp 61-73*	Tendons & Ligaments *READING: pp 55-61*
Feb 13 – 15	Energy Metabolism *READING: pp 84-90* **DUE: Favorite Athlete**	Leg Dissections *★Lab Room 155★*	Leg Dissections *★Lab Room 155★*
Feb 20 – 22	**EXAM 2**	Energy Metabolism	Muscle *READING: Ch 3*
Feb 27 – Mar 1	Muscle	Muscle *★Lab at HTU★*	Muscle *★Lab Room 155★*
Mar 6 – 8	Muscle Biomechanics	Respiratory System *READING: pp 74-84, 90-97*	Respiratory System *★Lab at Vet School★*
Mar 13 – 15	- - - SPRING BREAK - - - SPRING BREAK - - - SPRING BREAK - - -		
Mar 20 – 22	Neuroendocrine System *READING: Ch 7* **DUE: Muscle Biomech**	Neuroendocrine System	Cardiovascular System *READING: Ch 6*
Mar 27 – 29	**EXAM 3**	Cardiovascular System *★Lab at HTU★*	Cardiovascular System Kidney/Urinary System *READING: Ch 10*
Apr 3 – 5	Kidney/Urinary System	Environmental Adapt. *READING: Ch 9* *★Lab at HTU★*	Environmental Adapt.
Apr 10 – 12	Training Adaptations *READING: pp 297-298*	Exercise Testing *★Lab at HTU★*	Exercise Testing *★Lab at Vet School★*
Apr 17 – 19	Conditioning Programs *READING: pp 294-300*	Conditioning Programs *★Guest speakers★*	Growth
Apr 24 & 25	Pedigree Analysis **DUE: Condition Prog.**	Growth Lab *★Lab at HTU★*	
April 30	**EXAM 4** – Monday, April 30 @ 7:30 – 9:30 AM		

Topics and assignment due dates are subject to change—you will receive at least 1 week notice.

Additional Information

ANS Department Chair

Dr. Geoffry Dahl
Animal Sciences, Bldg 499 Rm 100
Phone: 392-1911

Disability Accommodation

"The Dean of Students Office provides individual assistance to students with documented disabilities based upon the need and impact of the specific disability. There is no requirement for a student to self-identify his/her disability. However, students requesting classroom accommodations must register with the Dean of Students Office in 202 Peabody Hall, 392-1261 (Voice) 392-3008 (TDD)."

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.

UF Counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals which interfere with their academic performance. These resources include:

1. **University Counseling Center**
   301 Peabody Hall, 392-1575
   personal and career counseling
2. **Student Mental Health**
   Student Health Care Center, 392-1171
   personal counseling
3. **Center for Sexual Assault/Abuse Recovery and Education**,
   Student Health Care Center, 392-1161
   sexual assault counseling
4. **Career Resource Center**
   Reitz Union, 392-1601
   career development assistance and counseling
5. **Campus Alcohol and Drug Resource Center**
   202 Peabody Hall, 392-1261
   drug and alcohol counseling
6. **Office of International Studies and Programs**
   123 Tigert Hall, 392-1345
   assistance provided for international students

ANS 4XXXC
Relationship of Form to Function in Horses

Meeting Time:

- Lectures: MW period 5 (11:45am-12:35pm)
- Lab: W periods 8-9 (1:55-3:50pm) or W periods 9-10 (4:05-6:00pm)

Credits: 3

Semester Offered: Spring

Prerequisites:

ANS 3043 Growth and Development of Farm Animals
*or
APK 2100C Applied Human Anatomy *and* APK2105C Applied Human Physiology

Instructor:

Dr. Lori K. Warren
Office: Animal Sciences building, Suite 210, Office 210G
Phone: (352) 392-1957
Email: LKWarren@ufl.edu
Preferred method of communication: Email or CANVAS messaging
Office Hours: M (10:00-11:30am, 1:00-3:00pm), W (10:00-11:30am), or by appointment

Teaching Assistants:

Lab A (W period 8-9): *[insert TA name], [insert TA email]*
Lab B (W period 9-10): *[insert TA name], [insert TA email]*

Course Description: Principles of conformation and performance evaluation of horses. Studies the anatomy, physiology, and dynamics of the horse as it affects athletic potential and performance.

