

CALS Curriculum Committee Meeting

October 13, 2017

2:00 p.m.

2025 McCarty Hall D

Members: T. Andenoro (Chair), R. Baldwin, J. Brendemuhl, T. Frazer, D. Gabriel, P. Inglett, S. Johnson, B. Kolaczowski, A. Mathews, C. Moss, G. Nunez, W. Porter, D. Pracht, D. Rowland, S. Sager, S. Turner, A. Warner, L. Warren, S. Wilson, A. Wysocki

Agenda and Index for Materials

Approve Minutes from September 15, 2017 meeting

Dr. Brendemuhl: Update from UCC

Selection of Chair-Elect

Tabled from last meeting

1. HUN 3XXX – Mentoring the Scientific Process (req. #11694)

Comments from 9/15/2017: A motion was made by Scott Sager to table this item. The motion was approved. The submission was tabled because the committee has requested that the submitter or a representative attend the next meeting of the CALS CC (10/13/17 in room 2025 McCarty D at 2:00 pm) to discuss several logistical concerns regarding the course. The committee's main concern revolves around the preparedness of the students to work with middle school aged children.

Graduate New Course Proposal

2. ANS 6XXX – Concepts in Applied Ethology (req. #11832)

Undergraduate Course Change Proposal

3. FYC 3001 – Principles of Family, Youth, and Community Sciences (req. #11884)

Certificate

4. Proposed Academic Assessment Plan for Mapping with Small Unmanned Aerial Systems Undergraduate Certificate (req. #11883)

5. Proposed Gateway to Agroecology Undergraduate Certificate (req. #11899)

Curriculum

6. Proposed Agricultural Education Minor (req. #11687)

Resubmissions

7. MCB 4911 – Supervised Research in Microbiology and Cell Science (req. #11711)
Comments from 8/18/2017: A motion was made by Dr. Johnson to recycle this item back to the department for required updates and resubmission. The motion was approved. A UCC2 submission requires a syllabus. Information on how students are graded and what is required of the student for each potential credit value (0-3) is needed.
8. MCB 4915 – Honors Thesis Research in Microbiology and Cell Science (req. #11710)
Comments from 8/18/2017: A motion was made by Dr. Johnson to recycle this item back to the department for required updates and resubmission. The motion was approved. A UCC2 submission requires a syllabus. Information on how students are graded and what is required of the student for each potential credit value (0-3) is needed.

CALS Curriculum Committee Meeting
September 15, 2017
Submitted by James Fant

Members Present: T. Andenoro, J. Brendemuhl, B. Kolaczowski, A. Lucky, C. Moss, G. Nunez, W. Porter, D. Pracht, S. Sager, S. Turner, A. Warner, L. Warren, A. Wysocki

Substitutes: Erin Alvarez for D. Rowland

Guests: Jason Smith and James Estrada

Call to Order: The College of Agricultural and Life Sciences Curriculum Committee met on September 15, 2017 in Rm. 2025 McCarty Hall D. Dr. Andrea Lucky called the meeting to order at 2:01 p.m.

Previous agenda items and supporting material can be found on the CALS Curriculum Committee homepage under archived information:

http://www.cals.ufl.edu/faculty_staff/curriculum_committee.shtml

Approval of Minutes: A motion was made by Dr. Porter to approve the minutes from the August 18, 2017 meeting of the CALS CC. The motion was approved.

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

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

Syllabus Statements – <http://www.cals.ufl.edu/faculty-staff/docs/policies/CALS%20Syllabus%20Policy%20Final.pdf>

Absences & Make-Ups – <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Update from UCC: Dr. Brendemuhl indicated that the first UCC meeting would not be until September 19 thus there was no update from the UCC.

However, he noted that there would be a curriculum committee developed for UF Quest and that a call for Quest courses for Years 1 and 2 should be forthcoming. Also, although four days were lost due to Hurricane Irma, there would not be an extension to the fall semester calendar. Lastly, he suggested due to the number of recycled courses at the August meeting, that he would be forwarding submissions that are pending at the CALS CC to the respective departmental members of the CALS CC so they may review and correct deficiencies with their departmental submitter prior to the submissions coming to the full committee.

Graduate New Course Proposal

1. ALS 6XXX – Project Team Research (req. #11786)

This submission was reviewed along with item #3.

A motion was made by Dr. Andenoro to approve these items as submitted. The motion was approved.

Undergraduate New Course Proposals

2. HUN 3XXX – Mentoring the Scientific Process (req. #11694)

A motion was made by Scott Sager to table this item. The motion was approved. The submission was tabled because the committee has requested that the submitter or a representative attend the next meeting of the CALS CC (10/13/17 in room 2025 McCarty D at 2:00 pm) to discuss several logistical concerns regarding the course. The committee's main concern revolves around the preparedness of the students to work with middle school aged children.

3. ALS 4XXX – Project Team Research (req. #11787)

Please see item #1.

4. WIS 4XXX – Wildlife Behavior and Conservation (req. #11503)

A motion was by Dr. Porter to recycle this item back to the department for required changes and resubmission. The motion was approved. The layout of the grading scheme on the UCC form needs to be fixed. Also, the possible points earned need to be shown relative to the percentages on the grading scale and decimal points need to be added to the percentages on both the UCC form and syllabus (ex. 936 – 890 points = 94 or higher A, 889 – 843 points = 90 – 93.9% A-, etc.). The CALS CC requires decimal points to be added to percentages to avoid confusion on the part of the student. In regards to the attendance and make-up policies on both the UCC form and syllabus it is best, for submission purposes, to adhere to university guidelines. This is required to avoid any issues that may arise later in the approval process. The link to registrar's site on these policies must be included in the syllabus:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Once a submission has been approved an instructor may include additional class policies as long as they do not go against university policy. The course description in the syllabus must match the description on the UCC form. Any other information you wish to include can fall under a different heading. The most recent version of the academic honesty and UF counseling boilerplate must be included in the syllabus. The statements can be found at: <http://www.cals.ufl.edu/faculty-staff/docs/policies/CALS%20Syllabus%20Policy%20Final.pdf>. Lastly, all external consultations must come from a department chair. The one from Animal Sciences included with the submission will need to also have the department chair approval. It is recommended that you contact your CALS CC departmental representative Dr. Steve Johnson (tadpole@ufl.edu) should you have questions.

Certificates

5. Proposed closure of Food Safety Graduate Certificate (req. #11726)

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

6. Proposed new Forest Health and Resilience Graduate Certificate (req. #11784)

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

Resubmissions

7. WIS 6XXX – Trade in Wild Resources (req. #11665)

Previously submitted 5/12/2017. A motion was made by Dr. Porter to approve this item as submitted. The motion was approved.

8. WIS 6XXX – Wildlife Toxicology: The Ecohealth Perspective (req. #11666)

Previously submitted 5/12/2017. A motion was made by Scott Sager to approve this item as submitted. The motion was approved.

9. WIS 6XXX – Human and Wildlife Conflict (req. #11685)

Previously submitted 8/18/2017. A motion was made by Scott Sager to approve this item as submitted. The motion was approved.

10. WIS 6XXX – Wildlife Forensic Pathology (req. #11741)

Previously submitted 8/18/2017. A motion was made by Dr. Porter to approve this item as submitted. The motion was approved.

The meeting was adjourned at 3:52 p.m.

Cover Sheet: Request 11694

HUN3XXX Mentoring the Scientific Process

Info

Process	Course New Ugrad/Pro
Status	Pending
Submitter	Henken, Robin J henken@ufl.edu
Created	5/19/2017 5:19:29 PM
Updated	9/6/2017 11:17:18 AM
Description of request	Expose students, who have a background in science, to the research process. Students will demonstrate their understanding of the research process by designing and completing an individual science research project and mentoring underserved middle-school students who are working on a science fair project.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Food Science and Human Nutrition 514915000	Percival, Susan S		9/6/2017
Added Syllabus Ment Res Proc 5-19-17.pdf					5/19/2017
College	Pending	CALS - College of Agricultural and Life Sciences			9/6/2017
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 11694

Info

Request: HUN3XXX Mentoring the Scientific Process

Description of request: Expose students, who have a background in science, to the research process. Students will demonstrate their understanding of the research process by designing and completing an individual science research project and mentoring underserved middle-school students who are working on a science fair project.

Submitter: Henken, Robin J henken@ufl.edu

Created: 5/19/2017 5:19:29 PM

Form version: 1

Responses

Recommended PrefixHUN

Course Level 3

Number XXX

Category of Instruction Intermediate

Lab Code None

Course TitleMentoring the Scientific Process

Transcript TitleMentor Scientif Proc

Degree TypeBaccalaureate

Delivery Method(s)On-Campus

Co-ListingNo

Effective Term Fall

Effective YearEarliest Available

Rotating Topic?No

Repeatable Credit?No

Amount of Credit2

S/U Only?No

Contact Type Regularly Scheduled

Weekly Contact Hours 2

Course Description Expose students, who have a background in science, to the research process. Students will demonstrate their understanding of the research process by designing and completing an individual science research project and mentoring underserved middle-school students who are working on a science fair project.

Prerequisites BSC2011 & CHM2046

Co-requisites none

Rationale and Placement in Curriculum This course is an elective. It exposes UF students to the research process and provides an opportunity for them to obtain a community-service learning experience.

Course Objectives

1. Apply knowledge of the research process to design, complete, present and critique research projects.
2. Demonstrate the skills to reach out to underserved middle-school students and interest them in science.

Course Textbook(s) and/or Other Assigned Reading• Society for Science & the Public. International rules for pre-college science research. 2017
<http://www.societyforscience.org/isef/rulesandguidelines>.

- Dahl WJ, Wright AR, Specht GJ, Christman M, Mathews A, Meyer D, Boileau T, Willis HJ, Langkamp-Henken B. Consuming foods with added oligofructose improves stool

frequency: A randomised trial in healthy young adults. J Nutr Sci. 2014;3:1-8. doi:10.1017/jns.2014.6. We will discuss this article in class.

- Regular access to the middle school science class webpage <https://sites.google.com/a/gm.sbac.edu/mrs-charbonnet-s-science/home>. This webpage has the directions for the science fair project and due dates for your middle-school mentee.
- Daily access to E-Learning on Canvas - <http://elearning.ufl.edu/>.

