



## **AGSC 5540: Food Policies and Regulations**

**FALL 2021 Semester**

### **COVID-19 Updates:**

As we are experiencing a national and global respiratory pandemic/endemic, although this course is going to be conducted in a traditional in-person format, we request careful adherence to CDC guidelines to ensure the safety of all students in the class and the teaching team. In case a student elects to participate in the classes remotely, a Zoom link is provided. Additionally, course information will be communicated via email, using the email address(es) that students had provided to TSU, and will be posted on eLearn. In case students have difficulty accessing eLearn, information will be additionally posted on the Public Health Microbiology Website (<https://publichealthmicrobiology.education/>) for ensuring the accessibility of course content by all students. Paper-based copies of the course material will be available for the students in the classroom. Students are expected to provide an active email address to the course instructor and are required to check and reply to course communications via email. Attendance and active participation are important aspects of this course. For those who elect to participate electronically, students are required to be present and visible during the online sessions. Students are welcome to visit or contact the instructor via phone during the office hours or if their question is time-sensitive and cannot wait for the office hour, they are welcome to contact the instructor any other time during the business hours/weekdays via phone or email.

### **Course Description:**

This course is to familiarize students with the critical aspects of food safety and current regulations of food products in the United States including microbial food safety of processed food and fresh produce, food additive regulation, food labeling, dietary supplements, nutrients labeling of products, the protection of the food supply from natural and anthropogenic pathogens, food safety modernization act regulation, as well as overviews of Hazard Analysis and Critical Control Point.

### **Rationale:**

With the tremendous ability of a plethora of microorganisms to move towards diversity and “fitness” through vertical and horizontal gene transfer mechanisms, assuring public health safety against natural and anthropogenic foodborne pathogens is a daunting task and a moving target. Enhanced global travel and commerce, increased proportions of infectious diseases in “at-risk” populations, and consumers’ demand for non-traditional commodities such as minimally processed and ready-to-eat products provide breeding grounds for emerging, novel, and reemerging infectious diseases. Foodborne diseases cost an estimated 420,000 lives every year around the globe and are collectively responsible for the loss of over 33 million years of healthy living annually. Every year, 1 out of 6 Americans experiences illnesses from these pathogens, leading to about 128,000 hospitalizations and over 3,000 deaths.

### **Students Evaluation and Assessment:**

The students will be provided an open-book, open-resources class assignment/quiz during every session to ensure the complete assimilation of course content and objectives. This system had



been in place since Fall 2018 and the former cohort of students had provided a very positive rating of the course. In-class activities are evidence of class active participation and are designed to ensure students assimilate the lecture content. They are not for grading purposes and will be collected by the instructor by the end of each session. For online classes during the COVID-19 respiratory pandemic/endemic, the students are expected to return the class activities by the end of each session to the instructor by email. Please include “[AGSC 5540] Class Activities” in the title of the email and send the email to [afouladk@tnstate.edu](mailto:afouladk@tnstate.edu)

**Class Schedule:** Lawson Hall 107B on Thursdays 4:40 to 8:00 pm

Students alternatively could attend the class virtually via:

**Zoom link:** <https://tennessee.zoom.us/j/92939837434> (passcode: PHMLab)

**Office Hours:** CARP Building (Lawson Hall), Suite 111.A on Wednesdays 2:00 to 4:00 pm

Students alternatively could attend the office hours virtually via:

**Zoom link:** <https://tennessee.zoom.us/j/92403525554> (passcode: PHMLab)

**Final Exam:** Lawson Hall 107B on Wednesday, 11/24/2021 5:00 to 7:00 pm

Students alternatively could attend the final exam virtually via:

**Zoom link:** <https://tennessee.zoom.us/j/93127460458> (passcode: PHMLab)

**Additional Friday Sessions (Optional):** Friday instructional hour sessions are designed for questions about exams, FSMA certification, project, and course contents from 2:00 to 4:00 pm.

**Zoom link:** TBD, based on collective availability and agreement.

**Course Instructor/Director:**

Dr. Aliyar Cyrus Fouladkhah, PhD, MS, MPH, MACE, CFS, CPH

Associate Professor | Faculty Director of Public Health Microbiology Laboratory

Suite 111A. Lawson Hall Research Complex, Telephone: (970) 690-7392 | [afouladk@tnstate.edu](mailto:afouladk@tnstate.edu)

**Teaching Fellows:**

Dr. Mino Bagheri, PhD, MSPH. Visiting Scholar, Public Health Microbiology Laboratory.