Course Objectives:

1. Differentiate the anatomical and biological features that enable the horse to be an exceptional athlete compared to humans and other species.
2. Appraise the horse's conformation and predict how it will affect the biomechanics of movement and the horse's suitability for different sports.
3. Identify anatomical structures within the organ systems covered and describe the relationship between structure and function.
4. Explain the integration of the equine musculo-skeleton, cardio-respiratory, and thermoregulatory systems during exercise and how these systems adapt to training.
5. Evaluate the horse's physical fitness and design sport-specific conditioning programs to optimize athletic performance.
6. Communicate with peers and horse industry professionals using correct anatomical, physiological, and veterinary medical terminology.

Course Schedule:

Lecture and Laboratory Topics:

WEEK	LECTURE Topic(s)	LABORATORY Topic
1	Amazing Athletes (course introduction) Skeletal Anatomy	Horse and Lab Safety
2	Conformation – balance and symmetry	Skeletal Anatomy
3	Conformation – Limb alignment	Conformation - Balance
4	Gaits and Biomechanics	Gaits and Limb Tracking
5	Bone – growth, physiology, adaptation to exercise	Breed conformation standards
6	Tendons and Ligaments	Conformation Review
7	Exam 1 Joints and Osteoarthritis	Limb Dissections (part 1)
8	Hoof Muscle – Anatomy	Limb Dissections (part 2)
9	Energetics of Exercise Muscle – Physiology	Muscle Anatomy
10	Muscle – Training Adaptations and Disorders	Muscle Biology
11	Cardiovascular System	Exercise Testing
12	Exam 2 Respiratory System	Cardio-Respiratory Systems
13	Thermoregulation	Thermoregulation
14	Evaluating Fitness Principles of Conditioning	Fitness Evaluation
15	Conditioning Programs	eXtreme Obstacle Course Challenge
Finals week	Exam 3	

Important Dates:

- Exam dates: Feb XX, Mar XX, April XX
- Project due dates: Feb XX, Apr XX
- 25-Furlong Derby: Apr XX

Course Textbooks and Reading List:

1. *Recommended* The Horse Conformation Handbook. H. Smith-Thomas. Storey Publishing, LLC (2005) ISBN-13: 978-1580175586
2. *Recommended* The Athletic Horse: Principles and Practice of Equine Sports Medicine, 2nd Edition. D.R. Hodgson, C.M. McGowan, and K.H. McKeever (editors). Saunders (2013) ISBN-13: 978-0721600758
3. *Recommended* Horse Gaits, Balance and Movement. S.E. Harris. John Wiley & Sons Ltd (2005) ISBN-13 : 978-0764587887
4. A variety of scientific and popular press articles will also be available on CANVAS. A partial listing of these articles is below:
    - Bryant, J.O. Heart of the matter: A look at the remarkable equine heart and what can go wrong. The Horse, July 2014.

- Cherdchutham, W., et al. Effects of exercise on biomechanical properties of the superficial digital flexor tendon in foals. Am. J. Vet. Res. 2001; 62:1859-1864.
- Contino, E.K. Management and rehabilitation of joint disease in sport horses. Vet. Clin. Equine 2018: 34:345-358.
- Firth, E.C. The Response of bone, articular cartilage and tendon to exercise in the horse. J. Anat. 2006; 208:513-526.
- Hoyt, D.F., C.R. Taylor. Gait and the energetics of locomotion in horses. Nature 1981; 292:239-240.
- Leste-Lasserre, C. Developmental Orthopedic Disease in Young Horses. The Horse, January 2018.
- Navarra, K., M. Anderson. Podotrochlosis: Navicular is no longer the end of the road for horses. The Horse, February 2019.
- Ortved, K.F. Regenerative medicine and rehabilitation for tendinous and ligamentous injuries in sport horses. Vet. Clin. Equine 2018; 34:359-373.
- Rivero, J.L., E.W. Hill. Skeletal muscle adaptations and muscle genomics of performance horses. Vet. J. 2016; 209:5-13.
- Valberg, S.J. Muscle conditions affecting sport horses. Vet. Clin. Equine 2018; 34:253-276.

Course Fee: $150.00 (covers lab supplies and materials and horse per diem)

Course Website:

All course materials and communications will be hosted on CANVAS. You can access CANVAS at https://elearning.ufl.edu. CANVAS will contain announcements, course notes, supplementary materials (e.g., articles, videos, web links), assignments, and a running tally of your grade.

Course Activities and Assessments:

This course will involve reading, writing, group work, and outside effort. The study of anatomy requires memorization; you will need to study lecture and supplemental materials outside of class and put in consistent effort throughout the semester. To get the most out of this course, take advantage of the opportunities offered, get dirty, and ask questions! Learning is not a spectator sport.

