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Revised Syllabus attached 019

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Washington State University

MAJOR CURRICULAR CHANGE FORM -- COURSE

JUL 16 2013

(Submit original signed form and ten copies to the Registrar's Office, zip 1035.)

WSU Registrar

WSU Registrar

Future Effective Date: 01/01/2014  
(effective date cannot be retroactive)

New course  Temporary course  Drop service course  
 There is a course fee associated with this course (see instructions)

- Variable credit \_\_\_\_\_
- Increase credit (former credit \_\_\_\_\_)
- Number (former number \_\_\_\_\_)
- Crosslisting (between WSU departments)  
(Must have both departmental signatures)
- Conjoint listing (400/500)
- Request to meet Writing in the Major [M] requirement (Must have All-University Writing Committee Approval)
- Request to meet GER in \_\_\_\_\_ (Must have GenEd Committee Approval)  Fulfills GER lab (L) requirement
- Professional course (Pharmacy & Vet Med only)  Graduate credit (professional programs only)
- Other (please list request) \_\_\_\_\_

- Repeat credit (cumulative maximum \_\_\_\_\_ hours)
- Lecture-lab ratio (former ratio \_\_\_\_\_)
- Prefix (former prefix \_\_\_\_\_)
- Cooperative listing (UI prefix and number FS 532 \_\_\_\_\_)  
taught by: WSU  UI  jointly taught
- S, F grading

FS 532 ADVANCED FOOD MICROBIOLOGY  
course prefix course no. title

3	3			RECOMMEND BIOLOGY 107, MBIOS 305, OR FS 416
credit	lecture hrs per week	lab hrs per week	studio hrs per week	prerequisite

Description (20 words or less) DISCUSS CURRENT TOPICS IN FOODBORNE PATHOGEN INCLUDING NOVEL DETECTION METHOD, VIRULENCE AND PATHOGENESIS, AND THEIR INTERACTION WITH ENVIRONMENT AND HOST.

**Instructor:** MEIJUN ZHU Phone number: 335-4016 Email: meijun.zhu@wsu.edu  
**Contact:** Jodi Anderson Phone number: 335-4763 Email: jlanderson@wsu.edu  
**Campus Zip Code:** 6376

- Please attach rationale for your request, a current and complete syllabus, and explain how this impacts other units in Pullman and other branches (if applicable).
- Secure all required signatures and provide 10 copies to the Registrar's Office.

Denise M. Smart 7-9-13 Chair/date Kimberly K. Kuhl 2/14/13 Dean/date \_\_\_\_\_ General Education Com/date

\_\_\_\_\_  
Chair (if crosslisted/interdisciplinary)\* Dean (if crosslisted/interdisciplinary)\* Graduate Studies Com/date

\_\_\_\_\_  
All-University Writing Com/date Academic Affairs Com/date Senate/date

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

July 9, 2013

MAJOR CURRICULAR CHANGE FORM -- COURSE

RE: FS 532 – ADVANCED FOOD MICROBIOLOGY

The School of Food Science (SFS) requests the approval of a new course to be offered at WSU – temporary approval for Spring 2014 and permanent approval for Spring 2015:

1. The syllabus for the proposed course is attached. The FS faculty have reviewed and approved the course, syllabus, and the request to cooperatively list the class for UI students.
2. Justification for this proposed course, FS 532
  - aligns with strategic plan of SFS and CAHNRS to provide diverse advanced classes in the area of microbiology/food safety;
  - new hired faculty can offer advanced training in food microbiology which is her area of interest and is currently not covered in our FS curriculum or offered on the WSU campus;
  - gives another option for FS graduate students to diversify and add to their MS or Ph.D. in FS program of study.
3. A management plan, including name of the program manager, must be provided for degree programs.

The new course will be offered to students from both campuses (WSU and UI) during the spring semester (once a year) as a cooperative class. It has been developed by Dr. Meijun Zhu, who is Asst Professor at WSU and will manage this 3-credit course.
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 new course will be offered to students from both campuses (WSU and UI) during the spring semester (once a year) as a cooperative class. It has been developed by Dr. Meijun Zhu, who is Asst Professor at WSU and will manage this 3-credit course.
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.

Target audience: students in the graduate Food Science program, Biosystems Engineering, Environmental Science, Molecular and Biosciences Dept, Masters in Agriculture degree, and corresponding Departments at Univ of Idaho.

Expected numbers: 8-12 students per year.

Methods of advertising: Sent electronically to faculty and graduate students in the departments above, along with personal phone calls to selected faculty, and advertising on our website, printed fliers and post in Buildings.

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?

Yes, it will require redeployment of existing resources, but expected and planned for due to the hiring of Dr. Zhu fall 2012. This is part of her teaching expectation due to her expertise in food microbiology. It will impact our program positively since there is a great need for an advanced microbiology class. Currently graduate students who need food microbiology can only take FS 416 (undergraduate class at UI). Due to limited space at UI and due to increased enrollment in our undergraduate numbers, there is no space for graduate students in this course. We would rather graduate students take a 500-class, so it will count on their program of study. With the creation of this new class, we can accommodate the graduate students.

