

COURSE CHANGE FORM

Complete 1a – 1f & 2a – 2c. Fill out the remainder of the form as applicable for items being changed.

1. General Information.						
a. Submitted by the College of: <u>Agriculture</u>		Today's Date: <u>5/19/11</u>				
b. Department/Division: <u>Plant Pathology</u>						
c. Is there a change in "ownership" of the course?					YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
If YES, what college/department will offer the course instead? _____						
d. What type of change is being proposed? <input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor ¹ (place cursor here for minor change definition)						
e. Contact Person Name: <u>Lisa Vaillancourt</u>		Email: <u>vaillan@uky.edu</u>		Phone: <u>218-0731</u>		
f. Requested Effective Date: <input checked="" type="checkbox"/> Semester Following Approval OR <input type="checkbox"/> Specific Term ² : _____						
2. Designation and Description of Proposed Course.						
a. Current Prefix and Number: <u>PPA 650</u>		Proposed Prefix & Number: <u>PPA 650</u>				
b. Full Title: <u>Fungal Biology</u>		Proposed Title: <u>Fungal Biology</u>				
c. Current Transcript Title (if full title is more than 40 characters): _____						
Proposed Transcript Title (if full title is more than 40 characters): _____						
d. Current Cross-listing: <input checked="" type="checkbox"/> N/A OR <input type="checkbox"/> Currently ³ Cross-listed with (Prefix & Number): _____						
Proposed – <input type="checkbox"/> ADD ³ Cross-listing (Prefix & Number): _____						
Proposed – <input type="checkbox"/> REMOVE ^{3,4} Cross-listing (Prefix & Number): _____						
e. Courses must be described by <u>at least one</u> of the meeting patterns below. Include number of actual contact hours ⁵ for each meeting pattern type.						
Current: <u>2</u> Lecture		_____ Laboratory ⁵		_____ Recitation		
_____ Clinical		_____ Colloquium		_____ Discussion		
_____ Seminar		_____ Practicum		_____ Indep. Study		
_____ Studio		_____ Research		_____ Residency		
_____ Other – Please explain: _____						
Proposed: <u>3</u> Lecture		_____ Laboratory		_____ Recitation		
_____ Clinical		_____ Colloquium		_____ Discussion		
_____ Seminar		_____ Practicum		_____ Indep. Study		
_____ Studio		_____ Research		_____ Residency		
_____ Other – Please explain: _____						
f. Current Grading System: <input checked="" type="checkbox"/> Letter (A, B, C, etc.) <input type="checkbox"/> Pass/Fail						
Proposed Grading System: <input checked="" type="checkbox"/> Letter (A, B, C, etc.) <input type="checkbox"/> Pass/Fail						
g. Current number of credit hours: <u>2</u>		Proposed number of credit hours: <u>3</u>				
h. Currently, is this course repeatable for additional credit?					YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

Comment [OSC1]: Excerpt from SR 3.3.0.G.2 Definition. A request may be considered a minor change if it meets one of the following criteria:
a. change in number within the same hundred series*;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s); d. a cross-listing of a course under conditions set forth in SR 3.3.0.E;
e. correction of typographical errors.

*...for the specific purposes of the minor exception rule, the 600-799 courses are the same "hundred series," as long as the other minor change requirements are complied with. [RC 1/15/09]

¹ See comment description regarding minor course change. *Minor changes are sent directly from dean's office to Senate Council Chair.* If Chair deems the change as "not minor," the form will be sent to appropriate academic Council for normal processing and contact person is informed.

² Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

³ Signature of the chair of the cross-listing department is required on the Signature Routing Log.

⁴ Removing a cross-listing does not drop the other course – it merely unlinks the two courses.

⁵ Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting generally represents at least two hrs per wk for a semester for 1 credit hour. (See SR 5.2.1.)

