Introduction
You are coming home from riding your horse and suddenly you come across an accident. A two horse trailer has flipped over and emergency crews are beginning to respond. As a horse, pet, or similar owner, what steps should you do beforehand?

A large hurricane is building strength offshore and is predicted to make landfall in your area. What steps should you do in advance of the predicted storm? What should you do during and after the storm?

Emergency Animal Management covers from individual events, such as a car accident, to mass events such as disease, weather, or human activity that can cause tremendous disruption to companion animals, animal agriculture, and other animals. All animals are at risk during a disaster or emergency. Animal health concerns can become human health concerns. Increasingly a One Health model in which human and animal health is managed cooperatively is used. Veterinarians, veterinary technicians, animal scientists, and others have a role in managing or participating in emergency animal management. This course will address concerns in livestock, companion animal, and specialty animals.

The course will discuss concepts like Technical Large Animal Emergency Rescue (TLAER), the PETs act, and how you should plan for your own animals in the event of an emergency.

This course will discuss Emergency Animal Management challenges from the perspective of a practicing veterinarian, an organization (federal, state, and/or local government, or industry), and animal owner.

Emergency response often utilizes a framework that includes surveillance, quarantine, treatment, disposal, and disinfection. In this course, we will discuss in detail the key concerns, issues, and how to implement the major stages involved in a response.

Instructor
Eric Benson, Ph.D.
Professor
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Cell: (302) 275-2131
Email: ebenson@udel.edu

Class Sections:
ANFS 451-010: Traditional undergraduate
ANFS 451-080: Honors undergraduate
ANFS 651-010: Traditional graduate

Class Hours
Tuesday and Thursday 11:00 AM – 12:15 PM, OA Newton Poultry Building
Office Hours
12:30 PM – 1:30 PM Thursday, OA Newton Poultry Building
Additional office hours by appointment

Course Student Learning Objectives
1. Students will demonstrate knowledge and of the major core concepts of the emergency animal response framework and apply the elements to new situations
2. Students will be able to develop and justify an emergency animal response plan for livestock, companion, and/or specialty animals
3. Students will demonstrate written communication skills important for communicating written scientific ideas and operational management plans
4. Students will demonstrate oral communication skills important for communicating written scientific ideas and operational management plans
5. Students will use critical thinking and reasoning, skeptical inquiry, and scientific approach to analyze emergency animal management scenarios and develop emergency animal management response plans

Program Student Objectives
This course is designed to be consistent with University of Delaware Animal and Food Science Curriculum Learning Goals and with University of Delaware General Education Goals (http://www2.udel.edu/gened/). Additional detail on how the course addresses the General Education and ANFS Learning goals is available under Canvas.

Textbook:
There is no required textbook.

There is a recommended textbook that I think complements the material in the course. There are no assignments or readings from the book, however, if the field of emergency animal management is something you are interested in, Veterinary Disaster Response (edited by Wingfield and Palmer) is a good book to have. This textbook is oriented towards a practicing veterinarian and a bit like reading a bulleted Power Point slide, but is one of the best resources available.

*Veterinary Disaster Response*
Edited by: Wayne E. Wingfield and Sally E. Palmer
Wiley-Blackwell, 2009
ISBN: 978-0-8138-1014-0

A second text that I think really complements the material in the course is Technical Large Animal Rescue. It’s an awesome book that complements the course material, but large parts of it go into more detail than we can effectively cover. It’s also a pretty expensive book. For this reason, I don’t make it a required or recommended text. If you are into horses or large animal rescue, definitely try to find a copy to read.

*Technical Large Animal Emergency Rescue 1st Edition*
Lectures:
Each lecture addresses one topic in the course. I will be changing things a bit and not having a required text. Lecture slides will be posted on Canvas in either PowerPoint or Adobe PDF versions. Students are responsible for printing lecture notes. In place of a required text, I expect you to review the lecture notes before coming to class and be ready to ask questions on the things you don’t understand. In previous classes, over 90% students indicated that lecture attendance was required to be successful. Students should attend lecture, be alert, ask questions and be interested in the material.