Weekly Schedule of Topics Week 1 Introductions

Discuss syllabus and course objectives
The mentoring process
Negotiating Westwood – how to check into school
Volunteer forms
Dress code
Discuss cultural differences

Week 2 Class pictures and nametags
Icebreakers for mentors (birds and songs)
How to complete a science project successfully (presentation)
Mentoring middle-school science students - survival skills (presentation)
Schedule forms – talk about mentoring 2 students working on a group project
Carpooling discussion
Assign TA groups
View example science project poster boards

Week 3 Discuss science fair forms and rules – basic information
Project designs for research projects (presentation and discussion)
Group presentations on ideas for science fair topic areas (i.e. animal sciences, behavioral & social sciences, biomedical & health sciences, cellular / molecular biology & biochemistry, chemistry, earth & environmental sciences, mathematics & computational sciences, microbiology, physics & astronomy, plant sciences)
Assignments:
• Review science fair rules and be prepared to answer quiz questions and discuss at the next class
Rules and Guidelines: <http://www.societyforscience.org/isef/rulesandguidelines>
Overview: <http://www.societyforscience.org/page.aspx?pid=517>
• Plan a research project (at the 6th grade level, see Westwood Science Fair Project Guide)
• Complete the science fair rules tutorial and use the Rules Wizard for your project by next class
Tutorial: <https://apps2.societyforscience.org/wizard/index.asp>
• Create PowerPoint presentation of project design to be presented weeks 4 and 5.

Week 4 Quiz on science fair forms and rules
Stickman the Middle Schooler
What science fair forms are needed for this project? Case scenarios.
Presentation of project design for research project to peer group
Due: PowerPoint presentations of individual project designs to class. If you have presented your study to the class, you may begin your experiment.
Keep a logbook.
Make sure your science fair forms are completed before you start your project.
Mentee assignments
Prepare parent letters
Icebreakers for mentees

Week 5 Presentations of individual project designs to class

Discuss "lesson plans" for planning what you hope to accomplish with your mentee at each visit

Discuss mentee issues

Assignment:

- Complete science fair forms (1, 1A, 1B, Research Plan and others as needed). Print out and bring to class. Due week 7.

Week 6

Presentations of individual research project designs to class

What do you do with your data - graphing and analyzing your data (presentation and discussion)

Discuss mentee issues

Demonstration on how to make graphs and prepare a bibliography

Assignments:

- Worksheet on graphing and simple statistics. Due week 7.
- Please read the journal article distributed in class and complete the worksheet. We will discuss in class next week. Due week 7
- Complete 1-page review of literature and 3 references. Due week 10.
- Create a small science fair display board poster of completed project Due week 11.

Week 7

Mentors' science fair forms due – please check over as a group.

Discuss mentee presentations and mentee issues

Discussion of journal article and worksheet. Discussion of what makes a good clinical study – CONSORT Checklist

Quiz

Due: Worksheet on graphing and simple statistics and Completed science fair forms

Assignment:

- Prepare mentee presentation for next class. Upload your presentation to Canvas by noon today.

Week 8

Review judging criteria for science fair projects

Due: Mentee presentations

Discuss mentee issues

Assignment:

- Begin work on your display board for your individual research project (Due week 11)

Week 9

Mentee progress check by appointment – no formal class

Quiz

After school help session

Week 10

Mentee presentations

Mentee progress check

Discuss mentee issues

Correct science fair forms from 6th grade classes

Due: 1 page report and bibliography

Week 11

Judging of mentors' individual research projects

Due: Bring your display board and logbook

Optional project notebook due

Discuss Mentee Display Board Workshop that we will have on November 9th

Week 12

Class discussion on issues related to mentee and projects.

Assignments:

- Help mentee finish display board
- Class reflection essay (see handout) Due week 15

Week 13 Mentee Display Board Workshop (Note: the workshop counts toward community service hours)

Optional mentee progress check by appointment with Ms. Charbonnet

Week 14 Presentation of mentee's project and display board

Note: If your mentee does not have a partial or completed display board for their project, then you will need to do a PowerPoint presentation of the project.

Quiz

Assignment:

- Class reflection essay (Due week 15)
- Complete online course evaluations <https://evaluations.ufl.edu>

Week 15 Final Class

Discuss mentee issues

Due: Mentee Project and Display Board Presentations

Class reflection essay

Complete online course evaluations <https://evaluations.ufl.edu>

Links and Policies Attendance is required for all classes and consistent with university policies that can be found at:

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

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

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

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

Campus Helping Resources: Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

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

and the University Police Department: 352-392-1111 or 9-1-1 for emergencies.

- U Matter We Care: Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

- Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/
- Sexual Assault Recovery Services (SARS): Student Health Care Center, 352-392-1161.
- University Police Department: 352-392-1111 (or 9-1-1 for emergencies).
<http://www.police.edu/>
- E-learning technical support: 352-392-4357 (select option 2) or email to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.
- Library Support: <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

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/>

Grading Scheme Mentor (i.e., undergrad) Research Project
Project Design Presentation (PowerPoint)

20

Completed Science Fair Project Forms

20

Written report - a 1-page review of literature (see "How to Write a Report and Report Rubric" handed out in class) and 3 references in a bibliography.

30

Logbook

10

Completed Project Poster Presentation (Display board)

20

Meet My Mentee (i.e., 6th grader) PowerPoint Presentation (use only first name of your mentee)

20

My Presentation of My Mentee's Poster (Display board or if not finished a PowerPoint presentation)

20

Community Service Learning Time/ Activity Logs (20 hour minimum)

200*

Final Reflection Essay

20

Class Attendance 140

A= 450 to 500 points (90% to 100%); B+= 425 to 449 points (85% to < 90%); B= 400 to 424 points (80% to < 85%); C+= 375 to 399 points (75% to < 80%); C= 350 to 374 points (70% to < 75%); D+=325 to 349 points (65% to 70%); D= 300 to 324 points (60% to <65%); E=<275 points (< 60%).

Instructor(s) Bobbi Langkamp-Henken, Ph.D.

Tentative Course Outline and Schedule
HUN 3XXX: Mentoring the Scientific Process
Fall, 2 credits
Wednesday periods 9 and 10 (4:05 to 6 PM)

INSTRUCTORS:

Bobbi Langkamp-Henken, Ph.D.
Food Science and Human Nutrition Department

FSHN Building, Room 309
Office: (352) 294-3721
Email: henken@ufl.edu

Office Hours: Tuesdays 2:30 to 4:00 p.m. (walk-in) and Wednesdays 1:30 p.m. to 3:00 p.m. (by appt. – call or email Mindy at (352) 294-3700; [mindye@ufl.edu](mailto:mindy@ufl.edu) to schedule)

Sara M. Charbonnet, M.Ed., N.B.C.T., Guest lecturer and contact for middle-school experiences
School Board of Alachua County
at Westwood Middle School
3215 NW 15th Avenue
Gainesville, FL 32605

Email: charbosm@gm.sbac.edu
Phone: (352) 955-6718 ext. 264

COURSE DESCRIPTION:

Expose students, who have a background in science, to the research process. Students will demonstrate their understanding of the research process by designing and completing an individual science research project and mentoring underserved middle-school students who are working on a science fair project.

Prerequisites: 1 year of biology and 1 year of general chemistry

COURSE OBJECTIVES - At the conclusion of this course, students will be able to:

1. Apply knowledge of the research process to design, complete, present and critique research projects.
2. Demonstrate the skills to reach out to underserved middle-school students and interest them in science.

COURSE MATERIALS: The following are required readings and resources.

- Society for Science & the Public. International rules for pre-college science research. 2017
<http://www.societyforscience.org/isef/rulesandguidelines>.
- Dahl WJ, Wright AR, Specht GJ, Christman M, Mathews A, Meyer D, Boileau T, Willis HJ, Langkamp-Henken B. Consuming foods with added oligofructose improves stool frequency: A randomised trial in healthy young adults. J Nutr Sci. 2014;3:1-8. doi:10.1017/jns.2014.6. We will discuss this article in class.
- Regular access to the middle school science class webpage
<https://sites.google.com/a/gm.sbac.edu/mrs-charbonnet-s-science/home>. This webpage has the directions for the science fair project and due dates for your middle-school mentee.
- Daily access to E-Learning on Canvas - <http://elearning.ufl.edu/>.

STUDENT EVALUATION AND ATTENDANCE:

Students will be evaluated on assignments, presentations, class participation, and community service hours/log. Attendance is required for all classes and consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

ASSIGNMENTS: In-class and out-of class work will be assigned and graded. Activities include designing, completing, and presenting an individual research project. As part of the course requirements, students will also be asked to apply what they have learned in class to help middle-school science students with a science fair project. All students will be asked to maintain time/activity logs for this community service activity. Students will be asked to complete a minimum of 20 hours of course-related community service. These activities will be done at Westwood Middle School located at 3215 NW 15th Ave. This school is on the corner of NW 34th Street and 1 block south of NW 16th Avenue.

GRADING:

Mentor (i.e., undergrad) Research Project	
Project Design Presentation (PowerPoint)	20
Completed Science Fair Project Forms	20
Written report - a 1-page review of literature (see "How to Write a Report and Report Rubric" handed out in class) and 3 references in a bibliography.	30
Logbook	10
Completed Project Poster Presentation (Display board)	20
Meet My Mentee (i.e., 6 th grader) PowerPoint Presentation (use only first name of your mentee)	20
My Presentation of My Mentee's Poster (Display board or if not finished a PowerPoint presentation)	20
Community Service Learning Time/ Activity Logs (20 hour minimum)	200*
Final Reflection Essay	20
Class Attendance	140

*Additional time can be earned by

- completing a project notebook similar to that required of your mentee. The only exception is that only a 1-page written report with 3 references is required (60 minutes).
- taking quizzes (15 minutes for 100%).
- completing worksheets.
- helping students on Wednesdays after school (record on time sheet).
- participating in class and earning Science Fair Bucks (5 to 10 minutes).
- participating in the Mentee Display Board Workshop (up to 90 minutes)

Attendance and Make-Up Work: Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:

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

A= 450 to 500 points (90% to 100%); B+= 425 to 449 points (85% to < 90%); B= 400 to 424 points (80% to < 85%); C+= 375 to 399 points (75% to < 80%); C= 350 to 374 points (70% to < 75%); D+=325 to 349 points (65% to 70%); D= 300 to 324 points (60% to <65%); E=<275 points (< 60%).

