DASC/FSTC 326-500: Food Bacteriology (Fall 2015)
M/W/F, 11:30 am - 12:20 pm CST
115 Kleberg Animal and Food Sciences Center
Texas A&M University, College Station, TX

Course Description
This course is designed to teach students relevant information and concepts applicable to the microbiology of raw and processed human foods, and accessory substances used in the manufacture of human foods. Students will be introduced to information and concepts related to microbiological spoilage and fermentation of foods, and to microbial pathogenic agents and toxins causing foodborne disease. Mechanisms for food preservation and processing will be discussed in light of their industrial application and utility for food safety and quality preservation. The course utilizes both in-class lecture and distance learning systems to transfer information to enrolled students. Students will be challenged to utilize memorization, problem-solving, mathematical calculation, and scenario response methods to demonstrate capacity to use acquired knowledge.

Instructor
Matthew Taylor, Ph.D.
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Instructor Office Hours
• The instructor maintains an open door policy, but reserves the right to refuse a student request for impromptu meeting if otherwise engaged. The instructor will make every effort to reschedule with the student at earliest convenience.
• Students wishing to discuss exam or quiz grades, or course performance, are encouraged to request an appointment to ensure instructor availability and meeting privacy.

Course Learning Objectives
• Initiate and develop understanding of the microorganisms that play a significant role in the production, processing, fermentation, keeping quality (shelf life) and safety of various foods.
• Develop understanding of, and appreciate, factors associated with the inhibition and inactivation of microorganisms in foods so as to produce wholesome safe foods for human consumption.
• Develop appreciation of foodborne microbes’ influences over the production and processing of foods, and the impact(s) of microbial pathogens on the development and execution of food processing practices, standards, and regulatory procedures.
**Course Learning Outcomes** *(Upon course completion, students should be able to:)*

- Distinguish significant differences in physiological characteristics between differing foodborne microorganisms, differences in disease syndromes caused by microbial foodborne pathogens, and evidences of microbial spoilage in foods.
- Identify and describe intrinsic and extrinsic factors of relevance to a specific foodstuff determining the survival and/or proliferation of microorganisms which may be considered commensal or cross-contaminants, as well as the impact of applied processes to reduce or eliminate such microbes.
- Describe suitable food processing technologies for use in food stabilization processing, comparing differences in mechanisms of microbial inhibition or inactivation, methods for assessment of microbial reduction/elimination, and key aspects of legislative approval for use in foods processing.
- Describe the impact of selected pieces of federal and/or state legislation on directing the activity of the U.S. foods industry as related to production of microbiologically safe, wholesome food.
- Characterize the key fermentative, spoilage, and pathogenic microorganisms associated with key food types, as well as the evidences of their growth and metabolism in foods.

**Assignment of Student Grade**

<table>
<thead>
<tr>
<th>Course Grade</th>
<th>Course Points Required (Exams + Quizzes)</th>
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<tbody>
<tr>
<td>A</td>
<td>450/500 (≥90%)</td>
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<tr>
<td>B</td>
<td>400/500 (80-89.99%)</td>
</tr>
<tr>
<td>C</td>
<td>350/500 (70-79.99%)</td>
</tr>
<tr>
<td>D</td>
<td>300/500 (60-69.99%)</td>
</tr>
<tr>
<td>F</td>
<td>&lt;300/500 (&lt;60%)</td>
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</tbody>
</table>

A student’s course grade will be calculated from the points accumulated from the four highest exam grades and 10 semester quizzes (8 regular quizzes + 2 distance module quizzes). Exams will be completed in class, while quizzes will be completed via eCampus.

Students achieving a course grade to their satisfaction following the last regular semester exam may elect to not take the final exam. Students may also choose to take the final exam in an effort to improve their course grade by use of the final exam to replace the lowest of the four semester regular exam grades.

The sum of the student’s ten semester quizzes will be weighted equivalently as an exam; students are not permitted to drop their quiz sum for grade calculation (quizzes must be used in final grade calculation).

Student final grades will not be adjusted or placed along a distribution curve at semester end; final grades will not be ‘curved.’ Student grades will be calculated to the 0.01 of a point.

**Course Grade Calculation**

Grade = \[\Sigma (\text{Sum of 4 highest exam grades}), (\text{Sum 10 semester quizzes})\] \(\times 0.2\)

(0.2: Conversion factor allowing determination of course grade [%])
Online Distance Module
- Over the semester, students will be required to complete two eCampus-delivered online learning modules: a short and a long module. Each module contains one or more sets of presentation slides, required and supplemental readings, and may contain other web resources.
- Each module must be completed by the date and time indicated in this syllabus and online on the class eCampus calendar. No module completion extension requests will be granted.
- Each module contains a quiz that must be completed and submitted via eCampus in order to count towards the student's course grade. Again, no extensions for module completion will be granted.

Exam and Quiz Completion Calendar

<table>
<thead>
<tr>
<th>Exam, Quiz</th>
<th>Completion Date/Deadline</th>
<th>Completion Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Friday, Sep. 25</td>
<td>11:30 am</td>
<td>115 Kleberg Center</td>
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<tr>
<td>Online Module Quiz: Food Microbiology History</td>
<td>Friday, Sep. 25</td>
<td>11:30 am</td>
<td>eCampus</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Friday, Oct. 16</td>
<td>11:30 am</td>
<td>115 Kleberg Center</td>
</tr>
<tr>
<td>Exam 3</td>
<td>Friday, Nov. 6</td>
<td>11:30 am</td>
<td>115 Kleberg Center</td>
</tr>
<tr>
<td>Online Module Quiz: HACCP</td>
<td>Friday, Nov. 6</td>
<td>11:30 am</td>
<td>eCampus</td>
</tr>
<tr>
<td>Exam 4</td>
<td>Friday, Dec. 4</td>
<td>11:30 am</td>
<td>115 Kleberg Center</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Wednesday, Dec. 16</td>
<td>10:30 am</td>
<td>115 Kleberg Center</td>
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</table>

- Completion time for exams indicates start time for exams.
- Completion time for online module quizzes indicates the deadline for quiz completion. Any student not completing the quiz by the time/date indicated will not be granted an extension on module/quiz completion and will forfeit those points towards his/her course grade.