Previous year’s lectures will be recorded using UD Capture and made available for the traditional and online sections.

Guest Instructors:
Several guest instructors will be either presenting via distance education or in person. Some of the guest instructors are, well, simply awesome. Students are expected to treat the guest instructors better than they would treat University of Delaware instructors. Material from the guest instructors may be included in assignments, quizzes and examinations.

Web site
We will be using the Canvas course management system. Canvas is your portal for the course and it’s as much of a place for students to post, comment, and exchange ideas as it a place for the instructor to upload content.

As the portal for the course, Canvas will be used to download and submit assignments, provide access to the lecture notes, supplemental readings, and other notes, as well as house the master class schedule. If you find links to other content relevant for the course, it’s a place for you to post it so that the rest of the class can benefit.

Assignments that can be submitted through Canvas should be submitted through Canvas. Sakai requires several steps to complete the submission process. Make sure you have finished submitting the assignment before logging out. The Canvas grading system will be used to record grades.

All homework, projects, and completed information will be distributed through Canvas. For the major writing assignments, I would suggest turning in the assignments in paper form because it’s much easier and faster to grade.

The website for the course is available through canvas.udel.edu
Quizzes:
There will be a weekly online quiz. The weekly quizzes cover from one week to the next and allow you to study smaller sections of material. Students in previous years indicated that this helped them to learn the material better than simply having ginormous exams. Quizzes are to be taken individually. For quizzes, it is best 10 of 11. There are enough quizzes that missing one or having a bad day for one quiz isn’t the end of the world. Collectively, though, they are important and you would want to do well on them.

Exams:
There will be two one hour and fifteen minute exams and a cumulative final. The cumulative final will be given during the final examination period. Students should plan to take the exams during the listed period. Make up examinations are at the discretion of the instructor and must be scheduled prior to the exam in question. Students with appropriate needs may take their examinations through the Office of Disability Support Services (DSS).

Coursework and Grading
This class is structured to provide a variety of experiences and opportunity for the students. In general, there will be bi-weekly homework, a weekly quiz, two examinations and a cumulative final exam. The number of assignments gives the student a number of opportunities to learn and the instructor opportunities to give feedback on student learning. Weekly quizzes are designed to encourage regular review of the material and provide regular feedback to the student. The grading strategy in the course rewards consistent performance more than occasional acts of brilliance.

Grades for the course are determined based on how well students complete the assigned work and the progress they have made towards the course objectives. There is no set number of A grades or similar. In previous years, a fair number of students have had A or A- grades. There is no guarantee that that will happen again. Ideally, everyone in the class will finish with an A.

Your assignments are a reflection of you. The work should look professional, be easy for the reader to understand and contain the appropriate material.

Homework problems are designed to make students think about the concepts introduced in class. You may be required to find outside readings to complete the assignments. If you use outside readings, include the information (pdf copy if available, website if not) so that your response can be evaluated.

Starting in 2015, this course will count as a second writing requirement for students in Animal and Food Science, Animal Science, Prevetinary Medicine and Animal Biosciences, Animal Biosciences, and Food Science majors. Note, this satisfies the University and program requirements for a second writing course. This may or may not satisfy some veterinary schools since some schools mandate that their second writing...
course have an English department coding. Students from majors other than the ones listed should contact their academic advisor.

Four of the homework assignments will require additional writing. The goal is to give you a chance to develop the plan, justify and defend your choice in writing. For one of the assignments, you will have the option to resubmit the assignment.

There is one comprehensive project in which each student will be responsible for developing an emergency response plan for the specified situation. For 2013 through 2015, students developed an emergency response plan for the University of Delaware Newark Farm. This assignment is expected to include significant writing, justification and support for your decision.

