A g e n d a

CALS Curriculum Committee Meeting
Tuesday, May 14, 2013, 12:00 p.m.
250 Agricultural Hall

___ Francisco Pelegri,(2013) ___ __
___ Jeri Barak, (2014)
___ Bill Bland, (2014)
___ Amin Fadl, (2013)
___ Randy Jackson, (2013)
___ Maya Hayslett, (2013)
___ Jack Kloppenburg, (2015)
___ Paul Mitchell, (2013)
___ Masarah Van Eyck, (2015)

CALS Ex Officio:
Sarah Pfatteicher ___
Phil Gonsiska___

CASI Ex Officio:
___ Liv Sandberg (non-voting)

Student Reps: ___ Tim Pearson
UP&S Office: ___ Susan Gisler
___ Dan Statter

MINUTES

April 23 minutes

AUTOMATIC CONSENT

CBE 561: Biomolecular Engineering Laboratory
Change made to course number, course description and prerequisites

COURSE PROPOSALS

Discontinued Courses

ENTOM 342: Insect Ecology

ENTOM 541: Biological Control of Insects

ENTOM 570: Principles of Insect Pest Suppression

New Course Proposals

ENTOM 354: Diagnosing and Monitoring Pest and Nutrient Status of Field Crops
This course gives students an opportunity to develop additional field and professional development skills in agricultural areas.

ENTOM 450: Basic and Applied Insect Ecology
The current BS, MS and PhD curricula require students to take courses in 'suborganismal', 'organismal' and 'applied' areas of entomology

ENTOM 451: Basic and Applied Insect Ecology Laboratory
This course is intended to be a companion to the lecture course being proposed (see Entomology 450).

Course Change Proposals

DAIRY SCI 433: Dairy Herd Management
Changing course description and course number.

ANNOUNCEMENTS

MINUTES

CALS Curriculum Committee Meeting
Tuesday, April 23, 2013, 12:00PM
250 Agricultural Hall

Present: Francisco Pelegri, Jeri Barak, Paul Mitchell, Amin Fadl, Maya Hayslett, Sarah Pfatteicher, Phil Gonsiska

Absent: Bill Bland, Randy Jackson, Jack Kloppenburg, Masarah Van Eyck, Liv Sandberg, Tim Pearson

Guest: John Ferrick; Director, CALS International Programs Office

Fadl motions, Mitchell seconds to call meeting to order at 12:02PM.

MINUTES

April 9th minutes

Unanimously approved

NEW BUSINESS

BIOCORE 301: Evolution, Ecology and Genetics
Change made to course number and description to make it easier for students and advisors to recognize this as an honors course.
BIOCORE 303: Cellular Biology
Change made to course number, honors classification and prerequisites
BIOCORE 323: Organismal Biology
Change made to course number, honors classification and prerequisites
BIOCORE 324: Organismal Biology Laboratory
Change made to course number, honors classification, course description and prerequisites
BIOCORE 333: Biological Interactions
Change made to course number, honors classification, course description, level and prerequisites

Committee received overview of changes to Biology curriculum for context.
Committee informed department is adding 300 and 400 level courses to show student progression through program
Committee states that proposed syllabi include language suggesting AB, BC grades are at the discretion of the instructor. Committee would like removal of language or clarification.
Syllabi include old course numbers. Committee suggests use of new course numbers

Unanimously approved

GENETICS 631: Plant Genetics
Change made to credit, course description, prerequisites

Committee received overview of changes to Genetics curriculum for context.

Committee is generally supportive of changes.
Committee questions why syllabus states course is open to UG and Grad. students.
Committee requests department remove language regarding grad. students for UG catalog

Unanimously approved

New Course Proposals

GENETICS 155: Freshman Seminar
Seminar will introduce freshman to the discipline of genetics, UW Laboratory of Genetics, research projects the faculty are pursuing and to resources available.

Committee stated that the proposal was strong and that proposed changes aligned with broader changes to Genetics curriculum.
Committee would like more clarity as to the role of instructor (Petersen).
Committee would like more clarity regarding potential student population of course, while keeping in mind that some first year students are sophomore standing and may not meet "freshman" definition included in course title, proposal and syllabus.

Unanimously approved

GENETICS 564: Introduction to Genomic and Proteomics
Course covers a variety of genomic, proteomic and bioinformatic approaches to biological problems.

Committee stated support for capstone options available in Genetics.
Committee questioned use of "introduction" in title. May be misleading due to Capstone status.
Committee suggests department remove "introduction" and add "capstone" in course title

Unanimously approved

GENETICS 567: Capstone Research Seminar
This is a 1-credit discussion/seminar-based companion course to 2 or more credits of senior research within our major (Gen 699 or Gen 681).

Committee informed this is a companion course to Genetics 699.
Committee informed of requirement for co-enrollment in Genetics 699, 681, 682
Committee informed course ran as Special Topic (875) course last fall.
Committee suggests "companion" be added to course title and "capstone" be removed

Unanimously approved

GENETICS 627: Animal Developmental Genetics
Course focuses on basic genetic mechanisms of animal embryonic development, with particular emphasis on central molecular circuitries.

Committee informed course began as 677 (experimental)
Committee states that no significant overlap between established courses is apparent.
Committee states course appears well justified and proposal is thorough.

Unanimously approved

GENETICS 633: Population Genetics
A graduate-level course focused on the interpretation of genetic variation in natural populations.

Committee states proposal is strong.
Committee states course evaluation is unique: assessment based on research and homework with no exams or quizzes.
Committee suggests department remove graduate-level language and change to reflect course is upper-level UG and Grad. level.

Unanimously approved

GENETICS 660: Evolutionary Genetics
We will present and discuss modern topics in evolutionary genomics, including genomic approaches, their application to evolutionary biology, and insights gleaned from such studies.

Committee stated proposal was strong; grading system and assessment are aligned.

Unanimously approved

INTER-AG 360: International Health Nutrition—Uganda
International Health and Nutrition program is to learn firsthand about the many health and nutrition issues faced by people in a developing country.

Committee informed that trip is a requirement of the course although it does not state this on the syllabus.
Committee requests department add language to ensure students know the trip is required
Committee requests department add language regarding amount of contact hours during the trip.
Committee suggests that department consider splitting course into 2 courses: one 1 credit and one 2 credit course. The two credit course in the fall (coursework) and the one credit in winter/spring (trip).

Tabled

AUTOMATIC CONSENT

ART HISTORY 264: Dimensions of Material Culture
Note crosslisted subjects and relationship to courses outside subject.

Committee informed course is cross listed with Landscape Architecture.

FOOD SCI 301: Introduction to the Science and Technology of Food
Food Sci 301 is the introductory course for both Dietetics and Food Sci students. Due to increasing enrollment, both depts. recommend that Food Sci 301 is open only to students who've already attained Dietetics (ADI) status, and not to predietetics (PDI) students.

Departmental Curriculum Changes
Nine major/ degree programs have submitted curriculum changes for the upcoming academic year thus far. Curriculum sheets for the two departments with more complicated changes are included. The others are summarized in the attached spreadsheet.

All consent items unanimously approved
Submitted: Dan Statter, Approved

Course Change Proposal

Subject Chemical & Biological Engr (220) **Status** Under Review by School/College
Proposer Regina M Murphy

Basic Information

Current course number
561

Current course title
Biomolecular Engineering Laboratory

Current published course description
Brief review of physical chemistry of biological macromolecules. Theory and laboratory experiments aimed at developing skills at preparing and characterizing biological macromolecules and macromolecular assemblies. Half-semester-long laboratory project focused on design of a specific process/product involving biomolecules.

Chief academic officer of this unit
Thomas F Kuech

Designee of chief academic officer for approval authority
Daniel J Klingenberg

Currently crosslisted with

What is the primary divisional affiliation of the course?
Physical Sciences

When will this change go into effect?
Fall 2013-2014

Basic Changes

Will the subject change?
No

Current subject
Chemical & Biological Engr (220)

Proposed subject

Will the course number change?
Yes

Current course number
561

Proposed course number
361

Is this an honors course?
No

Is this an individual instruction course such as directed study, independent study, research or thesis (i.e., a course with no group instruction)?
No

Will the title change?
No

Current title
Biomolecular Engineering Laboratory

Proposed title (max. 100 chars.)

Proposed transcript title (max. 30 chars.)

Will the crosslistings change?
No

Current crosslistings

Proposed crosslistings

Will the "repeatability" of the course change?
No

Current repeatability

Proposed repeatability

Catalog Changes

Will the credits change?

No

Current minimum credits

3

Current maximum credits

3

Proposed minimum credits

Proposed maximum credits

Will the grading system change?

No

Current grading system

Proposed grading system

Will the published course description change?

Yes

Current course description

Brief review of physical chemistry of biological macromolecules. Theory and laboratory experiments aimed at developing skills at preparing and characterizing biological macromolecules and macromolecular assemblies. Half-semester-long laboratory project focused on design of a specific process/product involving biomolecules.

Proposed course description

Instruction and laboratory experiments in basic molecular biology techniques, recombinant protein production, fermentation processes, protein purification and characterization, and related bioengineering laboratory topics. Geared towards chemical engineering students with interests in biotechnology and synthetic biology.

Will the prerequisites change?