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

<u>DATE</u>	<u>TOPIC</u>
Week 1	Introductions Discuss syllabus and course objectives The mentoring process Negotiating Westwood – how to check into school Volunteer forms Dress code Discuss cultural differences
Week 2	Class pictures and nametags Icebreakers for mentors (birds and songs) How to complete a science project successfully (presentation) Mentoring middle-school science students - survival skills (presentation) Schedule forms – talk about mentoring 2 students working on a group project Carpooling discussion Assign TA groups View example science project poster boards

- Week 3
- Discuss science fair forms and rules – basic information
 Project designs for research projects (presentation and discussion)
 Group presentations on ideas for science fair topic areas (i.e. animal sciences, behavioral & social sciences, biomedical & health sciences, cellular / molecular biology & biochemistry, chemistry, earth & environmental sciences, mathematics & computational sciences, microbiology, physics & astronomy, plant sciences)
- Assignments:**
- Review science fair rules and be prepared to answer quiz questions and discuss at the next class
 Rules and Guidelines: <http://www.societyforscience.org/isef/rulesandguidelines>
 Overview: <http://www.societyforscience.org/page.aspx?pid=517>
 - Plan a research project (at the 6th grade level, see Westwood Science Fair Project Guide)
 - Complete the science fair rules tutorial and use the Rules Wizard for your project by next class
 Tutorial: <https://apps2.societyforscience.org/wizard/index.asp>
 - Create PowerPoint presentation of project design to be presented **weeks 4 and 5.**
- Week 4
- Quiz** on science fair forms and rules
 Stickman the Middle Schooler
 What science fair forms are needed for this project? Case scenarios.
 Presentation of project design for research project to peer group
Due: PowerPoint presentations of individual project designs to class. If you have presented your study to the class, you may begin your experiment.
 Keep a logbook.
 Make sure your science fair forms are completed before you start your project.
 Mentee assignments
 Prepare parent letters
 Icebreakers for mentees
- Week 5
- Presentations of individual project designs to class
 Discuss “lesson plans” for planning what you hope to accomplish with your mentee at each visit
 Discuss mentee issues
Assignment:
- Complete science fair forms (1, 1A, 1B, Research Plan and others as needed). Print out and bring to class. **Due week 7.**
- Week 6
- Presentations of individual research project designs to class
 What do you do with your data - graphing and analyzing your data (presentation and discussion)
 Discuss mentee issues
 Demonstration on how to make graphs and prepare a bibliography
Assignments:
- Worksheet on graphing and simple statistics. **Due week 7.**
 - Please read the journal article distributed in class and complete the worksheet. We will discuss in class next week. **Due week 7**
 - Complete 1-page review of literature and 3 references. **Due week 10.**
 - Create a small science fair display board poster of completed project **Due week 11.**
- Week 7
- Mentors’ science fair forms due – please check over as a group.
 Discuss mentee presentations and mentee issues
 Discussion of journal article and worksheet. Discussion of what makes a good clinical study – CONSORT Checklist
Quiz
Due: Worksheet on graphing and simple statistics and Completed science fair forms
Assignment:
- Prepare mentee presentation for next class. **Upload your presentation to Canvas by noon today.**

Week 8	<p>Review judging criteria for science fair projects</p> <p>Due: Mentee presentations</p> <p>Discuss mentee issues</p> <p>Assignment:</p> <ul style="list-style-type: none"> • Begin work on your display board for your individual research project (Due week 11)
Week 9	<p>Mentee progress check by appointment – no formal class</p> <p>Quiz</p> <p>After school help session</p>
Week 10	<p>Mentee presentations</p> <p>Mentee progress check</p> <p>Discuss mentee issues</p> <p>Correct science fair forms from 6th grade classes</p> <p>Due: 1 page report and bibliography</p>
Week 11	<p>Judging of mentors' individual research projects</p> <p>Due: Bring your display board and logbook</p> <p>Optional project notebook due</p> <p>Discuss Mentee Display Board Workshop that we will have on November 9th</p>
Week 12	<p>Class discussion on issues related to mentee and projects.</p> <p>Assignments:</p> <ul style="list-style-type: none"> • Help mentee finish display board • Class reflection essay (see handout) Due week 15
Week 13	<p>Mentee Display Board Workshop (Note: the workshop counts toward community service hours)</p> <p>Optional mentee progress check by appointment with Ms. Charbonnet</p>
Week 14	<p>Presentation of mentee's project and display board</p> <p>Note: If your mentee does not have a partial or completed display board for their project, then you will need to do a PowerPoint presentation of the project.</p> <p>Quiz</p> <p>Assignment:</p> <ul style="list-style-type: none"> • Class reflection essay (Due week 15) • Complete online course evaluations https://evaluations.ufl.edu
Week 15	<p>Final Class</p> <p>Discuss mentee issues</p> <p>Due: Mentee Project and Display Board Presentations</p> <p>Class reflection essay</p> <p>Complete online course evaluations https://evaluations.ufl.edu</p>

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

OTHER INFORMATION:

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

Campus Helping Resources: Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- **University Counseling & Wellness Center**, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Wellness Coaching

and the University Police Department: 352-392-1111 or 9-1-1 for emergencies.

- **U Matter We Care:** Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.
- **Career Resource Center**, First Floor JWRU, 392-1601, www.crc.ufl.edu/
- **Sexual Assault Recovery Services (SARS):** Student Health Care Center, 352-392-1161.
- **University Police Department:** 352-392-1111 (or 9-1-1 for emergencies). <http://www.police.edu/>

- **E-learning technical support:** 352-392-4357 (select option 2) or email to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.
- **Library Support:** <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

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/>

2

Cover Sheet: Request 11832

ANS6XXX Concepts in Applied Ethology

Info

Process	Course New Grad
Status	Pending
Submitter	Mateescu,Raluca RALUCA@UFL.EDU
Created	9/14/2017 9:25:49 PM
Updated	9/15/2017 8:30:57 AM
Description of request	This is a new graduate course request.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Animal Sciences 514909000	Mateescu, Raluca		9/14/2017
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			9/14/2017
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 11832

Info

Request: ANS6XXX Concepts in Applied Ethology

Description of request: This is a new graduate course request.

Submitter: Mateescu,Raluca RALUCA@UFL.EDU

Created: 9/14/2017 9:25:49 PM

Form version: 1

Responses

Recommended PrefixANS

Course Level 6

Number XXX

Category of Instruction Intermediate

Lab Code L

Course Title Concepts in Applied Ethology

Transcript Title Applied Ethology

Degree Type Graduate

Delivery Method(s) On-Campus

Co-Listing No

Effective Term Earliest Available

Effective Year 2018

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 concepts and methods used to conduct research in the field of applied ethology. Course content includes an overview of mechanisms of animal behavior and approaches to measuring and modeling animal behavior. The focus is on developing skills necessary to conduct, analyze, and interpret research in applied ethology.

Prerequisites CALS major

Co-requisites None

Rationale and Placement in Curriculum Currently there is no course offered that covers mechanisms of animal behavior and approaches to measuring and modeling animal behavior. These topics are fundamental to numerous disciplines.

Course Objectives • Understand basic concepts in the field of applied ethology through discussion of both classic literature and current topics

- Explain and utilize principles of behavior science methodology, such as approaches to experimental design and methods of collecting behavioral data
- Critically analyze journal articles, provide clearly articulated peer review, and effectively communicate ideas in class discussions
- Apply concepts in applied ethology to interdisciplinary problems such as an animal welfare assessment
- Integrate principles covered in class in the development of a conceptual model for a behavior of interest

Course Textbook(s) and/or Other Assigned Reading The following textbook is recommended for this course:

Martin, P. and P. Bateson. (2007) *Measuring Behaviour: An Introductory Guide*. 3rd Edition.
Cambridge University Press.

This course will involve you perform several literature reviews, selecting journal articles for the assignments and journal discussion described on following pages of this syllabus. In addition, we will key articles to facilitate class discussion on important topics.

Assigned readings will be made available electronically. We will discuss the following readings on dates as follows:

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Manning, A., and M. S. Dawkins. 1992. *An Introduction to Animal Behaviour*, 4th Ed., Cambridge University Press, UK (Questions about animal behaviour, pp. 11-16)

March 10 Lehner, P. N. 1996. *Handbook of ethological methods*, 2nd Ed., Cambridge University Press. (A conceptual model of animal behavior, pp. 19-27, 37-45)

March 24 Hughes, B. O., and I. J. H. Duncan. 1988. The notion of ethological 'need', models of motivation and animal welfare. 1988. *Animal Behavior*. 36:1696-1707.

March 31 Fraser, D. 2009. Assessing animal welfare: Different philosophies, different scientific approaches. *Zoo Biology*. 28:507-518.

Gonyou, H. W. 1994. Why the study of animal behavior is associated with the animal welfare issue. *Journal of Animal Science*. 72:2171-2177.

Weekly Schedule of Topics		Week	Date	Lecture material
1	T Jan 8 & Th Jan 10	Introduction to animal behavior		
2	T Jan 15	Asking questions about behavior		
- In-class activity: student behavior topics				
	Th Jan 17	Asking questions about behavior		
- Discussion of assigned reading				
3	T Jan 22 & Th Jan 24	Assignment 1 – Student presentations and discussion		
4	T Jan 29	Answering questions about behavior		
Due: Assignment 1 written summary				
	Th Jan 31	Answering questions about behavior		
5	T Feb 5 & Th Feb 7	Answering questions about behavior		
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Due: Assignment 2 written summary				
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- Discussion of assigned reading				
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	Th Mar 14	Motivation of behavior		
- Discussion of assigned reading				
10	T Mar 19	What is animal welfare?		
- Discussion of assigned reading				
	Th Mar 21	Animal welfare		
Due: Assignment 3 literature review first draft				
11	T Mar 26 & Th Mar 28	Behavior and animal welfare assessment		
12	T Apr 2	Behavior and animal welfare assessment		
	Th Apr 4	Assignment 3 - Animal welfare journal discussions		

- | | | |
|----|----------------------|---|
| 13 | T Apr 9 | Assignment 3 - Animal welfare journal discussions |
| | Th Apr 11 | The peer review process |
| 14 | T Apr 16 & Th Apr 18 | Assignment 4 – Student presentations and discussion |
| 15 | T Apr 23 | Assignment 4 – Student presentations and discussion |
| | Th Apr 25 | No class; Due: Assignment 3 written report |

Links and Policies Academic Honesty

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Health and Wellness

U Matter, We Care:

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

Counseling and Wellness Center:

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

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

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

Academic Resources

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

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

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

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

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

Student Complaints Campus:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

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

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Online Course Evaluation Process

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Grading Scheme ASSIGNMENTS AND GRADING

All activities will be graded according to rubrics posted on CANVAS. The final grade in the course will be assigned based on numeric average, as described below.

Marking scheme:

A	89.5-100%	B+	84.5-89.4%	C+	74.5-79.4%	D+	64.5-69.4%
E	< 59.4						
		B	79.5-84.4%	C	69.5-74.4%	D	59.5-64.4%

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

Activity	Percentage of final grade
Assignment 1: Asking questions about behavior (Written report + oral presentation)	15%
Assignment 2: Answering questions about behavior (Written report + oral presentation)	20%
Assignment 3: Journal discussion (class discussion)	15%

Assignment 4: Modeling a behavioral system
(Written paper + oral presentation) 40%

Class participation
(Involvement in class discussions and activities, quality of questions) 10%

Assignments: There will be four assignments throughout the term. Three assignments will involve both a written paper and an oral presentation, and one assignment will be a student-led journal discussion. These assignments are described in detail in the following pages of this syllabus. Specific instructions for each assignment and the journal discussion will be discussed in detail in class well in advance of the due date, and numeric rubrics will be shared.