Table 1. Undergraduate grade composition (Section 010)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Total Value</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (2 hourly, 1 final)</td>
<td>3</td>
<td>350</td>
<td>42%</td>
</tr>
<tr>
<td>Project</td>
<td>1</td>
<td>150</td>
<td>18%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10</td>
<td>100</td>
<td>12%</td>
</tr>
<tr>
<td>Homework</td>
<td>9</td>
<td>225</td>
<td>27%</td>
</tr>
<tr>
<td>In Class Activity</td>
<td>3</td>
<td>15</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>840</td>
<td></td>
</tr>
</tbody>
</table>

This course also includes an Honors section (080). Students in the Honors section have slight differences on several of the assignments and have an additional honors project.

Table 2. Honors grade composition (ANFS 451-080)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Total Value</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (2 hourly, 1 final)</td>
<td>3</td>
<td>350</td>
<td>30%</td>
</tr>
<tr>
<td>Online Quizzes</td>
<td>11</td>
<td>100</td>
<td>11%</td>
</tr>
<tr>
<td>Project</td>
<td>1</td>
<td>150</td>
<td>16%</td>
</tr>
<tr>
<td>Honors Project</td>
<td>1</td>
<td>100</td>
<td>11%</td>
</tr>
<tr>
<td>Homework</td>
<td>9</td>
<td>225</td>
<td>24%</td>
</tr>
<tr>
<td>In Class Activity</td>
<td>3</td>
<td>15</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>940</td>
<td></td>
</tr>
</tbody>
</table>
Graduate students are not required to take the online quizzes or complete the homework. The quizzes do, however, help to identify whether you are on track in terms of learning. Graduate students who complete the homework and quizzes will have a larger pool of points to work from, helping to reduce the impact of any one assignment.

The instructor reserves the right to alter the number or value of assignments when the assignments are released. Assignments will be posted through Canvas.

There will be several extra credit assignments available. Extra credit is optional.

The overall grade is based on the student’s total number of points divided by the maximum number of points available. The grading scale is shown in Table 3. The table represents the minimum grade required to achieve a given grade. Historically, the class does not have a curve.

### Table 3. Grading scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100% - 92%</td>
<td>B-</td>
<td>81% - 79%</td>
<td>D+</td>
<td>68% - 67%</td>
</tr>
<tr>
<td>A-</td>
<td>91% - 89%</td>
<td>C+</td>
<td>78% - 77%</td>
<td>D</td>
<td>66% - 62%</td>
</tr>
<tr>
<td>B+</td>
<td>88% - 87%</td>
<td>C</td>
<td>76% - 72%</td>
<td>D-</td>
<td>61% - 59%</td>
</tr>
<tr>
<td>B</td>
<td>86% - 82%</td>
<td>C-</td>
<td>71% - 69%</td>
<td>F</td>
<td>&lt; 58%</td>
</tr>
</tbody>
</table>

If a student needs to withdraw or change their grading for a course, they need to understand the possible options and impacts this may have.

If a student withdraws before the end of the “Last day to register or to add courses” (typically the second week of class), the course will not be visible on the student record.

If a student withdraws between the “Last day to register or to add courses” and “Last day to change registration or to withdraw from courses”, (October 22, 2019), the course will be marked as W (Withdrawn) or WF (Withdrawn Failing) and visible on the student record.

Students who simply stop attending and being involved in class can be assigned a Z grade.
ANFS 451: Emergency Animal Management

Students can choose through UDSIS to have their grade as Pass/Fail (P/F) or Listener (Audit) (L). This selection must be made before the “Last day to change registration or to withdraw from courses”.

Under extenuating circumstances (for example, family or medical emergency), requests for changes to grading status should be made through the student’s home college office of student services. Any changes in grading status must be made prior to the first day of final examinations by University policy. For students enrolled in the College of Agriculture and Natural Resources, they should contact their academic advisor and Senior Assistant Dean Kim Yackoski (yackoski@udel.edu).