Ms. Sabrina Wadood, MS Candidate, Public Health Microbiology Laboratory.



### Suggested Textbooks:

Fouladkhah, A.; Bisha, B. *Advances in Prevention of Foodborne Pathogens of Public Health Concern during Manufacturing*. 1st ed. 2019. MDPI, Basel, Switzerland.

Wilde, P. 2018. *Food Policy in the United States: An Introduction*. Routledge.

Pomeranz, J.L., 2015. *Food Law for Public Health*. Oxford University Press.

Heinzerling, L, 2017. *Food Law: Cases and Materials*. Georgetown Law Center.

Fortin, N.D., 2016. *Food Regulation: Law, Science, Policy, and Practice*. John Wiley & Sons.

IAFP. 2011. *Procedures to Investigate Foodborne Illness*. Sixth Edition, Springer.

### Learning Outcomes:

After successful completion of this course, the student would be able to:

- Identify and assimilate the threat of foodborne pathogens of public health concern.
- Understand the laws and regulations applying to foods and food products from production and distribution to retail sales.
- Describe the current issues in food regulation, including food safety regulation and food security.
- Gain knowledge on Food Safety Modernization Act (FSMA) and Hazard Analysis Critical Control Point (HACCP).
- Recognize the process of additive approval in the US as well as nutritional labeling and health claims.
- Identify the critical role laws and regulation plays in protecting public health against foodborne disease episodes and the importance of climate change in the food safety landscape.

### Evaluation:

Term Paper	30 %
Attendance and Class Activities	25 %
Mid-term Exams	25 %
Class Assignments	10 %
Final Exam (optional)	10 %
Total	100 %

### Extra Points:

Accumulated extra credit points will be divided by 100 and will be added to your final grade. For example, if you accumulate 250 extra points during the semester and your final grade is 88, 2.5 points will be added to your final grade, and it will be reported as 90.5 *i.e.* an A. The top-scoring



student in the class will receive a certificate from the course instructor, indicating that he/she has completed the course with honors as the top-scoring student in the class.

The following grading scale will be used for assigning term letter grades:

Grading Scale:

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = below 60%

### Course Policies:

Students are prohibited to share course content, recording, and examination to any individual or make the content publicly available via online platforms. The instructor and the public health microbiology laboratory are the copyright owner of the content of the course.

### Term Paper:

Students of the class are expected to complete a review paper on a topic revolving around the microbial food safety and food laws. The paper topics would need to be discussed individually with the course instructor to ensure compatibility to the course content and student's education. Teaching fellows of course will also assist students in the construction of the manuscript for those interested to publish their work. Students will have three options for completing their course paper. These options are:

- (1) Standard Course Paper. This would need to be original writing of the student by using at least 10 peer-reviewed articles.
- (2) Food for Public Health Series Factsheet. This would need to be original writing of the student by using at least 10 peer-reviewed articles, further developed, and edited to be suitable for publication as a factsheet. You can access the factsheet of your peers from last year at: <https://publichealthmicrobiology.education/food-for-public-health-1>
- (3) Full-Length Review Paper. For those who are willing to publish their work and receive up to 50 extra credit points, their review paper should be a critical and evidence-based evaluation of at least 20-50 peer-reviewed articles. Depending on the extent and quality of the review article, students in this category are eligible to receive up to \$1200 *Publication Scholarship* of Public Health Microbiology program to be used towards the open access fees of the publication in the below special issue. You can access a review paper completed by one of your peers at: <https://www.mdpi.com/2076-2607/7/3/77>

The term papers in the third category are recommended to be constructed based on the guidelines of IJERPH available at:

[https://www.mdpi.com/journal/ijerph/special\\_issues/Food\\_Waterborne\\_Microbiology](https://www.mdpi.com/journal/ijerph/special_issues/Food_Waterborne_Microbiology)

These three options will be discussed in further detail in the classroom. Students who elect to be



involved in the second or third option will be the first author of these efforts and will receive additional support from the instructor and/or teaching fellows as the co-authors of the studies. Publishing the classwork is not required for class completion and those students with outstanding term papers will be selected by the course instructor for this opportunity and the extra credit points. Additionally, students could request to present a summary of their final paper (5-10 minutes talk) to gain public speaking experience and up to 50 additional extra credits. They would need to discuss this with the course instructor. Students choosing the second and third options will receive 50 extra credit points.

### **Attendance:**

Attendance in this class is required and is recorded regularly. Absences are excused only by the presentation of a valid reason. Excessive unexcused absences will decrease one's final grade at the discretion of the instructor.

