

Agenda

CALS Curriculum Committee Meeting
Tuesday, November 26th, 2013, 12:00 p.m.
250 Agricultural Hall

___ Randy Jackson, Chr (2014)

___ Jeri Barak, (2014)

___ Bill Bland, (2014)

___ Kirsten Brown, (2016)

___ Jack Kloppenburg, (2015)

___ Ahna Skop, (2016)

___ Susan Smith, (2016)

___ James Steele (2016)

___ Masarah Van Eyck, (2015)

CALS Ex Officio:

___ Sarah Pfatteicher

___ Phil Gonsiska

CASI Ex Officio:

___ Chris Day

Student Reps: ___ Matt Olson

___ Taylor Fritsch

UP&S Office:

___ Susan Gisler

___ Andrea Sottile

MINUTES

October 22, 2013

Notes from November 12, 2013

NON-COURSE PROPOSALS

Pass/Fail Policy

Lead: Kirsten

Proposal to adopt common Pass/Fail policy as recommended by Crossroads.

CALS International Certificate

Lead: Bill

Proposal to suspend admission of students to CALS International Certificate.

COURSE PROPOSALS

Biochem 620: *Eukaryotic Molecular Biology*

Lead: Phil

Course Change, effective Spring 2014. Eliminating Pharmacology from and adding Cell and Regenerative Biology to crosslistings, “due to the elimination of Department of Pharmacology from the School of Medicine and Public Health”.

Entom 354: *Diagnosing and Monitoring Pest and Nutrient Status of Field Crops*

Lead: Jeri

New Course, effective Spring 2014. One-week, one credit course to teach crop pest and nutrient problems. Preparation for WI Certified Crop Adviser’s exam. Meets Federal definition of credit hour.

Entom 711: *Multivariate Analysis of Ecological and Community Data*

Lead: Kirsten

New Course, effective Fall 2015. Two credit, graduate level course introducing multivariate analysis of ecological data. Students will conduct lecture beginning in week 5.

F & W Ecol 660: *Climate Change and Natural Resources*

Lead: Jeri

New Course, effective Fall 2014. Climate change and ecological conservation. Requesting Advanced L&S classification and LAS credit.

Hort 370: *World Vegetable Crops*

Lead: Masarah

Course Change, effective Fall 2014. Requesting Intermediate or Advanced L&S classification.

Geog 439: *US Environmental Policy and Governance*

Lead: Masarah

New Course, effective Fall 2014. Covers US environmental regulations. Variable credit course (3 or 4 cr.). The 4-credit version includes 50min/wk case study discussion.

Molecular & Environmental Tox 606: *Colloquium in Environmental Toxicology* **Lead: Bill**

Course Change, effective Spring 2014. Change of course description. Change prerequisites: one sem. of Biology. Seeks reinstatement of LAS credit and Intermediate L&S classification.

AUTOMATIC CONSENT

Neurodpt 699: *Independent Work*

New Course, effective Fall 2013. Independent study course for new Neuroscience Dept.

**CALS Curriculum Committee Meeting
October 22, 2013**

Present: Jackson, Bland, Brown, Kloppenburg, Van Eyck, Gonsiska, Sottile, Fritsch, Olson

Absent: Barak, Skop, Smith, Steele

Meeting called to order 12:00pm

MINUTES

Motion to approve last minutes: Van Eyck, Bland

BUSINESS

- DYSCI 234. Designed to replace DYSCI 302, elective class, content will be updated, main tenet of 302 (to have a cow) will be retained
 - Discussion:
 - Students report enjoying how it's actual production
 - The new numbering and format makes sense
 - Since it is part of a two-course sequence, can it be a required course?
 - Motion to approve; Brown, Kloppenburg – passed
- DYSCI 302. Request to delete because DYSCI 234 will replace it
 - Motion to approve; Brown, Olson – passed
- BSE ~~270~~. Course content to focus on heat and mass transfer, taught by new faculty member
 - Motion to approve; Bland, Kloppenburg – passed
- BIOCHEM 508. Change to course description, pre-requisite now to have a BC or higher in BIOCHEM 503, all seem to be minor changes
 - Motion to approve; Bland, Brown – passed
- BIOCHEM 710. Slight change to course description, effective SP 2014, content of course remains the same
 - Motion to approve; Van Eyck, Bland – passed
- BIOCHEM 100. Freshmen seminar intended to introduce freshmen and transfers to biochemistry as a department and major, also fulfills the CALS first-year seminar requirement
 - Motion to approve; Kloppenburg, Olson – passed
- FOOD SCI 437. Change to pre-requisites – adding that students be in ADI and have taken FOOD SCI 301
 - Discussion:
 - Seems to be motivated by a desire to attract only those students serious about FOOD SCI
 - Will restrict other student's access to the course
 - How do we address the influx of students without increasing faculty/staff? Keep in mind as our larger task re: capacity
 - Motion to approve; Bland, Olson – passed

- BSE 270. New course designed to teach students computer-aided drafting, online class via Learn@UW, intended to start SP 2014, apparently taught before as BSE 375
 - Discussion:
 - Uncertain of federal guidelines for credit hours
 - Four contact hours available per week for assistance seems appealing
 - Does the average student take 6 hours or 8 to 10, for example? May be worth probing more on this
 - Are online courses being tracked thus far? Would be worth looking in to
 - Motion to approve; Kloppenburg, Bland – passed
- BSE 461. Change in title, change to course description, will include food as part of course content
 - Motion to approve; Kloppenburg, Olson – passed

AUTOMATIC CONSENT

- ZOO 953. Cross-listing to include Atmospheric and Oceanic Sciences
 - Discussion:
 - Committee has previously suggested Zoology reach out to other departments who may have interest in cross-listing some of their courses in order to get greater buy-in

CAPACITY METRICS

- Bill is working up a model to go forward with capacity metrics discussion. It will be proposed at a future meeting. Model will examine instructional resources against student demand and how and where they meet; it will force us to confront assumptions about what quality education is
- Should know current goals and if we're accomplishing them
- Possible measurements/indicators: D-F-Drop rates, waitlists, time in residence, number of FTES of instructional faculty and staff and what the turnover is
- Regardless of metrics used, we must consider what our baseline is
- CALS Office to continue research about what other institutions may have accomplished regarding this

Meeting adjourned 12:52pm

CALS Curriculum Committee Meeting
November 12, 2013

- Capacity Metrics discussion (Bland handed out worksheet)
 - Metrics – faculty and ratios, ex. student credit hours taught per faculty. There is no shortage of metrics.
 - The question is which metrics matter and what do they tell us?
 - Perhaps CALS statistics are different from campus-wide statistics because CALS doesn't necessarily "count" the same metrics as other colleges/schools, such as lab meetings. They are still being done in CALS; just not being explicitly counted as in other locations on campus.
 - CALS "what's needed" (small group activity)
 - Service learning, capstones, internships, etc. all enable students to graduate as critical thinkers, informed citizens, experts of a certain area of content, etc. – (Jackson, Kloppenberg, Hammond)
 - Independent research/internships, capstones, 12 credits of 50 or less students, midsize = 50-150, large = greater than 150 – (Olson, Day, Gisler, Sottile)
 - Hammond to come up with statistics for each group of CALS majors – lab science, life science, and field science type majors. Select a representative major from each category and report findings to committee.



TO: CALS APC, CALS Curriculum Committee

FROM: Sarah Pfatteicher, Associate Dean for Academic Affairs
Philip A. Gonsiska, Assistant Dean for Academic Programs and Policies

DATE: 20 November 2013

RE: Changes to the College Pass/Fail Policy

Request:

The CALS Office of Academic Affairs requests permission to adopt changes to the College's Pass/Fail policy as recommended by the Crossroads Committee, effective for the Spring 2014 term.

Background:

Students at UW-Madison may elect to take some classes on a Pass/Fail basis. Students choosing to do so receive a grade of "S" (satisfactory) if they have earned a grade of C or higher and a grade of "U" (unsatisfactory) if they have earned lower than a C.

Policies for taking courses on a Pass/Fail basis have heretofore been determined at the college level. The resulting variation in approaches causes confusion among students. For example, a CALS student enrolled in an L&S course is bound by the CALS Pass/Fail policy, whereas an Engineering student wishing to take the same course on a Pass/Fail basis is bound by the Engineering policy. The current array of policies also has the potential to result in confusion for advisors in cross-college programs, such as Biology or Environmental Sciences.

The Crossroads Committee has reviewed Pass/Fail policies across UW-Madison. The committee has identified commonalities among these policies and recommends a common Pass/Fail policy.

Attached to this memo are the following:

1. the recommendations put forth by Crossroads
2. the current CALS policy
3. a side-by-side comparison of the two policies

The common policy recommended by Crossroads is largely congruent with current CALS policy and would result in a few minor procedural changes if implemented in CALS. In the interest of better serving our student population, we strongly recommend adopting the common Pass/Fail policy.

Office of Academic Affairs

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Recommendations Regarding the Undergraduate Pass/Fail Option

May 2013

The Crossroad Committee, which reports to the Provost, has received, debated, and endorsed the report of its subcommittee on the pass/fail option. The committee reviewed the complicated campus rules regarding the pass/fail grading option for undergraduates in great detail. We support the recommendation that specific common rules be developed. Toward that end, we recommend the undergraduate curriculum committees of the UW-Madison schools and colleges consider the recommendations below. Committee members included Amy Arntsen (Law), Alissa Ewer (Graduate School), John Klatt (CALS), Christopher Lee (L&S), and Michelle Young (Registrar's Office).

Background:

At UW—Madison, pass/fail refers to a student-initiated grading option whereby a particular student receives either an S or a U grade in a course in which students normally receives a letter or numeric grade. Grades of C or higher are typically represented with an S and grades of D or F become a U. Neither an S or a U is included in GPA calculations. Pass/fail should not be confused with credit/no credit. Credit/no credit refers to courses where all students in the course receive ungraded degree credit if they successfully participated in the course.

Implementation of the pass/fail option is specific to each school and college at UW—Madison and is different for graduate students, professional students, and undergraduates. The elements of the pass/fail option, however, are common:

1. Pass/fail is specific to the student, not the course.
2. An underlying letter or numeric grade is submitted by the instructor and converted by the Office of the Registrar into an S or U.
3. The instructor is not notified about the election of the pass/fail option.
4. Pass/fail must be declared or canceled by the student by specific deadlines.
5. The student must meet eligibility requirements.
6. Only certain courses may be taken on a pass/fail basis.
7. Courses taken on a pass/fail basis do not count for certain requirements that they would otherwise meet.
8. There are limits regarding the number of courses or credits an individual student may carry on a pass/fail basis.
9. Each academic dean's office is authorized to allow exceptions to the normal policy for its students.

Each school and college has developed slightly different ways of regulating pass/fail policy. Nonetheless, the policies that apply to undergraduates, share many commonalities. There would significant advantages in clarity and efficiency if a single policy applied to all undergraduates. We recognize that the differences between the policies do represent some differences in academic approach. Aligning the policies would certainly require review of the faculty through the appropriate curriculum committees. We recommend that the undergraduate schools and colleges (S/C) ask their curriculum committees to consider aligning their pass/fail policies in accordance with the following recommendations.

Recommendations:

The first three of the nine identified elements of the current pass/fail procedures are common to all schools and colleges. The others vary to some degree.

1. Pass/fail is specific to the student, not the course.

This means that one student in a course may be taking the course on a pass/fail basis and that others may not. This is inherent in the concept and does not need review.

Recommendation: **No change from current policy.**

2. An underlying letter or numeric grade is submitted by the instructor and converted by the Office of the Registrar into an S or N.

This is based on the notes of the UW Faculty Senate Meeting of January 15, 1973 and the Administrative interpretation of their decision by Vice Chancellor Shain, April 27, 1973 stating: “the Individual Pass-Fail option in each school and college will reflect the fact that a pass (S) will be recorded when a grade of A through C is earned. When a grade of D or F is earned, the Registrar will convert the grade to U.”

Recommendation: **No change from current policy.**

3. The instructor is not notified about the election of the pass/fail option.

This is also common to all policies. Note, however, that since the implementation of ISIS, it is possible that instructors may have access to ISIS information showing the grading basis of the course. Therefore, some instructors may discover that a student is taking the course on a pass fail basis. Students may, of course, share this information with their instructors if they choose.

Recommendation: **S/Cs use the language “the instructor is not notified when a student selects the pass/fail option.”**

4. Pass/fail must be declared or canceled by the student by specific deadlines.

All students must declare their intention to take a course on a pass/fail basis by the end of the fourth week of a regular semester or by the end of the proportional amount of the session for summer and modular courses. This much is common for all

undergraduates. Some S/C allow students to cancel a pass/fail declaration up until the application deadline; others do not allow the request to be canceled once submitted. None allow students to cancel after the deadline.

These deadlines are based on the idea that the pass/fail option is intended to encourage students to explore educational opportunities that they might otherwise not be willing to attempt. Pass/fail is not intended as a way of avoiding academic consequences.

Recommendation: **Students may submit pass/fail requests via their Student Center link from the time that they register until midnight on the Friday at the end of the fourth week of fall and spring semesters. (For modular and summer session courses, pass/fail requests must be submitted by midnight Friday of the week in which the session is one-fourth completed). Students may not cancel or add the pass/fail option after the deadline for submitting Pass/Fail Option Forms.**

5. The student must meet eligibility requirements.

There is a wide amount of variance in the different S/C requirements related to pass/fail eligibility. Some require a GPA (typically 2.0 or 2.5), some prohibit freshmen, and some require good academic standing. Our recommendation is that students in good academic standing (meaning students not on any form of academic probation) be allowed to take a course on a pass/fail basis. This would clearly be the easiest rule to administer through ISIS. If their academic status changes after pass/fail has been approved, it will not be rescinded.