Yes

Current prerequisites and other requirements

CBE 311; Chem 561 or 562 or 565 or equiv; Biocore 303 or Biochem 501 or equiv; or cons inst

Proposed prerequisites and other requirements

CBE 250; Zoo 151 or 153 or equiv; or consent of instructor.

Designation Changes

Will the Liberal Arts and Sciences (LAS) designation change?

No

What change is needed?

What is the rationale for seeking LAS credit?

Will the level of the course change for L&S attributes?

No

Current level:

Proposed level:

Will the L&S breadth requirement change?

No

Current breadth:

Proposed breadth:

Will the General Education Requirement change?

No

Current GER:

Proposed GER

Additional Information

Explain the relationship and importance of the proposed change to existing or future programs (i.e., degrees, majors and certificates)

CBE 361 fulfills chemical engineering elective requirements for majors. Chemical engineers are increasingly employed in activities based on biotechnology and bioengineering, including but not limited to renewable energy, pharmaceutical production, and food processing. Students interested in pursuing a career in this area benefit by early exposure to experimental tools and techniques used in the industry.

Are any of these programs outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Specify which requirement(s) this change affects, if any (e.g. satisfies third-level language, meets the major's capstone requirement, fulfills PhD minor requirement)

Satisfies chemical engineering elective requirement for the undergraduate major.

Do any of these requirements affect programs (degrees, majors, certificates) outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic unit. The proposal will be sent to the academic units that support those subjects for review.

Address the relationship of this change to other UW-Madison courses, including possible duplication of content

CBE 361 has some overlap with Biochem 651. Biochem 651 is a high-demand laboratory class in biochemical techniques, geared primarily towards biochemistry majors, and is chronically oversubscribed. CBE 361 requires fewer biology prerequisites, and has a greater emphasis on laboratory techniques relevant for bioprocessing and applied biotechnology.

Is there a relationship to courses outside your subject?

Yes

Indicate the outside affected subject(s). The proposal will be sent to the academic units that support those subjects for review.

Biochemistry (200)

Will any courses be discontinued as a result of this change?

No

List course number(s) and complete a course discontinuation proposal for each course

Justification Changes

Explain the need for the change

CBE 561 was developed several years ago as a senior-level elective, with a primary focus on theory and laboratory experiments involving characterization of biological macromolecules. The course was not taught for several years (because of limited faculty availability) but was completely renovated and modernized over the last few years. In the intervening years, the importance of bioengineering and biotechnology for chemical engineers has grown tremendously. The chemical engineering curriculum now requires all students to take two biology classes (typically Zoo 153 and Biochem 501). Many of our students are interested in pursuing undergraduate research or projects (such as iGEM, the International Genetically Engineering Machine competition); these students benefit tremendously by exposure to basic experimental methods and strategies earlier in their undergraduate program, before they get involved with more independent work. By changing the course prerequisites, we are able to make the course available to sophomores and juniors, rather than to seniors, thus equipping them to move easily into more advanced and/or independent work. By modifying the course content, we are better able to modernize the course and to meet the needs of chemical engineering students interested biotechnology and bioengineering.

Additional comments (optional)

Attach a syllabus

CBE561 Syllabus.pdf

Additional attachments (optional)(please read "help" text before uploading an attachment)

CBE561 – Biochemical Engineering Laboratory
Fall 2010

Class Meeting	Lecture	TR	1:20 – 2:10 PM in 2239 Engineering Hall
	Laboratory	R	2:30 – 6:15 PM in 1102A Engineering Hall

Instructor: Asst. Prof. Brian F. Pfleger
3629 Engineering Hall
pfleger@engr.wisc.edu
Office Hours: Tuesday 2:15-3:15 PM or by appointment.

Teaching Assistant: Daniel Mendez-Perez
2722 Engineering Hall,
mendezperez@wisc.edu
Office Hours: By appointment

Text: None. Readings will be posted on the course website.

Midterm Exam: A midterm exam will be held in lab on November 18th, 2010. The exam will be amixture of written and oral/demonstration questions.

Assigments/Pre-lab: Short pre-laboratory assignments will be due on **Thursdays** at the **BEGINNING** of class. Late assignments will **NOT** be graded. Solutions to pre-lab problems will be discussed in class and will be posted on the course website. The lowest prelab grade will be dropped.

Laboratory Reports: Three formal laboratory reports will be due periodically through the semester. The reports will cover the background, protocols used, data collected, and analysis of experiments performed in lab. Reports will be written and submitted by groups of two or more students.

Final Project: A formal paper (maximum 10 pages) describing either a modern biotechnology topic, protocol, or research proposal will be due at the end of the semester. Students will discuss with and have paper topics approved by Prof Pfleger prior to Thanksgiving.

Grading: Grades are calculated based on a curve.

Prelab assignments	12 x 2%	24%
Formal Reports	3 x 10%	30%
Midterm Exam	1 x 30%	25%
Final Paper	1 x 20%	20%
Participation	1 x 1%	1%
		100%

Course Website: Ecow2 – CBE561 will have lecture notes, readings, protocols, assignments, grades, notices, updates, and more.

Learning Objectives:

1. Understand how to isolate, analyze, and manipulate nucleic acid sequences
2. Understand how to produce, isolate, and purify proteins using living cell factories
3. Understand how culture microorganisms in laboratory scale
4. Introduce the concepts of synthetic biology and apply them to the grand challenges

Preliminary Course Schedule

Week	Date	Lab topic
1	9/2	Introduction and safety briefing
2	9/9	Pipetteman workshop, basic microbiology
3	9/16	DNA preparation and quantification
4	9/23	DNA analysis and manipulation
5	9/30	PCR and spectrophotometry of cells
6	10/7	Gel extraction and DNA clean-up
7	10/14	Cloning
8	10/21	Screening by colony PCR
9	10/28	Bacterial growth and production of small molecules
10	11/4	Protein expression
11	11/11	Protein Purification
12	11/18	**Midterm Exam**
13	11/25	Thanksgiving – No lab
14	12/2	Protein analysis
15	12/9	TBA

Course Discontinuation Proposal

Subject Entomology (355) **Status** Under Review by School/College
Proposer Sara M Rodock

Basic Information

Course number
342

Current course title
Insect Ecology

Chief academic officer of this unit
David B Hogg

Designee of chief academic officer for approval authority
Laurie S Ballentine; Sara M Rodock

What is the primary divisional affiliation of this course?
Biological Sciences

When will this change go into effect?
Spring 2013-2014

Currently crosslisted with

Rationale and Effects

Explain the need for the proposed discontinuation

The department is in the process of creating Entom 450/451 Basic and Applied Insect Ecology which will cover the content previously from Entom 342, 541 and 570

Is this course discontinuation related to a new course proposal?

Yes

List new course number(s) and complete new course proposal for each new course

Entom 450 and 451

Explain the effect this discontinuation will have on any requirements or programs (degrees, majors, certificates)

none, content will be covered in a new course

Are any of these affected programs or requirements outside your academic unit?

No

Indicate the subjects that are most closely aligned with the affected academic units. The proposal will be sent to the academic units that support those subjects for review.

Additional comments (optional)

Attachments (optional) (please read "help" text before uploading an attachment)

Course Discontinuation Proposal

Subject Entomology (355) **Status** Under Review by School/College
Proposer Sara M Rodock

Basic Information

Course number
541

Current course title
Biological Control of Insects

Chief academic officer of this unit
David B Hogg

Designee of chief academic officer for approval authority
Laurie S Ballentine; Sara M Rodock

What is the primary divisional affiliation of this course?
Biological Sciences

When will this change go into effect?
Spring 2013-2014

Currently crosslisted with

Rationale and Effects

Explain the need for the proposed discontinuation

The department is in the process of creating Entom 450/451 Basic and Applied Insect Ecology which will cover the content previously from Entom 342, 541 and 570

Is this course discontinuation related to a new course proposal?

Yes

List new course number(s) and complete new course proposal for each new course

Entom 450 and 451

Explain the effect this discontinuation will have on any requirements or programs (degrees, majors, certificates)

none, content will be covered in a new course

Are any of these affected programs or requirements outside your academic unit?

No

Indicate the subjects that are most closely aligned with the affected academic units. The proposal will be sent to the academic units that support those subjects for review.

Additional comments (optional)

Attachments (optional) (please read "help" text before uploading an attachment)

Course Discontinuation Proposal

Subject Entomology (355) **Status** Under Review by School/College
Proposer Sara M Rodock

Basic Information

Course number
570

Current course title
Principles of Insect Pest Suppression

Chief academic officer of this unit
David B Hogg

Designee of chief academic officer for approval authority
Laurie S Ballentine; Sara M Rodock

What is the primary divisional affiliation of this course?
Biological Sciences

When will this change go into effect?
Spring 2013-2014

Currently crosslisted with

Rationale and Effects

Explain the need for the proposed discontinuation

The department is in the process of creating Entom 450/451 Basic and Applied Insect Ecology which will cover the content previously from Entom 342, 541 and 570. Additionally, some of the information prevouisly taught in 570 is currently also covered in Entom 351.

Is this course discontinuation related to a new course proposal?

Yes

List new course number(s) and complete new course proposal for each new course

Entom 450 and 451

Explain the effect this discontinuation will have on any requirements or programs (degrees, majors, certificates)

none, content will be covered in new and existing courses

Are any of these affected programs or requirements outside your academic unit?

No

Indicate the subjects that are most closely aligned with the affected academic units. The proposal will be sent to the academic units that support those subjects for review.

