

## Course Syllabus

(subject to change)

### FOOD AND ENVIRONMENTAL VIROLOGY

*FOS4936/228B & FOS6936/3B69*

**Fall semester 2018**

|                              |  |
|------------------------------|--|
| <b>Instructor</b>            | Naim Montazeri, Ph.D.<br>Assistant Professor   |
| <b>Department</b>            | Food Science and Human Nutrition Department (FSHN)<br>University of Florida  |
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| <b>Office location</b>       | 572 Newell Drive, FSHN Bldg, Room 341A   |
| <b>Office hours</b>          | To be scheduled via email  |
| <b>Course communications</b> | Via email  |
| <b>Prerequisite (either)</b> | MCB2000/L, MCB3020/L, FOS4222/L, MCB4503/5505, or<br>permission of the instructor  |
| <b>Class location</b>        | Roger Hall, Room 106   |
| <b>Class hours</b>           | Tuesday and Thursday, 8:30-9:20 a.m. (2 <sup>nd</sup> period)  |
| <b>Attendance</b>            | Required   |
| <b>Credits</b>               | 2  |
| <b>Required readings</b>     | Refer to the UF e-learning (Canvas): <a href="https://elearning.ufl.edu/">https://elearning.ufl.edu/</a><br>(no textbook required) |

#### Course Description

This course is designed for graduate and upper-division undergraduate students and offers an overview of infectious viruses transmitted to humans through contaminated food, water, and contact surfaces. Food virology is an emerging topic in the field of microbial food safety, and this course helps students develop a competency framework within their discipline.

#### Course Goals

By the end of this course, the students will comprehend basic and applied principles of food virology; the importance of viruses in our ecosystem and their circulation between human and environment; major viral food-borne and water-borne diseases in humans; and recent advances in thermal and non-thermal inactivation of viruses in food and environment.

#### Course Structure

This is an in-class course and will be delivered through lectures and videos. Graduate students will take part in the peer-review discussions on pre-selected published articles and will deliver a 20-min oral presentation on emerging topics in food virology assigned by the instructor. Students will use

PowerPoint slide sets for in-class presentations. PowerPoint slide sets must be submitted by 11:59 p.m. on the 3<sup>rd</sup> calendar day before their due dates. Students are expected to communicate with the instructor in advance to ensure the format and accuracy of the content of their presentation. The slide sets will be uploaded to Canvas and used as course material for the exams.

All graduate and undergraduate students will complete and turn in three assignments (each 2-3 page long) on topics approved by the instructor. Participation in discussions along with the assignments will be used to review core materials and evaluate students' knowledge. Mid-term and final exams (~50 min) will be closed-book.

### Attendance and Make-Up Work

Requirements for class attendance and make-up exams, assignments, and other work follows university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

### Examination and Grading

Grading follows UF policies for assigning grade points (<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>). Grades are not curved and are not negotiable. The grading scale below will be used to calculate passing grades:

|                    | <b>Graduates<br/>(FOS6936)</b> | <b>Undergraduates<br/>(FOS4936)</b> |
|--------------------|--------------------------------|-------------------------------------|
| Mid-term exams (2) | 400                            | 400                                 |
| Assignments (3)    | 100                            | 200                                 |
| Presentation       | 100                            | -                                   |
| Final exam         | 400                            | 400                                 |
| <b>TOTAL</b>       | <b>1000</b>                    | <b>1000</b>                         |

| <b>Total point</b> | <b>Grade point</b> | <b>Passing grade</b> |
|--------------------|--------------------|----------------------|
| 1000               | 4.00               | A                    |
| 917.5              | 3.67               | A-                   |
| 832.5              | 3.33               | B+                   |
| 750.0              | 3.00               | B                    |
| 667.5              | 2.67               | B-                   |
| 582.5              | 2.33               | C+                   |
| 500.0              | 2.00               | C                    |
| 417.5              | 1.67               | C-                   |
| 332.5              | 1.33               | D+                   |
| 250.0              | 1.00               | D                    |
| 167.5              | 0.67               | D-                   |
| 0.0                | 0.00               | S                    |

## How to Access E-Learning

- Access requires a Gatorlink account. If you need to establish a Gatorlink account, go to <http://www.gatorlink.ufl.edu/>. Once you have created a Gatorlink account, access e-Learning homepage at <http://elearning.ufl.edu/>. Log in to e-Learning using your Gatorlink ID. The course should be listed under “Dashboard”
- FAQs: <http://elearning.ufl.edu/e-learning-basics/uf-e-learning-faqs/>
- Tutorials: <http://elearning.ufl.edu/e-learning-basics/uf-e-learning-tutorials/>

## Recommended Textbooks

- Koopmans M. et al. 2008. *Food-Borne Viruses - Progress and Challenges*. American Society for Microbiology Press, Washington, DC, USA
- Cook N. 2013. *Viruses in Food and Water - Risks, Surveillance and Control*. Woodhead Publishing, England
- Knipe D. M. & Howley P. M. 2007. *Fields Virology*. 5<sup>th</sup> Edition. Lippincott Williams & Wilkins. Philadelphia, PA, USA
- Carter J. & Saunders V. 2013. *Virology: Principles & Applications*. 2<sup>nd</sup> Edition. John Wiley & Sons Ltd. England

## Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at: <https://evaluations.ufl.edu/results>.

## Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, peer reviews, activity log, etc.). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Conduct & Honor Code, please see: <https://sccr.dso.ufl.edu/students/student-conduct-code/>.

## Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

## Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. Contact information: 0001 Reid Hall, 392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/).

## Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

| Service                                   | Location                            | Phone        | Web site  | Services provided  |
|---|-------------------------------------|--------------|---|--|
| University Counseling and Wellness Center | 3190 Radio Road                     | 352-392-1575 | <a href="https://counseling.ufl.edu/">https://counseling.ufl.edu/</a> | <ul style="list-style-type: none"><li>▪ Counseling Services - individual and group</li><li>▪ Outreach and Consultation</li><li>▪ Self-Help Library</li><li>▪ Wellness Coaching</li><li>▪ Drug &amp; Alcohol Support</li><li>▪ Crisis &amp; Emergencies</li></ul> |
| Career Resource Center                    | First Floor<br>J. Wayne Reitz Union | 352-392-1601 | <a href="https://www.crc.ufl.edu/">https://www.crc.ufl.edu/</a>       | Career development assistance and counseling   |
| U Matter We Care                          |                                     | 352-294-2273 | <a href="http://www.umatter.ufl.edu/">http://www.umatter.ufl.edu/</a> | Care-related programs and resources for students and employees   |

## Other Information

Lecture material and information are the property of the University of Florida and the course instructor and may not be used for any commercial purpose. Students found in violation may be subject to disciplinary action under the University's Student Conduct Code. Only students formally registered for the course are permitted to attend lectures and take quizzes/tests.

## Food and Environmental Virology

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(Tentative schedule)

| Wk |     | Date   | Topic/activity                            |                      |
|----|-----|--------|---|----------------------|
| 1  | Thu | Aug 23 | Pre-assessment and introduction           |                      |
|    | Tue | Aug 28 | Basic virology - I                        |                      |
| 2  | Thu | Aug 30 | Basic virology - II                       |                      |
|    | Tue | Sep 4  | Food-borne viruses and global health      |                      |
| 3  | Thu | Sep 6  | Hepatitis A & E                           |                      |
|    | Tue | Sep 11 | Enteroviruses                             |                      |
| 4  | Thu | Sep 13 | Human norovirus - I                       |                      |
|    | Tue | Sep 18 | Human norovirus - II (cell culture)       | Guest lecture        |
| 5  | Thu | Sep 20 | Methods to detect viruses                 |                      |
|    | Tue | Sep 25 | Review for exam 1                         |                      |
| 6  | Thu | Sep 27 | <b>Exam 1</b>                             |                      |
|    | Tue | Oct 2  | Isolation and concentration techniques    |                      |
| 7  | Thu | Oct 4  | Utilization of surrogates                 | Assignment 1 due     |
|    | Tue | Oct 9  | <b>Article peer-review</b>                |                      |
| 8  | Thu | Oct 11 | Bacteriophages                            |                      |
|    | Tue | Oct 16 | Virus-bacteria interactions               | Guest lecture        |
| 9  | Thu | Oct 18 | Viral presence in sewage (wastewater)     |                      |
|    | Tue | Oct 23 | Persistence of viruses in the environment | Assignment 2 due     |
| 10 | Thu | Oct 25 | Viral contamination by food handlers      | Student presentation |
|    | Tue | Oct 30 | Food-borne viruses in meat and seafood    |                      |
| 11 | Thu | Nov 1  | Review for exam 2                         |                      |
|    | Tue | Nov 6  | <b>Exam 2</b>                             |                      |
| 12 | Thu | Nov 8  | <b>Article peer-review</b>                |                      |
|    | Tue | Nov 13 | Food-borne viruses in produce             |                      |
| 13 | Thu | Nov 15 | Virus inactivation - post-processing      | Student presentation |
|    | Tue | Nov 20 | Virus inactivation - surface disinfection | Assignment 3 due     |
| 14 | Thu | Nov 22 | <b>Holiday</b>                            |                      |
|    | Tue | Nov 27 | <b>Article peer-review</b>                |                      |
| 15 | Thu | Nov 29 | Animal models to study viruses            | Student presentation |
|    | Tue | Dec 4  | Review of final exam                      |                      |
| 16 | Tue | Dec 11 | <b>Final exam / post evaluation</b>       |                      |