Participation: This class is heavily discussion-based, and involvement from all students is a critical component to achieving a well-balanced and interesting discussion. The grade for participation will be determined based on attendance and involvement in class discussions and activities. To achieve a good grade for participation you should plan to come to class familiar with any assigned reading and prepared to discuss your thoughts. On presentations days, be attentive to the other speakers and ask questions of the presenting student.

Instructor(s) Emily Miller-Cushon

ANS 6XXX Concepts in Applied Ethology – Syllabus Spring 2019

Course Title

ANS 6XXX Concepts in Applied Ethology (3 credits)

Course Instructor

Emily Miller-Cushon, Ph.D.

Office: Animal Sciences – Bldg 499, Room 104E

Email: emillerc@ufl.edu

Phone: (352) 448-3748

Office hours

I have an open-door policy. To make sure we will be available, you are welcome to schedule an appointment via email.

Course Description and Objectives

This course introduces concepts and methods used to conduct research in the field of applied ethology. Course content includes an overview of mechanisms of animal behavior and approaches to measuring and modeling animal behavior. The focus is on developing skills necessary to conduct, analyze, and interpret research in applied ethology.

Upon completion of this course, students will be able to:

- Understand basic concepts in the field of applied ethology through discussion of both classic literature and current topics
- Explain and utilize principles of behavior science methodology, such as approaches to experimental design and methods of collecting behavioral data
- Critically analyze journal articles, provide clearly articulated peer review, and effectively communicate ideas in class discussions
- Apply concepts in applied ethology to interdisciplinary problems such as an animal welfare assessment
- Integrate principles covered in class in the development of a conceptual model for a behavior of interest

Time and Location

T,Th 8:30 – 10:20 (2nd and 3rd period)

L.E. "Red" Larson Dairy Science Building (Bldg 499), Room 201

CLASS STRUCTURE

Course Website on Canvas: Our course website can be found through login to CANVAS (<http://elearning.ufl.edu>). I will use CANVAS as the primary means to contact with you any important announcements. Grades and assignment feedback will also be made available to you. Resources, including the course syllabus, assigned and recommended readings, supplementary references, and lesson material, will be posted in CANVAS. The lesson material (slides presented in class, as well as other related material) will be organized by topic within modules.

If you are not yet familiar with using CANVAS, please look at the Canvas 'Getting Started' Guide: guides.instructure.com/m/8470. To make sure you are not missing any announcement, please make sure your CANVAS settings are adjusted as follows:

- Go to your general **Canvas Settings** (upper right corner within CANVAS) > **Notifications** (left menu bar) > **Notification Preferences**: here set to **"ASAP"** for (at least) Announcements.

Lectures: Topics covered in the lecture will be presented with the aid of PowerPoint slides, images, and short video clips. Questions and discussion in the classroom are highly encouraged. The lecture slides posted on CANVAS will not include all details and examples discussed in the lecture, and it is recommended that you add to them while listening in class to make sure they are complete.

In-class discussion: Many topics in the class will be explored through in-class discussion.

Lectures: Topics covered in the lecture will be presented with the aid of PowerPoint slides and short video clips. These topics are outlined in the lecture schedule. Questions and discussion in the classroom are highly encouraged. Lecture slides will be posted on Canvas.

In-class discussion: Many topics in the class will be explored through in-class discussion.

Textbooks and required reading:

The following textbook is recommended for this course:

Martin, P. and P. Bateson. (2007) *Measuring Behaviour: An Introductory Guide*. 3rd Edition. Cambridge University Press.

This course will involve you perform several literature reviews, selecting journal articles for the assignments and journal discussion described on following pages of this syllabus. In addition, we will key articles to facilitate class discussion on important topics.

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ANS 6XXX Concepts in Applied Ethology – Syllabus Spring 2019

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- March 10** Lehner, P. N. 1996. Handbook of ethological methods, 2nd Ed., Cambridge University Press. (A conceptual model of animal behavior, pp. 19-27, 37-45)
- March 24** Hughes, B. O., and I. J. H. Duncan. 1988. The notion of ethological ‘need’, models of motivation and animal welfare. 1988. Animal Behavior. 36:1696-1707.
- March 31** Fraser, D. 2009. Assessing animal welfare: Different philosophies, different scientific approaches. Zoo Biology. 28:507-518.
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		B	79.5-84.4%	C	69.5-74.4%	D	59.5-64.4%		

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

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Absences, Make-up Work, and Late Assignments

Please speak with me as soon as possible if you know you will be absent on a presentation day, as this concerns scheduling. Classroom participation is expected and encouraged and regular attendance of lectures is required to obtain a good participation grade.

If you will have a conflict with submission deadlines for written assignments, please discuss with me in advance. It is expected that all written assignments will be received on or before the stated deadline. Please note that if you miss an assignment deadline without an approved reason, I will deduct 5 % from your grade for every day that the assignment is late.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

CLASS SCHEDULE

Please note that this schedule is subject to change as we move through the term. Any significant changes will be discussed in class in advance of the lecture.

Week	Date	Lecture material
1	T Jan 8 & Th Jan 10	Introduction to animal behavior
	T Jan 15	Asking questions about behavior
2	Th Jan 17	- <i>In-class activity: student behavior topics</i> Asking questions about behavior
		- <i>Discussion of assigned reading</i>
3	T Jan 22 & Th Jan 24	<i>Assignment 1 – Student presentations and discussion</i>
4	T Jan 29	Answering questions about behavior <i>Due: Assignment 1 written summary</i>

ANS 6XXX Concepts in Applied Ethology – Syllabus Spring 2019

	Th Jan 31	Answering questions about behavior
5	T Feb 5 & Th Feb 7	Answering questions about behavior
6	T Feb 12 & Th Feb 14	<i>Assignment 2 – Student presentations and discussion</i>
	T Feb 19	Conceptual models of behavior
7		<i>Due: Assignment 2 written summary</i>
	Th Feb 21	Conceptual models of behavior - <i>Discussion of assigned reading</i>
8	T Feb 26 & Th Feb 28	Learning and cognition
	T Mar 5 & Th Mar 7	<i>Spring break - no class</i>
	T Mar 12	Motivation of behavior
9	Th Mar 14	Motivation of behavior - <i>Discussion of assigned reading</i>
	T Mar 19	What is animal welfare? - <i>Discussion of assigned reading</i>
10	Th Mar 21	Animal welfare <i>Due: Assignment 3 literature review first draft</i>
11	T Mar 26 & Th Mar 28	Behavior and animal welfare assessment
12	T Apr 2	Behavior and animal welfare assessment
	Th Apr 4	<i>Assignment 3 - Animal welfare journal discussions</i>
13	T Apr 9	<i>Assignment 3 - Animal welfare journal discussions</i>
	Th Apr 11	The peer review process
14	T Apr 16 & Th Apr 18	<i>Assignment 4 – Student presentations and discussion</i>
15	T Apr 23	<i>Assignment 4 – Student presentations and discussion</i>
	Th Apr 25	No class; <i>Due: Assignment 3 written report</i>

OTHER IMPORTANT INFORMATION

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

ANS 6XXX Concepts in Applied Ethology – Syllabus Spring 2019

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/honorcodes/honorcode.php>.

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.

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.

Health and Wellness

U Matter, We Care:

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

Counseling and Wellness Center:

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

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies).

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

Academic Resources

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

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

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

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

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

ANS 6XXX Concepts in Applied Ethology – Syllabus Spring 2019

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

Student Complaints Campus:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

Services for Students with Disabilities

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

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

ASSIGNMENT 1 - Asking questions about animal behavior

This assignment will focus on developing questions about animal behavior. As background for this assignment, review in-class discussion and assigned reading on Tinbergen's questions about animal behavior.

- Choose a behavior topic that is relevant to your research or of interest to you
- Select four peer-reviewed journal articles related to your behavior of interest, which each utilize a different approach (addressing each of Tinbergen's questions)

Written assignment (80% of assignment grade)

For each paper, provide the full reference and write a short paragraph describing the study. Answer the following questions:

- What is the research problem?
- What is the research question?
- What is the background and justification for the research question, or how was it developed?
- What approach is used in the study, and how is it used?
- Why do you think this approach was used? How does it contribute to our understanding of the behavior?

Oral presentation (20% of assignment grade)

Prepare a 20 minute PowerPoint presentation.

Describe the behavior topic that you have chosen: who, what, when, where? What is the applied context of the behavior, or why is it of interest in industry or captive environments?

For one of the papers you selected for the written assignment, share your answers to the questions with the class.

Oral presentations will be during class on January 22 & 24.

Written assignment is due on Tuesday, January 29 by the start of class.

ASSIGNMENT 2 – Answering questions about animal behavior

This assignment will focus on experimental design and approaches to studying and measuring behavior.

Written assignment (80% of assignment grade)

You will be assigned two papers. For each paper, answer the following questions:

- What are the objectives and hypotheses?
- Is this study observational or experimental?
- What are the independent variables?
 - Was natural variation used or were the variables artificially manipulated?
 - How were the variables manipulated?
- What are the dependent variables?
 - What were the measurable units?
 - Were the measurable units well defined?
 - How were those units expressed in the results?
- Was there any confounding of variables or were there nuisance variables?
 - Where those variables considered? How were they dealt with?
 - Do you think they affected the internal or external validity of the study?
- What was the experimental design (e.g. one factor, two factor, repeated measure)?
 - What was the experimental unit?
 - What were the sample sizes?
- What sampling methods were used for behavioral data?
 - Were there any limitations to the sampling method chosen?
- Did the experimental design and data collection methods allow testing of the hypotheses, and were the objectives met?
- What do you think were the weaknesses of the experiment?
- How would you improve the experimental design or data collection?

Oral presentation (20% of assignment grade)

For one of the papers you are writing about, prepare a 20 minute PowerPoint presentation for the class.

Provide a brief overview of the topic covered in the paper, and describe the materials and methods. Share your answers to the assignment questions with the class.

Oral presentations will be during class on February 12 & 14.

Written assignment is due on Tuesday, February 19 by the start of class.

ASSIGNMENT 3 – Animal welfare journal discussion

For this assignment, you will work in pairs and lead a class discussion surrounding a paper of your choice. Select a peer-reviewed journal manuscript which focuses on an animal welfare problem, and behavioral approaches to address it (for example, behavioral indicators of welfare, or behavioral approaches to improve welfare). Please have me approve your paper at least one week before your discussion date. You will provide your paper to the class for reading in advance of your discussion date.

For your class discussion, please prepare questions to guide the class session. Your questions should encompass the following points:

- What is the welfare issue, and how does it relate to our definition of animal welfare?
- Explain connections explored between animal behavior and animal welfare in this study
- How can conclusions drawn from this study be applied to improve animal welfare?
- Discuss ethics of animal use in this study: were any of the study procedures likely to impair welfare? Was animal use approval stated?
- Discuss briefly limitations of the study and critique the experimental design

Your grade will depend on the quality of the discussion points you have prepared for class, and preparedness in guiding the class through the discussion.