Additional comments (optional)

Attachments (optional) (please read "help" text before uploading an attachment)

New Course Proposal

Subject Entomology (355) **Status** Under Review by School/College
Proposer Sara M Rodock

Basic Information

Course Title
Diagnosing and Monitoring Pest and Nutrient Status of Field Crops

Transcript Title (limit 30 characters)
Diag Nutrient/Pest of Crops

Three-digit course number
354

Is this an honors course?
No

Is this an individual instruction course such as directed study, independent study, research or thesis (i.e., a course with no group instruction)?
No

Will this course be crosslisted?
Yes

Note the crosslisted subjects
Agronomy (132)
Soil Science (908)
Plant Pathology (766)
Horticulture (476)

What is the primary divisional affiliation of this course?
Biological Sciences

Is this a topics course?
No

Can students enroll in this course more than once for credit?
No

If yes, please justify

Typically Offered
Spring

Catalog Information

Minimum credits

2

Maximum credits

2

Grading System

A-F

Course Description (will be published in Course Guide)

This course is designed to provide students with information necessary to diagnosis and monitor corn, soybean, alfalfa and wheat for pests (insects, weeds, diseases) and nutrient deficiency symptoms including perspectives from Agronomy, Entomology, Horticulture, Plant Pathology and Soil Science. Proper soil and pest sampling information will be provided as will proper crop staging techniques which are essential for pest and nutrient management.

Does the course have prerequisites or other requirements?

No

List the prerequisites and other requirements for the course

Indicate the component(s) that comprise the course. Check all that apply

Lecture

Administrative Information

Chief Academic Officer

David B Hogg

Designee of chief academic officer for approval authority

Laurie S Ballentine; Sara M Rodock

If there are additional contacts, please list

Bryan Jensen

Will any courses be discontinued as a result of this proposal?

No

List course number(s) and complete a course discontinuation proposal for each course

Beginning Term

Spring 2014-2015

Academic/Program Information

Is this course intended for a new academic program for which UAPC approval has not yet been finalized?

No

Which program?

Explain the relationship and importance of the proposed course to existing programs or future programs. (A program is a certificate, major or degree.)

This course gives students an opportunity to develop additional field and professional development skills in agricultural areas.

Are any of these programs outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Specify which requirement(s) this course meets, if any (e.g. satisfies third-level language, meets the major's capstone requirement, fulfills PhD minor requirement).

Elective course for Entomology and Plant Pathology undergraduate students

Do any of these requirements affect programs (degrees, majors, certificates) outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Course Content

Describe the course content

Field Crop Insect Pests: identification of insect pest life stages, damage symptomology, damage potential, life cycles, habits, monitoring criteria, economic thresholds; Field Crop Diseases: identification, environmental conditions needed for expression of symptoms, crop monitoring methods; Weed Identification: annual grasses, annual broadleaves, biennial broadleaves, perennial grasses, perennial broadleaves; Crop Growth Staging: value of crop growth staging, crop growth staging techniques (corn, alfalfa, small grains), crop development; Soil Testing Techniques: routine soil sampling , pre plant nitrate test, pre sidedress soil nitrate test; Plant Tissues Sampling: value of plant tissue sampling, reasons for plant tissue sampling, proper techniques for field crops, limitations, interpretation of lab results; Nutrient Deficiency Symptoms: contrast/comparison of nutrient deficiency symptoms in field crops; Nutrient Management Planning: value of nutrient crediting, manure crediting, legume crediting, manure spreader calibration; Herbicide Mode of Action and Injury Symptoms: contrast/comparison of herbicide mode of action, contrast comparison of herbicide injury symptoms, factors which herbicide can cause injury; Trouble Shooting Crop Injury Symptoms: contrast/comparison of various types of pest injury symptoms, method of field diagnosis

Address the relationship of this course to other UW-Madison courses, including possible duplication of content

none

Is there a relationship to courses outside your subject?

No

Indicate the outside affected subject(s). The proposal will be sent to those subjects for review.

List the instructor name and title (list multiple if applicable)

Bryan Jensen-Outreach Program Manager, Brian Hudelson-Senior Outreach Specialist

If the instructor is not a tenured or tenure-track faculty member at UW-Madison, please explain the instructor's qualifications here. Then, go to the "Justifications" tab and upload the instructor's c.v. in the "Additional Attachments" section.

Academic staff are used as instructors because of their educational background, professional background, work responsibilities (extension, research and/or teaching).

Attach a syllabus. See "help" for an explanation of what must be included in the syllabus.

Syllabus 354 3-20-13.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

This course utilizes several instructors and guest lecturers from CALS departments to provide coverage of Wisconsin field crop pest and nutrient deficiency symptoms in a single course. Exposure to some of the major pests are available in individual classes (Ento 351, Plant Path 300). However, weed identification is not covered. Because this course is inclusive of all field crop disorders, it allows the instructors and students to contrast and compare symptomology and pest interactions across disciplines within a single course. This course also utilizes hands on activities to give students hands on experience with mounted and/or live specimens. It is the only course which emphasizes pest monitoring practices that are important for crop advisers to achieve an unbiased assessment of pest populations and/or damage. This allows crop advisers to make the best possible recommendations to producers.

Provide an estimate of the expected enrollment

20

Justify the number of credits, following the federal definition of a credit hour (see help). Include the number of contact hours or, if contact hours are not an accurate measure of credit, provide an explanation of how credits are measured

As you can see in the syllabus the course meets for only a single week; however, students spend a total of 32 hours in class. A course that would meet for two 50 minute periods over 15 weeks would be a total of 25 hours.

If this is a variable credit course, provide rationale

Additional comments (optional)

Additional attachments (optional) (please read "help" before uploading an attachment)

355_354_cv_hudelson.pdf
355_354_cv_jensen.pdf

L&S Designations

Should the course be reviewed for L&S liberal arts and science (LAS) credit?

No

What is the rationale for seeking LAS credit?

Level of the course, for L&S attributes (value required for all L&S courses and courses requesting LAS credit)

Should the course be reviewed for L&S breadth requirements?

No

Indicate which:

General Education Designations

Should the course be reviewed for the general education requirement?

No

Which requirements?

DRAFT

Agronomy, Entomology, Horticulture, Plant Pathology, Soil Science 354,
Diagnosing and Monitoring Pest and Nutrient Status of Field Crops

Monday, January 13, 2014		
9:00	Bryan Jensen IPM Program	Introduction Rm. 150 Russell labs
9:15	Bill Kojis, Dept. of Agronomy	Corn Growth and Development
10:00	John Gaska, Dept. of Agronomy	Soybean and Small Grain Growth and Development
11:30	Lunch	
12:30	Matt Ruark Soil Science	• Soil Testing • Plant Tissue Testing • Nutrient Deficiency Symptoms
2:30	Break	
2:45	Richard Proost, NPM Program	Consequences of Misidentifying Weeds
3:15	Dan Heider, IPM Program	Monocot Weed ID Lecture
4:30	Quiz	
5:00	Adjourn	
Tuesday, January 14, 2014 Rm 150 Russell Labs		
8:00	Bryan Jensen	Corn Insect ID Lecture
9:30	Dan Heider	Monocot Weed ID Lab, section 1, Rm. 128 Moore Hall (group 1)
9:30	Bryan Jensen	Corn Insect lab, Rm. 147 Russell Labs, (group 2)
10:30	Break/change labs	
10:45	Dan Heider	Monocot Weed ID Lab, section 1, Rm. 128 Moore Hall (group 2)
10:45	Bryan Jensen	Corn Insect lab, Rm. 147 Russell Labs, (group 1)
11:45	Lunch On your own	
12:30	Dan Heider	Annual Broadleaf Weed ID Lecture
1:30	Bryan Jensen	Alfalfa and Soybean Insect Lecture
2:30	Dan Heider	Annual Broadleaf Weed ID Lab, section 1, Rm. 128 Moore Hall (group 1)
2:30	Bryan Jensen	Alfalfa & Soybean Insect lab, Rm. 147 Russell Labs, (group 2)
3:30	Break & Change labs	
3:45	Dan Heider	Annual Broadleaf Weed ID Lab, section 1, Rm. 128 Moore Hall (group 2)
3:45	Bryan Jensen	Alfalfa & Soybean Insect lab, Rm. 147 Russell Labs, (group 1)
4:45	Quiz	

5:15	Adjourn	
Wednesday, January 15, 2014 Rm. 150 Russell Labs		
8:00	Brian Hudelson Dept. of Plant Pathology	Field Crop Disease Lecture
10:30	Break	
10:30	Dan Heider	Biennial and Perennial Weed ID, Lecture and Lab, Rm. 128 Moore Hall (group 1)
10:30	Brian Hudelson	Field Crop Disease Lab, Rm. 187 Russell Labs (group 2)
12:30	Lunch On your own	
1:15	Dan Heider	Biennial and Perennial Weed ID, Lecture and Lab, Rm. 128 Moore Hall (group 2)
1:15	Brian Hudelson	Field Crop Disease Lab, Rm. 187 Russell Labs (group 1)
3:15	Vince Davis Dept. of Agronomy	Herbicide Mode of Action and Injury Symptoms
4:30	Adjourn	
Thursday, January 16, 2014 Rm. 150 Russell labs		
8:00	Francisco Arriaga, Dept. of Soil Science	Diagnosing Soil Compaction
8:45	Scott Sturgul NPM Program	Introduction to Nutrient Management Planning
9:45	Break	
10:00	Scott Sturgul	Introduction to Nutrient Management Planning (cont.)
10:45	Vince Davis	Troubleshooting Crop Injury
12:00	Quiz	
12:30	Adjourn	
Friday, January 17, 2014 RM. 150 Russell Labs		
8:30	Identification Exam	
10:30	Adjourn	

Learning Objectives

The course is designed to provide the skills necessary for proper pest identification, crop scouting techniques as well as provide useful baseline information for students preparing for the Wisconsin Certified Crop Adviser's exam. In addition, crop growth and development, pest life cycle, pest damage symptoms and economic thresholds will be covered. Crops covered will include, corn, alfalfa, soybean and wheat.