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Proposed to be repeatable for additional credit?		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
If YES:	Maximum number of credit hours:	_____	
If YES: Will this course allow multiple registrations during the same semester?		YES <input type="checkbox"/>	NO <input type="checkbox"/>
i. Current Course Description for Bulletin:	<u>The Fungal Biology course introduces basic mycological concepts, including systematics, anatomy, cell biology, metabolism, developmental biology, ecology, population genetics, and reproduction. Students will also learn about the use of fungi in research and biotechnology.</u>		
Proposed Course Description for Bulletin:	<u>The Fungal Biology course introduces basic mycological concepts, including systematics, anatomy, cell biology, metabolism, developmental biology, ecology, population genetics, and reproduction. There is a focus on modern molecular approaches to these concepts. Students will also learn about the use of fungi in research and biotechnology.</u>		
j. Current Prerequisites, if any:	<u>General undergraduate courses in biology, genetics, and chemistry. PPA400G, PPA500, PPA600, and PPA640 should be completed before taking this course.</u>		
Proposed Prerequisites, if any:	<u>Undergraduate courses in biology, genetics, and chemistry.</u>		
k. Current Distance Learning(DL) Status:	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Already approved for DL*	<input type="checkbox"/> Please Add ⁶ <input type="checkbox"/> Please Drop
*If already approved for DL, the Distance Learning Form must also be submitted <u>unless</u> the department affirms (by checking this box <input type="checkbox"/>) that the proposed changes do not affect DL delivery.			
l. Current Supplementary Teaching Component, if any:	<input type="checkbox"/> Community-Based Experience	<input type="checkbox"/> Service Learning	<input type="checkbox"/> Both
Proposed Supplementary Teaching Component:	<input type="checkbox"/> Community-Based Experience	<input type="checkbox"/> Service Learning	<input type="checkbox"/> Both
3. Currently, is this course taught off campus?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	
Proposed to be taught off campus?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	
4. Are significant changes in content/teaching objectives of the course being proposed?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	
If YES, explain and offer brief rationale:			
<u>My intention is to bring in material from the Advanced Plant Mycology course, PPA 672. There will be a new focus in the PPA 650 course on modern molecular approaches to Fungal Biology, and an additional course objective will be included, which will be an ability to identify and discuss current and emerging concepts in molecular mycology.</u>			
5. Course Relationship to Program(s).			
a. Are there other depts and/or pgms that could be affected by the proposed change?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	
If YES, identify the depts. and/or pgms: _____			
b. Will modifying this course result in a new requirement⁷ for ANY program?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	
If YES ⁷ , list the program(s) here: _____			
6. Information to be Placed on Syllabus.			
a.	<input type="checkbox"/> Check box if changed to 400G or 500.	If <u>changed to</u> 400G- or 500-level course you must send in a syllabus and <i>you must include the differentiation</i> between undergraduate and graduate students by: (i) requiring additional assignments by the graduate students; and/or (ii) establishing different grading criteria in the course for graduate students. (See SR 3.1.4.)	

⁶ You must *also* submit the Distance Learning Form in order for the course to be considered for DL delivery.

⁷ In order to change a program, a program change form must also be submitted.

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Signature Routing Log

General Information:

Course Prefix and Number: PPA 650

Proposal Contact Person Name: Lisa Vaillancourt Phone: 218-7031 Email: vailan@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Department Chair	06/17/11	Christopher Schardl / 218-0730 / schardl@uky.edu	
Graduate Curriculum Comm	9/30/11	Larry Grabau / 257-3469 / Larry.Grabau@uky.edu	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ⁸
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

⁸ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

PPA 650: FUNGAL BIOLOGY SYLLABUS

Credit hours: 3

Instructor: Lisa Vaillancourt,
Department of Plant Pathology
227 Plant Science Building
vaillan@uky.edu
859-218-0731

Class Meeting Time: MWF 1-2

Location: TBA

Office hours will be held in my office (227 PSB) from 2-3 on Mondays. In addition, I will always be available for individual consultation by appointment, and I will try to respond to e-mail queries within 24 hours. I have voicemail and you will be welcome to leave a message there, if you prefer.

Text: Your assigned reading will be from research articles and reviews: there is no required textbook. You may find it helpful to have the book “The Fungi, 2nd Edition”, by Michael Carlile, Sarah Watkinson, and Graham Gooday, Elsevier Press as a good source of background information. I have a copy of this and other textbooks that you are welcome to borrow for short periods, if you wish.

Course Descriptions

The Fungal Biology course introduces basic mycological concepts, including systematics, anatomy, cell biology, metabolism, developmental biology, ecology, population genetics, and reproduction. There will be a focus on modern molecular approaches to these concepts. You will also learn about the use of fungi in research and biotechnology.