As a *participant* (i.e. on days when your classmates are leading the discussion) your involvement will contribute to your participation grade.

Journal discussions will be during class on April 4 & 9.

ASSIGNMENT 4 – Modeling a behavioral system

This assignment will combine what you have learned about asking and answering questions about behavior in the development of a conceptual model and experiment for a behavior system of interest. Your assignment will consist of: a review of the literature concerning your behavior topic, a conceptual model of your behavior, and a proposal for an experiment.

Written assignment (80% of assignment grade)

- Prepare a review of the scientific literature concerning your behavior topic.
 - What do we know about why, when, and how it occurs?
 - Discuss internal mechanisms and external stimuli that elicit the behavior, as well as other factors which influence it (e.g. genetic effects, development). What are the consequences of the behavior?
 - The content and focus of your literature review will depend on your particular behavior topic.
 - Your literature review draft must be submitted for feedback by March 24
- After completing your literature review, incorporate information you have collected into a visual representation of what we know about the causation of the behavior.
 - Refer to conceptual models discussed in class as well as assigned reading (from March 10 and March 24). You may either adapt an existing model or develop an original model to suit your behavior topic.
- Identify gaps in our knowledge about the behavior and develop and discuss some questions that remain to be answered.
- Choose one of the questions you have identified and design an experiment to answer that question.
 - Describe the objectives and hypotheses
 - Explain how you would collect and analyze the data

Oral presentation (20% of assignment grade)

Prepare a 25 minute mini-lecture (using PowerPoint if you wish) providing an overview of what your written presentation will cover.

Literature review drafts should be submitted for feedback by March 21.

Oral presentations will be during class on April 16, 18, & 23.

Final written papers are due on Thursday, April 25 by the end of the day.

Cover Sheet: Request 11884

Removal of prerequisites to FYC3001

Info

Process	Course Modify Ugrad/Pro
Status	Pending
Submitter	Ivey, Kathryn Beaty kbeaty@ufl.edu
Created	9/27/2017 12:53:15 PM
Updated	9/27/2017 1:16:01 PM
Description of request	This request is to remove the required 30 credit minimum prerequisite from FYC3001. The FYCS Undergraduate Curriculum committee feel there is not sufficient reasoning for requiring 30 credits as this is an introductory course to the major.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Family, Youth and Community Sciences 514932000	Irani, Tracy Anne		9/27/2017
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			9/27/2017
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 11884

Info

Request: Removal of prerequisites to FYC3001

Description of request: This request is to remove the required 30 credit minimum prerequisite from FYC3001. The FYCS Undergraduate Curriculum committee feel there is not sufficient reasoning for requiring 30 credits as this is an introductory course to the major.

Submitter: Ivey, Kathryn Beaty kbeaty@ufl.edu

Created: 9/27/2017 12:53:15 PM

Form version: 1

Responses

Current PrefixFYC

Course Level3

Number 001

Lab Code None

Course Title Principles of Family, Youth and Community Sciences

Effective Term Spring

Effective Year 2018

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?No

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

Change Course Description?No

Change Prerequisites?Yes

Current PrerequisitesRemove: Prereq: 30 credits or more.

Proposed PrerequisitesNONE

Change Co-requisites?No

RationaleThere are no co-requisites

Cover Sheet: Request 11883

Mapping with Small Unmanned Aerial Systems Undergraduate Certificate AAP

Info

Process	AAPs/SLO New/Change Grad/Pro
Status	Pending
Submitter	Houder, Sandra shouder@ufl.edu
Created	9/27/2017 10:02:14 AM
Updated	9/28/2017 2:50:09 PM
Description of request	First time AAP submission for approval.

Actions

Step	Status	Group	User	Comment	Updated
Department	Transferred	CALS - Agricultural and Life Sciences - General 514903000	Garfield, Wanda	Transferred to CALS - Forest Resources and Conservation 51494600 per Sandra Houder's request.	9/28/2017
Added UAU AAP.docx					9/27/2017
Department	Approved	CALS - Forest Resources and Conservation 514946000	Baker III, Terrell T		9/28/2017
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			9/28/2017
No document changes					
Academic Assessment Committee					
No document changes					

SLO-AAP|New for request 11883

Info

Request: Mapping with Small Unmanned Aerial Systems Undergraduate Certificate AAP

Description of request: First time AAP submission for approval.

Submitter: Houder, Sandra shouder@ufl.edu

Created: 9/27/2017 10:02:15 AM

Form version: 1

Responses

Name of MajorForest Resources & Conservation

CollegeAgricultural and Life Sciences

Effective Term Earliest Available

Effective Year Earliest Available

Request TypeNew Certificate Academic Assessment Plan

Compliance AssistThe AAP has not been submitted into Compliance Assist.

School of Forest Resources & Conservation

Undergraduate Certificate in Mapping with Small Unmanned Aerial Systems

Mission Alignment

The SFRC is part of the University of Florida's Institute of Food and Agricultural Sciences with four missions: undergraduate education, graduate education, research and extension. Our programs provide: (1) a rich personal educational experience for students; (2) new discoveries and applications that enrich lives, communities and natural resources; and (3) lifelong learning opportunities for professionals, policy makers, landowners, youth and the general public. The Undergraduate Certificate in Mapping with Small Unmanned Aerial Systems focuses on the use of UASs as a geospatial data-acquisition tool. It is well-suited for students studying geomatics, as well as other disciplines which require high resolution geospatial information such as agriculture, forestry, wildlife management, mining, infrastructure planning and monitoring, and disaster management. It supports our mission by providing education to undergraduate students in a growing field that is changing and/or augmenting the way users from many disciplines collect valuable geospatial information.

Student Learning Outcomes

At the conclusion of the Certificate program courses, students will be able to:

1. Describe and discuss the history, evolution, and essential components of geospatial data acquisition and processing using UAS to include the aerial platform, sensor suite, and supporting systems.
2. Identify and discuss the main applications of UAS geospatial products.
3. Examine and critique the critical aspects of collecting geospatial data using UAS.
4. Calculate, test, assess, and report airborne and ground control methods used in geospatial applications of UAS.
5. Construct geospatial products from raw UAS data using modern processing methods.

Assessment Timeline

Direct assessment of the Student Learning Outcomes is conducted in SUR 4501C, SUR 4940C, and SUR 4376 for the Undergraduate Certificate in Mapping with Small Unmanned Aerial Systems.

SLO/ Course	SUR 4501C Foundations in UAS Mapping	SUR 4940C Practicum in UAS Mapping	SUR 4376 Geospatial Applications of UASs
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1	Final Presentation (Project Presentation)		Term Project
2			Discussion Board
3	Final Presentation (Project Presentation)	Final Paper (Deliverables)	Exam(s)
4	Final Exam + Project Assignments		
5	Processing Project Assignments	Final Presentation (Poster)	

Indirect assessment as described below will be conducted during the final term of the student's pursuit of the Graduate Certificate.

Assessment Cycle

Student Learning Outcomes are assessed for students in the program during course in spring (SUR 4501C), summer (SUR 4940C), and fall (SUR 4376).

Assessment:	Direct assessments in April, August, and December Indirect assessment varies by student (final term)
Analysis and Interpretation:	January-February
Improvement Plans:	February
Reporting:	September

Methods & Procedures

Student Learning Outcomes are assessed using: the Processing and Analysis Reports, Exam(s), and a Final Presentation in SUR 4501C; a Final Report, and Final Presentations in SUR 4940C; and Exam(s), a Term Project, and Discussion Board Posts in SUR4376.

Assignment descriptions:

SLOs	Assignment	Course	Description
3	Final Paper (Deliverables)	SUR 4940C	As the course progresses, students are required to submit several intermediate products, such as: flight plans, ground control plan and coordinates, point cloud, orthophoto, and analysis. The aggregated documents serve as the Final Paper reporting on the deliverables.

5	Final Presentation	SUR 4940C	Each student is required to complete a POSTER which summarizes the methodology, technology, analysis and results achieved using both a vertical-take-off-and-landing (VTOL) and fixed-wing UAS carrying lidar, multi-spectral and RGB sensors. Students are required to evaluate their results and compare these with conventional approaches. Students give a short poster presentation on the final day of class.
4	Exam(s)	SUR 4501C	One to two quizzes covering the main principles, concepts and content of the course topics are done on-line outside of class. These are open-book.
1, 3	Final Presentation	SUR 4501C	Each student is given 10 minutes to present a summary of one of the topics or projects completed during the semester. The presentation should include a brief summary of the objective, methodology, data processing, analysis, results and conclusion(s) reached.
5	Processing Project Report	SUR 4501C	Processing and Analysis Reports are assigned and due each week associated with multiple field sessions covering facets of UAS mapping.
1	Term Project	SUR 4376	The term project is an instructor-approved UAS-related subject, and may be a research paper, a video, a comprehensive literature review, or some other approved format. Throughout the semester, the student will provide milestone reports on their project, each of which will be graded and returned with accompanying guidance from the instructors. At the end of the semester, students will prepare a brief presentation of their project.
2, 3	Discussion Board	SUR 4376	Students are evaluated based on thoughtfully contributing to the class discussions and message board. Following a preparatory presentation, students identify and prioritize relevant questions for the subsequent guest speaker. Asynchronous students are expected to participate in the discussion via the website message board
3	Exam(s)	SUR 4376	One to two online Exams/Quizzes will be composed of questions related to the guest lectures and the assigned reading material.

In addition to these direct assessments, students will be given a self-reflective survey to indirectly assess their perceptions of learning and confidence relative to intended outcomes. This assessment is triggered by the individual application to receive the Graduate Certificate at the end of the program. The surveys will be administered through Qualtrics with the option of anonymity, and collected by Sandra Houder.

Data obtained through both direct and indirect assessments will be compiled and reviewed by the online programs office, Distance Education Committee, and Graduate Programs Committee in the School of Forest Resources & Conservation. Weaknesses identified and/or changes needed will be implemented directly and promptly via these groups.

Assessment Oversight

Name	Departmental Affiliation	Email	Phone
Rhiannon Pollard, Manager, Online Programs	SFRC	rhiannon-pollard@ufl.edu	273.0184
Sandra Houder, Academic Support	SFRC	shouder@ufl.edu	846.0146

Cover Sheet: Request 11899

Gateway to Agroecology

Info

Process	Certificate New Ugrad/Pro
Status	Pending
Submitter	Martin,Theresa M tmoore72@ufl.edu
Created	10/5/2017 12:38:17 PM
Updated	10/5/2017 1:12:09 PM
Description of request	We've had a steady increase in the number of students who are interested in Agroecology but lack a degree in the sciences or the appropriate science coursework to immediately begin a master's program. This certificate gives students the ability to complete the most appropriate courses for preparation to join the Master's in Agroecology at UF.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Agronomy 514908000	Gilbert, Robert A		10/5/2017
No document changes					
College	Pending	CALS - College of Agricultural and Life Sciences			10/5/2017
No document changes					
Office of Institutional Planning and Research					
No document changes					
University Curriculum Committee					
No document changes					
Office of the Registrar					
No document changes					
OIPR Notified					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
Academic Assessment Committee Notified					
No document changes					

Certificate|New for request 11899

Info

Request: Gateway to Agroecology

Description of request: We've had a steady increase in the number of students who are interested in Agroecology but lack a degree in the sciences or the appropriate science coursework to immediately begin a master's program.