Suggested Text

Field Crop Scout Training Manual. Hard copy vailable from the Integrated Pest Management Program, Rm. 643 Russell Labs ($35) or online (free) at http:ipcm.wisc.edu Click on publications.

GRADING POLICY

Grading Scale:

A 90% +
AB 85-89%
B 80-84%
BC 75-79%
C 66-74%
D 60-65%
F 59 & Below

Your final grade will be based on the following categories:

Identification Test	50% of final grade
Take-home exam	40%
Daily Quizzes	10%

For questions contact
Bryan Jensen;
RM. 643 Russell Labs
Dept. of Entomology
1630 Linden Dr.
Madison, WI 53706
Office 608-263-4073
Home 608-835-5419
Email: bmjense1@facstaff.wisc.edu

Brian Hudelson
Department of Plant Pathology
183 Russell Laboratories
1630 Linden Dr
Madison, WI 53706
Office: (608) 262-2863
hudelson@wisc.edu

SHORT CURRICULUM VITAE February 19, 2013

Brian Dean Hudelson

Department of Plant Pathology
University of Wisconsin-Madison
Madison, WI 53706
Telephone: (608) 262-2863
FAX: (608) 263-2626
email: bdh@plantpath.wisc.edu

EDUCATION

University of Wisconsin-Madison Madison, Wisconsin	B.S.-1984 (Honors)	Botany Bacteriology Molecular Biology
University of Wisconsin-Madison Madison, Wisconsin	M.S.-1989	Biometry
University of Wisconsin-Madison Madison, Wisconsin	Ph.D.-1990	Plant Pathology

POSITIONS HELD

Director, Plant Disease Diagnostics Clinic and Senior Outreach Specialist, Dept. of Plant Pathology, University of Wisconsin-Madison, providing diagnostic services and outreach activities in plant pathology, 1998 to present

Assistant Scientist working with Dr. Craig Grau, Dept. of Plant Pathology, University of Wisconsin-Madison, working on alfalfa disease pathology, 1997 to 1998

Assistant Scientist and Ginseng Research Program Manager working with Dr. Jennifer Parke, Dept. of Plant Pathology, University of Wisconsin-Madison, working on ginseng disease pathology, 1993 to 1997

Research Associate and Ginseng Research Program Manager working with Dr. Jennifer Parke, Dept. of Plant Pathology, University of Wisconsin-Madison, working on ginseng disease pathology, 1991 to 1993

Research Associate working with Dr. Ann MacGuidwin, Dept. of Plant Pathology, University of Wisconsin-Madison potato rot nematode, 1991

RESEARCH

My research and other professional activities concentrate on identification, etiology and control of diseases of plant diseases, with emphasis on development of techniques that can easily and reliably be used in diagnosis. I also have a strong interest in quantitative epidemiology with specific interests in understanding disease spatial patterns and their origins, and in the development of sampling techniques that can be useful in agricultural settings.

SELECTED RESEARCH PUBLICATIONS

B. Hudelson, D. Smith, G. Stanosz, and M. Hanson. 2008. First Report of *Sawadaea tulasnei* Powdery Mildew of Norway Maple (*Acer platanoides*) in Wisconsin. Plant Dis. 92: 485.

E. R. Bernstein, Z. K. Atallah, N. C. Koval, B. D. Hudelson, and C. R. Grau. 2007. First Report of Sudden Death Syndrome of Soybean in Wisconsin. Plant Dis. 91:1201.

R. C. Larsen, C. R. Grau, G. J. Vandemark, T. J. Hughes, and B. D. Hudelson. 2004. First Report of Brown Root Rot of Alfalfa Caused by *Phoma sclerotioides* in Wisconsin Plant Dis. 88:769.

G. L. Foreman, D. I. Rouse, and B. D. Hudelson. 2003. Infectivity of Verticillium dahliae in wood chip mulch. Phytopathology 93:S26.

C. Allen, B. D. Hudelson, J. Yao, and J. Tans-Kersten. 2003. Ralstonia wilt of geranium: A test case for the new agro-bioterrorism regulations. Phytopathology 93:S4.

G. L. Foreman, D. I. Rouse, and B. D. Hudelson. 2002. Wood chip mulch as a source of *Verticillium dahliae*. *Phytopathology* 92:S26.

Williamson, L., Allen, C., Nakao, K. and Hudelson, B. 2002. *Ralstonia solanacearum* race 3, biovar 2 isolated from geranium are pathogenic on potato. Plant Dis.: 86:987-991

Hudelson, B. D., Clayton, M. K., Smith, K. P., and Upper, C. D. 1997. Detection and description of spatial patterns of bacterial brown spot of snap beans using cyclic samples. Phytopathlogy 87:33-41.

Clayton, M. K. and Hudelson, B. D. 1995. Confidence intervals for autocorrelations based on cyclic samples. J. Am. Statist. Assoc. 90:753-757.

Hudelson, B. D., Clayton, M. K., Smith, K. P., and Upper, C. D. 1993. Modeling of superimposed spatial patterns of bacterial brown spot. Phytopathology 83:430-438.

Clayton, M. K. and Hudelson, B. D. 1991. Spatial patterns in microbial activity. pp. 111-131 in Hirano, S. S. and Andrews, J. H. (editors), The Microbial Ecology of Leaves. Springer-Verlag, New York. 499 pp.

Hudelson, B. D., Clayton, M. K., Smith, K. P., Rouse, D. I., and Upper, C. D. 1989. Nonrandom patterns of bacterial brown spot in snap bean row segments. Phytopathology 79:674-681.

EXTENSION PUBLICATIONS

Frost, K. and Hudelson, B. 2005. Lichens. University of Wisconsin Garden Facts XHT1027a/b/c/d.

Gevens, A., Seidl, A. and Hudelson, B. 2010. Late Blight. University of Wisconsin Garden Facts XHT1195.

Heimann, M. F. and Hudelson, B. 2008. Bacterial Wetwood. University of Wisconsin Garden Facts XHT1193.

Hudelson, B. 2009. Deciduous Tree Disease Quick Reference. University of Wisconsin Garden Facts XHT1190.

Hudelson, B. and Charkowski, A. 2010. Corky Ringspot. University of Wisconsin Garden Facts XHT1186.

Joy, A. and Hudelson, B. 2005. Blossom End Rot. University of Wisconsin Garden Facts XHT1140.

Joy, A. and Hudelson, B. 2005. Crown Gall. University of Wisconsin Garden Facts XHT1037.

Joy, A. and Hudelson, B. 2005. Impatiens Necrotic Spot. University of Wisconsin Garden Facts XHT1139.

Joy, A. and Hudelson, B. 2005. Powdery Scab. University of Wisconsin Garden Facts XHT1138.

Joy, A. and Hudelson, B. 2005. Southern Blight. University of Wisconsin Garden Facts XHT1042.

Joy, A. and Hudelson, B. 2005. Swiss Needle Cast. University of Wisconsin Garden Facts XHT1148.

Joy, A. and Hudelson, B. 2011. Dead Man's Fingers. University of Wisconsin Garden Facts XHT1201.

Kim, H. S., Hudelson, B. and Jung, G. 2008. Helminthosporium Turf Diseases. University of Wisconsin Garden Facts XHT1150.

Leisso, R. and Hudelson, B. 2008. Butternut Canker. University of Wisconsin Garden Facts XHT1142.

Leisso, R. and Hudelson, B. 2005. Tatters. University of Wisconsin Garden Facts XHT1141.

Muscato, G. and Hudelson, B. 2009. Volutella Blight. University of Wisconsin Garden Facts XHT1191

Sielaff, R. and Hudelson, B. 2010. Tobacco Rattle. University of Wisconsin Garden Facts XHT1180.

