

Washington State University
MAJOR CURRICULAR CHANGE FORM - - COURSE REVISION

- Please attach rationale for your request, a complete syllabus, and explain how this impacts other units in Pullman and other campuses (if applicable).
- Obtain all required signatures with dates.
- Provide original stapled packet of signed form/rationale statement/syllabus PLUS 10 stapled copies of complete packet to the Registrar's Office, campus mail code 1035.
- Submit one electronic copy of complete packet to wsu.curriculum@wsu.edu.

Requested Future Effective Date: Fall 2016 (term/year) Course Typically Offered: a/y, odd F

DEADLINES: For fall term effective date: **October 1st**; for spring or summer term effective date: **February 1st**. See instructions.

NOTE: Items received after deadlines may be put to the back of the line or forwarded to the following year. Please submit on time.

Current course [List course as it currently appears in the catalog]:

PI_P	521	General mycology
course subject/crosslist	course no.	title
4 (2 - 6)		
Credit hrs	lecture hrs	lab or studio
	per week	hrs per week
		prerequisite

Requested Change(s): Check all that apply and list proposed change.

- Change subject: _____
- Change course number: _____
- Change credit to: 3
- Change lecture-lab ratio to: (3 - 0)
- Variable credit: _____
- Repeat credit (cum. max. hrs): _____
- New/change crosslisting*: _____
- Conjoint listing (400/500): _____
- Special Grading: S, F; A, S, F (PEACT only); S, M, F (VET MED only); H, S, F (PHARMACY, PHARDSCI only)
- Other (please list request): _____

NOTE: If only requesting a change to title, prerequisite, and/or description, please use a **Minor Curriculum Change** form.

- Title change: _____
- Prerequisite change: _____
- Change catalog description to: _____

The following items require prior submission to other committees/depts. (SEE INSTRUCTIONS.)

- Request to meet Writing in the Major [M] requirement (Must have All-University Writing Committee Approval.)
- Request to meet UCORE in _____ (Must have UCORE Committee Approval » See instructions.)
- Special Course Fee _____ (Must submit request to University Receivables)

Contact: Scot Hulbert Phone number: 335-4504 Campus mail code: 6430

Email: scot_hulbert@wsu.edu Instructor, if different: Lori Carris

Scot Hulbert Digitally signed by Scot Hulbert
DN: cn=Scot Hulbert, o=Washington State University,
ou=Faculty Personnel, email=scot_hulbert@wsu.edu, c=US
Date: 2016.09.04 09:40:03 -0700 _____
Chair/date

Scot Hulbert 9/16/16
Dean/date

All-University Writing Com / date

Chair (if crosslisted/interdisciplinary)*

Dean (if crosslisted/interdisciplinary)*

UCORE Committee Approval Date

Catalog Subcommittee Approval Date

GSC or AAC Approval Date

Faculty Senate Approval Date

*If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided for each impacted unit and college.

MEMORANDUM

DATE: September 1, 2015
TO: Kim Kidwell, Acting Dean, CAHNRS
FROM: Scot Hulbert, Chair, Plant Pathology
SUBJECT: PI P 521, General Mycology

We are proposing a revision of our graduate level course PI_P 521. It will be taught in Pullman, as before, but will now be offered to students at Research and Extension Centers, with simultaneous delivery to all enrolled students on and off-campus using AMS services. The main revision is that it will no longer have a laboratory component and it will be offered for three credits, instead of four. The essential components of the laboratory will now be offered in a new course we are proposing, PI_P 570, Techniques in Plant Pathology.

The Department of Plant Pathology has graduate faculty located on the Pullman campus and at four Research & Extension Centers around the state (Mt. Vernon, Prosser, Puyallup and Wenatchee). Graduate students working with faculty located at the R & E Centers typically spend one to three semesters on the Pullman campus in order to take courses, and the remainder of their program is spent at the R & E Center. The R & E students are often unable to take one or more of the Plant Pathology courses they need because these courses are offered on an alternate year basis that does not correspond with the semesters they are on the Pullman campus. The department is able to deliver several non-lab courses by distance to accommodate the needs of the students and faculty at R & E Centers, but we have not been able to deliver four of our key, lab-based, organismal courses by distance: Virology (PI_P 511), Phytobacteriology (PI_P 514), Nematology (PI_P 513) and the previous version of this course. As part of a Plant Pathology graduate curriculum revision that was discussed at a state-wide plant pathology faculty retreat in June, 2015, we agreed to revise these courses so they can be delivered by distance, and to create a new 3-credit laboratory course, "Techniques in Plant Pathology" (PI_P 570) that will incorporate the essential lab components of the four organismal courses and will be offered on the Pullman campus every fall semester. We are proposing to reduce the number of credits for Virology (PI_P 511), Nematology (PI_P 513), Phytobacteriology (PI_P 514), and General Mycology (PI_P 521) from four credits to three credits.