EXAMS: there will be 3 exams, each covering approximately one-third of the course material. Format will consist of multiple choice, true/false, matching, short answer, & essay questions. Total points = 300 (100 pts each × 3 exams).

QUIZZES: short quizzes will be administered each week on Wednesdays at the beginning of your lab period. Format will be multiple choice or matching. Total points = 50 (5 pts each × 10 quizzes).

LAB ACTIVITIES: a 2-hour weekly lab will be held each Wednesday. Plan for most labs to last the entire time. The location of labs will vary (e.g., Horse Teaching Unit, Animal Sciences, Large Animal Clinical Sciences) and will be announced at the beginning of each week. Labs will consist of live animal evaluation, dissection and study of harvested tissues, video discussions, and other activities. Each lab is designed to supplement and enhance your under-standing of lecture material. All labs will have graded worksheets. Appropriate dress is required. Unsafe footwear (open-toed shoes) will NOT be allowed. Boots are preferred, but athletic shoes can suffice. Labs may be messy (eg, tissue

fluids, blood, paint, horse slobber); avoid wearing clothes that you don't want damaged. Horses can exhibit unpredictable behavior that can cause serious bodily harm – pay attention and seek guidance if you are uncomfortable working with them. Total points = 140 (10 pts each × 14 lab worksheets).

PROJECTS: there will be two course projects in this course. A summary of each is provided below; see CANVAS for more details. Total points = 100 (50 pts each × 2 projects).

1. *Relating Form to Function* – Due February XX.
   In this project, you will explore the concept that "form follows function" by choosing your favorite equine athlete and researching what made this horse excel at their sport (e.g., breed, conformation, attitude, and athleticism). You will prepare and submit a 10-minute video on your equine athlete.
2. *Training the Equine Athlete* – Due April XX.
   In this project, you will attend two different equine competitive events of your own choosing during the semester. For each event, you will need to evaluate the athletic demands of each activity and investigate how the horse should be prepared for each type of competition. You will submit a written report (2500 words) on your findings. A calendar of local equine sporting events and exhibitions will be listed under this project on CANVAS.

EXTRA CREDIT – 25-Furlong Derby: What does the horse go through training for competition? Experience it yourself! Train to run 25 furlongs (5 kilometers or 3.1 miles) this semester and earn 20 points extra credit! To earn the extra credit, you must: [1] keep a training journal documenting your training routine; [2] perform at least two fitness assessments during your training program; and [3] complete the 25-furlong Derby on April XX in 34 minutes or less (or an alternative race/sport approved by Dr. Warren). For more information, go to CANVAS > Assignments.

Grading Policy:

Grade Distribution:

40% = Lab Activities, Quizzes and Course Projects
60% = 3 Exams

Grading Scale:

A = 90 – 100 %
B = 80 – 89.9 %
C = 70 – 79.9 %
D = 60 – 69.9 %
E = less than 60 %

Additional Grading Information:

- Scores on individual assignments and exams, as well as a running tally of your cumulative course grade will be available at CANVAS > Grades.
- You have one week after the return of graded items to resolve any questions or disputes you have about the grading. After that, the grade will be final.
- Note there will be no +/- letter grades in this course.

Grades and Grade Points:

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

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/UGRD/academic-regulations/attendance-policies/.

COVID Response:

The laboratory sessions in this course will involve face-to-face instruction to accomplish the student learning objectives. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

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

Lectures will be delivered online using the Zoom platform. To avoid privacy issues with students enrolled in the course, these online sessions will NOT be recorded. Instead, separate lecture videos will be recorded by the instructor and made available to students who are unable to attend live lectures due to COVID-19 absences. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

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. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.

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

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
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Wellness Coaching

- U Matter We Care, www.umatter.ufl.edu/
- *Career Connections Center,* First Floor JWRU, 392-1601, https://career.ufl.edu/.
- Student Success Initiative, http://studentsuccess.ufl.edu.

Student Complaints:

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

ANS 3079L
Relationship of Form to Function in Horses
Course Syllabus

Principal Instructor:
Dr. Saundra Ten Broeck 231C Building 459 (352) 392-2789 sht@ufl.edu

Class Meetings:
Horse Teaching Unit Classroom, Tuesdays and Thursdays 8-9th period.

Course Description
ANS 3079L is a two-credit course focused on the principles of conformation and performance evaluation and the relationship of form to function. Consideration of the physiological and environmental factors that influence the development of the equine as an athlete will be explored.