Recommendation: **All undergraduates are eligible to take a course on a pass/fail basis if they are in good academic standing at the time they request pass/fail.**

6. Only certain courses may be taken on a pass/fail basis.

Again there is a great deal of S/C difference regarding which courses may be taken on a pass/fail basis. Our recommendation is that we restrict the pass/fail option to “elective” course work. The word “elective” will, however, have a different meaning in different S/Cs. This seems unavoidable. We ask, however, that each S/C clarify what elective means. This rule creates significant “enforcement” issues that will be discussed in the next item.

Recommendation: **Only elective work may be carried on a pass/fail basis. S/Cs may reject pass/fail requests for non-elective work.**

7 Courses taken on a pass/fail basis do not count for certain requirements that they would otherwise meet.

Limiting pass/fail to elective courses raises the question of what to do when a student request the pass/fail option in a course that should not be an elective—say a course in the student's major. Current policy varies. Some S/Cs reject students attempts to declare the pass/fail option in such courses, when they can be detected. Inevitably, some students will succeed in taking a course on a pass/fail basis when they expect it to count as a required (non-elective) course. In other cases, a student may take an elective course pass/fail and then change colleges or majors. We recommend adopting

a policy that pass/fail course not count for non-elective work, even if they would otherwise count. We also recommend that the curriculum committees consider whether they would expect the academic dean's office to make adjustments in certain cases. See number 9 below.

Recommendation: **Courses taken on a pass/fail basis will not count for non-elective requirements even if they would normally count toward such requirements.**

8. There are limits regarding the number of courses or credits an individual student may carry on a pass/fail basis.

Current S/C practices vary widely. Some limit credits; some limit courses. In practice, very few students take many pass/fail courses and limiting pass/fail to electives further restricts the possibilities for many students.

Recommendation: **Undergraduates may take one pass/fail course per term. The summer sessions collectively constitute one term.**

9. Each academic dean's office is authorized to allow exceptions to the normal policy for its students.

This allows the dean's office to respond to specific circumstances. An example would be a case where a student intending to graduate, elected the pass/fail option in a non-elective. The dean's office could allow the student to cancel the pass/fail option and graduate. It would be reasonable for the S/C curriculum committee to offer guidance to the dean's office regarding what might constitute reasonable intervention.

Draft Policy Statement:

The undergraduate curriculum committees are encouraged to consider adopting this draft policy.

Pass/Fail

All undergraduate students are eligible to take a course on a pass/fail basis if they request the option prior to the deadline and are in good academic standing at the time they request pass/fail. When a course is taken on a pass/fail basis, the instructor reports a letter grade, which is converted by the registrar to an S (satisfactory) or U (unsatisfactory). The grade of S shall be recorded by the registrar in place of instructors' grades of A, AB, B, BC, or C. The grade of U shall be recorded by the registrar in place of instructors' grades of D or F. Neither the S nor the U is used in computing the grade point average. A student must earn at least a C to receive credit for the course.

The following conditions apply to pass/fail courses:

Deadline to apply: Students may submit pass/fail requests via their Student Center link from the time that they register until midnight on the Friday at the end of the fourth week of fall and spring semesters. (For modular and summer session courses, pass/fail requests must be submitted by midnight Friday of the week in which the session is one-fourth completed). Students may not cancel or add the pass/fail option after the deadline for submitting Pass/Fail Option Forms.

Pass/fail can only be chosen for elective courses: Required courses cannot be taken on a pass/fail basis. CALS may reject pass/fail requests for non-elective work, but it is the student's responsibility to be sure that the requested course is an elective.

Pass/fail courses do not meet specific requirements: Courses taken on a pass/fail basis will not count for non-elective requirements even if they would normally count toward such requirements.

Number of pass/fail courses: Undergraduates may carry one course on a pass/fail basis per term. The summer sessions collectively count as a single term.

Exceptions: CALS is authorized to make exceptions to the pass/fail policy.

Notification: Students can see whether a course is pass/fail in their student center. Instructors are not notified when a student elects the pass/fail option.

Current Policy

Pass/fail privilege. Continuing students with at least a 2.0 cumulative GPA, new freshmen, and new transfer students may elect one pass/fail course each semester, with **a maximum of eight such courses** prior to graduation. Courses graded with the pass/fail system cannot be used to satisfy any of the university, college, degree program, or major requirements. With the exception of PE activity and dance courses, students must receive permission from their advisor.

For **all** pass/fail courses, students must receive permission from the Office of Undergraduate Programs and Services. Students enroll in a class and then apply for pass/fail grading no later than the end of the fourth week of classes (see [registrar's website](#) for exact deadlines). Summer Session and modular courses have different deadlines, and students should check the [registrar's website](#) for correct information. Students can obtain the form to apply for pass/fail privilege on the registrar's website.

After approval, the student cannot change the grading back to the conventional (A, AB, etc.) basis. The registrar will convert final letter grades submitted by the instructor, who is not informed of the student's pass/fail status, to an S (pass) for grades A, AB, B, BC or C, and to a U (fail) for a grade of D or F. The grade is excluded from the GPA. Students are warned that although a grade of D carries credit under the conventional system, it carries no degree credit when it is converted to a grade of U under the pass/fail privilege.

Students in pre-professional programs for veterinary medicine, medicine, and graduate studies are cautioned not to take work that is required or recommended on a pass/fail basis.

Current Policy	Proposed Policy	Changes
Continuing students with at least a 2.0 cumulative GPA, new freshmen, and new transfer students may elect one pass/fail course each semester, with a maximum of eight such courses prior to graduation.	<p>All undergraduate students are eligible to take a course on a pass/fail basis if they request the option prior to the deadline and are in good academic standing at the time they request pass/fail.</p> <p>Number of pass/fail courses: Undergraduates may carry one course on a pass/fail basis per term. The summer sessions collectively count as a single term.</p>	Under the new policy, students may take more than a total of 8 courses pass/fail.
Courses graded with the pass/fail system cannot be used to satisfy any of the university, college, degree program, or major requirements. With the exception of PE activity and dance courses, students must receive permission from their advisor.	<p>Pass/fail can only be chosen for elective courses: Required courses cannot be taken on a pass/fail basis. CALS may reject pass/fail requests for non-elective work, but it is the student's responsibility to be sure that the requested course is an elective.</p> <p>Pass/fail courses do not meet specific requirements: Courses taken on a pass/fail basis will not count for non-elective requirements even if they would normally count toward such requirements.</p>	The new policy does not explicitly require an advisor's approval to take a course on a Pass/Fail basis.
For all pass/fail courses, students must receive permission from the Office of Undergraduate Programs and Services. Students enroll in a class and then apply for pass/fail grading no later than the end of the fourth week of classes (see registrar's website for exact deadlines). Summer Session and modular courses have different deadlines, and students should check the registrar's website for correct information. Students can obtain the form to apply for pass/fail privilege on the registrar's website.	Deadline to apply: Students may submit pass/fail requests via their Student Center link from the time that they register until midnight on the Friday at the end of the fourth week of fall and spring semesters. (For modular and summer session courses, pass/fail requests must be submitted by midnight Friday of the week in which the session is one-fourth completed).	

After approval, the student cannot change the grading back to the conventional (A, AB, etc.) basis.

Students may not cancel or add the pass/fail option after the deadline for submitting Pass/Fail Option Forms.

Previously, we haven't technically allowed students to cancel the pass/fail option. In practice, however, we haven't processed the actions until after the deadline, and it has been possible for students to request that we not process their form.

The registrar will convert final letter grades submitted by the instructor, who is not informed of the student's pass/fail status, to an S (pass) for grades A, AB, B, BC or C, and to a U (fail) for a grade of D or F. The grade is excluded from the GPA. Students are warned that although a grade of D carries credit under the conventional system, it carries no degree credit when it is converted to a grade of U under the pass/fail privilege.

When a course is taken on a pass/fail basis, the instructor reports a letter grade, which is converted by the registrar to an S (satisfactory) or U (unsatisfactory). The grade of S shall be recorded by the registrar in place of instructors' grades of A, AB, B, BC, or C. The grade of U shall be recorded by the registrar in place of instructors' grades of D or F. Neither the S nor the U is used in computing the grade point average. A student must earn at least a C to receive credit for the course.

Students in pre-professional programs for veterinary medicine, medicine, and graduate studies are cautioned not to take work that is required or recommended on a pass/fail basis.

Exceptions: CALS is authorized to make exceptions to the pass/fail policy.

Notification: Students can see whether a course is pass/fail in their student center. Instructors are not notified when a student elects the pass/fail option.



TO: CALS APC, CALS Curriculum Committee, and CALS Student Association

FROM: Sarah Pfatteicher, Associate Dean for Academic Affairs, CALS
John Ferrick, Director of CALS International Programs Office

DATE: 4 November 2013

RE: Permission to Suspend Undergraduate International Certificate

CC: Kate VandenBosch, Dean of CALS
Masarah Van Eyck, Administrator of CALS International Certificate

Request:

The College of Agricultural and Life Sciences requests permission to suspend admissions to the undergraduate CALS International Certificate effective 31 January 2014 (or as soon as reasonably possible after that date), and hereby seeks your input on this request, advisory to the dean, and prior to submitting documentation to the University Academic Planning Council.

Background:

Established in 2009, the CALS International Certificate has been a low-enrollment program whose students' needs may now be better served by other programs on campus. As noted on the Academic Planning and Institutional Research website, "According to UW-Madison program review guidelines, programs that award fewer than five (5) degrees in a five-year period are deemed 'low enrollment' and are to be reviewed and considered for discontinuation."

In the five-year existence of the certificate program, only four students have enrolled in and graduated with the CALS International Certificate. Zero students are presently enrolled. We deem this to be below the threshold for a viable program, and believe that college resources would be better directed toward enhancing other international opportunities for students.

In addition to the lack of enrollment, we note that current administrative structures related to the program are under review. The CALS International Certificate's advising and curriculum have been overseen by faculty members named to the CALS International Committee. That committee is presently on hiatus while a campus-wide committee reviews the mission and structure of the CALS International Programs unit to which that committee reports. Members of the review committee will submit their final report with recommendations to Dean VandenBosch by February 2014. We anticipate being able to make a decision about discontinuation of the certificate following receipt of that report. As a result, we believe that at this time suspension, rather than discontinuation, is the appropriate step.

Plans for Accommodating Enrolled, Stopped-out, and Prospective Students:

As of fall 2013, there are no students currently enrolled in the CALS International Certificate. We will direct prospective students seeking an international curriculum to the few dozen international certificates offered across campus, including the Certificate in Global Health, which has been offered since fall 2010 and is administered through CALS.

Office of Academic Affairs

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CALS remains committed to a vibrant and varied set of international educational opportunities for students, and we are confident that suspension of the certificate will not significantly affect these opportunities. The college's unique International Studies Requirement requires every CALS undergraduate (more than 3,000 students at present count) to complete at least three credits of academic work with international content. CALS also provides on-going support for a variety of field study programs, enabling students to study overseas for up to several weeks, without needing to leave campus for a full semester. In addition, support from the Madison Initiative for Undergraduates has supported CALS faculty in developing a plethora of innovative, high-impact curricula that introduce their undergraduates to the international aspects of their fields. MIU funding has also enabled us to expand international internships available to students. These courses, internships, and field study programs, in addition to more traditional semester and year-long study abroad programs, all provide our students with encouragement and opportunity to extend their learning beyond the boundaries of the state.



COLLEGE OF
AGRICULTURAL & LIFE SCIENCES
University of Wisconsin-Madison

November 11, 2013

Academic Planning Council
College of Agricultural and Life Sciences
Agricultural Hall

Dear colleagues,

As the administrator for the CALS International Certificate, I support the attached proposal to suspend admissions to this program. My support is due in large part to the certificate's historic low enrollment and the emergence of other more promising opportunities for science majors seeking international coursework and experiences.

As the inaugural Director of Science Curriculum Internationalization housed in CALS's Academic Affairs Office, I am disappointed that this well-designed certificate was not as successful a program as one might have hoped. Happily, thanks in large part to the Madison Initiative for Undergraduates, CALS faculty and staff are now revitalizing and establishing new curricular and co-curricular initiatives that will more strategically strengthen and innovate international curriculum in undergraduate science education at UW-Madison.

I look forward to contributing to these new developments.

Sincerely,

Masarah Van Eyck
Director, Science Curriculum Internationalization
College of Agricultural & Life Sciences

Office of Academic Affairs

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Proposed Suspension of Enrollment in the CALS International Certificate, as discussed by the CALS Student Association (CALSSA) on 11/12/13

Background

The proposal to suspend enrollment in the International Certificate generated a great deal of discussion at the meeting tonight. From an organizational standpoint, the argument for suspension is compelling. Dean Gonsiska pointed out that since 2009, only 4 students have graduated with the certificate and none are currently enrolled according to the records. The certificate is overseen by an inactive International Committee, and there are 16 other certificates across campus that cover international topics, from Celtic studies to International Engineering to Global Health.

The proposal to suspend enrollment is slated for review by the CALS Academic Planning Council (APC) next Tuesday (Nov. 19th), the CALS Curriculum Committee on the 20th, again by the CALS APC on December 3rd, and finally by the University APC.

CALSSA Feedback

There appears to be student interest in the certificate, but some organizational and communication difficulties may be causing the low enrollment. A particular CALSSA member mentioned that he was completing the certificate and was unaware of a need to enroll before completing the course requirements. A search of the CALS webpage during the meeting led to the conclusion that the certificate did not have a formal enrollment process. Students also commented that the certificate may not be listed on DARS like other certificates on campus to help track completion. Dean Pfatteicher pointed out that students are expected to enroll; however, the website note “For more information, contact the certificate director” could be easily overlooked by students rather than acted upon as the first step towards enrollment. Dean Pfatteicher also noted that the DARS listing is only visible for individuals who enroll, and explains why no CALSSA member could access it.