### **Exam Policies:**

Exam dates will be announced by the instructor in lecture at least one week prior to the examination. You must let the instructor know as soon as possible if you know you will miss an exam. There will be NO make-up exams. If you miss an exam and you provide a valid excuse, your score on the final exam will be used in place of the exam you missed. This will be allowed for only one missed quiz or exam.

### **Disability Policy:**

It is the policy of TSU to accommodate students with disabilities, pursuant to federal and state law, and the University's commitment to equal educational opportunities. Any student with a disability who needs accommodations, for example in seating placement, or arrangement for examinations, should inform the instructor at the beginning of the course. Students with disabilities are encouraged to contact the Office of Disabled Student Services, which is located in Kean Hall, Room 117, telephone 963-7400 or 963-7872.

### **Academic and Classroom Misconduct:**

Academic and classroom misconduct will not be tolerated. Students are expected to always conduct themselves appropriately (cell phone usage is not allowed in the classroom). In keeping with the purpose of the university, it is expected that all students always maintain a proper attitude and behavior during lectures. Respect for colleagues must also be maintained (arrive on time, no excessive talking during lecture, etc.) so that each class member will have an equal opportunity to receive the best education for that student.

### **Academic Dishonesty, Plagiarism, and Cheating:**

Put simply, academic dishonesty, plagiarism, and cheating will NOT be tolerated. Although you are encouraged to collaborate on problems sets, the work you turn in must be your own, and not simply a re-copy of someone else's work. If you are caught plagiarizing or cheating, the first offense will result in a score of zero for the assignment or exam. A second offense will result in a zero (F) for the course, and a letter stating the reason for the failure will be added to your student record.



Alterations to Syllabus:

During the course, it may become necessary for the instructor to modify this syllabus to meet the changing needs of the students or because of unforeseen circumstances. All such changes will be announced in advance in the classroom to the students. The content of this syllabus, thus, is tentative and is subject to change based on the instructor's discretion during the semester.

**Class Schedule, Fall 2021**

Date	Topic
<b>Week 1</b>  <u>8/19/2021</u>	<p align="center"><b>The Public Health Necessity for Food Regulations I/II</b></p> <p>Epidemiology of Transboundary Diseases of Importance in the United States</p> <p align="center"><i>Description of Course Assignments and Syllabus</i></p> <p align="center"><i>Description of Term Paper Assignment</i></p>
<b>Week 2</b>  <u>8/26/2021</u>	<p align="center"><b>The Public Health Necessity for Food Regulations II/II</b></p> <p align="center">Foodborne Diseases of Public Health Importance</p> <p align="center"><i>CDC NORS Data Assignment</i></p> <p align="center"><i>Discussion of Topics of Term Paper</i></p>
<b>Week 3</b>  <u>9/2/2021</u>	<p align="center"><b>Dietary Guidelines for American I/II</b></p> <p align="center">Evidence-based Policies for Creating a Healthy Eating Pattern</p> <p align="center"><i>Finalizing the Topics for Term Paper</i></p> <p align="center"><u><i>CDC NORS Data Assignment: Due before the start of the class</i></u></p>
<b>Week 4</b>  <u>9/9/2021</u>	<p align="center"><b>Dietary Guidelines for American II/II</b></p> <p align="center">Evidence-based Policies for Creating a Healthy Eating Pattern</p> <p align="center"><u><i>Topics, Selection of Paper's Options, List of Reference/Literature (only a list), Due for the Term Paper</i></u></p>



<p><b>Week 5</b> <u>9/16/2021</u></p>	<p><b>Guidelines for Foodborne Disease Outbreak Response (CIFOE)</b> Investigation of Foodborne Diseases: Policies and Guideline</p>
<p><b>Week 6</b> <u>9/23/2021</u></p>	<p><b>No Class Fall Break</b> <i>(Attendance Optional) 5th Annual State-Wide Competition of Public Health Microbiology Laboratory, Nashville Tennessee</i> <i>Optional Students Presentations on Term Paper (50 extra credit points)</i></p>
<p><b>Week 7</b> <u>9/30/2021</u></p>	<p><b>Hazard Analysis and Critical Control Point (HACCP)</b> Principles, and Application in Meat and Juice industries <i>Optional Assignment: Development of a HACCP plan (50 extra credit points)</i> <i>Review for Mid-term Exam</i></p>
<p><b>Week 8</b> <u>10/7/2021</u></p>	<p><b>Mid-term Examination</b> <i>Discussion on Review Paper Progress</i> <b>Food Safety Modernization Act Certification I/IV</b> <i>HACCP Plan Assignment Due at the Beginning of the Class</i> <i>Discussion on Review Paper Progress</i></p>
<p><b>Week 9</b> <u>10/14/2021</u></p>	<p><b>Food Safety Modernization Act Certification II/IV</b> <i>Discussion on Review Paper Progress</i></p>
<p><b>Week 10</b> <u>10/21/2021</u></p>	<p><b>Food Safety Modernization Act Certification III/IV</b> <i>First Draft of Term Paper Due Before the Start of the Class</i></p>