Student Learning Outcomes:

After completing the Fungal Biology course students will be able to:

- Define common mycological terms.
- Describe the evolutionary relationships and overall organization of the fungal kingdom.
- Compare and contrast Eumycota with other organisms that are commonly included among the fungi.
- Diagram fungal cellular ultrastructure, name and explain the function of major organelles.
- Describe the structure, chemistry, and developmental biology of the fungal cell wall.
- Explain how fungi grow, and predict environmental effects on growth.

- Describe the modes of action of major classes of antifungal chemicals.
- Draw lifecycles and describe modes of reproduction for the major groups of fungi.
- Diagram basic primary and secondary metabolic pathways in fungi.
- Compare and contrast the various saprophytic and parasitic lifestyles of fungi.
- Describe the unique advantages of fungi for use in research and biotechnology.
- Identify and discuss current and emerging concepts in molecular mycology.

Prerequisites: Undergraduate courses in biology, genetics, and chemistry. I will assume that you have a basic background in all these areas. Plant Pathology students should take PPA 400G, PPA 500, PPA 600, and PPA 640 prior to taking this course.

Assignments, Exams, and Grades:

Active participation in class discussions will be expected from every student. You will be graded on class participation. You will be assigned reading each week. I will also give you a set of questions each week to guide your reading and our subsequent class discussions, including some that are fairly narrow and specific and others that are more open ended. Addressing these questions will usually require you to do some additional background reading. Although I won't collect them, you should write down your answers to these questions and bring them to class. Please do this preparation individually in advance of our meetings in order to promote good discussions.

There will be four short in-class writing assignments on the reading material and class discussion. These will be in the nature of "pop quizzes" and will not be announced prior to the day they are assigned.

You will be given four homework exercises to do outside of class that relate to the topics being discussed. The homework should be sent to my e-mail by midnight on the day it is due.

The Fungal Biology midterm and final will each consist of several essay questions (drawn from our class discussion questions) testing understanding of key concepts and ability to relate this information to applications in research and biotechnology. The final will not be cumulative and will cover material only since the midterm.

Grading:

Class participation: 20%

In-class writing: 10% (2.5% each)

Homework exercises: 20% (5% each)

Midterm exam: 25%

Final exam: 25%

Grading scale: A=90%+; B=80-89%; C=70-79%; E=<69%

Attendance:

Because this is a discussion class, your attendance is very important. Your participation grade will be lowered by one percentage point for each unexcused absence. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences:

- a. serious illness;
- b. illness or death of family member;
- c. University-related trips;
- d. major religious holidays;
- e. other circumstances you find to be "reasonable cause for nonattendance".

Students anticipating an excused absence for a major religious holiday or a university-related trip are responsible for notifying me in writing no later than the last day for adding a class. Information regarding dates of major religious holidays may be obtained through the University of Kentucky religious liaison.

There will be no make-up quizzes or exams. If quizzes or exams are missed due to excused or unexcused absences, the others will count for a higher percentage of the grade to make up the difference.

TOPICS TO BE COVERED
Introduction: What are Fungi and why are they important?
Systematics: Naming Conventions
Systematics-Molecular Phylogenetics
Systematics- Fungal Evolution
Systematics- Tree of Life Project
Systematics- Tree of Life Project
Life Cycles: Oomycota
Life Cycles-“Lower Fungi”
Life Cycles- “Higher Fungi”
Anatomy-Ultrastructure
Anatomy-Cell Wall
Growth: Polar Growth
Growth: Growth in Culture
Growth: Mycelial Individuality
Growth: Dimorphic Fungi
Growth: Adhesion, Invasive Growth
Development: Differentiation, Multicellular Structures
Development: Differentiation, Sporulation
Development: Spore germination

Development: Spore Dispersal
MIDTERM
Primary Metabolism
Primary Metabolism
Fermentation
Secondary Metabolism
Prevention of Fungal Growth
Sexual Development
Sexual Development
Fungal Genetics
Fungal Genetics
Population Genetics
Population Genetics
Fungal Ecology: Saprophytes
Fungal Ecology: Necrotrophic Plant Pathogens
Fungal Ecology: Biotrophic Plant Pathogens
Fungal Ecology: Mycorrhizal Fungi
Fungal Ecology: Endophytes of Plants
Fungal Ecology: Pathogens of Animals
Fungal Ecology: Animal mutualists
Industrial Mycology
Summary and Review
FINAL