With resources to promote the certificate and clearer instructions for enrollment, CALS students would benefit from the International Certificate as a means to expand and document their understanding of today’s global society and marketplace. It could draw students from the over-enrolled Global Health Certificate while providing a more attractive option for students in agriculture- and business-focused majors. If new enrollment is suspended, CALSSA hopes that the final timeframe for enrollment will be clearly communicated to the full CALS student body in time to ensure that any individuals already planning to complete the requirements could earn the certificate, even if they previously failed to interpret the invitation to contact the certificate director as the initiating step in the enrollment process.

Course Change Proposal

Subject Biochemistry (200)

Status Under Review by School/College

Proposer Chelsea Spangler

Basic Information

Current course number

620

Current course title

Eukaryotic Molecular Biology

Current published course description

This course focuses on the basic molecular mechanisms that regulate DNA, RNA, and protein metabolism in eukaryotic organisms. This course is intended for advanced undergraduates and first year graduate students with a firm knowledge of basic biochemistry.

Chief academic officer of this unit

Elizabeth A Craig

Designee of chief academic officer for approval authority

Catherine Ryan; Sebastian Y Bednarek

Currently crosslisted with

Pharmacology (724)

What is the primary divisional affiliation of the course?

Biological Sciences

When will this change go into effect?

Spring 2013-2014

Basic Changes

Will the subject change?

No

Current subject

Biochemistry (200)

Proposed subject

Will the course number change?

No

Current course number

620

Proposed course number

Is this an honors course?

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

Will the title change?

No

Current title

Eukaryotic Molecular Biology

Proposed title (max. 100 chars.)

Proposed transcript title (max. 30 chars.)

Will the crosslistings change?

Yes

Current crosslistings

Pharmacology (724)

Proposed crosslistings

Cell and Regenerative Biology (217)

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?

No

Current course description

This course focuses on the basic molecular mechanisms that regulate DNA, RNA, and protein metabolism in eukaryotic organisms. This course is intended for advanced undergraduates and first year graduate students with a firm knowledge of basic biochemistry.

Proposed course description

Will the prerequisites change?

No

Current prerequisites and other requirements

Biochem 508 or equiv

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:

Intermediate

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)

The proposed change of cross-listing from Pharmacology to Cell and Regenerative Biology (CRB) is due to the elimination of Department of Pharmacology from the School of Medicine and Public Health (SMPH) and its replacement by the Department of CRB.

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)

The proposed change of cross-listing will not affect other UW-Madison courses. The content of the course will not change.

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

The proposed change of cross-listing will not affect other UW-Madison courses. The content of the course will not change.

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

The course director, Dr. Wassarman, was formerly affiliated with the Department of Pharmacology but is now on the faculty for Cell and Regenerative Biology. The course should therefore be cross-listed with his current department (217) and NOT 724, as the course is no longer associated with Pharmacology.

Additional comments (optional)

Attach a syllabus

Additional 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

1

Maximum credits

1

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

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. This course is will prepare students to recognize and diagnose pest and nutrient problems in field crops. Pest identification, life history, damage symptoms, nutrient deficiency symptoms and monitoring methods will be compared and contrasted. Soil and plant tissue sampling techniques will be discussed so students can select and implement the appropriate sampling protocol. Crop staging techniques will be reviewed relative to crop management milestones and pest control timings. Herbicide mode of action and injury symptoms will be discussed as will techniques to troubleshoot crop production problems.

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

PI Path 559 covers some similar topics but there is no concern in the Plant Pathology department about this overlap as the Plant Pathology 559 course is specific and more in-depth about the plant pathology aspects and also have a lab.

Is there a relationship to courses outside your subject?

Yes

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

Plant Pathology (766)

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.

354schedule.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 in those other courses. 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?

***Agronomy, Entomology, Horticulture, Plant Pathology,
Soil Science 354,
Diagnosing and Monitoring Pest and
Nutrient Status of Field Crops
(IPM Field Crop Scout Training Class)***

Monday, January 6, 2014

Room 104, Russell Labs

8:00	Bryan Jensen IPM Program	Introduction Rm. 184 Russell labs
8:15	Bill Kojis Dept. of Agronomy	Corn Growth and Development
9:00	John Gaska, Dept. of Agronomy	Soybean and Small Grain Growth and Development
10:30	Break	
10:45	Richard Proost, NPM Program	Consequences of Misidentifying Weeds
11:15	Bryan Jensen IPM Program	Corn Insect Lecture
12:00	Lunch (on your own)	
1:00	Bryan Jensen IPM Program	Corn Insect Lecture (cont.)
1:45	Dan Heider, IPM Program	Monocot Weed ID Lecture
2:30	Break (reconvene in lab)	
2:45	Dan Heider	Monocot Weed ID Lab, section 1, Rm. 128 Moore Hall (group 1)
2:45	Bryan Jensen	Corn Insect ID Lab, section 2, Rm 147 Russell Labs (group2)
3:45		
4:00	Dan Heider	Monocot Weed ID Lab, Section 2, , Rm. 128 Moore Hall (group 2)
4:00	Bryan Jensen	Corn Insect ID Lab, Section 1, Rm 147 Russell Labs (group 1)
5:00	Adjourn	

Tuesday, January 7, 2014

Rm. 104 Russell labs

8:30	Quiz	
9:00	Dan Heider	Annual Broadleaf Weed ID Lecture
10:00	Bryan Jensen	Alfalfa & Soybean Insect ID Lecture
10:15	Break (reconvene in labs)	
10:30	Dan Heider	Annual Broadleaf Weed ID Lab, section 1, Rm. 128 Moore Hall (group 1)
10:30	Bryan Jensen	Alfalfa and Soybean Insect ID Lab, section 2, Rm. 147 Russell Labs (group 2)
11:30	Lunch (on your own)	

12:30	Dan Heider	Annual Broadleaf Weed ID Lab, section 2, , Rm. 128 Moore Hall (group 2)
12:30	Bryan Jensen	Alfalfa and Soybean Insect ID Lab, section 1, Rm 147 Russell labs (group 1)
1:30	Break (reconvene in RM. 184 RL)	
1:45	Brian Hudelson, Dept. of Plant Pathology	Field Crop Disease Identification Rm. 184 Russell Labs
4:15		Adjourn

WEDNESDAY, January 8, 2014 Go Directly to your Lab Session		
8:00	Brian Hudelson	Field Crop Disease Lab, Rm. 187 Russell Labs (group 1)
	Dan Heider	Biennial and Perennial Weed ID, Lecture and Lab, section 2, , Rm. 128 Moore Hall (group 2)
10:00	Brian Hudelson	Field Crop Disease Lab, Rm. 187 Russell Labs (group 2)
	Dan Heider	Biennial and Perennial Weed ID, Lecture and Lab, section 1, Rm. 128 Moore Hall (group 1)
12:00	Lunch (on your own)	
1:00	Vince Davis, Dept. of Agronomy	Herbicide Mode of Action and Injury Symptoms (Rm. 184 Russell Labs)
2:15	Break	
2:30	Dr. Francisco Arriaga, Dept. of Soil Science	Diagnosing Soil Compaction
3:15	Quiz	
3:45	Adjourn	
 THURSDAY, January 9, 2014 Rm. 104 Russell labs		
8:30	Scott Sturgul Nutrient and Pest Management Program	<ul style="list-style-type: none">• Soil Testing• Plant Tissue Testing• Nutrient Deficiency Symptoms
10:30	Break	
10:45	Scott Sturgul	An Introduction to Nutrient Management Planning
11:45	Lunch (on your own)	
12:45	Scott Sturgul	An Introduction to Nutrient Management Planning
1:30	Vince Davis	Trouble Shooting Crop Injury Symptoms
2:30	Quiz	

FRIDAY, January 10, 2014 104 Russell labs	
8:30	ID Exam.(184 Russell Labs)
10:30 (approx.)	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 available 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%

Take home Exam

The take home exam can be picked up after the ID exam on Friday, January 10 and will be due by Tuesday, January 21 at 4:00 pm. Return completed exams to Bryan Jensen, Rm. 643b Russell Labs.

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

For questions contact:

Brian Hudelson

Department of Plant Pathology

183 Russell Laboratories

1630 Linden Dr

Madison, WI 53706

Office: (608) 262-2863

hudelson@wisc.edu

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 sclerotoides* 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. Phytopathology 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 Pathology 558: 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 Drosophila, 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

Multivariate Analysis of Ecological and Community Data

Transcript Title (limit 30 characters)

Multivar Analysis Ecol Data

Three-digit course number

711

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

Forest And Wildlife Ecology (396)

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

2

Maximum credits

2

Grading System

A-F

Course Description (will be published in Course Guide)

This course will examine some common methods of multivariate data analysis in ecology and environmental science. Often called ¿community data analysis,¿ this class will cover methods for the analysis of complex, multidimensional datasets that are collected in the study of plant, invertebrate, fish, and bird communities. We will also address the concurrent analysis of the environmental factors that may drive community distributions. All of this provides the basis for predictive modeling of distributions across landscapes. General methods we will cover include ordination (PCA, DCA, NMDS, CCA), clustering (or classification), and other comparative analyses of data matrices (ANOSIM, Mantel tests). The "class" (better called a "workshop") is designed to be applied, meaning that the objective is for students to learn in a ¿hands-on¿ way how to use these tools, and the circumstances under which their uses are either appropriate or inappropriate.

Does the course have prerequisites or other requirements?

Yes

List the prerequisites and other requirements for the course

Stats 571 & 572 or equivalent course or consent of instructor

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

Seminar

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 and Phil Townsend

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 2015-2016

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 of interest to graduate students in ecologically related graduate 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).

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 units. The proposal will be sent to the academic units that support those subjects for review.

Course Content

Describe the course content

The class will meet once a week for 2 hours and will center around two principal objectives over the course of the semester. 1. The first objective will be exposure to the main approaches in multivariate ordination analyses common for ecological data. The first 45 - 60 minutes of class will be a lecture/discussion format, in which the basic principles of a method will be covered. The second hour will be in a lab setting, and will focus on application. We will use the software packages PRIMER and PC-ORD (and possibly a few other custom or shareware packages as needed) to learn the practical methods of analyzing real data and interpreting results. 2. The second objective will be to have students analyze their own data. This part of the course will allow you to work on novel analyses of your data with the ultimate goal of a paper by the end of the class. We expect that will be the sort of thing that might eventually become (or be part of) a thesis chapter/manuscript. Some of this will occur in class but most of it will be on your own. This will culminate in a paper and a short oral presentation associated with your analysis. This course is intended to be student-driven and might be better thought of as a workshop rather than a course or a seminar. The instructor will lecture where appropriate, but as the semester progresses we expect students to take the lead in all class activities. Because this class is intended to be practical and applied, students will get the most out of our class if they supply their own data sets for use in the lab setting and by participation participating in every aspect of the course.

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

There are currently courses in Botany and Statistics that would have courses that touch on some similar areas.

Is there a relationship to courses outside your subject?

Yes

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

Statistics (932)

Botany (208)

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

Claudio Gratton and Phil Townsend

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.

Ento711_syllabus-3-20-13.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

This course is for advanced graduate students working with multivariate data typical of (though not limited to) ecological or landscape research. Students in our programs and across campus are constantly requesting instruction using these analytical tools as they are prevalent in the literature and are now standard in many areas of biology.

Provide an estimate of the expected enrollment

15-20

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

The course is a seminar/workshop-style with once per week meetings for 3 hours with a final project and presentation

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?

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?

New Course Proposal [DRAFT]

Course Number: Entomology 711 and Forest and Wildlife Ecology 711
Course Name: Multivariate analysis of ecological and community data
Credits: 2
Format: Monday at 2:30 pm, 3 hour Lecture/discussion period
Offering: Every other fall semester
Instructor: Dr. Claudio Gratton and Dr. Phil Townsend
Office Hours: By appointment (cgratton@wisc.edu or ptownsend@wisc.edu)
Pre-requisites: Stats 571 and Stats 572 or consent of instructor

Course Description:

This course will examine some common methods of multivariate data analysis in ecology and environmental science. Often called “community data analysis,” this class will cover methods for the analysis of complex, multidimensional datasets that are collected in the study of plant, invertebrate, fish, and bird communities. We will also address the concurrent analysis of the environmental factors that may drive community distributions. All of this provides the basis for predictive modeling of distributions across landscapes. General methods we will cover include ordination (PCA, DCA, NMDS, CCA), clustering (or classification), and other comparative analyses of data matrices (ANOSIM, Mantel tests). The “class” (better called a “workshop”) is designed to be applied, meaning that the objective is for students to learn in a “hands-on” way how to use these tools, and the circumstances under which their uses are either appropriate or inappropriate.

Course Organization

The class will meet once a week for 2 hours and will center around two principal objectives over the course of the semester.

1. The first objective will be exposure to the main approaches in multivariate ordination analyses common for ecological data. The first 45 - 60 minutes of class will be a lecture/discussion format, in which the basic principles of a method will be covered. The second hour will be in a lab setting, and will focus on application. We will use the software packages PRIMER and PC-ORD (and possibly a few other custom or shareware packages as needed) to learn the practical methods of analyzing real data and interpreting results.
2. The second objective will be to have students analyze their own data. This part of the course will allow you to work on novel analyses of your data with the ultimate goal of a paper by the end of the class. We expect that will be the sort of thing that might eventually become (or be part of) a thesis chapter/manuscript. Some of this will occur in class but most of it will be on your own. This will culminate in a paper and a short oral presentation associated with your analysis.

