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.

<table>
<thead>
<tr>
<th>Requested Future Effective Date: Fall, 2016</th>
<th>(term/year) Course Typically Offered: a/y even F</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEADING: For fall term effective date: October 1st; for spring or summer term effective date: February 1st. See instructions.</td>
<td></td>
</tr>
<tr>
<td>NOTE: Items received after deadlines may be put to the back of the line or forwarded to the following year. Please submit on time.</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PL</th>
<th>P</th>
<th>514</th>
<th>Phytobacteriology</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>(3 - 3)</td>
<td>514</td>
<td>Phytobacteriology</td>
</tr>
<tr>
<td>Credit hrs</td>
<td>lecture hrs</td>
<td>lab or studio hrs</td>
<td>per week</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

Scot Hulbert  Chair/date  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 514, Phytopathology

We are proposing a revision of our graduate level course PI_P 514. 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), Nematology (PI_P 513), General Mycology (PI_P 521) 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 therefore proposing to drop the labs and reduce the number of credits for Virology (PI_P 511), Nematology (PI_P 513), Phytopathology (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.*

With the resignation of our bacteriologist, Brenda Schroeder, we do not currently have a faculty member who is a bacterial disease specialist. With the proposed revision of the course (no laboratory, lecture only), we hope it will be easier to identify individuals who can cover the lecture portion of the class.

The course will be offered in the fall semester of even 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?*

We hope to identify a qualified postdoctoral associate who has had the course or a similar course, who works with bacterial pathogens and would enjoy teaching this course. We would expect to pay for the services, possibly by buying their time spent from their postdoctoral advisor.

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

We expect a temporary instructor for the course would cost $6,000 - $8,000 each semester. We would try to cover this cost with a combination of summer session revenue and teaching allocation. If this does not cover it, we would use ICR money to cover the balance.
PLANT PATHOLOGY 514       PHYTOBACTERIOLOGY       3 Credits

Vogel Plant Science Building Room 31  T TH 9:10-10:25  Fall Semester, 2016

INSTRUCTOR: TBD


COURSE OBJECTIVE: To provide you with an understanding of the biology, physiology, genetics, and biochemistry of bacterial plant pathogens and bacteria associated with plants.

COURSE WEBSITE: BLACKBOARD, accessed from MyWSU

<table>
<thead>
<tr>
<th>Student Learning Outcomes At the end of this course, students should be able to:</th>
<th>Course Topics/Dates The following topic(s)/dates(s) will address this outcome:</th>
<th>Evaluation of Outcome: This outcome will be evaluated primarily by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate scientific literacy in major concepts and processes relative to the major groups of plant pathogenic bacteria</td>
<td>Weeks 1-10</td>
<td>Exam 1 and 2</td>
</tr>
<tr>
<td>Locate and evaluate sources of scientific information on fungi and fungal-like organisms.</td>
<td>Weeks 10-15</td>
<td>Exam 3</td>
</tr>
<tr>
<td>Communicate and work effectively in groups in developing presentations</td>
<td>Weeks 10-15</td>
<td>Exam 3</td>
</tr>
</tbody>
</table>

LECTURE TOPICS
Lecture Objective:

Week 1
Introduction to plant bacteria
History of phytobacteriology

Week 2
Bacterial structure
Rhizobium, Bradyrhizobium, and other rhizobia

Week 3
Bacterial growth and nutrition
Bacterial classification I; species concept
Week 4
Bacterial classification II
Agrobacterium

Week 5
Erwinia, Brenneria, and Pantoea -- the amylovora and herbicola groups
Erwinia (Pectobacterium) -- the carotovora group

Week 6
Exam I
Agrobacterium genetics

Week 7
Pseudomonas (fluorescent)
Ralstonia, Burkholderia, and Acidovorax (Nonfluorescent pseudomonads)

Week 8
Xanthomonas
Arthrobacter, Clavibacter, Curtobacterium, Rathayibacter, and Rhodococcus

Week 9
Spiroplasmas, phytoplasmas, and xylem-limited bacteria
Symptoms Caused by Plant-Pathogenic Bacteria

Week 10
Bacteriocins/ bacteriophage
Exam II

Week 11
Hypersensitive reaction
Host-pathogen recognition I

Week 12
Host-pathogen recognition II
Other types of host resistance

Week 13
Enzymes in pathogenesis; pectolytic enzymes
Mechanisms of bacterial pathogenicity

Thanksgiving Vacation

Week 14
Bacterial phytotoxins I
Bacterial phytotoxins II

Week 15
Epidemiology and Control of Bacterial Plant Diseases/
Genetics of other plant pathogenic bacteria

Finals week
Final exam
Grading System

Three written exams of 100 points each

Total Points

Grade Assignment

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>94.0 – 100%</td>
<td>A</td>
</tr>
<tr>
<td>90.0 – 93.9</td>
<td>A-</td>
</tr>
<tr>
<td>87.0 – 89.9</td>
<td>B+</td>
</tr>
<tr>
<td>83.0 – 86.9</td>
<td>B</td>
</tr>
<tr>
<td>80.0 – 82.9</td>
<td>B-</td>
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<tr>
<td>77.0 – 79.9</td>
<td>C+</td>
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<tr>
<td>73.0 – 76.9</td>
<td>C</td>
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<tr>
<td>70.0 – 72.9</td>
<td>C-</td>
</tr>
<tr>
<td>60.0 – 69.9</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 59.9</td>
<td>F</td>
</tr>
</tbody>
</table>

Cell phone users:
Out of respect for myself and your colleagues please turn off your cell phones during class. Please do not make outgoing calls or accept calls during the lectures.

Policy on Attendance, Participation and Late Assignments
Attendance and active participation in discussions are required. Students will receive a 10-point penalty for each unexcused absence. Exams will only be given on the designated dates unless prior arrangements are made.

Academic Integrity Statement
Academic integrity is the cornerstone of the university. Any student who attempts to gain an unfair advantage over other students by cheating, will fail the assignment and be reported to the Office Student Standards and Accountability. Cheating is defined in the Standards for Student Conduct WAC 504-26-010 (3).

WSU Disability Statement
Students with Disabilities: Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center. For more information contact a Disability Specialist: 509-335-3417 http://accesscenter.wsu.edu, Access.Center@wsu.edu

WSU Safety and Emergency Notification:
Washington State University is committed to enhancing the safety of the students, faculty, staff, and visitors. It is highly recommended that you review the Campus Safety Plan
(http://safetyplan.wsu.edu/) and visit the Office of Emergency Management web site (http://oem.wsu.edu/) for a comprehensive listing of university policies, procedures, statistics, and information related to campus safety, emergency management, and the health and welfare of the campus community.