1. Syllabus for the proposed course.

A revised syllabus is attached.

2. Justification of how the proposed course or degree program aligns with the intentions of the academic program for the department in which it is housed, and how it aligns with the strategic plan for CAHNRS.

The main purpose for the proposed revision is to make the class more available to students at RECs. Along with several other revised courses we are proposing, we believe it will make it easier for faculty at RECs to train graduate students and therefore contribute to goal 6 of the CAHNRS Strategic Plan. Additionally, we believe it would support Goals 4, 5, 7, 8, 10, 17 and 18 of the Strategic Plan.

3. *A management plan, including name of the program manager, must be provided for degree programs.*

Not Applicable

4. *Course delivery schedule: Identify who will teach the course, how often the course be offered and what delivery cycle (semester, odd year/even year) the course will be offered in.*

The course would be taught by its current instructor, Lori Carris. It will be taught in the same cycle the course is currently being taught, in **fall of odd years**.

5. *A marketing plan for the course/program, including target audience, programs of study it will support, expected student numbers, and methods of advertising the course must be provided.*

The target audience will not change from the existing course; it will be a key course for Plant Pathology graduate students. We expect that enrollment may increase slightly because students at RECs will now be able to enroll and participate by videoconferencing.

6. *Will the new course/program require redeployment of existing resources? If so, what will be the impact on existing courses and/or programs, teaching loads, research productivity, and service and outreach?*

Existing departmental FTE will be used to teach the course, as before.

7. *Describe the funding model for the course if an instructor on permanent budget is not assigned to the course.*

The course will only be taught by Lori Carris whose position is supported on a permanent budget.

PLANT PATHOLOGY 521 GENERAL MYCOLOGY 3 Credits

Vogel Plant Science Building Room 31

T TH 1:25-2:40

INSTRUCTOR: Dr. Lori Carris (329 Johnson Hall; 335-3733; lori.carris@wsu.edu)

COURSE OBJECTIVE: To provide a basic understanding of the biology, taxonomy and phylogeny of fungi.

REQUIRED TEXT: Moore et al. 2011. **21st Century Guidebook to fungi**. Cambridge University Press, Cambridge, UK (available at the Bookie)

COURSE WEBSITE: BLACKBOARD, accessed from MyWSU

Student Learning Outcomes At the end of this course, students should be able to:	Course Topics/Dates The following topic(s)/dates(s) will address this outcome:	Evaluation of Outcome: This outcome will be evaluated primarily by:
Demonstrate scientific literacy in major concepts and processes relative to the major groups of fungi and fungal-like organisms	Weeks 1-15	Midterm and final exams; case studies; team presentations
Locate and evaluate sources of scientific information on fungi and fungal-like organisms.	Weeks 3, 4 , 8, 12, 13, 15	Case studies and team presentations
Communicate and work effectively in groups in developing presentations	Weeks 4, 12, 15	Team presentations

REFERENCES (In Owen Science Library unless otherwise noted):

Arora, D. 1986. **Mushrooms Demystified**. Second Edition. Ten Speed Press, Berkeley, California.

Esser K., Lemke P.A., eds. 1994-2015. **The Mycota**. A Comprehensive Treatise on Fungi as Experimental Systems for Basic and Applied Research. Springer-Verlag, New York.

Farr D. F., Bills G.F., Chamuris G.P., Rossman A.Y. 1989. **Fungi on Plants and Plant Products in the United States**. APS Press, St. Paul, MN. (updated online at <http://nt.ars-grin.gov/fungalDATABASES/index.cfm>)

Hawksworth D. L. 1974. **Mycologist's Handbook**. Commonwealth Mycological Institute. Kew

Kirk P.M., et al. 2011. **Dictionary of the Fungi**. 10th Edition. CABI Publishing

Margulis L., Corliss J.O., Melkonian M., Chapman D.J. 1990. **Handbook of Protoctista**. Jones and Bartlett Publishers, Boston

Mueller G. M., Bills G.F., Foster M. S., eds. 2004. **Biodiversity of Fungi. Inventory and Monitoring Methods**. Elsevier Academic Press, New York)

Stevens, R. B. 1974. **Mycology Guidebook**. University of Washington Press, Seattle.

Trudell, S. & Ammirati, J. 2009. **Mushrooms of the Pacific Northwest**. Timber Press Field Guide, Portland, Oregon.