This course is intended to be *student-driven* and might be better thought of as a workshop rather than a course or a seminar. The instructor will lecture where appropriate, but as the semester progresses we expect students to take the lead in all class activities. Because this class is intended to be practical and applied, students will get the most out of our class if they supply their own data sets for use in the lab setting and by participation participating in every aspect of the course.

Pre-requisites

Students should have at least one semester of basic parametric statistics covering ANOVA, regression, and other basic methods. Students at the very beginning of their graduate/research career may not be best-served by this class but I am happy to discuss this matter on an individual basis.

Course Outline / Schedule

1	Introduction and overview; principles of Ordination, Gradient analysis	Student slides due Friday
2	Student Introductions Data and Matrices; distance measures; Measuring the Environment	Topics assigned/signup
3	NMDS	
4	ANOSIM	
5	ANOSIM, cont. (Mantel Test)	Students start leading discussions
6	perMANOVA	
7	PCA / PCO	
8	WA/CA, DCA, CCA, RDA	First half of paper due!
9	Clustering and classification	
10	Clustering, continued	
11	Predictive modeling, Hyperniche	Open Lab Week
12	Species richness and rarefaction	Open Lab Week
13	Catch-up, Individual Projects	Open Lab Week
14	Student Presentations	< 2 periods >

Student Presentations. There is no official Exam period for this class, but we need one or two 2-2.5-hr slots for final presentations.

Readings

There are a variety of good resources for a class of this kind, including Mike Palmer's Ordination Web Page (ordination.okstate.edu), as well as the manuals for PC-ORD, Canoco and Primer. Purchasing the pc-ORD manual is optional. Additional readings may be placed on reserve. Journal articles relevant to class topics will be posted on the web site.

Representative readings

- Anderson, M. J., and A. A. Thompson. 2004. Multivariate control charts for ecological and environmental monitoring. *Ecological Applications* 14:1921–1935.
- Anderson, M., R. Gorley, and K. Clarke. 2008. PERMANOVA+ for PRIMER: guide to software and statistical methods. Primer-E, Ltd, Plymouth, UK.
- Clarke, K. R., and R. M. Warwick. 1998. Quantifying structural redundancy in ecological communities. *Oecologia* 113:278–289.
- Clarke, K. R., and R. M. Warwick. 2001. Change in marine communities: an approach to statistical analysis and interpretation, 2nd edition. Primer-E, Ltd, Plymouth, United Kingdom.
- Clarke, K. R., and R. N. Gorley. 2006. PRIMER v6: User Manual/Tutorial, 2nd edition. Primer-E, Ltd, Plymouth, United Kingdom.
- Gotelli, N. J., and R. K. Colwell. 2001. Quantifying biodiversity: procedures and pitfalls in the measurement and comparison of species richness. *Ecology Letters* 4:379–391.
- Legendre, P., and M. J. Anderson. 1999. Distance-based redundancy analysis: testing multispecies responses in multifactorial ecological experiments. *Ecological Monographs* 69:1–24. doi: 10.1890/0012-9615(1999)069[0001:DBRATM]2.0.CO;2.
- Rex, M. A., J. A. Crame, C. T. Stuart, and A. Clarke. 2005. Large-scale biogeographic patterns in marine mollusks: A confluence of history and productivity? *Ecology* 86:2288–2297.
- Wang, Y., U. Naumann, S. T. Wright, and D. I. Warton. 2012. mvabund– an R package for model-based analysis of multivariate abundance data. *Methods in Ecology and Evolution* 3:471–474. doi: 10.1111/j.2041-210X.2012.00190.x.

Student Responsibilities

Attendance is mandatory. You won't get anything out of the class if you do not attend. We understand that graduate students may have other obligations that cause them to miss class. If this is the case, please let the instructors know *in advance* that you will miss a session. Obviously, we will make exceptions for illnesses or other emergencies.

Labs. This is an applied class, which means that 50% or more of our class time effort will be focused on “labs,” in which we analyze data sets using the methods discussed in class. There will be no formal lab write-ups accompanying each lab. However, your efforts in the labs over the semester will build toward your final project (see below), so it will best to document some of the more promising approaches you use.

Data. Datasets specific to the topics covered will be made available before each class by the group presenting. We will work on common datasets to demonstrate the techniques of the week.

In addition, you will eventually need your own dataset to use in the class as part of your final project. You will get the most out of the class this way, and hopefully you will come out of the class with some results that you can use as pilot analyses or even as a component of your thesis/dissertation. Your data sets should be **multivariate**, meaning there are multiple independent and multiple dependent variables. For most of you, you will actually have two multivariate data sets, one with your ecological (or response) variables, and one with your environmental (or predictor) variables. Your data can be either **continuous** or **categorical**. Typically, most software packages will read spreadsheet data that have the observations in rows and the variables in columns. Not all of the methods we use in the class will be appropriate to your data set. That's okay. In fact, that is part of what we want to address in the course. If you do not have a data set to use for the class, you should try to find a data set to use that is comparable to what you might eventually analyze for your research (e.g., ask your advisor or a lab-mate). If that doesn't work, Claudio and Phil will work with you to identify a suitable data set to use in class.

Lectures. As a graduate-level class, we intend the class to become increasingly student-driven over the semester. This year, Claudio will give the first few lectures, however, starting at Week 5, teams of students will put together and give the lecture on each topic. Each student will only have to do this once during the semester, and each week a minimum of 2 students will be assigned to put together that week's lecture. I will do their best to assign the lectures to the students who have the best background for that topic (meaning we will do our best not to assign you something you are utterly unfamiliar with). This is not intended to be onerous and you are not alone in this endeavor; we will help you with finding the appropriate literature and the instructors will provide additional information (Powerpoint slides, figures) to assist you in your efforts. I will always be there at class in case you get stuck when going through the lecture. However, we feel that it is critical to graduate student education that you have the opportunity to introduce and explain a method in a classroom setting. We expect the students to prepare lectures that will be about 45 minutes in length (total per class, not total per student). The lectures should be accompanied by figures in a Powerpoint presentation (usually 15-20 slides will suffice). All Powerpoint slides will be made available to all students in the class. The remainder of the class will be lab, led by students (with assistance from me) in which you will work through a sample dataset.

Before we make the assignments, we want to get to know you better! This will help us assign topics and will also help us to advise you on labs over the course of the semester. So, for the second week of class, we will ask each student to get up and introduce themselves. As part of this introduction, please provide to us 2 Powerpoint slides that introduce you and your research. The slides can have pictures or text or preferably both. **One slide** should have your name and a bit about your background (like where you are from, what program you are in, what motivates you, what you want to be if/when you grow up, what kind of background in quantitative methods you have, etc.). The **second slide** should introduce us to your expected research. What you include here will depend in part on where you are in your program. It should have the tentative title to your thesis or project, and should tell us (1) what the key *question or hypothesis of your research* is. You **must also include** on this slide (2) *some sort of summary of the data you plan to use in your research or in the class* for the

labs (see above) and project (see below).

Readings. There are no assigned readings. However, the students responsible for each lecture should include at least ONE example reference drawn from the scientific literature that is an application of the method that they are lecturing on. To that end, each student who is assigned a topic for a week should scour the scientific literature for one good paper that they will provide to the class as a PDF. Students who want to can read the paper to learn more. The student who assigns the paper should certainly read the paper! These papers should be from peer-reviewed journals, and can be a classic or alternatively a recent application of the method. If you find a good review paper on a topic, by all means, let the class know, but this is not meant to be a literature review of the topic.

Class Project. A major goal of the class is to give you the opportunity to analyze your data in a way that will contribute to your research. To that end, the class has a final project that should be based on analyses that you have conducted over the course of the semester (not all of the methods, of course, but whatever subset of analyses that goes well together and tells a compelling story). You will give a **presentation** to the class on your research at the end of the semester. The presentation will be 10 minutes, plus time for questions. We will provide more info on the presentations toward the end of the semester, but suffice it to say that your presentation must be clear and concise. 10 minutes is barely enough time to introduce your problem and hypothesis, describe data and methods, describe one key result, discuss the implications of the result and conclude.

On the last day of presentations, you must also turn in a **paper**, ~15-20 pages, typed, with the main body double-spaced, in a standard scientific format. This means that the paper should have an abstract (which can be single spaced, about 250 words), figures and maybe tables, and a list of references (which can also be single spaced). Provide the citations and references in the format of a journal that you regularly use. The way the class is set up, you should not have to rush to finish these analyses and write the paper at the end of the semester. You should be building to this over the course of the semester. For some of you, this paper may in fact represent a draft of a chapter in your thesis or dissertation. Best case scenario: Original data + Original analyses = Paper to Submit to a Journal! To make sure that students do not procrastinate on the paper, however, I have set a due date of **November 7** for the first part of your paper: introduction with brief literature review, objective, methods to the extent appropriate (e.g., data collection).

Grading: 50% project (paper and presentation), 50% participation (lecture, effort in lab, interaction).

Grading Scale

Above 90% = A

80%-89.9% = B

70%-79.9% = C

60%-69.9 = D

Below 60% = F

New Course Proposal

Subject Forest And Wildlife Ecology (396)

Status Under Review by School/College

Proposer Sara M Rodock

Basic Information

Course Title

Climate Change and Natural Resources

Transcript Title (limit 30 characters)

Climate Change & Nat Resources

Three-digit course number

660

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)

The evidence that the Earth's climate is changing at unprecedented rates is now overwhelming. Environmental tipping points are being crossed and many species are adapting or failing to adapt. Climate change poses a significant problem for conserving and managing wildlife and their habitats. In this class, students will be introduced to climate change and its ecological impacts through engaging class discussions, online climate exercises, and group projects aimed at developing climate change adaptation plans.

Does the course have prerequisites or other requirements?

Yes

List the prerequisites and other requirements for the course

Junior or Senior Standing, Graduate Student, or Consent of Instructor

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

Lecture

Administrative Information

Chief Academic Officer

William H Karasov

Designee of chief academic officer for approval authority

Laurie S Ballentine; Sara M Rodock; Sheila M Timme

If there are additional contacts, please list

Benjamin Zuckerberg

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 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 serves as an upper-level elective for undergraduates in Forest Science and Wildlife Ecology as well as graduate students in Forestry and Wildlife Ecology. This topic area is an emerging field of study in natural resources.

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).

For our undergraduate programs this course serves as either a Wildlife Ecology ecology breadth or conservation biology course and for Forest Science it serves as a track course. For our graduate programs it serves as an elective.

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

A relatively rapid increase in global temperatures has been documented during the past century, both across Earth's surface and in the oceans. A changing climate poses a significant problem for conservation agencies that have the responsibility of maintaining viable populations of species and the habitats they depend on. Climate change transcends political and jurisdictional boundaries and adds significant uncertainty to the conservation and management of our natural resources. The central purpose of this class is an introduction to modern climate change and its ecological impacts on species, communities and natural resources management. With a major focus on wildlife conservation and management, the goal of this course is to provide an understanding of the direct and indirect impacts of climate change on animal and plant communities. The course has three interconnected learning objectives for developing a comprehensive understanding of the current and future impacts of climate change on natural systems. The first learning objective is to gain a basic understanding of the mechanisms, feedback systems and drivers associated with modern climate change. The second learning objective is to identify the ecological and evolutionary impacts of climate change on natural communities and wildlife populations (including changes in phenology and range limits, community dynamics, and altered trophic interactions). The third learning objective is to develop hands-on experience in developing a climate change adaptation plan that could be implemented by a local, state or national conservation agency.

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)

Benjamin Zuckerberg

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.

fwe_660_syllabus.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

The Climate Change and Natural Resources course will help to strengthen both the undergraduate and graduate curriculums in Forest and Wildlife Ecology by providing additional training in climate changes impacts on natural resources management. This is a growing area of concern in natural resources management and is not covered by other courses in the department. This course is a necessary component for preparing our graduates for future careers in wildlife management, conservation biology, natural resource planning, and academia. Understanding and incorporating the impacts of climate change on ecological systems is an increasingly important aspect of forest and wildlife ecology.

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

The course meets for two power lectures a week for the duration of the semester (hour and 15 minutes, two times a week) which meets the federal definition of a credit our

If this is a variable credit course, provide rationale

none

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?

A relatively rapid increase in global temperatures has been documented during the past century, both across Earth's surface and in the oceans. The study of modern climate change is a wicked conservation problem that spans basic science and its application to applied problems. The course has three interconnected learning objectives for a better understanding of the impacts of climate change on ecological systems. First, students will gain a basic understanding of the mechanisms, feedback systems and drivers associated with modern climate change. Second, students will cover the ecological and evolutionary impacts of climate change on natural communities and wildlife populations. Finally, by the end of the class, students will complete an evaluation of the current methods of climate change adaptation and mitigation being implemented across the country. Student learning goals are assessed by both writing and oral communication, and are required to understand how basic ecological and evolutionary principles can be used to predict the myriad of biological responses to climate change. Climate change adaptation is inherently multidisciplinary, integrating science with society to reach practical solutions. The central project of the course consists of a semester-long group exercise (groups of 4-5 students) with the goal of developing a Climate Adaptation Plan for a vulnerable species or community in Wisconsin. With regard to the Biological Sciences breadth area, this course examines scientific studies and breakthroughs in climate change biology in both terrestrial and aquatic ecosystems. Classroom discussions often cover the scientific method, hypothesis driven research, broader environmental impacts, and quantitative approaches.