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

N/A.

Received 10/10/13

**Advanced Food Microbiology (3 cr)**  
**FS532 (WSU & UI)**  
**Spring Semester, 2014**

**INSTRUCTOR:**

Dr. Meijun Zhu, Rm232, Food Science and Human Nutrition Building;

Phone: 509-335-4016 (office); 509-715-1184 (home); E-mail: [meijun.zhu@wsu.edu](mailto:meijun.zhu@wsu.edu)

**DAY AND TIME:** T, Th, 1:25 - 2:40 pm

**LOCATION:** FSHN 103

**OFFICE HOURS:**

- W 9:00 - 10:30 am and by appointment
- Location: FSHN 232

**COURSE PREREQUISITES:**

This is a graduate level course which builds on undergraduate coursework in Biology, Microbiology and Biochemistry. At least one course (3 credits or more) related to microbiology is recommended and could include courses such as MBioS 305 General Microbiology and/or FS 416 Food Microbiology.

**CLASS FORMAT:**

In-class lectures, paper discussion, and student projects

**RECOMMENDED TEXTBOOKS:**

- ***Bacterial Pathogenesis: A Molecular Approach***  
Wilson, B.A., Salyers, A. A., Whitt, D. D. and Winkler, M.E.  
2010, Third Edition, American Society for Microbiology Press.
- ***Food-Borne Microbes: Shaping the Host Ecosystem***  
Jaykus, L.A., Wang, H.H., Schlesinger, L.S.  
2009, Fourth Edition, American Society for Microbiology Press.

**READING MATERIALS:**

- PowerPoint lecture notes
- Research papers handed out in the class, which will cover water mobility and foodborne pathogen growth, novel food preservation methods, virulence factors and pathogenesis of foodborne pathogens, prion disease, antibiotic resistance and food safety, and new emerging foodborne detection methods.

**COURSE GOALS:**

1. To build a comprehensive understanding about foodborne pathogens regarding their prevalence and virulence, interactions with the environment and the host.

2. To learn molecular biology and other cutting-edge techniques to detect and identify microorganisms associated with foods.
3. To explore bacterial signaling and their possible roles in biofilm formation and pathogenesis of foodborne pathogens.
4. To critically read and communicate on current literatures of foodborne pathogens.

### STUDENT LEARNING OUTCOMES:

1. Be able to apply knowledge about novel food preservation methods, virulence and pathogenesis of foodborne pathogens and their interaction with environment and the host, to the food industry and human health.
2. Develop the basic skills to apply the principles behind advanced techniques to solve food industry problems as well as research questions.
3. Identify current literatures on foodborne pathogens.
4. Locate, critically evaluate, and apply scholarly literature and other scientific information to design experiments and solve problems in food microbiology and foodborne pathogens and related disciplines.

### COURSE REQUIREMENTS AND EXPECTATIONS:

Attendance is essential to your success in this class. Therefore, students are expected to attend all classes. Excused absences include university-sanctioned events, illness and family emergencies. Students should become engaged in interactive learning processes, participate in classroom discussions, and ask questions when a particular topic or point is unclear. Appropriate professional behavior demonstrating respect for fellow students and instructor is expected.

### GRADING:

1. Course assignments and points:

Mid-term exam	100
Final exam	100
Paper discussion	60
Student presentation	60
Final project/review paper	100
Attendance/participation	40
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TOTAL POINTS	460

2. Grade scale

<u>Grade</u>	<u>% of Total Points</u>
A	≥92.0
A-	90.0 - 91.9
B+	87.0 - 89.9
B	82.0 - 86.9
B-	80.0 - 81.9
C+	77.0 - 79.9

C	72.0 - 76.9
C-	70.0 - 71.9
D+	67.0 - 69.9
D	60.0 - 66.9
F	<60

Student Learning Outcomes for this course:	Course Topics/Dates	Evaluation of Outcome:
At the end of this course, students should be able to:	The following topic(s)/date(s) will address this outcome:	This outcome will be evaluated primarily by:
Write a statement for each of the Learning Outcomes you identified: (Start your statement with a verb)	List the course topic and date you plan to address this outcome	List the ways you will evaluate progress made towards this outcome (writing, group activities, exams, essays, report, etc.)
Be able to apply knowledge about novel food preservation methods, virulence and pathogenesis of foodborne pathogens and their interaction with the environment and the host, to the food industry and human health.	Address this throughout the entire semester in all topics.	Paper presenting In class discussion Midterm exam Final exam
Develop the basic skills to apply the principles behind advanced techniques to solve food industry problems as well as research questions.	Address this throughout the entire semester in all topics.	Paper discussion Final project/review paper Student presentation Midterm exam Final exam
Identify current literature on foodborne pathogens.	1/23, 2/4, 2/11, 3/13, 4/3, 4/22, 4/29, 5/1  Guest Lectures on 1/28, 2/6, 2/13, 2/18 to discuss current research progress on select food-borne pathogens.	Paper discussion Review paper Student presentation
Locate, critically evaluate, and apply scholarly literature and other scientific information to design experiments and solve problems in food microbiology and foodborne pathogens and related disciplines.	Address this throughout the entire semester in all topics through in class paper discussions, and final project review paper.	Final project/review paper Student presentation