Ulloa, M. and Hanlin, R. T. 2000. **Illustrated Dictionary of Mycology**. APS Press, St. Paul, MN

Webster J, Weber R.W.S. 2007. **Introduction to Fungi**. Cambridge University Press

COURSE OUTLINE

Reading assignments in parentheses refer to pages in Moore et al. (2011) unless otherwise noted; other than for the first class period, **students are expected to have read the assigned material and viewed posted presentations (on BLACKBOARD class site) prior to coming to class**. Reading assignments from references other than required texts will be posted on the course class site whenever possible. Refer to *The Mycota*, Vol. VII (2014-2015) for in-depth treatment of the different groups of fungi.

WEEK

- 1 History of Mycology; Introduction to Kingdom Fungi and fungal-like organisms (Moore: 1-31)
Introduction to Basidiomycota (Moore: 61-62)
- 2 Smuts (Moore: 61, assigned chapter from *The Mycota*)
Rusts (assigned chapter from *The Mycota*)
- 3 Introduction to Hymenomycetes (Moore: 63-70)
Gasteromycetes. Case Study #1
- 4 Mushrooms
Fungi and food (team presentations)
- 5 Heterobasidiomycetes (jelly fungi)
Conidial ascomycetes—hyphomycetes (Moore: 74-108)
- 6 Conidial ascomycetes—coelomycetes (Moore: 111-126)
Yeasts
- 7 Introduction to Ascomycota; Taphrinomycotina, Eurotiales
Erysiphales, Meliolales, Laboulbeniales

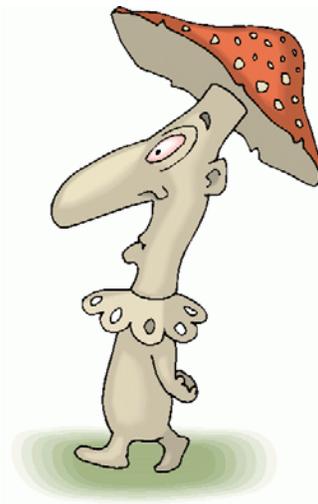
MID-TERM EXAM (take-home)

- 8 Discomycetes
Lichens. Case Study #2
- 9 Pyrenomycetes
Loculoascomycetes
- 10 Introduction to Glomeromycota; Mycorrhiza
Introduction to Zygomycota; Mucorales
- 11 Endogonales, Entomophthorales, Tricomycetes
Introduction to Chytridiomycota
- 12 **Fungi and animals (team presentations)**
Fungal-like organisms; Hyphochytriomycota, Plasmodiophoromycota,
Labyrinthulomycota
- 13 Introduction to Oomycota
Peronosporales. Case Study #3

Thanksgiving break

- 14 Introduction to Myxomycota; Slime molds I
Slime molds II.
- 15 **Fungi and plants (team presentations)**
Fungal Phylogeny and Evolution. Fossil Fungi.

FINAL EXAM (To be determined based on WSU Registrar's Final Exam Schedule)



ECOLOGICAL ROLES OF FUNGI: TEAM PRESENTATIONS

This is your opportunity to learn about the different types of fungi occurring in various ecological niches and share that information with an audience. You will be working in groups of 3-4 on team presentations focused on broad ecological roles of fungi—fungi and food, fungi and animals, or fungi and plants (see syllabus). Each team will select or be assigned a specific group or type of fungi within each of these broad groups, and will develop a 10 minute presentation. The presentations should be developed for an audience that does not necessarily have a mycological background, and should include images, videos or animations to illustrate salient points.

Abstract: A one-page (maximum length, not including references) abstract summarizing the presentation is required. The abstract will include a title, introduction, and key points about the fungi being presented. A minimum of five references (see information below) is required with the abstract.

References: A minimum of five references will be used—at least three references should come from the primary literature and/or reference books, and at least one reference should come from the popular press. Cite references in the text by author-date or by numbers. Arrange references alphabetically, and follow a recent issue of *Mycologia*, *Phytopathology* or *Plant Disease* for citation style. Use standard abbreviations for journal names, and if in doubt, spell it out.

Web page URLs must be current and citations are to include:

- Author's name (if known)
- Date of publication or last revision (in parenthesis)
- Title of document
- Title of complete work (if applicable)
- URL
- Date of access (in parenthesis)

Presentation:

Each team presentation should be 10 minutes in length, and all members of the team are to participate. Creativity and originality in presentation style are strongly encouraged. Images of fungi must be included—the source of the images must be identified. Think about your audience in putting together your presentation—how can you convey information in an informative yet engaging manner.