INSTRUCTION (Primary or Co-Instructor)

Farm and Industry Short Course: Plant Diseases – 1999 to 2011
Plant Pathology 375: Diagnosing and Monitoring of Pests and Nutrients of Field Crops – 1999 to 2013
Plant Pathology558: Biology of Pathogens – 2013

MEMBERSHIPS

American Phytopathological Society, Phi Kappa Phi, Wisconsin Phenological Society

AWARDS

2003 John S. Donald Short Course Teaching Award
2004 Second Mile Award from the Wisconsin Association of County Agricultural Agents

BRYAN JENSEN

OUTREACH PROGRAM MANAGER II

University of Wisconsin
Department of Horticulture
Integrated Pest Management Program

BACKGROUND:

Education:

M.S., Entomology, 1986, University of Wisconsin-Madison
B.S., Biology, 1979, University of Wisconsin-Stevens Point

Employed: 1980 to present by the University of Wisconsin-Madison, Integrated Pest Management Program

Work Experience

April 1980-present. Worked with UW-Horticulture's Integrated Pest Management Program as a Pest Management Technician (1980-1986), Senior Outreach Specialist (1986-1990) and Outreach Program Manager I, (1991- 1996), Outreach Program Manager II (1996-present)

DUTIES/RESPONSIBILITIES/ACTIVITIES

Program Administration,
-Coordinate IPM staff and project activities
-Prepare state and national plans of work and accomplishment reports
-Coordinate IPM programming efforts with UW faculty, WI Department of Agriculture, Trade and Consumer Protection, Department of Natural Resources and other appropriate agencies and individuals

Outreach Activities
-Implement IPM outreach and instructional activities including:

- Field Scout Training Class
- Certified Crop Advisor Training
- Assist county and regional extension staff with IPM educational programs

-Develop and assist with development of IPM activities for the state of Wisconsin which are based on stakeholder needs

Contact information

Dept. of Entomology
1630 Linden Dr.
Madison, WI 53706

Office (608) 263-4073
Home (608) 835-5419
FAX (608) 262-3322

Email: bmjense1@facstaff.wisc.edu

Professional service and committees

2012 Chair Elect, NCERA 222, North Central IPM Coordinators

1992- 2001, 2006-2012, Board of Directors for Wisconsin Association of Professional Agriculture Consultants.
Offices held: Secretary (1996-2001, 2007-present)
Chair, Scholarship Committee

2001 to present, member of Wisconsin CCA Board
Offices held:
Chair, 2007-2008
Past Chair, 2008-2012
Committee representation: Executive, Education, Scholarship

Member of UW Extension Grains Self-Directed Team
2007-2009 Co-chair
2001-2001, Co-chair IPCM committee
2008-2009, Co-Chair of Grains Self-Directed Team
2010-present Coach for Fruit and Vegetable Self Directed Team

2000-2003, Member of College of Agricultural and Life Sciences Committee on Academic Staff Issues (CASI)
Co-Chair, 2003
Member of Professional Development Committee
Chair, Academic Staff Performance Evaluation Committee

1989-2007, Serve on Department of Entomology Extension and Applied Research Committee

2001, 2003, Review Committee for Wisconsin Department of Agriculture, Trade and Consumer Protection's Cooperative Pest Survey

1991-1994, Plant Path, Entomology, Horticulture, Soils and Agronomy 375, Special Topics: Survey of Crop and Pest Management Research and Outreach

Activities

1995-2000, Chair of Wisconsin Gypsy Moth Educational Committee

1995, 1996, Reviewer of IPM Accomplishment Reports for NC Region.

1995, Chair of Wisconsin IPM External Advisory Committee

1994-Present, Quality Assurance Unit for Wisconsin IR-4 Project

1987, 1988, 1989, 1991, 1992, Member of Farmland Ag Chemical Advisory Board

1987, Department of Horticulture Ad hoc Committee on Academic Staff Evaluation

Awards and Honors

1998, Education Award, Wisconsin Fertilizer and Chemical Association

2000, Second Mile Award, Wisconsin Association of County Agricultural Agents

2006, 2010 Donald R. Peterson Wisconsin Farm Progress Days Technology Transfer Award, Wisconsin Farm Technology Days

2009, Friend of Agronomy Award

2010, Outstanding Specialist Award, Cooperative Extension (ANRE)

Refereed Journal Publications

Jensen, B.M., J.L. Wedberg, D.B Hogg, 1991. Assessment of Damaged Caused by Tarnished Plant Bug and Alfalfa Plant Bug (Hemiptera:Miridae) on Alfalfa Grown For Forage

W.D. Hutchinson, Jensen, B.M., Leonard, B.R., Temple, J. Cook, D.R., Weinzierl, R.A., Foster, R.E., Rabey, T.L., Flood, B.R., Evidence of Decreasing Helicoverpa zea Susceptibility to Pyrethroid Insecticides in the Midwestern United States, Plant Management Network, June 2007.

Bulletins and Technical Reports

Wedberg, J.L. and B.M. Jensen. Over 20 articles submitted to Arthropod Management Tests.

Co-author (selected publications)

- UW Extension Bulletin, Scouting Corn: A Guide for Wisconsin Corn Production,
- Pest Management in Wisconsin Field Crops
- A Visual Guide for Estimating Soybean Aphids
- Field Crop Pest Management Training Manual

Popular Press

Jensen, B.M. Spotted Wing Drosophilia, Fresh Magazine, 2011

Jensen, B. M. Brown Marmorated Stink Bug, Fresh Magazine, 2011

Cummings Carlson, J., B. Jensen, Integrated Pest Management for Christmas Trees Its Time has Come, American Christmas Tree Journal, 33(4) pp 49-50

Grant Support.

1999. Proposal to Implement Educational Plots for the Grains Self-Directed Team's Crop Care Clinics for the Farmer. Jensen, Proost, Boerboom

1998, "Proposal for Regional IPM Training Centers", Richard Proost, UW-NPM; Bryan Jensen, UW-IPM; Chris Boerboom, Department of Agronomy; Jeff Polenske, Wisconsin Association of Agricultural Consultants; Greg Andrews, Pierce County UWEX; Mike Ballweg, Sheboygan County UWEX; Larry Tranel, Iowa County UWEX; Ted Bay, Grant County UWEX

1998, "Survey of Pest Management Practices Employed by WI Farmers", Pete Nowak, Department of Rural Sociology; Richard Proost, Nutrient and Pest Management Program; Bryan Jensen, IPM Program; Chris Boerboom, Department of Agronomy; Jeff Polenske, WI Association of Professional Agricultural Consultants

1998, Development of a New Programming Framework for WISDOM, $15,024, University Industry Relations Grant. Larry Binning, Bryan Jensen

1997, Development of Tutorial Software for WISDOM and Cranberry Crop Management Software. $1,963. Larry Binning, Bryan Jensen

1997, Developing Field and Vegetable Crop Scouting Manuals with Annual Update System, $9,149. Laura Ward Good, Bryan Jensen

1995, Strategies for Integrated Pest Management Implementation in Corn and Soybean, USDA-IPM Grant, NCR IPM Coordinators.

1994, Establishment of an Outdoor Training Facility for Crop and Pest Related Problems. $49,873, WI Sustainable Agriculture Program. Bryan Jensen, Larry Binning, John Wedberg.

1992 and 1993, Investigation of Corn Rootworm Scouting Techniques and Efficacy of Using reduced Insecticide Rates. J.L. Wedberg, B. Jensen

1991, $20,000, Jensen, Haanstad, Lovett, Sustainable Agriculture Grant from WDATCP for development of a Nursery IPM Program

1987, Curricular Revitalization Project: Pesticide Issues 375, WK. Kellogg Foundation

New Course Proposal

Subject Entomology (355) **Status** Under Review by School/College
Proposer Sara M Rodock

Basic Information

Course Title
Basic and Applied Insect Ecology

Transcript Title (limit 30 characters)
Basic & Applied Insect Ecology

Three-digit course number
450

Is this an honors course?
No

Is this an individual instruction course such as directed study, independent study, research or thesis (i.e., a course with no group instruction)?
No

Will this course be crosslisted?
No

Note the crosslisted subjects

What is the primary divisional affiliation of this course?
Biological Sciences

Is this a topics course?
No

Can students enroll in this course more than once for credit?
No

If yes, please justify

Typically Offered
Fall

Catalog Information

Minimum credits

3

Maximum credits

3

Grading System

A-F

Course Description (will be published in Course Guide)

Basic and Applied Insect Ecology is advanced course in population and community ecology, plant-insect interactions, insect biodiversity and biogeography, and applied ecology. The course will weave basic ecological theory and principles with their application to entomological problems such as conservation, biological control, agriculture, and insect-vectored diseases of plants and humans. We will use the current entomological and ecological scientific literature and draw on examples from a broad range of natural and managed ecosystems. As the semester progresses, the scope of the lectures and literature will broaden from pair-wise species interactions (e.g., a predator and its prey) to the entire community of organisms and their physical environment. Lectures are designed to emphasize the theoretical principles and historical background underlying the various topics with a link to potential applications in agriculture, conservation, pest management, and/or invasion biology.

Does the course have prerequisites or other requirements?

Yes

List the prerequisites and other requirements for the course

Biology 151 & 152 or equivalent courses, or consent of instructor

Indicate the component(s) that comprise the course. Check all that apply

Lecture

Administrative Information

Chief Academic Officer

David B Hogg

Designee of chief academic officer for approval authority

Laurie S Ballentine; Sara M Rodock

If there are additional contacts, please list

Claudio Gratton

Will any courses be discontinued as a result of this proposal?

Yes

List course number(s) and complete a course discontinuation proposal for each course

Entom 342 and 541

Beginning Term

Fall 2013-2014

Academic/Program Information

Is this course intended for a new academic program for which UAPC approval has not yet been finalized?

No

Which program?

Explain the relationship and importance of the proposed course to existing programs or future programs. (A program is a certificate, major or degree.)

This course will be the course available to fulfill both the 'organismal' and 'applied' categories in the Entomology BS, MS and PhD programs.

Are any of these programs outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Specify which requirement(s) this course meets, if any (e.g. satisfies third-level language, meets the major's capstone requirement, fulfills PhD minor requirement).