This certificate gives students the ability to complete the most appropriate courses for preparation to join the Master's in Agroecology at UF.

Submitter: Martin,Theresa M tmoore72@ufl.edu

Created: 10/5/2017 12:38:17 PM

Form version: 1

Responses

Certificate Name Gateway to Agroecology

Transcript Title Gateway to Agroecology Certificate

Credits9

LevelBaccalaureate

CIP Code 01.1102

Degree ProgramAgronomy

Effective Term Spring

Effective Year2018

Certificate Description Gateway to Agroecology provides an opportunity to students with no science background to obtain foundational information required to enter an Agroecology MS program.

Requirements for Admission Students who hold a Bachelor's degree from an accredited institution.

Requirements for Completion Core (9 credits):

SWS 3022 (3) Introduction to Soils in the Environment Letter Graded

ALS 4154 (3) Global Agroecosystems Letter Graded

PLS 3004C (3) Principles of Plant Science Letter Graded

Rationale and Place in Curriculum More students are expressing interest in continuing their education opportunities with a MS in Agroecology, but do not currently hold a degree in the sciences. This certificate will provide the appropriate courses to transition into our MS Agroecology program, while providing additional off-book revenue for the department.

Students that have not completed the prerequisite courses required will be reviewed by advisors to determine appropriate action for the student to take.

Student Learning Outcomes Student Learning Outcomes and Assessment types are as follows:

ALS 4154

SLO

1. Describe and understand global agricultural production systems.
2. Explain and provide examples of agricultural production issues from environmental, economic, and societal perspectives.
3. Apply the knowledge gained in this course to identify emerging agricultural production systems.

ASSESSMENT

1. 3 online exams through Canvas. 25 points each = 75 points total
2. Class participation will consist of weekly discussions of assigned scientific readings on

advanced topics = 25 points total

PLS3004C

SLO's

1. Apply the theoretical knowledge covered in the course to production situations and make scientifically sound recommendations.
2. Understand management practices (e.g. soil, water, nutrients, rotations, crop and variety selection, overall plant production system) and interpret how they affect plant production.
3. Formulate hypotheses about the processes that impact plant growth and develop and propose experiments that could be developed to test hypotheses based on the scientific method.
4. Communicate in both oral and written forms about key scientific concepts related to plant anatomy, plant genetics, plant physiology, soils and crop production practices to different audiences to inform them about issues of concern related to agricultural production.
5. Assess future agricultural production needs and opportunities to identify potential career paths in the agricultural sciences.

ASSESSMENT

1. Assignments (70%): Assignments will be given regularly in class and for each module. To supplement course content and apply concepts learned in class, every student will complete a total of five (5) service hours related to the Plant Sciences at an approved location before the end of the semester, and complete the Service Hours Evaluation Assignment.
2. Participation (5%):
3. Project (25%): 2 projects will be completed: Individual Plant Science Profile and Group Plant Challenge Project

SWS3022

SLO

1. Content: Demonstrate competence in the terminology, concepts, and methodologies
2. Communication: communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.
3. Critical Thinking: analyze information carefully and logically from multiple perspectives using discipline specific methods, and develop reasoned solutions to problems.

ASSESSMENT

Ongoing communication evaluation, content exams and multiple choice or true/false quizzes, discussions and assignments which incorporate fundamental concept knowledge and computations relevant to course material. Computation, analysis and application of data/results to issues related to soil management will assess the critical thinking skills.

6

Cover Sheet: Request 11687

Agricultural Education Minor

Info

Process	Minor New/Close Ugrad
Status	Pending
Submitter	Trammell, Rebecca E rtrammell@ufl.edu
Created	5/10/2017 1:49:25 PM
Updated	10/4/2017 3:37:00 PM
Description of request	To add the agricultural education minor

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Agricultural Education and Communication 514926000	Myers, Brian E		10/4/2017
Added Catalog Copy Ag Ed minor.doc					5/10/2017
College	Pending	CALS - College of Agricultural and Life Sciences			10/4/2017
No document changes					
AP for Undergraduate Affairs Notified					
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|New for request 11687

Info

Request: Agricultural Education Minor

Description of request: To add the agricultural education minor

Submitter: Trammell, Rebecca E rtrammell@ufl.edu

Created: 5/10/2017 1:49:25 PM

Form version: 1

Responses

Existing Degree Program Name Agricultural Education & Communication

CIP Code 13.1301

Existing Minor(s) Agricultural Communication

Extension Education

Leadership

Proposed Minor Name Agricultural Education

Proposed Transcript Title (Maximum 50 characters) Agricultural Education

Code MAE

Credits 15

Number of Students 25

Effective Term Earliest Available

Effective Year Earliest Available

Percentage of Credits Available Fully Online <50%

Percentage of Credits Available Off-Campus 50% or more

Rationale and Place in Curriculum There is a severe shortage of school-based agricultural educators coupled with the state's requirement for individuals who hold a bachelor of science degree to enter teaching agriculture on a temporary teaching certificate. There is no known overlap with any other existing minors as no minor focuses on agricultural education in public schools.

Impacts on Other Programs There are no known negative impacts to degree programs in other departments as the coursework required for this minor is housed in the same department. A positive impact is the broadening of potential employment in agricultural education to CALS students in other majors.

AGRICULTURAL EDUCATION MINOR

Agricultural Education

Hours: 15 credits

College of Agricultural and Life Sciences

The agricultural education minor supplements a student's academic major and prepares students for careers in school-based agricultural education and other agricultural outreach programming. The minor offers course work in formal educational methods, curriculum design, and program planning for youth programs.

With adviser approval, all undergraduates in the college are eligible for this minor. Students in other colleges can also enroll with approval of the Department of Agricultural Education and Communication.

Required Courses:

- AEC 4200 Teaching Methods in Agricultural Education (3 credits)
- AEC 4202 Curriculum Development and Assessment Techniques in Emerging Agricultural Technologies (3 credits)
- AEC 4228 Laboratory Practices in Teaching Agricultural Education (3 credits)
- AEC 4323 Development and Philosophy of Agricultural Education (3 credits)
- AEC 4504 Curriculum and Program Planning for Agricultural Education (3 credits)

Cover Sheet: Request 11711

MCB4911: Supervised Research in Microbiology and Cell Science change from S/U to graded course

Info

Resubmission

Process	Course Modify Ugrad/Pro
Status	Pending
Submitter	Oli,Monika moli@ufl.edu
Created	6/15/2017 10:23:49 AM
Updated	9/18/2017 8:37:16 PM
Description of request	Change Supervised Research in Microbiology and Cell Science from S/U to graded course

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Microbiology and Cell Science 514910000	Triplett, Eric		6/15/2017
No document changes					
College	Recycled	CALS - College of Agricultural and Life Sciences	Brendemuhl, Joel H	Recycled per CALS CC. Please see minutes from CALS CC meeting 8/18/17.	8/31/2017
No document changes					
Department	Approved	CALS - Microbiology and Cell Science 514910000	Triplett, Eric		9/18/2017
Replaced Syllabus MCB4911 v2 9-17.docx					9/18/2017
Added Syllabus MCB4911 v3 9-17.docx					9/18/2017
College	Pending	CALS - College of Agricultural and Life Sciences			9/18/2017
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					

Step	Status	Group	User	Comment	Updated
Catalog					
No document changes					
College					
Notified					
No document changes					

Course|Modify for request 11711

Info

Request: MCB4911: Supervised Research in Microbiology and Cell Science change from S/U to graded course

Description of request: Change Supervised Research in Microbiology and Cell Science from S/U to graded course

Submitter: Oli,Monika moli@ufl.edu

Created: 6/15/2017 10:23:49 AM

Form version: 1

Responses

Current PrefixMCB

Course Level4

Number 911

Lab Code None

Course Title Supervised Research in Microbiology and Cell Science

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?No

Change Course Title?No

Change Transcript Title?No

Change Credit Hours?No

Change Variable Credit?No

Change S/U Only?Yes

S/U Only StatusChange from S/U Only

Change Contact Type?No

Change Rotating Topic Designation?No

Change Repeatable Credit?No

Change Course Description?No

Change Prerequisites?No

Change Co-requisites?No

RationaleOur student enrollment has dropped since Supervised Research in Microbiology and Cell Science was changed to S/U. The department decided to change the research experience to a graded course.

MCB 4911 Supervised Research in Microbiology and Cell Science

Catalog Description:

Credits: 0 to 3; can be repeated with a change in content up to 6 credits.

Firsthand, authentic research in microbiology and cell science under the supervision of a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

Credits: 0-3

One credit hour requires 3 hrs./week in the lab.

Maximum credits for MCB4011 is 6CR total

If you previously registered for supervised research in any other department (prefix) such as BMS 4905 (11), CHM 4905 (11), ZOO 4905 (11), IDH 4905 (11), the credits earned will be included in the 6 credit maximum allowed for undergraduate research. Since Fall, 2012 the College of Medicine has required all students to register under BMS 4905 (11). Microbiology majors may do so but we recommend a maximum of 2 credits per semester and a total of 06 during the undergraduate degree. Please talk to your individual mentors in that college to verify the course they will approve you for.

Pre-requisites and Co-requisites: undergraduate research mentor permission; microbiology majors only. The contract at the end of this syllabus has to be completed, signed and submitted to the academic advisor during registration.

Students must be a Microbiology and Cell Science major and have a minimum GPA of 3.0 in order to enroll in MCB 4911. The student must complete this form in its entirety each semester of registration and obtain the appropriate signatures and then submit the form to the academic advisor in 1047 MCSB for registration. Research must be conducted in a research laboratory setting. Clinical research is inappropriate and not permitted. NOTE: Research credit hours may not be utilized for fulfillment of required Microbiology Department elective credit hours. Students may not register for this course if they are receiving any form of financial compensation for the research.

