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 S

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]:

<table>
<thead>
<tr>
<th>Course subject/crosslist</th>
<th>Plant Nematology</th>
</tr>
</thead>
<tbody>
<tr>
<td>513</td>
<td>title</td>
</tr>
<tr>
<td>4</td>
<td>credit hrs</td>
</tr>
<tr>
<td></td>
<td>lecture hrs per week</td>
</tr>
<tr>
<td></td>
<td>lab or studio hrs per week</td>
</tr>
<tr>
<td></td>
<td>prerequisite</td>
</tr>
</tbody>
</table>

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: Cynthia Gleason

Scot Hulbert  Chair/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 513, Nematology

We are proposing a revision of our graduate level course PI_P 513. 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), Phytopathobiology (PI_P 514), General Mycology (PI_P 521) and the previous version of this course Nematology (PI_P 513). As part of a Plant Pathology graduate curriculum revision that was discussed at a statewide 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), Phytopathobiology (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 a new faculty member, Cynthia Gleason, who will be starting in March of 2016. It will be taught in the same cycle the course is currently being taught, in spring 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. We also hope that the no-lab, 3-credit format will attract a few more students from other departments who are interested in nematology.

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 new faculty member (Cynthia Gleason) whose position is supported on a permanent budget.
Instructor
Cynthia Gleason, office: 335 Johnson Hall, office hours by appointment.

Course Materials
Additional materials will be provided by the instructor.

Course Objectives
1. Provide an understanding of nematode biology and plant parasitism.
2. Provide knowledge about classical and modern techniques and resources to conduct research in nematology.
3. Provide experience in evaluating and presenting current scientific nematology literature.

General Format
Plant Nematology will be taught through two 75-minute lectures per week. Students will be expected to actively participate in discussions during class, write an essay and present it to the class.

Student Learning Objectives and Evaluation

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>The following will address this outcome:</th>
<th>This outcome will be evaluated primarily by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of this course, students should be able to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Have a general understanding of the morphology and taxonomy of nematodes</td>
<td>First five sessions</td>
<td>Midterm 1 and final</td>
</tr>
<tr>
<td>2. Be able to understand and interpret scientific literature pertaining to nematology</td>
<td>All sessions</td>
<td>Three exams, one essay paper and participation in paper discussions</td>
</tr>
<tr>
<td>3. Have an understanding of the mechanisms of nematode pathogenicity and plant defenses against nematode pathogens</td>
<td>All sessions</td>
<td>Midterm 2 and final</td>
</tr>
<tr>
<td>4. Be able to formulate hypotheses and develop</td>
<td>All sessions</td>
<td>Three exams, one essay paper and participation in</td>
</tr>
</tbody>
</table>
Policy on Participation, Late Assignments and Exams
Active participation in class discussions is expected. Assignments must be turned in during class on the due date. Credit will not be given for late assignments except by prior consent of the instructor. Make-up exams and quizzes will only be provided under special circumstances and by prior consent of the instructor.

Grading
Two midterm exams (100 points each) and one final exam (100 points) will be given during the semester according to the schedule below. The exams will cover material from lectures, discussions and reading assignments. The midterm exams are designed to test your in-depth understanding of nematology. The final exam is cumulative and will test your understanding of concepts and material not covered in the midterm exams. You will be expected to write an essay paper (75 points), in which you will summarize, discuss and critically evaluate an experimental area of nematode research. Essays will be graded on accuracy and depth of coverage of the topic as well as interpretation of the quality of the work and future research needed. You are also expected to present your topic in class (75 points). Your presentation will be graded on clarity as well as knowledge of the subject including your ability to answer questions. Presentations will be 15 minutes in length and will be presented at the end of class periods in the second half of the semester.

Point Summary:

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Points each</th>
<th>Total points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterms</td>
<td>2</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Final</td>
<td>1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Essay</td>
<td>1</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Class Presentation</td>
<td>1</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td></td>
<td>450</td>
</tr>
</tbody>
</table>

Grade Assignment
94.0 – 100%          A
90.0 – 93.9           A-
87.0 – 89.9           B+
83.0 – 86.9           B
80.0 – 82.9           B-
77.0 – 79.9           C+
73.0 – 76.9           C
70.0 – 72.9           C-
60.0 – 69.9           D
< 59.9               F

Course Outline
January 12 Introduction and overview
January 14  Morphology
January 19  Morphology
January 21  Classification and taxonomy
January 26  Classification and taxonomy
January 28  Root-knot nematodes
February 2  Root-knot nematodes
February 4  Cyst nematodes
February 9  Cyst nematodes
February 11  Migratory endoparasites
February 16  Migratory endoparasites
February 18  MIDTERM 1
February 23  Ectoparasites
February 25  Ectoparasites
March 1  Ectoparasites
March 3  Reproduction and development
March 8  Metabolism, survival strategies, hatching
March 10  Sensory perception, movement
March 15  No class - Spring Break
March 17  No class - Spring Break
March 22  Molecular plant-nematode interactions
March 24  Molecular plant-nematode interactions
March 29  Molecular plant-nematode interactions
March 31  Molecular plant-nematode interactions
April 5  Resistance genes
April 7  MIDTERM 2
April 12  Resistance and genetic engineering
April 14  Genomics
April 19  Genomics
April 21  Population dynamics, sampling
April 26  Biological and cultural management
April 28  Chemical management
XXX  Comprehensive exam

WSU Academic Honesty
Academic integrity will be strongly enforced in this course. Any student caught cheating on the exam will be given an F grade for the course and will be reported to the Office Student Standards and Accountability. Cheating is defined in the Standards for Student Conduct WAC 504-26-010 (3). It is strongly suggested that you read and understand these definitions.

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.