This course can be applied to the BS, MS and PhD degrees in Entomology

Do any of these requirements affect programs (degrees, majors, certificates) outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Course Content

Describe the course content

Autecology of insects: interactions with the environment-Why study insect ecology?-Insects and humans, applications of ecology to solving problems-Form and function/Ecology of size-Thermal ecology and seasonality-Metabolic theory-Applications: Degree-day models, development, cold/heat tolerance, flight Plant-Herbivore Interactions-Host Plant Resources for Herbivores, Nutrient Limitation & Stoichiometry-Theory and Pattern of Plant Defense-Adaptations of Herbivores, Specialization & Diet Breadth-Plant Pattern, Herbivore Distribution & "Enemy Free Space"-Co-Evolution Between Herbivores and Host Plants-Applications: Plant breeding and host-plant resistance, Evolution of insecticide resistance Predator-Prey interactions-Behavioral ecology of predators and parasitoids-Insect Defense & Co-Evolution of Predators and Prey-Predation: Functional & Numerical Responses-Population Dynamics & Regulation-Predator-Prey Population Dynamics-Outbreaks, "Stability" & Persistence of Predator-Prey Interactions-Multi-trophic Interactions, Trophic Cascades & Biological Control-Applications: Biological control, insect outbreaks Multi-species interactions and communities-Trophic Cascades and food webs-Metapopulation Dynamics-Competition, Coexistence, Resource Partitioning & the Niche-Positive Interactions: Mutualisms & Pollination-Parasites, Pathogens & Insects as Vectors-Insect Community Structure & Development-Landscape ecology and meta-communities-Applications: Conservation biology, Insect vectors of diseases, Pollinators in agroecosystems, Invasive species Insects in Ecosystems-Energy flow-Nutrient cycling-Agroecosystems-Applications: Ecosystem services, decomposition, Biogeography, Diversity and Life History Evolution-Mating Systems, Parental Investment & Sexual Selection-Structure and Evolution of Insect Societies-Biogeography & Large Scale Patterns of Diversity-Applications: Bees and Ants, conservation hot-spots, bar-coding

Address the relationship of this course to other UW-Madison courses, including possible duplication of content

Currently the department of Entomology has courses on Insect Ecology (355 342) and Biological Control of Insects (355 541).

Is there a relationship to courses outside your subject?

No

Indicate the outside affected subject(s). The proposal will be sent to those subjects for review.

List the instructor name and title (list multiple if applicable)

Claudio Gratton

If the instructor is not a tenured or tenure-track faculty member at UW-Madison, please explain the instructor's qualifications here. Then, go to the "Justifications" tab and upload the instructor's c.v. in the "Additional Attachments" section.

Attach a syllabus. See "help" for an explanation of what must be included in the syllabus.

Syllabus (355-450)_Gratton.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

The current BS, MS and PhD curricula require students to take courses in 'suborganismal', 'organismal' and 'applied' areas of entomology. While there are other courses offered in the applied area (such as Insects in Forest Ecosystem Function and Management, Economic Entomology, and Medical Entomology), none of them are overlapping in content with the newly proposed course. Principles of Insect Pest Suppression would have had overlap but is being discontinued because of this new course.

Provide an estimate of the expected enrollment

30

Justify the number of credits, following the federal definition of a credit hour (see help). Include the number of contact hours or, if contact hours are not an accurate measure of credit, provide an explanation of how credits are measured

This course will feature 3 fifty minute lectures a week.

If this is a variable credit course, provide rationale

Additional comments (optional)

Additional attachments (optional) (please read "help" before uploading an attachment)

L&S Designations

Should the course be reviewed for L&S liberal arts and science (LAS) credit?

Yes

What is the rationale for seeking LAS credit?

This course meets a number of the L&S habits of the mind as outlined below. As outlined in the syllabus, student learning goals will be assessed by both writing and oral communication. By its nature, the subject of the course, spans basic science and its application to applied problems. Students are requires to understand how basic ecological and evolutionary principles can be used to analyze, understand, model and predict the behavior of managed ecosystems in order to solve problems ranging from invasive species, public health concerns or conservation of global biodiversity (of which insects are the greatest terrestrial contributors). Problem-solving of this nature is inherently multidisciplinary integrating science with society to reach practical solutions to insect-derived problems. Students will draw from diverse subject areas and modes of thinking as they design and execute their oral presentations and writing assignments. With regard to the Biological Sciences breadth area, this course examines scientific studies and breakthroughs in ecology, evolution and pest management in terrestrial and aquatic ecosystems. This would include discussion of the scientific method, hypothesis-driven research, and statistical analysis.

Level of the course, for L&S attributes (value required for all L&S courses and courses requesting LAS credit)

Advanced

Should the course be reviewed for L&S breadth requirements?

Yes

Indicate which:

B-Biological Science

General Education Designations

Should the course be reviewed for the general education requirement?

No

Which requirements?

Entomology 450 Lecture- Syllabus

Course Number:	Entomology 450
Course Name:	Basic and Applied Insect Ecology
Credits:	3
Format:	MWF, 9:55 am, 50 minute lecture
Offering:	Every other fall semester
Instructor:	Dr. Claudio Gratton
Office Hours:	By appointment (cgratton@wisc.edu)
Pre-requisites:	Biology 151 & 152, or Biology 101/102 & Botany 130, or instructor consent

Course Description:

Basic and Applied Insect Ecology is advanced course in population and community ecology, plant-insect interactions, insect biodiversity and biogeography, and applied ecology. The course will weave basic ecological theory and principles with their application to entomological problems such as conservation, biological control, agriculture, and insect-vectored diseases of plants and humans. We will use the current entomological and ecological scientific literature and draw on examples from a broad range of natural and managed ecosystems. As the semester progresses, the scope of the lectures and literature will broaden from pair-wise species interactions (e.g., a predator and its prey) to the entire community of organisms and their physical environment. Lectures are designed to emphasize the theoretical principles and historical background underlying the various topics with a link to potential applications in agriculture, conservation, pest management, and/or invasion biology.

Student learning objectives:

Upon completion of the course, students will have demonstrated:

1. Comprehension of ecological concepts/principles at the physiological, population, community and ecosystem levels.
2. Understanding of the mechanisms mediating interactions of insects with their biotic and abiotic environments.
3. Proficiency in the application of ecological theory to the understanding of novel insect systems and their applied implications
4. Understanding of the importance of insects as selective, stabilizing and potentially destructive components of ecosystems.
5. Ability to view and understand applied entomological problems through the lens of basic ecological theory
6. Ability to understand and communicate the significance of specific research studies published in the primary literature

Required Textbook:

Price, P. W., R. F. Denno, M. D. Eubanks, D. L. Finke, and I. Kaplan. 2011. **Insect Ecology: Behavior, Populations and Communities.** Cambridge University Press. 829 pp. ISBN: 9780521542609

Grading Policy:

Final grades will be determined relative to the frequency distribution (i.e. "curve") for the class as a whole. Grades will be based on two hourly exams (100 pts. each), a final (150 pts.), a short paper (50 pts.) and a group presentation (50 pts.). Although you will need to know factual information for the exams, exams are designed to evaluate your understanding of the material rather than your ability to memorize. Exams will require you to interpret, evaluate, synthesize and apply the knowledge you have gained. Rote memorization of the course content will not be sufficient, as the exams are designed to make you think integratively and holistically.

Grading Scale
92% and above = A
88%-91.9% = AB
82%-87.9% = B
78%-81.9 = BC
72%-77.9 = C
60%-71.9 = D
Below 60% = F

Syllabus Topics:

Unit I: Autecology of insects: interactions with the environment
Why study insect ecology?
Insects and humans, applications of ecology to solving problems
Form and function/Ecology of size
Thermal ecology and seasonality
Metabolic theory

Applications: Degree-day models, development, cold/heat tolerance, flight

Unit II: Plant-Herbivore Interactions
Host Plant Resources for Herbivores, Nutrient Limitation & Stoichiometry
Theory and Pattern of Plant Defense
Adaptations of Herbivores, Specialization & Diet Breadth
Plant Pattern, Herbivore Distribution & "Enemy Free Space"
Co-Evolution Between Herbivores and Host Plants

Applications: Plant breeding and host-plant resistance, Evolution of insecticide resistance

Unit III: Predator-Prey interactions
Behavioral ecology of predators and parasitoids
Insect Defense & Co-Evolution of Predators and Prey
Predation: Functional & Numerical Responses
Population Dynamics & Regulation
Predator-Prey Population Dynamics
Outbreaks, "Stability" & Persistence of Predator-Prey Interactions
Multi-trophic Interactions, Trophic Cascades & Biological Control

Applications: Biological control, insect outbreaks,

Unit IV: Multi-species interactions and communities
Trophic Cascades and food webs
Metapopulation Dynamics

Competition, Coexistence, Resource Partitioning & the Niche
Positive Interactions: Mutualisms & Pollination
Parasites, Pathogens & Insects as Vectors
Insect Community Structure & Development
Landscape ecology and meta-communities

Applications: Conservation biology, Insect vectors of diseases, Pollinators in agroecosystems, Invasive species

Unit V: **Insects in Ecosystems**

Energy flow
Nutrient cycling
Agroecosystems

Applications: Ecosystem services, decomposition,

Unit VI: Biogeography, Diversity and Life History Evolution

Mating Systems, Parental Investment & Sexual Selection
Structure and Evolution of Insect Societies
Biogeography & Large Scale Patterns of Diversity

Applications: Bees and Ants, conservation hot-spots, bar-coding

New Course Proposal

Subject Entomology (355) **Status** Under Review by School/College
Proposer Sara M Rodock

Basic Information

Course Title
Basic and Applied Insect Ecology Laboratory

Transcript Title (limit 30 characters)
Basic/Applied Insect Ecol Lab

Three-digit course number
451

Is this an honors course?
No

Is this an individual instruction course such as directed study, independent study, research or thesis (i.e., a course with no group instruction)?
No

Will this course be crosslisted?
No

Note the crosslisted subjects

What is the primary divisional affiliation of this course?
Biological Sciences

Is this a topics course?
No

Can students enroll in this course more than once for credit?
No

If yes, please justify

Typically Offered
Fall

Catalog Information

Minimum credits

1

Maximum credits

1

Grading System

A-F

Course Description (will be published in Course Guide)

Basic and Applied Insect Ecology Laboratory/Discussion is the companion course for the lecture-based Basic and Applied Insect Ecology (Entomology 450). This course will include hands-on experiences such as labs, field trips, computer exercises, and discussions based on readings in the primary literature to enhance and delve into more details on materials introduced in the course lectures.