Instructor Information:

Dr. Graciela L Lorca

Office: Genetics Institute, Room 307

glorca@ufl.edu

Office hours: Day(s), time(s)

Graduate or Post-doctoral Student Research Mentor: (if applicable)

Name, Office location, Telephone number, Email address

Course Objectives: After completion of this course, the student will be able to

1. Gain hands-on experience with microbiology and molecular biology techniques in the context of a research project
2. Complete University Biosafety and Chemical safety training (as applicable to research lab/project) and take proper safety precautions in the laboratory, if relevant to the project
3. Search the literature
4. Properly keep an accurate record of research performed and document findings in a lab research notebook
5. Understand and implement the principles of experimental design (i.e. use of controls, technical and biological replicates, statistical considerations) and research ethics.
6. Perform data analysis, interpretation of experimental results, and/or bioinformatics in the context of research project.
7. Write a research report and communicate research findings to a group of scientific peers.
8. Work in a team environment, if relevant to the project and conduct herself/himself responsibly and ethically in research

The student will have fully participated in the research process with a desirable outcome of a final written report that synthesizes data collected or gathered and evaluates the hypothesis under investigation.

Textbooks/Required Materials:

There is no required text in this course. If appropriate to the project, the student may be required to purchase a laboratory notebook and is encouraged to consult with their research adviser for recommendations on the style of notebook to use. Students should also consult in advance with their research adviser on the necessity of owning a calculator, laptop computer, etc. in order to perform their project tasks.

Recommended reading includes the following or comparable works on the same topics:

- Responsible Conduct of Research, National Science Foundation, available online at <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>.
- On Being a Scientist: Responsible Conduct in Research, 2nd Edition, National Academy Press, 1995. Available at no cost at <http://www.nap.edu/readingroom/books/obas>.
- Avoiding Plagiarism Guide, George A. Smathers Marston Science Library, available online at <http://www.uflib.ufl.edu/msl/07b/studentplagiarism.html>.
- The Craft of Scientific Writing, 3rd Edition, by Michael Alley (1996), Springer-Verlag, NY, NY.
- The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid, by Michael Alley (2002), Springer-Verlag, NY, NY.

Attendance policy/lab participation:

Attendance and participation in research lab activities as agreed to between faculty mentor and student. Criteria for this part of the final letter grade (to be specified in research contract) may include things such as satisfactory completion of experiments/data analysis, participation in lab meetings, participation in lab journal clubs, scheduled meetings with faculty mentor, professionalism, etc.

Students conducting undergraduate research are expected to exercise a significant degree of autonomy in their work, completing research tasks with relatively little direct oversight from their research adviser. Nevertheless, the student should dedicate a minimum number of hours on their project that is consistent with the total credit hours sought for the experience. Besides the minimum expectations outlined in this section of this syllabus, the faculty adviser may also have additional expectations for participation, including attendance at group meetings, individual meetings, etc.

0 Credit Hours: Students can enroll in this course for 0 credit hours. This situation would be preferred by students who are approaching a maximum number of credit hours toward their degree or who are unable to cover the cost of tuition for these credits. Students registering for 0 credit hours should carefully discuss with their faculty adviser the time expectations for completion of the requirements of the class, and these expectations should be clearly articulated on the Undergraduate Research Contract.

NOTE: If the student is only enrolled in 0 credit hours of MCB 4911 in a given semester with no other courses, they will be charged for 1 credit hour of tuition and fees.

1-3 Credit Hours: Students are expected to devote a minimum of three hours per week of actual work in this class for each credit in which they are enrolled. Students can enroll in a total of 6 credit hours of this course during their undergraduate study at UF. Students should carefully discuss with their faculty adviser the time expectations for completion of the requirements of the class, and these expectations should be clearly articulated in the Undergraduate Research Contract.

NOTE:

- Fall and Spring Semesters: You can register for 0-3 credits. 1 credit = 3hrs. per week in the lab. (16 weeks total for one semester) Students may register for no more than **3 credits maximum per semester. However, we recommend a maximum of 2 credits per semester so that you can spread out your research for credit to at least 3 full semesters.**
- Summer C Semester: 1 credit – 4 hrs. per week in the lab. (12 weeks total for Summer C). Students may register for no more than 2 credits for Summer C (department policy).

- Summer A or Summer B – 1 credit = 6 hrs. per week in the lab. (6 weeks total for A and 6 weeks for B). Students may register for no more than 1 credit for Summer A or 1 credit for Summer B. If a student is planning to do undergraduate research for the entire summer, they should register for Summer C.

The policies for allowable absences and make-up work follow the university attendance policies: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Supplies:

Research supplies, including laboratory notebook and personal protective equipment, will be provided by the faculty mentor's research program.

Research lab notebook:

All MCB4911 students are expected to document their research findings in a research lab notebook (either electronic or hard copy, as stipulated by the faculty mentor). Unless specified otherwise by the faculty mentor, all lab research notebooks will remain the property of the faculty's research lab.

Assessment:

- 70% *Degree to which student meets expectations.* Expectations are to be established by the research adviser and student prior to the student's enrollment in this course. The agreed-upon expectations will be reflected on the Undergraduate Research Form signed by both the student and research adviser. The following is a minimum set of expectations for every student enrolled in this class for credit: i.) develop a project plan, ii.) perform experimental work or applied experimental work, iii.) write a research report. These minimum expectations as well as additional expectations (e.g., hours spent in the lab, attendance at departmental research seminars, participation in research group meetings, etc.) are to be clearly established and articulated to the student by the research adviser prior to commencement of the research project.
- 5% *Biosafety Training.* Completion of laboratory safety training
- 10% *Lab Notebook.* Research lab notebook final grade
- 15% *Quality of the final report or presentation.* The faculty adviser will provide clear expectations of the desired format, content, and deadlines of the final report or presentation. The faculty adviser will grade the final report.

You will receive a letter grade according to the following scale:

A	90-100%
B	80-89%

C	70-79%
D	60-69%
E	<60%

For more information on grades and grading policies, please visit:
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

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/honorcodes/honorcode.php>.

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.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,
www.counseling.ufl.edu/cwc/
Counseling Services*

Groups and Workshops
Outreach and Consultation
Self-Help Library
Training Programs
Community Provider Database

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

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/

MCB 4911 SUPERVISED RESEARCH - UNDERGRADUATE STUDENT/MENTOR CONTRACT
DEPARTMENT OF MICROBIOLOGY AND CELL SCIENCE

INSTRUCTIONS: Students must be a Microbiology and Cell Science major and have a minimum GPA of 3.0 in order to enroll in MCB 4911. The student must complete this form in its entirety each semester of registration and obtain the appropriate signatures and then submit the form to the academic advisor in 1047 MCSB for registration. Research must be conducted in a research laboratory setting. Clinical research is inappropriate and not permitted. NOTE: Research credit hours may not be utilized for fulfillment of required Microbiology Department elective credit hours. Students may not register for this course if they are receiving any form of financial compensation for the research. Be sure all holds are cleared and you have room on your schedule for the requested credits so that we can register you for this course.

STUDENT NAME: _____ UFID: _____

MAJOR: COLLEGE: CLAS_or CALS _____

PHONE: _____ UF EMAIL: _____

Research Instructor Name: _____ Department: _____

Instructor Telephone: _____ Instructor Email: _____

Brief Description of Research (continue on back, or attach if necessary):

What are the expectations for the student's attendance in this project (e.g., estimated hours/week in your laboratory, in seminars, group meetings, etc.)?

Student Signature: _____ Date: _____

I approve of the research description submitted by the student applicant. I have read the responsibilities of the research adviser and agree to undertake these responsibilities.

Faculty Adviser's/Academic Advisor Signature: _____

I have read the responsibilities of the research adviser and agree to undertake these responsibilities.

Mentor's Signature (if applicable): _____

RESPONSIBILITIES OF THE STUDENT

1. Work actively doing research and participating in other related activities for at least 3 hours each week for every credit hour enrolled in the course.
2. Keep clear accurate records of your work.
3. Understand how to conduct research in a responsible and ethical manner. Follow the UF Honor Code at all times.
4. Follow all safety protocols and ask questions about safety protocols before performing any procedure about which you are unsure.
5. Ask for assistance when you need it.
6. Keep your faculty research adviser and/or mentor informed of your results.
7. If required, learn to work on a team while also pursuing independent research on your project.
8. Write and submit a research report following the guidelines and expectations of your faculty adviser and/or mentor.
9. Strive to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report. Seek out opportunities for oral presentations at a conference, writing and submitting a journal paper of your work, etc.

RESPONSIBILITIES OF THE FACULTY ADVISER AND STUDENT MENTOR

1. Provide support and supervision of the student (either directly or by referring her/him to someone else, e.g., graduate student or postdoctoral associate).
2. Meet regularly with the student to review her/his progress and to provide guidance in moving forward in her/his project.
3. Arrange for all safety training that is appropriate for the student to ensure her/his safety in your laboratory.
4. Help the student understand the broader context in which her/his research project fits and understand the basis for methods and procedures used.
5. Provide frequent feedback on the student's performance, accompanied by recommendations for improving performance if needed.
6. Provide feedback and establish deadlines on the student's
 - project plan, final report, other requirements as noted on the Undergraduate Research Form
7. Encourage the student to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report.
8. Assign the student's final grade and submit it to the departmental grade coordinator.

8

Cover Sheet: Request 11710

MCB4915: Honors Thesis Research in Microbiology and Cell Science change from S/U to graded course

Info

Resubmission

Process	Course Modify Ugrad/Pro
Status	Pending
Submitter	Oli, Monika moli@ufl.edu
Created	6/15/2017 10:14:37 AM
Updated	9/18/2017 8:37:53 PM
Description of request	Change Honors Thesis Research in Microbiology and Cell Science from S/U to graded course

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Microbiology and Cell Science 514910000	Triplett, Eric		6/15/2017
No document changes					
College	Recycled	CALS - College of Agricultural and Life Sciences	Brendemuhl, Joel H	Recycled per CALS CC. See minutes from CALS CC meeting 8/18/17.	8/31/2017
No document changes					
Department	Approved	CALS - Microbiology and Cell Science 514910000	Triplett, Eric		9/18/2017
Replaced Syllabus MCB4915 v2 9-17.docx Added Syllabus MCB4915 v3 9-17.docx					9/18/2017 9/18/2017
College	Pending	CALS - College of Agricultural and Life Sciences			9/18/2017
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					

Step	Status	Group	User	Comment	Updated
Catalog					
No document changes					
College Notified					
No document changes					

Course|Modify for request 11710

Info

Request: MCB4915: Honors Thesis Research in Microbiology and Cell Science change from S/U to graded course

Description of request: Change Honors Thesis Research in Microbiology and Cell Science from S/U to graded course

Submitter: Oli,Monika moli@ufl.edu

Created: 6/15/2017 10:14:37 AM

Form version: 1

Responses

Current PrefixMCB

Course Level4

Number 915

Lab Code None

Course Title Honors Thesis Research in Microbiology and Cell Science

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?No

Change Course Title?No

Change Transcript Title?No

Change Credit Hours?No

Change Variable Credit?No

Change S/U Only?Yes

S/U Only StatusChange from S/U Only

Change Contact Type?No

Change Rotating Topic Designation?No

Change Repeatable Credit?No

Change Course Description?No

Change Prerequisites?No

Change Co-requisites?No

RationaleOur student enrollment has dropped since Honors Thesis Research in Microbiology and Cell Science was changed to S/U. The department decided to change the research experience to a graded course.