Evaluation: Grades for the project will be based on effort and creativity (40%); content (40%); quality of the abstract and oral presentations (20%), in particular how well you have conveyed information to the audience.

CASE STUDIES

Three case studies will be assigned during the semester. The case studies, which will be posted on the Blackboard site, will present a problem involving one or more fungi that will require information retrieval and critical thinking to resolve. Students may collaborate online to come up with a response, but each student must provide justification for his/her answer and indicate if this was the result of collaboration or independent effort. Each case study response is worth 25 points.

GRADING PROCEDURE:

One midterm exam (150 points) and one **final exam** (150 points) will be given during the semester according to the schedule listed above. The exams will cover material presented in lectures, discussions, and reading assignments, the format will be short answer and short essay. Other graded components of the course will include **team presentation** (100 points) **and abstracts** (75 points), **and three case studies** (25 points each).

Graded Component	Points	Individual	Team
Midterm Exam	150	X	
Final Exam	150	X	
Team Presentation	75		X
Team Abstract	75		X
Case Studies (3)	75	X	
Total Points	625	(375)*	(150)*

*See Determination of Final Grades below for weighting factor

Grades will be determined by scores in three major performance areas: Individual Performance 60% (midterm and final exams; case studies); Team Performance 40% (team presentations and abstracts); Peer Evaluations (a factor to modify the team grade). See attached Peer Evaluation form.

Determination of Final Grades

The final grades will be determined by computing a raw total score for each student in each major performance area. This will be the sum of the midterm and final exams, graded laboratory assignments/quizzes/case studies, team specimen collection, and group project, and scores in the peer evaluation; each of these scores will be multiplied by a weighting factor to get a final total, as in the following hypothetical example:

	<u>Weighting factor</u>			
Individual performance: 350 earned/375 possible = 93.3%	x .60	=	55.0	
Team performance: 133 earned/150 possible = 88.9%	x .40	=	(35.6)	
Peer Evaluation: 9 average score/10 possible	35.6 x .9	=	<u>32</u>	
Total =			87 %	

Grade Assignment: The final course grade will be rounded up or down based on the following scale. For example, 89.1-89.4% will be rounded down to 89%, 89.5-89.9% will be rounded up to 90%.

90 – 100%	A
80 – 89	B
70 – 79	C
60 – 69	D
< 59	F

Academic Integrity Statement

Academic integrity is a non-negotiable requirement for PIP521. Any student caught violating the academic integrity policy will receive a failing grade and be referred to the Office of Student Conduct. We will be engaged in several group activities this semester that may result in a report written by two or more students. The names listed on the report must reflect substantial input from all students involved in the project, and all students listed will be assigned the same grade. If individual students in a group project submit a separate report, that report will reflect the original work of each student. For more information on WSU’s academic integrity policy, refer to: <http://www.conduct.wsu.edu/AI> and <http://www.wsulibs.wsu.edu/plagiarism/main.html>

Policy on Attendance, Participation and Late Assignments

Attendance and active participation in discussions are strongly encouraged. Exams will only be given on the designated dates without prior consent of the instructor and/or an excused absence. Assignments must be turned in by 5 pm on the due date; credit will not be given for late assignments except by prior consent of the instructor and/or an excused absence.

WSU Disability Statement

Students with Disabilities: Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Disability Resource Center (DRC). All accommodations MUST be approved through the DRC (Washington Building, Room 217). Please stop by or call 509-335-3417 to make an appointment with a disability specialist.

WSU Safety

Please familiarize yourself with information regarding campus emergencies/school closings by visiting: <http://oem.wsu.edu/emergencies>

PEER EVALUATION

NAME _____ **TEAM NAME** _____

This is an opportunity to evaluate the contributions of your teammates to the team presentations in which you participated this semester. Write the names of your teammates in the spaces below. You can assign an average of 10 points per team member. If you think everyone on your team contributed equally, they should all get the same number of points (but that doesn't have to be 10—see below). If everyone on your team, including you, did the same amount of work, and all team members agree, each person will get an average of 10 points. Be fair in your assessment---if someone did not carry his/her share of the work load, don't assign them 10 points. If someone really worked harder than the rest of the group, that person should get more than 10 points.

There are some rules to follow in assigning points:

- You can't give anyone more than 15 points
- You do not have to assign all your points!
- Don't give anyone a grade they have not earned

Team Members	Score
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

If you gave anyone less than 10 points, please indicate why (use back of page if needed):

If you gave anyone more than 10 points, please indicate why:

If you were to assign points to yourself, what do you think you deserve? Why?