Does the course have prerequisites or other requirements?

Yes

List the prerequisites and other requirements for the course

Concurrent or previous enrollment in Entomology 450, consent of instructor for undergraduates

Indicate the component(s) that comprise the course. Check all that apply

Laboratory

Administrative Information

Chief Academic Officer

David B Hogg

Designee of chief academic officer for approval authority

Laurie S Ballentine; Sara M Rodock

If there are additional contacts, please list

Claudio Gratton

Will any courses be discontinued as a result of this proposal?

No

List course number(s) and complete a course discontinuation proposal for each course

Beginning Term

Fall 2013-2014

Academic/Program Information

Is this course intended for a new academic program for which UAPC approval has not yet been finalized?

No

Which program?

Explain the relationship and importance of the proposed course to existing programs or future programs. (A program is a certificate, major or degree.)

This course will be the course available to fulfill both the 'organismal' and 'applied' categories in the Entomology BS, MS and PhD programs.

Are any of these programs outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Specify which requirement(s) this course meets, if any (e.g. satisfies third-level language, meets the major's capstone requirement, fulfills PhD minor requirement).

This course will require concurrent enrollment in Entomology 450 and would thus constitute 4 credits of 'organismal' or 'applied' coursework required for the Entomology BS, MS and PhD programs.

Do any of these requirements affect programs (degrees, majors, certificates) outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Course Content

Describe the course content

Autecology of insects: interactions with the environment 1. Temperature-dependent development lab Plant-Herbivore Interactions 2. Nutritional ecology lab 3. Literature discussion Predator-Prey interactions 4. Parasitoid-host lab 5. Literature discussion Multi-species interactions and communities 6. Competition Lab 7. Landscape ecology - problem-based lab 8. Literature discussion Insects in Ecosystems 9. Literature discussions Biogeography, Diversity and Life History Evolution 10. Literature discussions

Address the relationship of this course to other UW-Madison courses, including possible duplication of content

none

Is there a relationship to courses outside your subject?

No

Indicate the outside affected subject(s). The proposal will be sent to those subjects for review.

List the instructor name and title (list multiple if applicable)

Claudio Gratton

If the instructor is not a tenured or tenure-track faculty member at UW-Madison, please explain the instructor's qualifications here. Then, go to the "Justifications" tab and upload the instructor's c.v. in the "Additional Attachments" section.

Attach a syllabus. See "help" for an explanation of what must be included in the syllabus.

Syllabus 451Gratton.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

This course is intended to be a companion to the lecture course being proposed (see Entomology 450). It will allow graduate students (and advanced undergraduates with consent of instructor) to explore in more depth topic materials presented in class. It will require students to develop skills in independent thinking, analysis and synthesis than that will help them develop as scientists. Hands on activities are currently not part of the Insect Ecology course and this course would allow students to

Provide an estimate of the expected enrollment

~10

Justify the number of credits, following the federal definition of a credit hour (see help). Include the number of contact hours or, if contact hours are not an accurate measure of credit, provide an explanation of how credits are measured

The course will meet once per week for 2-3 hours.

If this is a variable credit course, provide rationale

Additional comments (optional)

Additional attachments (optional) (please read "help" before uploading an attachment)

L&S Designations

Should the course be reviewed for L&S liberal arts and science (LAS) credit?

Yes

What is the rationale for seeking LAS credit?

This course meets a number of the L&S habits of the mind as outlined below. As outlined in the syllabus, student learning goals will be assessed by both writing and oral communication. By its nature, the subject of the course, spans basic science and its application to applied problems. Students are requires to understand how basic ecological and evolutionary principles can be used to analyze, understand, model and predict the behavior of managed ecosystems in order to solve problems ranging from invasive species, public health concerns or conservation of global biodiversity (of which insects are the greatest terrestrial contributors). Problem-solving of this nature is inherently multidisciplinary integrating science with society to reach practical solutions to insect-derived problems. Students will draw from diverse subject areas and modes of thinking as they design and execute their oral presentations and writing assignments. With regard to the Biological Sciences breadth area, this course examines scientific studies and breakthroughs in ecology, evolution and pest management in terrestrial and aquatic ecosystems. This would include discussion of the scientific method, hypothesis-driven research, and statistical analysis.

Level of the course, for L&S attributes (value required for all L&S courses and courses requesting LAS credit)

Advanced

Should the course be reviewed for L&S breadth requirements?

Yes

Indicate which:

B-Biological Science

General Education Designations

Should the course be reviewed for the general education requirement?

No

Which requirements?

Entomology 451 Lab - Syllabus

Course Number:	Entomology 451
Course Name:	Basic and Applied Insect Ecology, Laboratory/Discussion
Credits:	1
Format:	Thursday at 1:20 pm, 3 hour Lab/Discussion period
Offering:	Every other fall semester, concurrent with Entomology 450.
Instructor:	Dr. Claudio Gratton
Office Hours:	By appointment (cgratton@wisc.edu)
Pre-requisites:	Entomology 450 or concurrent enrollment in Ento 450, consent of instructor for undergraduates

Course Description:

Basic and Applied Insect Ecology Laboratory/Discussion is the companion course for the lecture-based Basic and Applied Insect Ecology (Entomology 450). This course will include hands-on experiences such as labs, field trips, computer exercises, and discussions based on readings in the primary literature to enhance and delve into more details on materials introduced in the course lectures.

Student learning objectives:

Upon completion of the course, students will have demonstrated:

1. Comprehension of ecological concepts/principles at the physiological, population, community and ecosystem levels.
2. Understanding of the mechanisms mediating interactions of insects with their biotic and abiotic environments.
3. Proficiency in the application of ecological theory to the understanding of novel insect systems and their applied implications
4. Ability to view and understand applied entomological problems through the lens of basic ecological theory
5. Ability to carry out experiments working with live insects, analyze and interpret experimental data
6. Ability to understand and communicate the significance of own research and specific research studies published in the primary literature

Required Textbook: Price, P. W., R. F. Denno, M. D. Eubanks, D. L. Finke, and I. Kaplan. 2011. **Insect Ecology: Behavior, Populations and Communities.** Cambridge University Press. 829 pp. ISBN: 9780521542609

Grading Policy:

Students will be expected to take an active part in the laboratories and discussions. Laboratories will be discovery-based and will Grades will be based on classroom attendance and participation (50pts), lab reports (50pts), a short review paper (100 pts.).

Grading Scale
92% and above = A
88%-91.9% = AB
82%-87.9% = B

78%-81.9 = BC
72%-77.9 = C
60%-71.9 = D
Below 60% = F

Syllabus Topics: These topics will mirror the lecture topics in Entomology 450.

Unit I: Autecology of insects: interactions with the environment

1. Temperature-dependent development lab

Unit II: Plant-Herbivore Interactions

2. Nutritional ecology lab
3. Literature discussion

Unit III: Predator-Prey interactions

4. Parasitoid-host lab
5. Literature discussion

Unit IV: Multi-species interactions and communities

6. Competition Lab
7. Landscape ecology - problem-based lab
8. Literature discussion

Unit V: **Insects in Ecosystems**

9. Literature discussions

Unit VI: Biogeography, Diversity and Life History Evolution

10. Literature discussions

Course Change Proposal

Subject Dairy Science (292) **Status** Under Review by School/College
Proposer Theodore J Halbach

Basic Information

Current course number
433

Current course title
Dairy Herd Management

Current published course description
Application of the fundamental principles of economics, nutrition, physiology, and breeding to the management of the dairy herd.

Chief academic officer of this unit
Kent A Weigel

Designee of chief academic officer for approval authority
Catherine E Rook; Michel A Wattiaux

Currently crosslisted with

What is the primary divisional affiliation of the course?
Biological Sciences

When will this change go into effect?
Fall 2013-2014

Basic Changes

Will the subject change?
No

Current subject
Dairy Science (292)

Proposed subject

Will the course number change?
Yes

Current course number
433

Proposed course number
233

Is this an honors course?
No

Is this an individual instruction course such as directed study, independent study, research or thesis (i.e., a course with no group instruction)?
No

Will the title change?
No

Current title
Dairy Herd Management

Proposed title (max. 100 chars.)