Exam Makeup Process Timeline

<table>
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<tr>
<th>Exam Makeup Step</th>
<th>Deadline for Completion</th>
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<tr>
<td>1. Notify instructor of reason(s) for exam absence.</td>
<td>Within 2 days of scheduled exam date.</td>
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<tr>
<td>2. Present documentation verifying student’s exam absence excuse and complete makeup exam</td>
<td>No later than 5:00 pm CST, two (2) business days following the exam date.</td>
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Exam and Quiz Completion

- In addition to online module quizzes, there will be eight (8) semester eCampus-delivered quizzes students will complete reviewing over presented lecture material. Quizzes are typically released to students on Wednesdays. The instructor will work to announce quizzes during lecture or by email, though the instructor does not guarantee use of both methods of communication to students.

- This semester marks the first semester incorporating the use of online/distance learning modules for DASC/FSTC 326. In addition to course module learning material and post-module quiz, each module has a short survey for students to complete to provide feedback on module completion and module improvement. Please complete each survey for instructor’s use in refining the online components of the course material.

- All email communications from instructor to the class, including notices of semester eCampus quizzes or exam date reminders, will be sent using the university’s howdy.tamu.edu email system. If a student does not check the email address that is associated with the TAMU Howdy system, it is the student’s responsibility to either: i) begin regularly checking their Howdy-associated email account, or; ii) update Howdy to their preferred email address.

- Students will be given 2 attempts to complete each eCampus quiz, in order to allow the student to potentially improve their grade over the first attempt. If the eCampus system locks/freezes, or a student is otherwise prevented from completing the quiz twice, but is able to complete the quiz once, the recorded grade will be used for student grade determination. *If a student is prevented from completing the quiz successfully on the first attempt by failed internet or eCampus failure, the student should take a picture of the screen with their phone and email the image to the instructor immediately along with an explanation as to the problem.*

- Students will only be allowed to make up missed exams for reasons covered under Rule 7.1 of the Texas A&M University Student Rules ([http://student-rules.tamu.edu/rule07](http://student-rules.tamu.edu/rule07)). Proper documentation verifying the student’s reason(s) for exam absence must be presented at time of scheduled exam makeup, following the exam makeup process timeline given above.

- Students arriving late to an exam will not be granted extra time to complete the exam. Students are encouraged to arrive at the classroom approximately 10-12 min prior to the start of class on exam dates in order to ensure the complete class period for exam completion.

- Students will be required to present photo ID at time of exam completion. Acceptable forms of ID include university student ID, state-issued driver’s license, military ID, passport. No student will be allowed to complete an exam without appropriate identification.

- Any student wishing to complete the final exam MUST enroll for the final exam NO LATER THAN Wednesday, December 9, at 5:00 pm CST. This is a hard deadline and no extensions will be granted.
Course Materials

- All online course material will be delivered to students via the class eCampus site. Learning module material will be offered in PDF format and may be downloaded and retained by students for their use following semester’s end.

- The instructor will also assign readings from the textbook below throughout the semester to assist students’ understanding of presented material/information. The textbook may be purchased by the student from any number of online vendors, but is offered to students free-of-charge via the TAMU Libraries as a downloadable PDF document (http://library.tamu.edu). Students are cautioned that the correct text is the 7th edition, though copies of previous editions may be available as well.


Course Instructor Expectations of Students

- Students are to silence and stow their cell phones for class. Treat this class like a movie; it can wait. Students are not to keep their cell phone on their person during an exam but in a personal bag or backpack. Alternatively, phones may be placed on the presentation table at the front of the classroom and retrieved after an exam is done.

- If a student must take an emergency call during a lecture or an exam, the student should inform the professor prior to the class or test to allow arrangements to be made.

- Students suspected of cheating on an exam will be dealt with according to university policies and procedures. If cheating is demonstrated to have occurred, students will fail the course, no questions asked.

- Students will not be allowed to take exams early except only in very extenuating circumstances (e.g., short-notice military or out-of-state relocation). In such instances, proof must be offered upon request and requests will be handled on a case-by-case basis.

- Throughout the semester, the instructor will have to travel out of town to fulfill other professional obligations. In these instances, guest speakers will come in and present lecture material. Additionally, some guest speakers will be invited to speak even when the instructor is in town. Guest speaker material is fair game for both semester quizzes and exams, and students are expected to attend class consistently.

- Students will not keep exams but will be allowed to review them as desired throughout the semester in order to prepare for upcoming exams, understand incorrect answers, and prepare for the final exam. Students will not be allowed to view a completed exam until all make-ups are complete, and copying of questions or digital pictures of exam responses are forbidden.
Americans with Disabilities Act (ADA) Statement
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall, Room B-118, or call 845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu).

Academic Integrity Statement
“An Aggie does not lie, cheat or steal, or tolerate those who do.”
[http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor)