ALS4404: Insects in Italy: The role of entomology in art, history, and our future

Location: Florence, Italy; Summer A 2016.

Catalog Description: (3 credits) Learn the history of how insects, fungi, and insect-vectored diseases have shaped the food we eat and human history by exploring art, science, and food production in Italy. Students will visit multiple museums, historical locations, and tour agricultural operations to explore these intertwined disciplines.

Course hashtag: #UFbugsinItaly
We encourage students to share course-related photos and information using the course hashtag and the hashtag #GlobalGators on Twitter and Instagram.

Course Learning Objectives: At the conclusion of this course, students will be able to:

1. Explain the historical significance of insects and crops on Italian development.
2. Recognize the risks that agriculture and our food security face with diminishing resources.
3. Illustrate the influences driving science and art in the Middle Ages.
4. Assess the benefits and costs of current issues facing science and society.
5. Compare and contrast Italian and American experiences in agriculture, art, and science.

Instructors: This course will be co-taught in Florence, Italy during Summer A by two instructors.

1. Dr. Jennifer L. Gillett-Kaufman, Associate Extension Scientist, Entomology and Nematology Department, gillett@ufl.edu
2. Dr. Phillip E. Kaufman, Associate Professor, Entomology and Nematology Department, pkaufman@ufl.edu

Meeting Times: TBD, but proposed Tuesday, Wednesday, Thursday, for 150-minute class periods with several field trips. Three Thursday trips (marked below with an * asterisk) will require an early start time, you will have three late start periods to make up for the extra time we spend on these field trips.

Meeting Location: Florence University of the Arts, Florence, Italy. Class will have both formal classroom meetings and multiple field trips during class time.

Canvas: This course utilizes the Canvas system in e-Learning at the University of Florida to supplement in-class learning. https://elearning2.courses.ufl.edu/portal Course materials, including narrated PowerPoints (slides available as PDFs) with associated quizzes will be placed on this site for full student access. Students are required to listen to narrated PowerPoints, read papers, and/or watch videos.
before class meeting times and be prepared to discuss the information from the pre-work. Student grades will be posted on this site as they are finalized. Most assignments will be submitted in class or on Canvas. All critical dates will be posted on the syllabus page in Canvas, check there for changes in the course schedule.

**Office Hours:** Given the uncertainty of the course location and timing, both Dr. Gillett-Kaufman and Dr. Kaufman will be available to students by appointment from 7:30 AM until 8:30 PM. Please utilize email, gillett@ufl.edu or pkaufman@ufl.edu, as appropriate to make an appointment. The instructors’ cell phone numbers will be provided on Canvas and the first day of class.

**Attendance Policy:** Attendance is required for all sessions. 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](https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx). Specifics on Assignment Policy and late submissions appear below.

**Assignment Policy:** All writing assignments are due by the date and time posted and must be submitted using Canvas as an unlocked MS Word document (*.doc or *.docx).

**Late submissions:** Late submissions for all writing assignments will be docked 10% on the individual component grade for each 24 hrs after each deadline. Quizzes, discussions, and presentations cannot be made up unless the instructors are provided a University-accepted excused absence (see Attendance Policy URL) for which replacement exercises will be assigned.

**Material and Supply Fees:** TBD

**Grading:** Grading will be based on 300 points

- Pre-class or in-class quizzes, based on narrated PPT and reading (5 pts. x 12 quizzes): 20%
- Online discussion and participation (5 pts. x 12 posts): 20%
- Individual presentation (30 pts.): 10%
- Written assignments (weekly, 20 pts. x 6 assignments): 40%
- Group project and presentation (30 pts.): 10%
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<tr>
<th>ALS4404</th>
<th>Number</th>
<th>Individual Point Value</th>
<th>Total Points</th>
<th>Percent of Grade</th>
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</thead>
<tbody>
<tr>
<td>Pre-class quiz</td>
<td>12</td>
<td>5</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>Discussion &amp; participation</td>
<td>12</td>
<td>5</td>
<td>60</td>
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<tr>
<td>Individual presentation</td>
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<td>30</td>
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<td>10</td>
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<tr>
<td>Written assignments</td>
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<tr>
<td>Group project</td>
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<td>30</td>
<td>30</td>
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**Grading Scale:**