MCB 4915 Honors Thesis Research in Microbiology and Cell Science

Catalog Description:

Credits: 0 to 3; can be repeated with a change in content up to 6 credits. Prereq: junior standing, Students must be a Microbiology and Cell Science major and be admitted to the CALS Honors Program order to enroll in MCB 4915 and pursue independent research in microbiology and cell science leading to a CALS honors thesis. Student will be mentored by a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

Credits: 0-3

One credit hour requires 3 hrs./week in the lab.

Maximum credits for MCB4015 is 6CR total

If you previously registered for supervised research in any other department (prefix) such as BMS 4905, CHM 4905, ZOO 4905, IDH 4905, the credits earned will be included in the 6 credit maximum allowed for undergraduate research. Since Fall, 2012 the College of Medicine has required all students to register under BMS 4905. Microbiology majors may do so but we recommend a maximum of 2 credits per semester and a total of 6 during the undergraduate degree. Please talk to your individual mentors in that college to verify the course they will approve you for.

Pre-requisites and Co-requisites: Undergraduate research mentor permission; microbiology majors only. The contract at the end of this syllabus has to be completed, signed and submitted to the academic advisor during registration.

Students must be a Microbiology and Cell Science major and have a minimum GPA of 3.75 in order to enroll in MCB 4915. The student must complete this form in its entirety each semester of registration and obtain the appropriate signatures and then submit the form to the academic advisor in 1047 MCSB for registration. Research must be conducted in a research laboratory setting. Clinical research is inappropriate and not permitted. NOTE: Research credit hours may not be utilized for fulfillment of required Microbiology Department elective credit hours. Students may not register for this course if they are receiving any form of financial compensation for the research.

Instructor Information:

Dr. Graciela L Lorca

Office: Genetics Institute, Room 307

glorca@ufl.edu

Office hours: Day(s), time(s)

Graduate or Post-doctoral Student Research Mentor: (if applicable)

Name, Office location, Telephone number, Email address

Course Objectives: After completion of this course, the student will be able to

1. Gain hands-on experience with microbiology and molecular biology techniques in the context of a research project
2. Complete University Biosafety and Chemical safety training (as applicable to research lab/project) and take proper safety precautions in the laboratory, if relevant to the project
3. Search the literature
4. Properly keep an accurate record of research performed and document findings in a lab research notebook
5. Understand and implement the principles of experimental design (i.e. use of controls, technical and biological replicates, statistical considerations) and research ethics.
6. Perform data analysis, interpretation of experimental results, and/or bioinformatics in the context of research project.
7. Write a research report and communicate research findings to a group of scientific peers.
8. Work in a team environment, if relevant to the project and conduct herself/himself responsibly and ethically in research

The student will have fully participated in the research process with a desirable outcome of a final written report that synthesizes data collected or gathered and evaluates the hypothesis under investigation.

Textbooks/Required Materials:

There is no required text in this course. If appropriate to the project, the student may be required to purchase a laboratory notebook and is encouraged to consult with their research adviser for recommendations on the style of notebook to use. Students should also consult in advance with their research adviser on the necessity of owning a calculator, laptop computer, etc. in order to perform their project tasks.

Recommended reading includes the following or comparable works on the same topics:

- Responsible Conduct of Research, National Science Foundation, available online at <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>.
- On Being a Scientist: Responsible Conduct in Research, 2nd Edition, National Academy Press, 1995. Available at no cost at <http://www.nap.edu/readingroom/books/obas>.
- Avoiding Plagiarism Guide, George A. Smathers Marston Science Library, available online at <http://www.uflib.ufl.edu/msl/07b/studentplagiarism.html>.
- The Craft of Scientific Writing, 3rd Edition, by Michael Alley (1996), Springer-Verlag, NY, NY.
- The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors

to Avoid, by Michael Alley (2002), Springer-Verlag, NY, NY.

Attendance policy/lab participation:

Attendance and participation in research lab activities as agreed to between faculty mentor and student. Criteria for this part of the final letter grade (to be specified in research contract) may include things such as satisfactory completion of experiments/data analysis, participation in lab meetings, participation in lab journal clubs, scheduled meetings with faculty mentor, professionalism, etc.

Students conducting undergraduate research are expected to exercise a significant degree of autonomy in their work, completing research tasks with relatively little direct oversight from their research adviser. Nevertheless, the student should dedicate a minimum number of hours on their project that is consistent with the total credit hours sought for the experience. Besides the minimum expectations outlined in this section of this syllabus, the faculty adviser may also have additional expectations for participation, including attendance at group meetings, individual meetings, etc.

0 Credit Hours: Students can enroll in this course for 0 credit hours. This situation would be preferred by students who are approaching a maximum number of credit hours toward their degree or who are unable to cover the cost of tuition for these credits. Students registering for 0 credit hours should carefully discuss with their faculty adviser the time expectations for completion of the requirements of the class, and these expectations should be clearly articulated on the Undergraduate Research Form/Contract.

NOTE: If the student is only enrolled in 0 credit hours of MCB 4915 in a given semester with no other courses, they will be charged for 1 credit hour of tuition and fees.

1-3 Credit Hours: Students are expected to devote a minimum of three hours per week of actual work in this class for each credit in which they are enrolled. Students can enroll in a total of 6 credit hours of this course during their undergraduate study at UF. Students should carefully discuss with their faculty adviser the time expectations for completion of the requirements of the class, and these expectations should be clearly articulated in the Undergraduate Research Form/Contract.

NOTE:

- Fall and Spring Semesters: You can register for 0-3 credits. 1 credit = 3hrs. per week in the lab. (16 weeks total for one semester) Students may register for no more than **3 credits maximum per semester. However, we recommend a maximum of 2 credits per semester so that you can spread out your research for credit to at least 3 full semesters.**

- Summer C Semester: 1 credit – 4 hrs. per week in the lab. (12 weeks total for Summer C). Students may register for no more than 2 credits for Summer C (department policy).
- Summer A or Summer B – 1 credit = 6 hrs. per week in the lab. (6 weeks total for A and 6 weeks for B). Students may register for no more than 1 credit for Summer A or 1 credit for Summer B. If a student is planning to do undergraduate research for the entire summer, they should register for Summer C.

The policies for allowable absences and make-up work follow the university attendance policies: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Supplies:

Research supplies, including laboratory notebook and personal protective equipment, will be provided by the faculty mentor's research program.

Research lab notebook:

All MCB4915 students are expected to document their research findings in a research lab notebook (either electronic or hard copy, as stipulated by the faculty mentor). Unless specified otherwise by the faculty mentor, all lab research notebooks will remain the property of the faculty's research lab.

Assessment:

- 70% *Degree to which student meets expectations.* Expectations are to be established by the research adviser and student prior to the student's enrollment in this course. The agreed-upon expectations will be reflected on the Undergraduate Research Form signed by both the student and research adviser. The following is a minimum set of expectations for every student enrolled in this class for credit: i.) develop a project plan, ii.) perform experimental work or applied experimental work, iii.) write a research report. These minimum expectations as well as additional expectations (e.g., hours spent in the lab, attendance at departmental research seminars, participation in research group meetings, etc.) are to be clearly established and articulated to the student by the research adviser prior to commencement of the research project.
- 5% *Biosafety Training.* Completion of laboratory safety training
- 10% *Lab Notebook.* Research lab notebook final grade
- 15% *Quality of the final report or presentation.* The faculty adviser will provide clear expectations of the desired format, content, and deadlines of the final report or presentation. The faculty adviser will grade the final report.

You will receive a letter grade according to the following scale:

A	90-100%
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E	<60%

For more information on grades and grading policies, please visit:
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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/honorcodes/honorcode.php>.

Software Use:

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Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

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

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/

MCB 4915 Honors Thesis Research in Microbiology and Cell Science

INSTRUCTIONS: Students must be a Microbiology and Cell Science major and be admitted to the CALS Honors Program order to enroll in MCB 4915. The student must complete this form in its entirety each semester of registration and obtain the appropriate signatures and then submit the form to the academic advisor in 1047 MCSB for registration. Research must be conducted in a research laboratory setting. Clinical research is inappropriate and not permitted. NOTE: Research credit hours may not be utilized for fulfillment of required Microbiology Department elective credit hours. Students may not register for this course if they are receiving any form of financial compensation for the research. Be sure all holds are cleared and you have room on your schedule for the requested credits so that we can register you for this course.

STUDENT NAME: _____ UFID: _____

MAJOR: COLLEGE: CLAS_or CALS _____

PHONE: _____ UF EMAIL: _____

Research Instructor Name: _____ Department: _____

Instructor Telephone: _____ Instructor Email: _____

Brief Description of Research (continue on back, or attach if necessary):

What are the expectations for the student's attendance in this project (e.g., estimated hours/week in your laboratory, in seminars, group meetings, etc.)?

Student Signature: _____ Date: _____

I approve of the research description submitted by the student applicant. I have read the responsibilities of the research adviser and agree to undertake these responsibilities.

Faculty Adviser's/Academic Advisor Signature: _____

I have read the responsibilities of the research adviser and agree to undertake these responsibilities.

Mentor's Signature (if applicable): _____

RESPONSIBILITIES OF THE STUDENT

1. Work actively doing research and participating in other related activities for at least 3 hours each week for every credit hour enrolled in the course.
2. Keep clear accurate records of your work.
3. Understand how to conduct research in a responsible and ethical manner. Follow the UF Honor Code at all times.
4. Follow all safety protocols and ask questions about safety protocols before performing any procedure about which you are unsure.
5. Ask for assistance when you need it.
6. Keep your faculty research adviser and/or mentor informed of your results.
7. If required, learn to work on a team while also pursuing independent research on your project.
8. Write and submit a research report following the guidelines and expectations of your faculty adviser and/or mentor.
9. Strive to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report. Seek out opportunities for oral presentations at a conference, writing and submitting a journal paper of your work, etc.

RESPONSIBILITIES OF THE FACULTY ADVISER AND STUDENT MENTOR

1. Provide support and supervision of the student (either directly or by referring her/him to someone else, e.g., graduate student or postdoctoral associate).
2. Meet regularly with the student to review her/his progress and to provide guidance in moving forward in her/his project.
3. Arrange for all safety training that is appropriate for the student to ensure her/his safety in your laboratory.
4. Help the student understand the broader context in which her/his research project fits and understand the basis for methods and procedures used.
5. Provide frequent feedback on the student's performance, accompanied by recommendations for improving performance if needed.
6. Provide feedback and establish deadlines on the student's
 - project plan, final report, other requirements as noted on the Undergraduate Research Form
7. Encourage the student to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report.
8. Assign the student's final grade and submit it to the departmental grade coordinator.