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

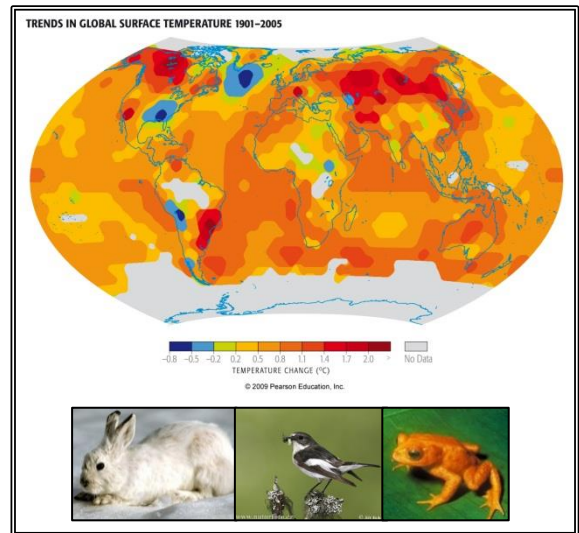
Which requirements?

CLIMATE CHANGE AND NATURAL RESOURCES (Forest and Wildlife Ecology 660)**INSTRUCTOR:**

Benjamin Zuckerberg, Ph.D.
 Assistant Professor
 Department of Forest and Wildlife Ecology
 226 Russell Labs, 1630 Linden Drive, Room A133
 Phone: 263-0853
 E-mail: bzuckerberg@wisc.edu
 Website: <http://labs.russell.wisc.edu/zuckerberg/>
 Office Hours: Tuesday and Thursdays (1:30-2:30)

LECTURES:

September 3rd, 2013 – December 12th, 2012
 Tuesdays and Thursdays: 11:00 a.m. -12:15 p.m.
 Russell Laboratories Room 104

**COURSE PURPOSE, GOALS AND OBJECTIVES:**

A relatively rapid increase in global temperatures has been documented during the past century, both across Earth's surface and in the oceans. A changing climate poses a wicked problem for conservation agencies that have the responsibility of maintaining viable populations of species and the habitats they depend on. Climate change transcends political and jurisdictional boundaries and adds significant uncertainty to the conservation and management of our natural resources. The central purpose of this class is an introduction to modern climate change and its ecological impacts on species, communities and natural resources management. With a major focus on wildlife conservation and management, the goal of this course is to provide an understanding of the direct and indirect impacts of climate change on animal and plant communities.

The course has three interconnected learning objectives for developing a comprehensive understanding of the current and future impacts of climate change on natural systems.

First learning objective: gain a basic understanding of the mechanisms, feedback systems and drivers associated with modern climate change.

Second learning objective: identify the ecological and evolutionary impacts of climate change on natural communities and wildlife populations (including changes in phenology and range limits, community dynamics, and altered trophic interactions).

Third learning objective: develop hands-on experience in developing a climate change adaptation plan that could be implemented by a local, state or national conservation agency.

COURSE STRUCTURE AND DYNAMICS

This is an advanced course targeted to upper-level undergraduate and graduate students with a background in ecology or biology. There will be significant expectations for independent work and active in-class participation. Class grading will consist of group projects and examinations.

GRADING COMPONENTS

Group Project Report and Presentation 40%

Climate Wizard Exercises 15%

Exam I 15%

Exam II 15%

Group Project Progress Reports (2) 5%

Class Participation and Weekly Quizzes 10%

EXAMINATIONS

There will be two exams that will consist of 10 multiple choice, 3 short answer questions, and 1 essay question. The two exams will focus primarily on the class units: Fundamentals and Ecological Impacts (see lecture schedule).

ATTENDANCE POLICY

It is expected that you will be present at all classes. In accordance with UW-Madison policy, I will make every effort to avoid scheduling mandatory course requirements on dates when a religious observation may cause substantial numbers of students to be absent. In addition, I will extend reasonable consideration to accommodate you should your university-endorsed extracurricular activities (not including practice activities for performances or athletic events) conflict with class attendance requirements. **You must provide adequate and reasonable advance notice (>24 hrs. notice) so that they can ensure that an accommodation is made.**

You are required to be present at the beginning of the semester and to remain until the work of the semester is completed (which includes group projects and presentations). Exemptions from this must be given advanced notice from the instructor. Note that any excused or unexcused absences may have a negative impact on your final grade. It is your responsibility to be mindful of class attendance policies for each of your classes.

GROUP PROJECTS AND FINAL REPORTS

The central project of the course consists of a semester-long group exercise (groups of 3-4 students) with the goal of developing a **Climate Adaptation Plan** for a vulnerable species Wisconsin. The core components of the plan will consist of a literature review and conceptual model, vulnerability assessment, adaptation recommendations, and monitoring plan. The groups will give final presentations at the end of the class and complete a group final report. Peer evaluations will be done periodically throughout the course of the semester. Full participation in the group project is mandatory. Note that any prolonged inability to work with your group may have a negative impact on your final grade.

LEARN@UW AND WEEKLY QUIZZES

Learn@UW will be used to post readings assignments, PowerPoint slides, and changes to the syllabus. There will be brief weekly online **quizzes** (4-5 questions) that are **mandatory**. These quizzes will be designed to gauge your level of understanding (and my ability to communicate) the week's topics. **You get full credit if you complete the quiz. Quizzes are posted every Friday by noon, and must be submitted by Sunday at 10:00 p.m.**

There is a public course website at <http://labs.russell.wisc.edu/zuckerberg/teaching/> but this is mainly for advertising purposes. Please do not visit this site for information on the class.

ClimateWizard

ClimateWizard (www.climatewizard.org) enables you to access leading climate change information and visualize the impacts anywhere on Earth. This web-based program allows you to choose a state or country and assess how climate has changed over time and to project what future changes are predicted to occur in a given area. You will have 2 group exercises to learn how to view and interpret historic and predicted climate maps for anywhere in the world.

Missed Lectures and Medical Absences

Campus policy with respect to flu and other contagious diseases places a premium on minimizing the risk of spreading disease. If you are running a fever over 100°F with a cough or sore throat, stay home. Wait until 24 hours after your fever breaks before returning to class. **If you miss a lecture for any reason, you are responsible for the content covered in class.** I will not respond to LearnUW-posted queries about missed lecture content.

Students with Disabilities: Requesting Reasonable Accommodations

UW–Madison supports the right of full and equal educational opportunity for all students. Disability should not be the basis for exclusion from the institution’s programs, activities and services. All students are entitled to an accessible, accommodating, supportive and nondiscriminatory institutional environment. It is therefore the policy of UW–Madison to provide reasonable accommodations to qualified students with disabilities.

Implementing reasonable and effective accommodations is a shared institutional and student responsibility. Students with disabilities who need accommodations should notify the institution of such need as early as possible, preferably before the beginning of a semester. Students who incur or recognize a disability for which an accommodation is needed during the semester should notify the institution immediately. For instructional or academic accommodations, students are encouraged to notify me directly. Students may also make accommodation requests through the McBurney Disability Resource Center or a duly designated departmental or college Access and Accommodation Resource Coordinator (AARC).

I will work with students to identify and to provide reasonable instructional or academic accommodations, although the student is responsible for self-advocacy. In addition, the McBurney Disability Resource Center is available as a resource and can assist students with accommodation issues, can recommend appropriate instructional or academic accommodations to faculty and can recommend or provide other needed reasonable accommodations.

PLAGIARISM POLICY

Academic Integrity is critical to the mission of the University of Wisconsin-Madison, a research one institution with high academic standards and rigor. All members of the University

community play a role in fostering an environment in which student learning is achieved in a fair, just and honest way. **I have zero tolerance for plagiarism.** You are expected to uphold the core values of academic integrity which include honesty, trust, fairness, respect and responsibility. These core values, combined with finding one's purpose and passion and applying them in and out of classroom learning, produce students who become extraordinary citizens. This unique path of opportunities, created by each student, is commonly known as the Wisconsin Experience and impacts our campus community and beyond in significant and positive ways. The value of a University of Wisconsin-Madison degree depends on the commitment of our academic community to promote high levels of personal honesty and respect for the intellectual property of others.

The University of Wisconsin-Madison takes academic misconduct allegations very seriously. If I suspect a student has engaged in academic misconduct, I will contact the student and ask them to explain their work. If I still believe the student engaged in such an act after meeting with them, I will decide on a sanction (with outside consultation), which may include a zero on the assignment or exam, a lower grade in the course or failure in the course. The Dean of Student's Office will be informed and will contact the student about their rights. Repeated acts of academic misconduct may result in more serious actions such as probation or suspension. For tips on how to avoid plagiarism see the following link at the writing center.

<http://writing.wisc.edu/Handbook/QuotingSources.html>

LECTURE READINGS

Please see the additional document on Class Readings for full details of reading assignments. These are required readings that are meant to supplement the lecture material. You will be expected to know the information covered in these readings for the exams. All readings except for the textbook are available as PDF documents on Learn@UW. The main textbook is:

Title: Climate Change Biology

Author: Lee Hannah

Publisher: Academic Press

You may purchase the text through your favorite local or on-line bookseller.

FINAL GRADING SCHEMA

All grades for assignments and exams will be reported as a percentage and final grades will be calculated based on grading components above.

LETTER GRADE	NUMERICAL RANGE
A	93-100%
AB	88-92%
B	83-87%
BC	78-82%
C	70-77%
D	60-69%
F	0-59%

CLIMATE CHANGE AND NATURAL RESOURCES
(Forest and Wildlife Ecology 375/875)
Lecture Schedule FALL 2013

Date	Week	Lecture	Class Unit	Lecture Topic
03-Sep	1		Overview	Introduction to Course; Knowledge Survey
05-Sep	1	1F	Fundamentals	Climate System: A Gentle Introduction
10-Sep	2	2F	Fundamentals	Greenhouse Effects and Processes
12-Sep	2	3F	Fundamentals	Aerosols, Feedbacks and Teleconnections
17-Sep	3	4F	Fundamentals	What is the evidence? IPCC Findings I
19-Sep	3	5F	Fundamentals	What is the evidence? IPCC Findings II
24-Sep	4	6F	Fundamentals	Modeling Future Climate Change
26-Sep	4	7F	Fundamentals	WI Initiative on Climate Change Impacts
01-Oct	5		Group Exercise	Climate Adaptation Plans
03-Oct	5			Exam 1 Fundamentals
08-Oct	6		No class	Group project
10-Oct	6	1I	Impacts	How are species responding? <i>Range shifts</i>
15-Oct	7	2I	Impacts	How are species responding? <i>Phenology</i>
17-Oct	7		Adaptation	Conceptual modeling
22-Oct	8	3I	Impacts	Ecosystem changes
24-Oct	8	4I	Impacts	Biodiversity changes
29-Oct	9	5I	Impacts	Evolutionary consequences
31-Oct	9	6I	Impacts	Warming experiments
05-Nov	10	1P	Prediction	Species distribution modeling
07-Nov	10	2P	Prediction	Bioclimatic modeling
12-Nov	11	3P	Prediction	Community modeling and review
14-Nov	11			Exam 2 Ecological Impacts and Prediction
19-Nov	12	1A	Adaptation	Ecological Monitoring
21-Nov	12	2A	Adaptation	Climate adaptation, mitigation, and planning
26-Nov	13	3A	Adaptation	Vulnerability assessments
28-Nov	13			THANKSGIVING BREAK
03-Dec	14	4A	Adaptation	Communicating climate change
05-Dec	14	5A	Adaptation	Future steps in climate change adaptation
10-Dec	15		Group	Group Final Presentations
12-Dec	15		Group	Group Final Presentations

CLIMATE CHANGE AND NATURAL RESOURCES (Forest and Wildlife Ecology 660)

Lecture Readings

These are required readings that are meant to supplement the lecture material. You will be expected to know the information covered in these readings for the exams. All readings except for the textbook are available as PDF documents on Learn@UW. The main textbook is:

Title: Climate Change Biology

Author: Lee Hannah

Publisher: Academic Press

You may purchase the text through your favorite local or on-line bookseller.

There will be readings from the IPCC07 (Fourth Assessment Report of the Intergovernmental Panel on Climate Change, published in 2007).

WG1, WG2, WG3 refer to the three major working groups within IPCC (WG1: Physical System, WG2: Vulnerability of Socio-Economic and Natural Systems, WG3: Mitigation Options)

- TS refers to the 2007 Technical Summary
- SPM refers to the 2007 Summary for Policymakers

So, for example, AR4 WG1 TS means the Physical System Working Group's technical summary.

Reading Schedule FALL 2012

Week #	Class Unit	Reading Assignment	Source
1	Climate System	Chapter 2 (pg. 13-39) pg. 21-27; 29-32; Box TS.6 (pg. 56)	Hannah AR4 WG1 TS
2	Adaptation	Lawler 2009	
3	Fundamentals	Pg. 1-12, 16-21 Pg. 1-18 Box TS.2	Wang and Schimel AREES AR4 WG1 SPM AR4 WG1 TS
4	Fundamentals	Pg. 1-14 Chapter 2 (pg. 41-52)	Donner and Large ARER Hannah
5	Impacts	Pg. 57-60 Chapters 3, 4	Root et al. 2003 Nature Hannah
6		Exam I	
7	Impacts	Chapter 5 Chapters 1 and 2	Hannah WICCI Report
8	Impacts	Chapter 6 and 7 Pages 2019-2022	Hannah Walther 2010 Phil Trans Roy Soc B
9	Impacts	Chapter 10 Pages 1477-1478	Hannah Bradshaw and Holzapfel 2006 Science
10	Prediction	Chapter 11 and 12 Pages 145-148	Hannah Thomas et al. 2004 Nature
11		Exam II	
12	Adaptation	Thanksgiving Break	
13	Adaptation	Chapter 13 and 14	Hannah
14	Adaptation	Chapter 15	Hannah

Course Change Proposal

Subject Horticulture (476)

Status Under Review by School/College

Proposer James Nienhuis

Basic Information

Current course number

370

Current course title

World Vegetable Crops

Current published course description

HORT 370 World Vegetable Crops 3 Open to 1st Year 2013 Fall Course Description: An overview of the importance of fresh and processed vegetables worldwide. Vegetable origin, history, classification, culture, marketing, physiology, genetics, handling, quality, significance in world cultures and diets. Pre-Reqs: A course in horticulture and a course in biology. Open to Freshmen

Chief academic officer of this unit

Irwin L. Goldman

Designee of chief academic officer for approval authority

Not Found

Currently crosslisted with

What is the primary divisional affiliation of the course?