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<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Minimum points required for grade</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
<td>270</td>
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<tr>
<td>B+</td>
<td>88-89.999</td>
<td>264</td>
</tr>
<tr>
<td>B</td>
<td>80-87.999</td>
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<tr>
<td>C+</td>
<td>78-79.999</td>
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<tr>
<td>C</td>
<td>70-77.999</td>
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<tr>
<td>E</td>
<td>&lt;60</td>
<td>&lt;180</td>
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For information on current UF policies for assigning grade points, see [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx)

**Required Readings:** To maximize student interaction, instructors employ a flipped-classroom experience using Canvas to deliver readings, videos, and recorded lectures so students spend class time in the field or delivering presentations and discussing observations made on field trips. As such, readings are arranged by course week on Canvas and students will be quizzed on content before discussion/lecture, typically during the first 10 minutes of class or online before field trips.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Summary</th>
<th>URL</th>
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<tbody>
<tr>
<td>Truffles and forensic entomology</td>
<td>Explore how flies in truffles leads to litigation</td>
<td>District Court Bochum (Truffles case) Germany 24 January 1996 <a href="http://cisgw3.law.pace.edu/cases/960124g1.html">http://cisgw3.law.pace.edu/cases/960124g1.html</a></td>
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<tr>
<td>GMOs and US acceptance</td>
<td></td>
<td>Evans E, Ballen F. 2013 A synopsis of US consumer perception of genetically modified (biotech) crops. UF/EDIS. 8 pp. FE-934. <a href="https://edis.ifas.ufl.edu/fe934">https://edis.ifas.ufl.edu/fe934</a></td>
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</tbody>
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### Olive decline
Researchers concerned over olive disease in Europe  

### Food safety and edible insects
Exploration of insects as food  

### Explore the UN FAO website

### History of malaria in Italy

### History of malaria in Italy

### GMOs and Mosquitoes

### Livestock pest management
Video: Integrated fly management of livestock (3 parts, 35 min).  

### Tentative Course Schedule:

**Week 1:** Course introductions and expectations. Food, fungi, and flies. Forensic Entomology: it is not always about dead people! Bees, why we need insects.

**Tuesday:** Flipped-classroom activity: Review the online syllabus. *Pre-class syllabus quiz on Canvas 5 points.* Overview of course expectations and assignments. Cooperating with strangers, networking exercise. Overview of insects in Italy. Insects in historic and modern food-chain interactions and introduction to insect-vectored human pathogens.

**Wednesday:** Forensic entomology... for food! *Pre-class quiz on Canvas 5 points.* Want some truffles with that? Not the chocolate ones. Food contamination with insects and the basics of forensic entomology. **Class debate:** Who is at fault? Fruit fly and beetle contamination in mushroom production areas. Introduction to bees and beekeeping in Italian history.

**Thursday:** Early Start Field trip! A buzz about bees. *Honey and wax production in Tuscany.*

*Students who know they have allergic reactions to bee or wasp stings are encouraged to notify us before the tour and to bring along allergy medication for the field trip.* Students write a short report on their experience, due prior to next class meeting.
**Week 2**: Plant and animal pests and pathogens and insect-vectored fungi and bacteria. From apples to olives, our food system is always at risk.

**Tuesday**: Flipped-classroom activity: Recorded lecture (Locusts and wheat in Morocco). *Pre-class quiz on Canvas 5 points.* In-class discussion on locusts in history and their migration from Africa to Europe, North Africa as Rome’s bread basket. Discussion about benefits of Peace Corps service and the UF Peace Corps Prep Program.

**Wednesday**: Flipped-classroom activity: Reading on bees, and GMOs. *Pre-class quiz on Canvas 5 points.* In-class, brief introduction to GMOs and debate rules. **Class debate: Hot topics: 1. Bee health** 2. Use of GMOs.

**Thursday**: Flipped-classroom activity: Reading on introduced and invasive species, olive decline. **Early Start Field trip!** What is in your olive oil? Olive decline in Italy because of an insect-vectored pathogen. Olive grove tour and olive oil tasting. Fattoria di Maiano. Students write a short report on their experience, due prior to next class meeting.