Proposed transcript title (max. 30 chars.)

Will the crosslistings change?
No

Current crosslistings

Proposed crosslistings

Will the "repeatability" of the course change?
No

Current repeatability

Proposed repeatability

Catalog Changes

Will the credits change?

No

Current minimum credits

Current maximum credits

Proposed minimum credits

Proposed maximum credits

Will the grading system change?

No

Current grading system

Proposed grading system

Will the published course description change?

Yes

Current course description

Application of the fundamental principles of economics, nutrition, physiology, and breeding to the management of the dairy herd.

Proposed course description

Overview of practical dairy herd management with components of reproduction, nutrition, milk quality, facilities and records. Laboratories emphasize practical applications, analyses of alternatives and decision making. Includes farm visits and analysis.

Will the prerequisites change?

No

Current prerequisites and other requirements

Proposed prerequisites and other requirements

Designation Changes

Will the Liberal Arts and Sciences (LAS) designation change?

No

What change is needed?

What is the rationale for seeking LAS credit?

Will the level of the course change for L&S attributes?

No

Current level:

Proposed level:

Will the L&S breadth requirement change?

No

Current breadth:

Proposed breadth:

Will the General Education Requirement change?

No

Current GER:

Proposed GER

Additional Information

Explain the relationship and importance of the proposed change to existing or future programs (i.e., degrees, majors and certificates)

Fills a void for sophomores in the dairy science curriculum and will serve as preparation for internships that are required for majors. This course is designed as an entry level course in dairy science for undecided or other majors in CALS.

Are any of these programs outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic units. The proposal will be sent to the academic units that support those subjects for review.

Specify which requirement(s) this change affects, if any (e.g. satisfies third-level language, meets the major's capstone requirement, fulfills PhD minor requirement)

None

Do any of these requirements affect programs (degrees, majors, certificates) outside your academic unit?

No

Indicate the subjects that are most closely aligned with the other academic unit. The proposal will be sent to the academic units that support those subjects for review.

Address the relationship of this change to other UW-Madison courses, including possible duplication of content

Graduate students in Dairy Science will now take Dairy Science 535, Dairy Farm Management Practicum for study in practical herd management. There are no known duplications of content with any other timetable listed course.

Is there a relationship to courses outside your subject?

No

Indicate the outside affected subject(s). The proposal will be sent to the academic units that support those subjects for review.

Will any courses be discontinued as a result of this change?

No

List course number(s) and complete a course discontinuation proposal for each course

Justification Changes

Explain the need for the change

Currently, freshmen to graduate students take Dairy Science 433. Dairy Science 233 targets students with sophomore and junior standing. The course is intended to expose students to the breadth of the discipline, stimulating their intelectual curiosity for future coursework that includes the basic science necessary to gain expertise in these topics. Dairy Science majors are required to have one internship experience, another goal of the revised course is to improve student preparation for these opportunities. Finally, this course could serve as an exploratory course for non-dairy science majors.

Additional comments (optional)

Attach a syllabus

F2013_DYSCI_233_Syllabus.pdf

Additional attachments (optional)(please read "help" text before uploading an attachment)

DRAFT

DAIRY SCIENCE 233 COURSE SYLLABUS

DY SCI	233	**Dairy Herd Management**	Credits:3	Fall 2013
Course Description: Overview of practical dairy herd management with components of reproduction, nutrition, milk quality, facilities and records. Laboratories emphasize practical applications, analyses of alternatives and decision making. Includes farm visits and analysis. **Lecture:** 11:00-11:50 on Monday and Wednesday in 204 Animal Sciences **Lab:** 2:25-5:25 on Monday in 204 Animal Sciences *Pre-Requisites:* Dy Sci/An Sci 101 or consent of instructor, Sophomore or Junior standing				

Course objectives:

1) Learn dairy management terminology
2) Gain exposure to accepted dairy farm management systems
3) Become familiar with benchmarks used in the dairy industry to evaluate farm management.

Course Coordinator: Ted Halbach, Dairy Management Instructor

Rm. 283 Animal Sciences
Office: 608-263-3305
Cell: 608-219-5289
E-mail: tjhalbach@wisc.edu
Office hours:

- Tuesday, Thursday and Friday – 10:30 to 11:30 AM
- Wednesday 1:30 to 2:30 PM
- Or by appointment

Class Meeting Outline

Module 1	**Dairy Records Management**	
9/4 Lecture	Dairy Comp 305 Basics	Halbach
9/9 Lecture	Data Entry, Command Line, Graphing	Halbach
9/9 Lab	Hands-on Use of Dairy Comp 305	Halbach
9/11 Lecture	DC 305 Modules to Monitor and Analyze Data	Halbach
9/16 Lecture	DC 305 Modules to Monitor and Analyze Progress on a Dairy	Halbach
9/16 Lab	Review Command Lines and Graphs. Hands-on Use of DC 305 Modules	Halbach
9/18 Lecture	Presentations of Final Projects/Debrief	Halbach
9/23 Lecture	DHI Herd Management Reports	Fourdraine
9/23 Lab	AgSourceDM and Profit Opportunity Analyzer	Fourdraine
Module 2	**Dairy Nutrition and Nutrient Mgmt.**	
9/25 Lecture	The Silage Making Process and Management to Reduce Silage Losses	Holmes
9/30 Lecture	Covers for Silage Storage	Holmes

9/30 Lab	View Feed Inventory Webinar Prior to Lab. Using Silage Storage and Inventory Spreadsheets. Take Home Assignment	Holmes
10/2 Lecture	Feeding Management	Shaver
10/7 Lecture	Feeding Management	Shaver
10/7 Lab	Field Trip – tbd	Shaver
10/9 Lecture	Field Trip debrief	Shaver
10/14 Lecture	Feeding With Robotic Milking Systems	Shaver
10/14 Lab	Field Trip – Arlington Dairy and wrap-up	Shaver
10/16 Lecture	Nutrient Management and Manure Handling Systems	Wattiaux
10/21 Lecture	Nutrient Management and Manure Handling Systems	Wattiaux
10/21 Lab	Field trip - tbd	Wattiaux
10/23 Lecture	Nutrient Management and Manure Handling Systems	Wattiaux
10/28 Lecture	Nutrient Management and Manure Handling Systems	Wattiaux
10/28 Lab	Nutrient Management Plans	Wattiaux
10/30	*Mid-term examination	
Module 3	**Dairy Reproduction**	
10/30 Lecture	Measuring and Monitoring Reproduction	Fricke
11/4 Lecture	Factors Affecting Fertility	Fricke
11/4 Lab	Measuring and Monitoring Reproduction	Fricke
11/6 Lecture	Improving A.I. Service Rates	Fricke
11/11 Lecture	Reproduction Tools and Technology	Fricke
11/11 Lab	DC305 Reproduction Herd Analysis	Fricke
Module 4	**Milk Quality**	
11/13 Lecture	Milking Machines	Sanford
11/18 Lecture	Milking Parlor Design	Sanford
11/18 Lab	Parlor Planner: capital investment, cow flow and parlor	Sanford
11/20 Lecture	Benchmarking milk quality	Ruegg
11/25 Lecture	Milking performance	Ruegg
11/25 Lab	Field trip - tbd	Ruegg
11/27 Lecture	Using Diagnostic data	Ruegg
11/2 Lecture	Assessing clinical mastitis	Ruegg
11/2 Lab	Using farm data to assess milk quality	Ruegg
11/4 Lecture	On-farm product handling	Turgasen
11/9 Lecture	On-farm product handling	Turgasen
11/9 Lab	Field trip - tbd	Turgesen
11/11 Lecture	Field trip debrief	Turgesen

Grading

30% Quizzes (take home individual and group quizzes for each module)
25% Lab assignments
15% Mid-term exam (*scheduled on October 30 from 5:30 - 7:00 p.m.)
15% Final exam (noncumulative, date to be announced)
15% Attendance and class participation.

Participation scale:

- ✓ Attends class. Consistent, positive and thoughtful contributions to class and lab discussions and observed positive contribution in group settings. 100 points
- ✓ Attends class. Occasionally contributes (sometimes thoughtful) to class and lab discussions and in group settings. 80 points
- ✓ Attends class but little or no effort at being involved in group or class discussions. 60 points.
- ✓ Attends class, little or no effort at being involved in group or class discussions, is non-attentive (sleeps, emails or other internet activity during class period) 30 points.
- ✓ Chronically misses class and no participation in class discussions. 0 points
- ✓ You will be allowed to miss one lab and two lecture periods during the semester; grade drops one letter grade each miss after that.
- ✓ Peer evaluations will be performed for group projects. Students award a numeric score to each member of their team (not including themselves) and those scores must add up to 100. Students must also provide a qualitative explanation of those scores, and those comments are passed on (anonymously) to their peers.

Grade Scale

Each module will be worth approximately 25% of the final grade.
Final Grade = Percentage

A = 93% - 100%
AB = 89% - 92%
B = 83% - 88%
BC = 79% - 82%
C = 70% - 78%
D = 60% - 69%
F = <60%

Grades will be posted regularly on Learn@UW.

Homework

Students will be assigned weekly assignments utilizing the dairy management software, Dairy Comp 305.