3. Exams will cover material discussed in classes and lecture handouts.

- A university approved absence must be presented to the instructor prior to missing any written exam. Possibilities for a make-up exam will be discussed as problems arise.
- Dictionaries, cell phones, computers, ipods, or ANY other electronic equipment cannot be used, played, or consulted during examinations

4. Students will be required to write a review paper on selected topics with minimum 4-6 single-spaced, 12 font, 1-inch margin pages. References **will not** be included in paper counts. With a minimum reference of 20 and maximum of 40 references.
  - The topic can be selected based on students' research area and/or interests. It could focus on a particular pathogen, selected virulence factors, bacterial signaling involved in pathogenesis, or novel detection methods.
  - Graduate students are also welcome to link the review paper to their own research projects.
  - Once you select your paper topic you want to write, submit or discuss the topic with the instructor. The due date for the topic: March 13, 2014
  - Due day for the draft paper: April 3, 2014
  - Due date for the review paper: April 24, 2014,
  - Each student's paper will be graded for both technical and written quality.
  - A penalty of 5 points per working day will be assessed to papers submitted after the due date (no later than 5:00 pm PST that day).
5. On selected dates, students and the instructor will discuss the assigned research papers. The individual student will be assigned to lead the paper discussion. Understanding information of discussed papers will be required for examination purposes.
6. Paper discussion and presentations will be evaluated by peer and the instructor using weighted criteria described in the attached sheet. After each presentation, anonymous comments and scores from peers will be summarized and a final score assigned by the instructor.
7. A total of 20 points will be awarded for those students who frequently participate in classroom paper discussion (>75% of lectures) with less points assigned to those students who participate less frequently. In addition, students may earn up to 20 points for attendance, and each unexcused absence will result in a 2-point deduction from your overall score. An excused absence requires prior approval by the instructor.

#### **STUDENTS WITH DISABILITIES:**

##### **WSU**

Reasonable accommodations are available for students with a documented temporary or permanent disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Access Center (Washington Building 217) to schedule an appointment with an Access Advisor. All accommodations **MUST** be approved through the Access Center.

##### **UI**

Reasonable accommodations are available for students who have documented temporary or permanent disabilities. Please notify your instructor(s) during the first week of class regarding accommodation(s) needed for the course. All accommodations must be approved through Disability Support Services located in the Idaho Commons Building, Room 306; phone 885-6307; email at [dss@uidaho.edu](mailto:dss@uidaho.edu); website at [www.access.uidaho.edu](http://www.access.uidaho.edu) or [www.webs.uidaho.edu/taap](http://www.webs.uidaho.edu/taap).



## CAMPUS SAFETY:

Washington State University is committed to maintaining a safe environment for its faculty, staff, and students. Safety is the responsibility of every member of the campus community and individuals should know the appropriate actions to take when an emergency arises. In support of our commitment to the safety of the campus community, the University has developed a Campus Safety Plan, <http://safetyplan.wsu.edu>. It is highly recommended that you visit this web site as well as the University emergency management web site at <http://oem.wsu.edu/emergencies> to become familiar with the information provided.

## ACADEMIC HONESTY:

Students who violate WSU's Standards of Conduct for Students will receive an F as a final grade in this course, will not have the option to withdraw from the course and will be reported to the Office of 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 standards: <http://conduct.wsu.edu/default.asp?PageID=338>.

## PLAGIARISM:

Plagiarism is defined by Webster's Dictionary as, "*to steal and pass off the ideas or words of another as one's own.*" There are two general forms of plagiarism:

- (a) Unintentional: the use of other writers' words, phrases, sentences, paragraphs as though they were your own *without understanding* the need to cite the original source. Unintentional plagiarism normally occurs when the individual does not understand the conventions of scientific writing and the need to cite sources of information.
- (b) Intentional: the use of another writers' work and claiming it as your own. Intentional plagiarism includes *knowingly copying* or incorporating sections of books, articles, or other sources into your work without citation.

To **avoid** plagiarism, you must acknowledge the source of information. In scientific writing, this can be performed in the text of your work through the use of surnames of authors and the year of publication (e.g., Smith et al., 2003) or by using numbers enclosed by parentheses which correspond to specific citations in the reference section. In addition to employing citations in the text, plagiarism can be avoided by applying special techniques when writing about information obtained from a source:

- (a) Paraphrase: rewording information in which you accurately present the main ideas from the source but do so using your own organization, words, and sentence structures.
- (b) Summary: a concise statement of the main idea from a section within a source.
- (c) Direct quotation: use of quotes surrounding the passage written by another author.

In general, paraphrasing (a) and the use of summary statements (b) are very common techniques used in scientific writing. Use of quotations (c) in scientific writing is rare and should be avoided.

Plagiarism is dishonest and is **not** tolerated. If caught using all or portions of a current or former classmate's writing or other sources of information (e.g., purchase a paper), a grade of "zero" will be given for the exercise. Additional penalties for plagiarism are possible as outlined in the *Washington State University Student Handbook*.