**Week 3**: Insect vectored pathogens on vertebrates.

**Tuesday**: Flipped-classroom activity: Recorded lecture (Medical entomology, diseases and disasters) and readings. *Pre-class quiz on Canvas 5 points.* In-class, short lecture on the impact of insects on human health and a discussion on two important diseases of man, bubonic plague (fleas), and malaria (mosquitoes). Discussion on the impact on Italian history and the arts with a special tie-in to Siena and its economic development after a plague outbreak in 1348.

**Wednesday**: Flipped-classroom activity: Readings on use of GMO mosquitoes to reduce insect-vectored pathogen transmission. **Class debate:** More GMOs?! Do your feelings change if we are discussing a GMO insect being released in the wild? *Pre-class quiz on Canvas 5 points.*

**Thursday**: Field trip! In Italy, Florence’s population was reduced from 110–120 thousand inhabitants in 1338 down to 50 thousand in 1351. Where did all the bodies go?? Walk around Florence and visit buildings with design elements that are symbolic of plague. Visit a site of mass burials attributed to plague and discuss cultural significance of changes in burial practices. And visit the Basilica di Santa Croce. Students write a short report on their experience, due prior to next class meeting. **Additional excursion/extra credit opportunity during cultural activities planned in Siena will expand on this topic.**

**Week 4**: Insects and animal food production.

**Tuesday**: Flipped-classroom activity: Recorded lecture (Veterinary entomology), video, and reading. In-class short lecture on the impact of insects on animal agriculture. Class discussion on animal agriculture in history and the future of insects as a protein source. *Pre-class quiz on Canvas 5 points.*
**Wednesday: Field trip!** Modern cheese-making demonstration with a visit to the Mukki dairy facility. Modern agriculture has many advantages over historic practices, including improved food safety, high production capacity, and consistency in food flavors. Through this experience, student will observe the current status of modern food production. *Pre-class quiz on Canvas 5 points.*

**Thursday: Early Start Field trip!** Small farm dairy tours and cheese-making demonstrations. What’s old is new again, the emergence of artisan products and agro-tourism. Visit traditional dairy production facilities to observe dairy production and challenges with food safety. Students write a short report on their experience from the Wednesday and Thursday field trips, due prior to next class meeting.

**Week 5:** Insects and agriculture in art and architecture.

**Tuesday:** Introduction to insects and agriculture in art and architecture. *Pre-class quiz on Canvas 5 points.*

**Wednesday: Field trip!** Class will break into two teams. One instructor and one team will walk to the Uffizi Gallery and one team and instructor will walk to the Accademia Gallery. Team members will select two pieces each to add to a Feast and Famine Art Tour the teams develop for the gallery. *Pre-class quiz on Canvas 5 points.*

**Thursday:** Teams work in small research groups to learn more about the pieces they selected and each student will write a brief description of how one piece they select depicts one of the course topics (serves as weekly short report). Groups will each make and submit a gallery map and guided discussion brochure. Students will select topics for Week 6 presentations.

**Week 6:**

**Tuesday: Field trip!** Class will walk together and team one will deliver the Uffizi Gallery Feast and Famine Art Tour. *Pre-class quiz on Canvas 5 points.*

**Wednesday: Field trip!** Class will walk together and team two will deliver the Accademia Gallery Feast and Famine Art Tour. *Pre-class quiz on Canvas 5 points.*

**Thursday:** Discussion: Students will self-evaluate and peer-evaluate the Feast and Famine Art Tour presentations (serves as weekly short report). Students will each present a 5-minute overview of a topic covered on the Feast and Famine Art Tour. Small group discussions and class discussions will focus on insects in Italy and how to improve critical thinking skills.
Online Course Evaluation Process

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

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/scr/process/student-conduct-honor-code.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.
Services for Students with Disabilities

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

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

Campus Helping Resources

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

Your course instructors, Drs. Gillett-Kaufman and Kaufman, will provide you with cell phone numbers that you can call day or night if you need assistance.

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

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

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