Biological Sciences

When will this change go into effect?

Fall 2014-2015

Basic Changes

Will the subject change?

No

Current subject

Horticulture (476)

Proposed subject

Will the course number change?

No

Current course number

370

Proposed course number

Is this an honors course?

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

Will the title change?

No

Current title

World Vegetable Crops

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?

No

Current course description

HORT 370 World Vegetable Crops 3 Open to 1st Year 2013 Fall Course Description: An overview of the importance of fresh and processed vegetables worldwide. Vegetable origin, history, classification, culture, marketing, physiology, genetics, handling, quality, significance in world cultures and diets. Pre-Reqs: A course in horticulture and a course in biology. Open to Freshmen

Proposed course description

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?

Yes

Current level:

Proposed level:

Intermediate or Advances

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)

none

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

none

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

Horticulture 370 is an upper level lecture/laboratory course that fulfills the requirement for "habits of the mind". specifically the learning objectives are: 1. Gain an understanding and patterns of reasoning of the biogeography, domestication, and modern development of key vegetable crops in the ten most important vegetable plant families worldwide. Thus it draws upon a framework of knowledge to pose meaningful questions. 2. Gain an understanding of the biology of these unique plants, focusing on their physiology, genetics, and response to environment; thus, posing questions that advance knowledge and understanding. 3. Develop an appreciation for their culinary and cultural characteristics through hands-on exercises and laboratory activities; thus, connecting theory and application and making connections among diverse subject areas and modes of thinking and eating. 4. Understand how vegetable crops are distinct from other agricultural commodities and develop a fluency in explaining how these crops were developed by cultures around the world to satisfy particular culinary and cultural niches; thus, applying major areas of knowledge to solution of community problems.

Additional comments (optional)

The course has a 50 minute lecture on Mondays and Wednesdays and a 2-hour hands-on laboratory in which we explore the physical, taxonomic, biochemical and cultural traits associated with the vegetables in 10 families.

Attach a syllabus

Hort370 Syllabus Fall, 2013 FINAL.pdf

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

Horticulture 370: World Vegetable Crops

Fall semester - 2013

Instructors:

Jim Nienhuis 262-6975 390 Moore Hall nienhuis@wisc.eduIrwin Goldman 262-1624 423 and 377 Moore Hall ilgoldma@wisc.edu

Wed	Sept 4	(JN & G)	Lecture in Room 351 Moore Hall. Introduction to course, Family Solanaceae
Fri	Sept 6	(JN)	Lab. F.H. King Sustainable Agriculture garden and tour of Eagle Heights gardens (take 80 bus or walk or bike to Eagle Heights)
Mon	Sept 9	(JN)	Solanaceae - tomato
Wed	Sep 19	(JN)	Solanaceae - tomato
Fri	Sept 13	(JN&IG)	Lab - Tomato diversity and tomato paste- <i>Babcock</i>
Mon	Sept 16	(JN)	Solanaceae
Wed	Sept 18	(JN)	Solanaceae (<i>Capsicum spp.</i>)
Fri	Sept 20	(JN&IG)	Lab – Capsicum and salsa - <i>Babcock</i>
Mon	Sept 23	(JN)	Tomato Processing Industry
Wed	Sept 25	(JN)	Solanaceae (tomatillo, eggplant)
Fri	Sept 27	(IG&JN)	Exam #1 followed by – vegetable pigments
Mon	Sep 30	(JN)	Fabaceae – snap beans
Wed	Oct 2	(JN)	Fabaceae – Lima beans
Fri	Oct 4	(JN)	Lab – Chazen Art Museum – Vegetables and Art
Mon	Oct 7	(JN)	Fabaceae - peas
Wed	Oct 9	(JN)	Meet at Madison Farmer's Market on King Street
Fri	Oct 11	(JN&IG)	Chili relleno demonstration - <i>Babcock</i>

Mon	Oct 14	(IG)	Alliaceae
Wed	Oct 16	(IG)	Vegetable-based Medicines and the Alliaceae
Fri	Oct 18	(JN&IG)	Exam #2, followed by Alliaceae diversity, ACSOs, and Maillard (Babcock)
Mon	Oct 21	(IG)	Cucurbitaceae (Cucurbita)
Wed	Oct 23	(IG)	Cucurbitaceae (Cucumis)
Fri	Oct 25	(IG&JN)	Lab- Cucurbit diversity and pumpkin pie (Babcock)
Mon	Oct 28	(JN)	Apiaceae
Wed	Oct 30	(JN)	Apiaceae
Fri	Nov 1	(JN&IG)	Lab – Apiaceae volatiles and pickling (Babcock)
Mon	Nov 4	(IG)	Lecture - Cucurbitaceae (melons and watermelons)
Wed	Nov 6	(JN)	Brassicaceae (Brassica oleracea)
Fri	Nov 8	(JN&IG)	Discussion of organic agriculture with chicory and beignets (Babcock)
Mon	Nov 11	(JN)	Brassicaceae (Brassica rapa, <i>Raphanus</i> spp.)
Wed	Nov 13	(JN)	Vegetables in human cultural celebrations
Fri	Nov 15	(JN&IG)	Exam #3, followed by Brassica diversity lab (Babcock)
Mon	Nov 18	(JN)	Asteraceae
Wed	Nov 20	(JN)	Asteraceae
Fri	Nov 22	(JN&IG)	Field trip to vegetable market
Mon	Nov 25	(IG)	Chenopodiaceae

Wed	Nov 27	(IG)	Chenopodiaceae
Fri	Nov 29	(IG&JN)	Thanksgiving Holiday
Mon	Dec 2	(JN)	Solanaceae (potato)
Wed	Dec 4	(JN)	Solanaceae (potato)
Fri	Dec 6	(JN&IG)	Lab – Potato chips and French fries- Shelley Jansky Lab
Mon	Dec 9	(IG)	Poaceae
Wed	Dec 11	(JN)	Vegetables of Asia
Fri	Dec 13	(JN&IG)	Exam #4 – Room 351 Moore

All course materials covered in class will be posted on our Learn@UW site.

There is no final exam. Your letter grade will be based on the mean of the four semester exams. The first three exams will only cover material covered since the beginning of class or the prior exam. The 4th exam may include some comprehensive questions relating to vegetables discussed during the whole semester.

You may, and it is recommended, write a paper on a vegetable topic of interest to you and approved by Jim and Irwin. The paper will be graded and given a numeric score that may substitute for one exam.

There are no makeup exams given in the course; thus you can miss one exam if you write a paper and use that grade to substitute for one of the exams. If you miss more than one exam, you will receive a zero for each exam missed.

We strongly recommend regular attendance in both the lecture and laboratory portions of the class. We also require that any work submitted for this course, including exams and papers, be solely your own work.

There is no required text; however, the book World Vegetables provides an excellent overview of vegetables. Rubatzky, V.E. and Mas Yamaguchi. 1997. World Vegetables – Principles, Production and Nutritive Value (2nd edition). Chapman and Hall (publishers).

Locations used by Horticulture 370:

Lecture room: Room 351 Moore Hall

Food Applications Lab, located in the basement of Babcock Hall

Babcock B120, located in the basement of Babcock Hall

F.H. King Garden and Eagle Heights Community Garden, located east of Eagle Heights Apartments across Lake Mendota Drive

<http://www.lakeshorepreserve.wisc.edu/visit/eagleheightsgardens.htm> This garden is accessible by bike, by foot, and by the campus #80 bus.

Chazen Museum of Art is located at 800 University Avenue. We will meet in a classroom on one of the lower floors.

Message from the Dean of Students:

9 August 2013

When Classwork and Religious Observances Conflict

We would like to remind you of the faculty policy that mandatory academic requirements should not be scheduled on days when religious observances may cause substantial numbers of students to be absent from the university. Some religions mark observances over multiple days, which may begin at sunset on the day preceding the posted date(s) of the holiday. **Of particular note at the start of the fall 2013 semester is the Jewish holiday Rosh Hashanah (5-6 September), which begins at sunset on the second day of classes (4 September). Other major religious holidays that occur during the fall semester include the Jewish holiday Yom Kippur (14 September) and the Islamic holiday Eid-al-Adha (15 October***).**

In addition, given our university's multicultural community, there are bound to be conflicts between mandatory academic requirements and other religious observances. Please visit www.interfaithcalendar.org for a listing, though not exhaustive, of religious holidays. You also may obtain a copy of the listing from the Office of the Secretary of the Faculty, 262-3958, 129 Bascom Hall. Please refer to the [academic calendar](#) for additional information, and mark the noted holidays on your calendar now so that you do not schedule mandatory exercises on any of these dates.

A student's claim of a religious conflict, which may include travel time, should be accepted at face value. A great variety of valid claims exist for religious groups, and there is no practical, dignified, and legal means to assess the validity of individual claims. State law mandates that any student with a conflict between an academic requirement and any religious observance must be given an alternative for meeting the academic requirement. The law also stipulates that students be given a mechanism by which they can conveniently and confidentially notify an instructor of the conflict.

Please adhere to the following three guidelines that have been developed to provide clarity for both students and instructors: (1) Announce early in the semester that your students must notify you within the first two weeks of class of the specific days or dates

on which they request relief. Including this information on your course syllabus is another appropriate method to make sure your students are informed of the policy; (2) Make-ups may be scheduled before or after the regularly scheduled requirements; and (3) It is understood that instructors may set reasonable limits on the total number of days claimed by any one student. Occasionally, students may not fully understand the necessity for prior notice, and under these circumstances we urge you to be as flexible as possible. Our policy seeks to be sensitive to the needs of individual students. *(Note: Given the timing during the first week of classes, instructors should be flexible with guidelines (1) and (2) regarding the observance of Rosh Hashanah.)* Please make sure any teaching assistants that you supervise are aware of this policy. Finally, on a different but somewhat parallel topic, we urge fairness, compassion, and sensitivity when you or your TAs are approached by a student requesting class time off due to a family emergency. Demonstration of your understanding in such a circumstance may be important to the student in getting through the crisis. Please note that University Health Services offers counseling for students on a 24/7 basis. If you have any questions, please do not hesitate to contact us. *** *Islamic holidays are based on the lunar cycle, and dates may vary by one day from those listed.*

New Course Proposal

Subject Geography (416)

Status Under Review by School/College

Proposer Morgan Mceuen Robertson

Basic Information

Course Title

US Environmental Policy and Governance

Transcript Title (limit 30 characters)

US Envir Policy & Governance

Three-digit course number

439

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

Envir St - Gaylord Nelson Inst (360)

What is the primary divisional affiliation of this course?

Social Studies

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

4

Grading System

A-F

Course Description (will be published in Course Guide)

This course covers a broad cross-section of American environmental policy. In this course we will survey the basic elements of American environmental policy and regulation, and also focus on the specific people, sites and scales at which environmental decision-making happens. Understanding environmental outcomes in a complex society depends on observing both the structure of regulations and the geographic forces of human culture, politics and economics. This course will maintain a dual focus a) on the legal and regulatory aspects of environmental regulation and b) on views on the process of regulation and the variegated landscape (human and natural) that it creates. We will review the architecture of US environmental law in depth, but also pay attention to the social and environmental context into which such laws and regulations must enter in order to be effective.

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

Discussion

Lecture

Administrative Information

Chief Academic Officer

Kristopher N Olds

Designee of chief academic officer for approval authority

Holly K Gibbs; Ian G Baird; Matthew Turner; Robert E Roth; Sharon M Kahn

If there are additional contacts, please list

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 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 proposal allows Geography to augment its program (as well as offer to campus) an environmental policy class that is grounded both in current policy materials and a deep understanding of the legal and regulatory structure of environmental law, and in social science understandings of the relationship between laws, culture, political economy and ecological forces. Geography's programs are currently underserved in the area of the North American environment, and there is a strong demand at both the undergraduate and graduate level for courses covering developed-world environmental issues.

Are any of these programs outside your academic unit?

Yes

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.

Community & Environmental Soc (864)

Forest And Wildlife Ecology (396)

La Follette School Pub Affairs (826)

Urban And Regional Planning (944)

Law (528)

Civil and Environmental Engr (240)

Envir St - Gaylord Nelson Inst (360)

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 fulfill the intermediate-level course requirements for the people-and-environment concentration in Geography.

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

*The goals of this course are: * to familiarize the student with the spectrum of major US environmental regulations, including the Clean Water Act, the Clean Air Act, the Endangered Species Act, CERCLA, and regulations involving environmental justice, climate change, and market environmentalism. * to make students literate in the specialized language of environmental policy and regulation. * to see, through current case material, how these policies manifest in our daily interactions with the environment and government. * to provide the social and environmental background to each policy debate necessary to allow students to view issues of policy through the critical and geographic viewpoints often adopted by social scientists.*

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

There are two courses which treat similar material. The first is Forest and Wildlife Ecology/Environmental Studies 515: Renewable Resources Policy. FWE 515 meets in the Spring semester, and covers some of the same policy arenas; approximately half of the reading is from a textbook, and the rest is mainly secondary sources. Lecture themes alternate between crosscutting themes and specific policy-based discussions. By contrast, the proposed course will meet only in the Fall semester, and focuses most student reading on primary-source policy materials. There is a strong weekly-theme structure and each week is focused on a set of policies rather than on an era or a crosscutting theme. The proposed course will also spend significant lecture time on the social and geographic context into which, say, the Clean Water Act came into being. The second is Urban and Regional Planning 449: Government and Natural Resources. This course is only offered in the Summer Session. It is similar to FWE 515 but its restricted schedule means that it is not available to a significant number of students.