Instructional Objectives
1. Students will gain an appreciation for the unique design of the horse as an athlete.
2. Students will learn to evaluate conformation for correctness and faults that relate to the biomechanics of equine movement.
3. Students will learn basic anatomy and physiology of the equine as a foundation for learning to evaluate and think critically about the horse as an athlete.
4. Students will develop the ability to confidently evaluate several different types, disciplines and events in the horse industry for the purposes of purchasing, marketing, judging, and/or breeding horses.
5. Students will learn to design and evaluate conditioning programs specific to the athletic event for which the horse was selected.

Course Format
This course will consist of lecture, hands-on exercises, handouts, short videos, and practice judging classes. There will be three (3) 100 point exams and a cumulative final exam. Homework assignments will be given throughout the semester and there will be a special problem worth 50 points. Class attendance is highly correlated with course success.

Policy on absences and missed work
Permission for making up missed exams and coursework will be granted only for authorized absences arranged in **ADVANCE** of the absence or in case of emergency.

Grading Breakdown

Three Exams	300 pts
Final Exam	100 pts
Homework	100 pts
Special Problem	50 pts

Grades will be calculated as a percentage of 550 possible points.
There is NO grading curve.

You will have one week after the return of any assignments or exams to resolve any questions. After that, all grades are final.
You should retain all graded items until a final course grade has been assigned.
Extra credit opportunities may become available throughout the semester. Due dates will be strictly adhered to.

Letter grades will be determined by course average as follows:

A = 90.0 – 100%	C = 70-73%
A- = 87-89%	C- = 67-69%
B+ = 84-86%	D+ = 64-66%
B = 80-83%	D = 60-63%
B- = 77-79%	D- = 57-59
C+ = 74-76%	E = <57

Exams:
Exams will consist of 100 points written. These questions can be multiple choice, short answer, matching, or short essay. *Note: Exams may be given in an alternate classroom during regularly scheduled class meeting times.*

Final Exam:
The final exam will be comprehensive and consist of 100 points written. The Final exam will be held **Friday April 30th 8:00 A.M.**

Homework
There will typically be a homework assignment each week that there is not a test. Homework must be submitted in person. If this is not possible then arrangements must be made with the instructor prior to the due date.

Special Problem
The special problem can consist of attending any one of the following activities:

1. Ocala Breeders Sales February 16, March 16 or April 19, 2010
2. State Fair Judging Contest in Tampa on Feb 6, 2010 or State 4-H Judging Contest in Gainesville April 10, 2010
3. Little Everglades International Combined Driving Event Jan 28-31 http://littleevergladesranch.com/Driving_Event.html
4. Florida Horse Festival and Carriage Festival February 19-21 http://www.fcmr.org
5. Live Oak Driving Event March 23-28, 2010 www.cailiveoak.com
6. Other event as approved by instructor.

After attending your selected equestrian activity you must design a conditioning program for a horse in that discipline. A written report about how the evaluation methods we have learned in class might be applied to the event you attended. A written contract must be submitted to the instructor on February 2nd stating the event that you will attend. This is a binding contract and will not be negotiated. Proof must be given that you attended the event such as a marked catalog, show bill, or written note from event coordinator. A separate handout will provide detail for the conditioning program.

Course Outline

January5	Introduction to Course, What Kind of Animal is the Horse?
January 7	Conformation Evaluation
January 12	Conformation Measurements
January 14	The Hoof
January 19	Faults/Blemishes/Unsoundnesses; Tendons & Ligaments
January 21	Bone – Gross Anatomy
January 26	Joints, examine legs
January 28	Leg Dissection
February 2	Leg Dissection – ***Contract Due***
February 4	**Exam 1**
February 9	Saddle Fitting
February 11	Form to Function (Defining Type as it relates to Function)
February 16	Defining Gaits/Defects in Gaits – Amira at HTU
February 18	Evaluating Quality of Movement
February 23	Hunter Under Saddle/ Working Hunter/Hunter Hack
February 25	Western Pleasure
March 2	Western Riding/Cutting
March 4	Reining
March 8-12	**Spring Break**
March 16	Roping/Working Cow Horse/Versatility
March 18	Saddle Type Performance Evaluation
March 23	**Exam 2**
March 25	Exercise and the Respiratory System
March 30	Exercise and the Cardiovascular System
April 1	Exercise as it Relates to Environmental Factors
April 6	Adaptations to Training
April 8	Conditioning Programs
April 13	Evaluating Fitness lab
April 15	Pedigree Analysis - Sire and Dam Lines
April 20	**Exam 3**
April 30	**Final Exam 8:00 A.M.**