<b>Week 11</b> <u>10/28/2021</u>	<b>Food Safety Modernization Act Certification IV/IV</b>
<b>Week 12</b> <u>11/4/2021</u>	<b>Food and Drug Administration Food Code</b> <b>Produce Safety Rule of Food Safety Modernization Act</b>
<b>Week 13</b> <u>11/11/2021</u>	<b>Nutrition Fact Labeling</b> <b>FDA's Generally Recognized as Safe (GRAS) List</b> Regulatory Requirements and Recent Changes for Nutrition Information Panel for Food Products and GRAS List- Food Additives and Health Claims <b>Food Fortification with Micronutrients</b>
<b>Week 14</b> <u>11/18/2021</u>	<b>Food Safety and Climate Changes</b> Climate Change and Health, Climate Change Adoption, and Risk Communication <i>Final Review Paper Due</i> <i>Review for Final Exam</i>
<b>Week 15</b> <u>11/24/2021</u> <b>WEDNESDAY</b>	<b>Final Examinations</b> <i>Announcement of Publication Scholarship Recipients, Certificates</i> <i>Review of the Course Content</i>

## TSU Academic Calendar:

[https://www.tnstate.edu/academic\\_programs/documents/2021-2022%20Academic%20Calendar%20FINAL%2008.10.21.pdf](https://www.tnstate.edu/academic_programs/documents/2021-2022%20Academic%20Calendar%20FINAL%2008.10.21.pdf)





# TSU - ACADEMIC CALENDAR 2021-2022

## FALL SEMESTER 2021

Aug 6	Faculty contracts begin
Aug 6	Faculty report for fall semester activities
Aug 9	Faculty/ Staff Institute
Aug 11-12	Residence Halls Open (New Students)
Aug 13	Residence Halls Open (Returning Students)
Aug 16	Classes Begin
Aug 16- Aug 20	Late registration/Schedule Adjustment
Sept 6	Holiday-Labor Day
Sept 16	Recognition of Constitution Day
Sept 20-22	Student Study Days– No Activities Scheduled
Sept 23-24	Fall Break
Sept 27 – Oct 1	Mid-term Examination Week-all classes meet as scheduled
Oct 8	Last day to withdraw from a course and/or the University
Oct 13	Founders Day
Oct 24-30	Homecoming
Oct 25 – Jan 21	Registration for Spring 2022
Nov 11	Veterans' Day
Nov 19	Last Day of Classes
Nov 22-24	Final Exams
November 27	COMMENCEMENT
November 29	Faculty must have posted all grades via “MyTSU”
Dec 5	Records Office releases all posted grades via “MyTSU”
Dec 24 – Jan 2	Holiday Break – University Closed

## SPRING SEMESTER 2022

Jan 3-7	Extreme Winter 1
Jan 10 -14	Extreme Winter 2
Jan 10	Faculty Contracts Begin
Jan 11	Faculty/Staff Institute
Jan 13-14	Residence Halls Open
Jan 17	Holiday – MLK Jr Day – No Classes
Jan 18	Classes Begin
Jan 18-21	Late Registration/Schedule Adjustments
Feb 28 – Mar 4	Mid-term Examination Week – all classes meet as scheduled
Mar 7 - 11	Spring Break
Mar 18	Last day to withdraw from a course and/or the University
Mar TBA	Honors Convocation
Mar 28 – April 29	Registration for Summer 2021
Mar 28 – Aug 19	Registration for Fall 2022
April 25-29	Student Study Week- No Activities Scheduled
April 29	Last Day of Classes
May 2 - 5	Final examinations
May 6	Graduate Commencement Ceremony, 5:00 p.m., Gentry Complex
May 7	Undergraduate Commencement Ceremony – 8:00 a.m., Hale Stadium
May 9	Faculty must have posted all grades via “MyTSU”
May 12	Records Office releases all posted grades via “MyTSU”

For information regarding TNeCampus Academic Calendar, access the website at:  
<http://www.tnecampus.org/academic-calendar>