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)

Morgan Robertson, Assistant Professor

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.

Geography 439 Syllabus Sample.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

It would strengthen Geography's policy offerings within people-and-environment geography, as well as provide a US course for our majors: currently options for majors are dominated by internationally-based coursework, but at least half or more of the Department's majors taking a people-environment concentration have policy and/or a domestic emphasis.

Provide an estimate of the expected enrollment

About 30. When the course was offered twice as a Special Topic, with the considerable handicaps of not being cross-listed and satisfying no requirements (and with the additional handicap that it was accidentally not included in the catalog its first semester), it still attracted 15 people.

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 is being proposed as a variable-credit course. I would like the option to expand the social-science perspective element of the course without sacrificing the policy background component, and to that end the course would move from: 3 credits: 100 minutes of lecture and 50 minutes discussion/seminar per week. 3 contact hours. to: 4 credits: 100 minutes of lecture, 50 minutes of case-based discussion seminar, 50 minutes of discussion/seminar based on geographic or social-science literature or guest speaker per week. 4 contact hours.

If this is a variable credit course, provide rationale

See the discussion above.

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?

LAS credit automatically granted because this is an L&S course

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

Intermediate

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

Yes

Indicate which:

S-Social Science

General Education Designations

Should the course be reviewed for the general education requirement?

No

Which requirements?

Geography 439: US Environmental Policy and Governance **[Also listed as ENVIR ST 439 and PA 439]**

Instructor: Dr. Morgan Robertson (mmrobertson@wisc.edu)

Office Hours: TBD

Classroom: TBD

Lecture Meeting Times: TBD

Office Hours: TBD

This course covers a broad cross-section of American environmental policy. The goals of this course will be:

- to familiarize the student with the spectrum of major US environmental regulations, including the Clean Water Act, the Clean Air Act, CERCLA, regulations involving environmental justice and climate change,
- to make students literate in the specialized language of environmental regulation,
- to see how these policies affect our daily interaction with the environment, and
- to also view issues of policy through the critical and geographic viewpoints often adopted by scientists and academics.

This course covers a broad cross-section of American environmental policy. In this course we will survey the basic elements of American environmental policy and regulation, and also focus on the specific people, sites and scales at which environmental decision-making happens. Understanding environmental outcomes in a complex society depends on observing both the structure of regulations and the geographic forces of human culture, politics and economics. This course will maintain a dual focus a) on the legal and regulatory aspects of environmental regulation and b) on views on the process of regulation and the variegated landscape (human and natural) that it creates. We will review the architecture of US environmental law in depth, but also pay attention to the social and environmental context into which such laws and regulations must enter in order to be effective. Each topic will generally be treated in three class periods: the first two will consist of lecture by the instructor (usually on Mondays and Wednesdays), and in the third the students will discuss readings, participate in group activities and debates/discussions (usually on Fridays). The readings will come from both the policy world and from academic and policy scholarship, on the issue of the week.

Learning objectives: By the end of the course, students will be able to:

The goals of this course are:

- to familiarize the student with the spectrum of major US environmental regulations, including the Clean Water Act, the Clean Air Act, the Endangered Species Act, CERCLA, and regulations involving environmental justice, climate change, and market environmentalism.
- to make students literate in the specialized language of environmental policy and regulation.

- to see, through current case material, how these policies manifest in our daily interactions with the environment and government.
- to provide the social and environmental background to each policy debate necessary to allow students to view issues of policy through the critical and geographic viewpoints often adopted by social scientists.

Student evaluation: Students will receive a grade based on the following activities

1. Class discussion and reading response (25%): Grading will be based both on your class participation (5%) and your answers to questions based on the reading in a two-page (maximum) short-answer format assignment made available at the beginning of each new topic, and due after that topic's discussion period (20%). Each weekly assignment will be worth 2% of your grade – since there will be 12 assignments, you can miss two of them and still get full credit for this portion of your grade. Extra credit will not be given for handing in more than 10 of these assignments.
2. Paper description (5%): prior to the midpoint of the semester, students will hand in a one-sheet description of the topics they will write their papers about.
3. Paper 1 (15%): students will write a report on one portion of a state or federal environmental statute and associated regulatory code. The report will be approximately 2000-3000 words. (Due date TBA: about four weeks prior to finals week).
4. Paper 2 (15%): students will report on an actual case or incident in which the policy analyzed in Paper 1 was central to the debate. The report will be approximately 2000-3000 words. (Due date: Dec 13)
5. Two exams (40%): There will a midterm (20%) in a take-home essay format, and a final exam (20%) in a short answer format, taken in-class. The midterm will be handed out on 10/11, and will be due on 10/18. The final exam will be Friday, December 20th from 12:25 – 2:25.
6. Each assignment will receive a percentage grade. Overall course grades will be given on the following basis A=93-100%, AB=88-92%, B=83-87%, BC=78-82%, C=70-77%, D=60-69%, F=0-59%.

Topic	Lecture Dates	Topic
1		History of American environmental policy: how and why public policy on the environment gets made
2		Wilderness: Romanticism, science, and protected areas
3		Water: Water Law, the Clean Water Act and the Safe Drinking Water Act
4		Water II: Water Law, the Clean Water Act and the Safe Drinking Water Act

5		Air: the Clean Air Act
6		Species: Biodiversity and the Endangered Species Act
7		Energy: Coal, Oil and alternative energies
8		Energy II: Coal, Oil and alternative energies
9		Scale: Environmental Federalism
10		Courts: Caselaw and Jurisprudence
11		Agriculture and Environment
12		Environmental Justice: Civil Rights, Anti-Toxics and OSHA
13		Environmental Economics: Markets and Nature
14		The US in global environmental policy (<i>Discussion section: review</i>)

Course Policies:

- ◆ You are expected to attend all classes and to take comprehensive notes on lectures and reading materials. You will not do well in this class if you do not follow that advice.
- ◆ There will be no make-up exams as a rule, except for 'excused' absences. Excused absences are those arranged with me **before a class** for official University reasons (per UW System Administrative Code) or those documentable as health- or crisis-related after an exam. You also are entitled to an excused absence for the purpose of observing a religious holiday; but you must notify me of your request for one during the first week of class.
- ◆ If you find yourself falling behind, or having trouble with any part of this course, please see me sooner rather than later.
- ◆ **Late work will be accepted at a 15% discount for each day late.**

Plagiarism and Academic Misconduct

It is assumed that you are familiar with University policy on cheating and plagiarism as set forth in UWS 14. UWS 14 is the chapter of the University of Wisconsin System Administrative code that regulates academic misconduct. UW-Madison implements the rules defined in UWS 14 through our own "Student Academic Misconduct Campus Procedures." UWS 14.03 defines academic misconduct as follows:

Academic misconduct is an act in which a student:

- seeks to claim credit for the work or efforts of another without authorization or citation;
- uses unauthorized materials or fabricated data in any academic exercise;
- forges or falsifies academic documents or records;
- intentionally impedes or damages the academic work of others;
- engages in conduct aimed at making false representation of a student's academic performance;
- assists other students in any of these acts.

Examples include but are not limited to: cutting and pasting text from the web without quotation marks or proper citation; paraphrasing from the web without crediting the source; using notes or a programmable calculator in an exam when such use is not allowed; using another person's ideas, words, or research and presenting it as one's own by not properly crediting the originator; stealing examinations or course materials; changing or creating data in a lab experiment; altering a transcript; signing another person's name to an attendance sheet; hiding a book knowing that another student needs it to prepare an assignment; collaboration that is contrary to the stated rules of the course, or tampering with a lab experiment or computer program of another student.

If you repeat **your own words** from an earlier composition, without citation or quotation marks, it is still plagiarism and held to the same standard.

If you are accused of misconduct, you may have questions and concerns about the process. If so, you should feel free to call SAJA at 263-5700 or send an email to dean@studentlife.wisc.edu.

(this section adapted from: <http://students.wisc.edu/doso/samplesyllabus.html>)

Readings

Week 1: Introduction – How is the US Environment Governed?

Andrews, Richard N.L. 1999. *Managing the Environment, Managing Ourselves: A History of American Environmental Policy*. New Haven: Yale University Press. CHAPTER 9.

Rosenbaum, Walter A. 2011. *Environmental Politics and Policy*, 8th ed. Washington, DC: CQ Press. CHAPTER 3.

Nixon Administration Ash Council Memoranda, from the Nixon Presidential Library
US House of Representatives Document 91-366. 1970. Reorganization Plan No. 3 of 1970.

Week 2: Wilderness

Public Law 88-577. September 3, 1964. The Wilderness Act.

Scott, D. 2004. *The Enduring Wilderness: Protecting our National Heritage through the Wilderness Act*. Golden, CO: Fulcrum. CHAPTERS 3-4.

Cronon, William. 1995. "The Trouble with Wilderness; or, Getting Back to the Wrong Nature." In Cronon, William, *Uncommon Ground: Rethinking the Human Place in Nature*. New York: Norton, pp 69-90.

Case: Roadless Areas and the Clinton/Bush Roadless Rule controversy

Week 3: Water I

Dzurik, Andrew A. 1996. *Water Resources Planning*, 2nd ed. Lanham MD: Rowan & Littlefield. CHAPTER 4.

Maddock, Tara. 2004. Fragmenting regimes: how water quality regulation is changing political-economic landscapes. *Geoforum* 35(2): 217-230

Public Law 92-500. October 18, 1972. Federal Water Pollution Control Act. FIRST 6 PAGES ONLY.

Case 1: Water Quality Trading in Ohio

Case 2: Florida's Numeric Nutrient Criteria

Case 3: Rock River TMDL in Wisconsin

Week 4: Water II

Hough, Palmer and Morgan Robertson. 2009. Mitigation under Section 404 of the Clean Water Act: What it is and Where it comes from. *Wetlands Ecology and Management*. 17.

Robertson, Morgan. 2009. The work of wetland credit markets: Two cases in entrepreneurial wetland banking. *Wetlands Ecology and Management*. 17:35-51.

Case 1: Wisconsin's Act 118 on Wetlands

Case 2: Wetland banking in Chicago

Case 3: Fracking and the Safe Drinking Water Act

Week 5: Air

Rosenbaum, Walter A. 2011. *Environmental Politics and Policy*, 8th ed. Washington, DC: CQ Press. CHAPTER 6, Pages 200-218

Barcott, Bruce. 2004. "Changing All The Rules". *The New York Times*, April 4, 2004.

Weisskopf, Michael. 1989. "The Pollution Peddlers". *Washington Post National Weekly Edition*, November 20-26, 1989.

Case 1: SO₂ monitoring in Florida

Case 2: Charter St. New Source Review

Case 3: CO₂ Endangerment Finding

Week 6: Species

Doub, J. Peyton. 2013. *The Endangered Species Act: History, Implementation, Successes, and Controversies*. New York: CRC Press. CHAPTER 3.

Sayre, Nathan F. 2002. *Ranching, Endangered Species, and Urbanization in the Southwest: Species of Capital*. Tucson, AZ, University of Arizona Press. CHAPTER 1.

Case 1: Listing the Polar Bear as Threatened

Case 2: HCP for the California Condor in metro Los Angeles

Case 3: De-listing the Wolf in Wisconsin

Week 7: Energy I

Kraft, M. 2001. *Environmental Policy and Politics*, 5th ed. New York: Longman. CHAPTER 6.

Reece, Eric. 2005. "Death of A Mountain." *Harper's Magazine*, April 2005, 41-60.

Case 1: Renewable Fuel Standards

Case 2: Frac sands in Wisconsin

Case 3: Mountaintop removal in Kentucky

Week 8: Energy II

Readings TBD

Week 9: Federalism

Schwab, Robert M. 2006. "Environmental Federalism." In WE Oates, ed., *The RFF Reader in Environmental and Resource Policy*. Washington, DC: RFF, pp 109-114.

Oates, Wallace E. 2006. "The Arsenic Rule: The Case for Decentralized Standard-setting?" In WE Oates, ed., *The RFF Reader in Environmental and Resource Policy*. Washington, DC: RFF, pp 115-117.

Doyle, Martin W., Rebecca Lave, Morgan M. Robertson and Julia Ferguson. 2013. River Federalism. *Annals of the Association of American Geographers*. 103(2) 2013: 290-298.

Case 1: Wind turbines in a Wisconsin Township

Case 2: Sagebrush Rebellion and Wise Use movement documents

Case 3: Recycling in Chicago

Week 10: Courts

O'Leary, Rosemary. 2013. Environmental Policy in the Courts. In Vig, Norman and Michael Kraft, eds., *Environmental Policy: New Directions for the 21st Century*, 8th ed. Washington, DC: SAGE CQ Press, 137-156.

Wisconsin Constitution, Article IX, Section 1: The Public Trust Doctrine.

<http://legis.wisconsin.gov/lrb/pubs/consthi/04consthiIV4.htm>

Wisconsin DNR Bureau of Water Regulation and Zoning. 1995. *Champions of the Public Trust: A History of Water Use in Wisconsin*. Madison, WI: WDNR.

Case 1: Just v. Marinette County

Case 2: Lucas v. South Carolina Coastal Council

Week 11: Agriculture

Lehrer, Nina. 2010. *US Farm Bills and Policy Reforms*. Amherst, NY: Cambria Press. CHAPTER 3.

Cunningham, M. A. 2005. A Comparison of Public Lands and Farmlands for Grassland Bird Conservation. *The Professional Geographer* 57 (1):51-65.

Case 1: CRP declines since 2007

Case 2: Wisconsin CAFO hi-cap well permit

Case 3: Organic certification and standards

Week 12: Environmental Justice

Cole, L. W., and S. R. Foster. 2001. *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement*. New York, NY: New York University Press. CHAPTER 1.

Case 1: OSHA case in North Carolina adhesives industry

Case 2: Native American resource management – the Swinomish Tribe

Case 3: Mercury toxicity in Wisconsin subsistence fishing

Week 13: Environmental Economics

Portney, Paul R. 2006 Market-based Approaches to Environmental Policy: A “Refresher” Course. In WE Oates, ed., *The RFF Reader in Environmental and Resource Policy*. Washington, DC: RFF, pp 51-55.

Boyd, James et al. 2006. Trading Cases: Five Examples of the Use of Markets in Environmental and Resources Management. In WE Oates, ed., *The RFF Reader in Environmental and Resource Policy*. Washington, DC: RFF, pp 56-65.

PCAST (President’s Council of Advisors on Science and Technology). 2011. *Report to the President. Sustaining Environmental Capital: Protecting Society and the Economy*. July 2011. SUMMARY.

Case 1: Ohio River Water Quality Trading pilot program

Case 2: Willamette Partnership and Counting on the Environment

Week 14: Global Environmental Policy

Clapp, Jennifer and Peter Dauvergne. 2011. *Paths to a Green World: The Political Economy of the Global Environment*. Cambridge, MA: MIT Press. PAGES 56-86.

Case 1: Olu Tolgoi mine in Mongolia

Case 2: CBD/TRIPS conflicts

Case 3: California carbon credits from REDD

Course Change Proposal

Subject Molecular & Environmental Tox (362)

Status Under Review by School/College

Proposer Joel A Pedersen

Basic Information

Current course number

606

Current course title

Colloquium in Environmental Toxicology

Current published course description

Lectures by resident and visiting professors on toxicology and problems related to biologically active substances in the environment.

Chief academic officer of this unit

Christopher A Bradfield

Designee of chief academic officer for approval authority

Eileen M Stevens

Currently crosslisted with

Forest And Wildlife Ecology (396)

Soil Science (908)

Plant Pathology (766)

Entomology (355)

What is the primary divisional affiliation of the course?

Biological Sciences

When will this change go into effect?

Spring 2013-2014

Basic Changes

Will the subject change?

No

Current subject

Molecular & Environmental Tox (362)

Proposed subject

Will the course number change?

No

Current course number

606

Proposed course number

Is this an honors course?

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

Will the title change?

No

Current title

Colloquium in Environmental Toxicology

Proposed title (max. 100 chars.)

Proposed transcript title (max. 30 chars.)

Will the crosslistings change?

No

Current crosslistings

Forest And Wildlife Ecology (396)

Soil Science (908)

Plant Pathology (766)

Entomology (355)

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

Lectures by resident and visiting professors on toxicology and problems related to biologically active substances in the environment.

Proposed course description

Current topics in molecular and environmental toxicology and problems related to biologically active substances in the environment. Topics vary each semester. Lectures are by resident and visiting professors and other researchers. (This change does not reflect any alteration to the content of the course.)

Will the prerequisites change?

Yes

Current prerequisites and other requirements

None.

Proposed prerequisites and other requirements

One semester of biology. (This has historically been the prerequisite for the course. The prerequisite was dropped without my knowledge.)

Designation Changes

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

Yes

What change is needed?

SEEK_LAS_DESIG

What is the rationale for seeking LAS credit?

In the past this course has been used to help fulfill the undergraduate natural science requirement for non-science majors. I would like to have the course reinstated as fulfilling this requirement. Beyond this, the course would be beneficial for students in the environmental science major. The course contributes to general principles to understanding the world through the Natural and Biological Sciences. Students taking the course will be able to demonstrate knowledge of scientific concepts and assumptions, analyze and interpret scientific evidence, demonstrate knowledge of the scientific method, demonstrate understanding of scientific reasoning, and determine when scientific information supports a given conclusion, and think critically about the impact of scientific discovery on society.

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

Yes

Current level:

Proposed level:

Intermediate

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)

The course content is appropriate for helping to fulfill the LAS undergraduate natural science breadth requirement. In addition, the course would be beneficial to students in the environmental science major. (This program is outside my academic unit, but does not appear on the drop down list on the Course Proposal website.)

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)

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

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

There is no comparable course on campus.

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

The requested change simply reinstates the course to count towards fulfilling a L&S natural science breadth requirement. The change in the course description is simply for clarification. It does not reflect a change in course content.

Additional comments (optional)

I have made a few modifications to the syllabus: (1) the number of 75-minute lectures has been increased to 10 to comply with federal guidance on the value of a semester credit; (2) I have indicated in the syllabus that each lecture has associated readings assigned and that these materials are fair game for exam questions; (3) I have replaced the 2010 syllabus with a tentative one for the Spring 2014 semester; and (4) I amended the grading scale to clarify grade cutoffs to the tenth of a percentage point.

Attach a syllabus

MET 606 Syllabus - Spring 2014 (Tentative).pdf

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

COLLOQUIUM IN ENVIRONMENTAL TOXICOLOGY 606
MET/Entomol/PI Path/Soil Sci/WI Ecol 606
SPRING SEMESTER 2014

COORDINATOR: Joel Pedersen, Associate Professor, Dept. Soil Sci.; 263-4971, japedersen@soils.wisc.edu

PLACE: 270 Soil Science TIME: Tuesdays, 4:00-5:15 PM

CLASS MATERIALS: Learn@UW

E-mail for extra credit only: jgoh@wisc.edu with subject "Extra Credit Questions (DATE of Lecture)"

"All substances are poisons; there is none that is not a poison. The right dose differentiates a poison and a remedy." *Paracelsus (1493-1541)*

COURSE SYLLABUS

LECTURE SCHEDULE

- 01/21 *Environmental problems associated with agriculture and food systems*
Prof. Steve Ventura, Soil Science, UW – Madison
- 02/04 *Bioassay effects directed analysis work related to the CAFO hormones project*
Dr. Curtis Hedman, Wisconsin State Laboratory of Hygiene
- 02/18 *Environmental concerns with the beneficial reuse of biosolids*
David Taylor, Madison Metropolitan Sewerage District
- 02/25 *Engineered nanomaterials in the environment*
Prof. Joel Pedersen, Molecular and Environmental Toxicology, UW – Madison
- 03/04 *Viral gene delivery: A tool to study neurodegenerative disorders*
Prof. Corrina Burger, Neurology, UW – Madison
- 03/25 *Remediation of mercury contamination in the Amazon Basin*
Eric Uram, Headwaters Consulting, LLC
- 04/08 *Influence of vitamin D on cancer development*
Dr. Amy Irving, Molecular and Environmental Toxicology, UW – Madison
- 04/15 TBD
- 04/22 *Transformation of environmental toxicants by sunlight*
Prof. Christy Remucal, Environmental Chemistry & Technology, UW – Madison
- 05/06 *Influence of environmental factors on prion disease transmission*
Dr. Christopher Johnson, National Wildlife Health Center, U.S. Geological Survey, Madison, WI

Learning Objectives

Students will become aware of the presence of toxicants in their environment and their possible effects, understand methods of inquiry and patterns of reasoning used in environmental toxicology, understand how the evidence supporting arguments in environmental toxicology is evaluated, and make connections across multiple disciplines.

Course Materials

Readings and videos associated with each lecture will be posted to Learn@UW a week prior to the lecture. These materials contain important background information for lecture topics and may apply them to areas that cannot be covered in class due to time constraints. The presentations and handouts for each lecture will be accessible electronically through Learn@UW.

Exams and Grading

Mid-term exam (03/11) 4:00-5:15 PM, Rm 270 Soil Science: Material presented during first four meetings

Final exam TBA: Material presented after midterm

Each exam will be worth 44% of your final grade and consists of 50 multiple choice and true/false questions. Exams will be in scantron format; be sure to bring a #2 pencil. Extra credit points may be earned by submitting questions to be considered for inclusion on exams (see below). Questions will be based on material presented in lecture and in the assigned readings and videos.

Attendance is mandatory and constitutes 12% of your final grade. Please sign in for each lecture. You may miss one lecture without penalty; however, every additional lecture missed will cost two points.

Grading. The course is graded on a curve. The top score is generally taken as 100%, and grades distributed as follows: A = 93.0-100%, AB = 88.0-92.9%, B = 83.0-87.9%, BC = 78.0-82.9%, C = 70.0-77.9%, D = 60.0-69.9%, F = 0-59.9%. Extra credit (see below) is factored in after curving.

Extra credit. By the Friday after each lecture, students may submit for extra credit a maximum of two short (3-6 lines maximum) true/false or multiple-choice questions. Multiple-choice questions should have 4 or 5 choices and only one correct answer. Please indicate what **you** consider to be the correct answer. Even if wrong, this will help in understanding the intent of the question. Submit questions via e-mail to slspeth@wisc.edu with the subject **"Extra Credit Questions" followed by the date of the lecture to which your questions correspond**. This will ensure that they are recorded. Do not send questions to the course instructor.

Exams will comprise 50 questions from those submitted (edited to shorten them or to correct grammar and misspellings). To encourage prompt submission of thoughtful questions, **an extra credit point** will be awarded **for each question** submitted on time and **a bonus point** for each question used in the examination. If several questions are identical and that question is selected, the author of the earliest submission will receive the bonus point. **Be sure to include your name on the questions (e-mail addresses are often indecipherable) and the lecture date in the subject line!** Late questions and submissions with more than 2 questions will be ignored, and no bonus points will be awarded. Students with surnames beginning with A-L should submit questions after the 01/21, 02/18, 03/04, 04/08, and 04/22 lectures; those with surnames beginning with M-Z should submit questions after the 02/04, 02/25, 03/25, 04/15 and 05/06 lectures. Thus, all students can earn 10 bonus points for each exam (20 points total) just by submitting questions on time in the proper cycle, and additional points if one or more of their questions are chosen for use in the final.

New Course Proposal

Subject Neuroscience (681)

Status Under Review by School/College

Proposer Mary J Walker

Basic Information

Course Title

Independent Work

Transcript Title (limit 30 characters)

NEURODPT 699

Three-digit course number

699

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)?

Yes

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?

Yes

If yes, please justify

Students may do independent study in a lab for more than one semester.

Typically Offered

Fall, Spring, Summer

Catalog Information

Minimum credits

1

Maximum credits

4

Grading System

A-F

Course Description (will be published in Course Guide)

Independent work

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

Independent Study

Administrative Information

Chief Academic Officer

Tom C T Yin

Designee of chief academic officer for approval authority

Mary J Walker; Rebecca H Welch

If there are additional contacts, please list

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.)

Students from other programs or disciplines may do independent work in Dept of Neuroscience labs.

Are any of these programs outside your academic unit?

Yes

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.

Physiology (762)

Biochemistry (200)

Microbiology (192)

Neuroscience Training Program (682)

Cell and Regenerative Biology (217)

Medical Microbiol & Immunology (620)

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).

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

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

Independent study for undergraduates gaining lab experience in Neuroscience.

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

This is an independent study listing for the Department of Neuroscience to accommodate the realignment of the Depts of Physiology, Pharmacology and Anatomy.

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)

Baron Chanda, Edwin Chapman, Shing-Ya Chiu, Cynthia Czajkowski, Erik Dent, Timothy Gomez, Yevgeny Grinblat, Mary Halloran, Xin Huang, Zhen Huang, Meyer Jackson, Mathew Jones, Jon Levine, Peter Lipton, Xuelin Lou, Donata Oertel, Luis Populin, Gail Robertson, Avtar Roopra, Tom C T Yin, Su-Chun Zhang, Xinyu Zhao, Lea Ziskind-Conhaim

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 - NEURODPT 699.pdf

Justifications

Explain how this course contributes to strengthening your curriculum

With the realignment of Basic Science departments, there is a need for 699 Independent Work for the new Dept of Neuroscience.

Provide an estimate of the expected enrollment

Usually no more than 5 students per instructor, most often only 1 student per semester.

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

"A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than: 1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class work each week for approximately 15 weeks for one semester or trimester hours of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or 2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours."

If this is a variable credit course, provide rationale

Number of credits is based on amount of time spent working in laboratory under supervision of faculty and/or postdocs and grad students.

Additional comments (optional)

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

Syllabus - NEURODPT 699.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?

Syllabus
Department of Neuroscience 699
(NEURODPT 681-699)
Fall, Spring, Summer

Title: Neuroscience Independent Work

Number of credits (1-4 credits) is based on amount of time spent working in laboratory under supervision of faculty and/or postdocs and grad students learning laboratory skills, progressing with number of semesters working in labs.

Learning objectives: To gain skill and knowledge in laboratory procedures and research skills.

Texts or references to be used: Hands on training in laboratory skills and procedures. No assigned text.

Representative list of readings: Hands on training in laboratory skills and procedures. No specific assigned readings although readings may be recommended by instructors as needed.

How students will be evaluated: Graded A-F

Syllabus
Department of Neuroscience 699
(NEURODPT 681-699)
Fall, Spring, Summer

Title: Neuroscience Independent Work

Number of credits (1-4 credits) is based on amount of time spent working in laboratory under supervision of faculty and/or postdocs and grad students learning laboratory skills, progressing with number of semesters working in labs.

Learning objectives: To gain skill and knowledge in laboratory procedures and research skills.

Texts or references to be used: Hands on training in laboratory skills and procedures. No assigned text.

Representative list of readings: Hands on training in laboratory skills and procedures. No specific assigned readings although readings may be recommended by instructors as needed.

How students will be evaluated: Graded A-F