Students taking a course Pass/Fail will complete work as required, receive full credit both for full time status during the semester and towards graduation, and are assigned a letter grade. When students complete a course on a pass/fail basis, the instructor will assign a regular grade. If the student has a grade of A, B, C or D (plus or minus), a grade of P will be listed on the report of grades and on the transcript. If the student receives a grade of F, it will be recorded on the permanent record. A passing grade will not be counted in the GPA. A failing grade under the pass/fail option will be counted in the GPA. Matriculated students have the option to take one course per semester that is offered on a letter-grade basis on a pass/fail basis. The total number of credits earned on a pass/fail basis may not exceed 24 in the baccalaureate degree program, excluding those courses that are graded pass/fail only. Students may not use a course taken with a Pass/Fail elective grade and passing grades are not included in the GPA calculation. In most instances a pass/fail course can only be used as a free elective. A course taken on a pass/fail basis cannot be used to fulfill the University multicultural requirement. Students are encouraged to consult their academic advisor on taking a course on a pass/fail basis.

Students taking a course as Listener are registered without credit or a grade. They receive credit towards full time enrollment for a given semester, but not credit towards graduation. The advantage of Listener status is that you don’t have to stress about assignments, exams, and similar, but the downside is that it does not directly help for graduation. Listener status is a useful approach for a class that is required for your major or for a class you are taking only for personal interest. If you are taking a class as Listener for major, you should plan to attend most of the lectures with the intent of learning as much for the semester when you take the class for grade. Students are encouraged to consult their academic advisor on taking a course on as a Listener.

Incomplete (I) grades will only be given under extenuating circumstances (for example, documented medical or family issues). Incomplete grades will not be given after the final exam is complete unless there is a documented issue. Missing the final exam or other major grading elements will simply result in a lower grade. An incomplete grade that has not been satisfied will automatically default to "F" two weeks into the next regular semester. It is up to the student to contact the instructor to request and document the need for an incomplete grade. It is also up to the student to complete the work.
Mid-Term Grading
Students who were admitted as freshman to UD and are in their first or second UD semester have a mid-term grading period during the Fall and Spring semesters.

Parking
Our classroom is located on the farm and we need to manage our impact to farm activity. Please take steps to avoid parking excessive numbers of vehicles around Newton Poultry Building. In particular, we have been asked not to have any vehicles park on Farm Lane.

Excused Absences
Students are encouraged to attend class. In previous classes that I have taught, over 95% of the students indicated that regular attendance was essential. The material in the course does not directly track the textbook and there is significant additional information.

In addition, starting in Fall 2018, all faculty on campus are being asked to assist the University in maintaining compliance with Title IV Federal Student Aid regulation 34 CFR 668.22(a). A student earns federal student aid through attendance and the institution must ensure they are actively participating in enrolled courses.

No-Show: Students who are on the roster, but do not attend class during the free drop/add period are being referred for follow up to their academic advisor and/or assistant dean. This was not being done in previous years.

Absences on religious holidays listed in University calendars is recognized as an excused absence. Nevertheless, students are urged to remind the instructor of their intention to be absent on an upcoming holiday.

Absences on religious holidays not listed in University calendars, as well as absences due to athletic participation or other extracurricular activities in which students are official representatives of the University, shall be recognized as excused absences when the student informs the instructor in writing during the first two weeks of the semester of these planned absences for the semester.

Finally, if students have minor illnesses and are only out for a few days, students are encouraged to a) visit Student Health and b) contact your appropriate Dean’s office to ensure that the absence is recorded. For more serious illnesses (e.g., hospitalization, surgery or protracted medical illness) requiring the student to be absent for a week or more, students need to contact their appropriate Dean’s office as soon as practical. For the full policy on excused absences, please follow this link: http://facultyhandbook.udel.edu/handbook/3113-student-class-attendance-and-excused-absences.

If a student has an excused absence on one of the three hourly exams, their final examination grade will be used in place of both the final exam and the excused
examination. Note, this will increase the impact of the final exam. This policy may be used once a semester.

The official University of Delaware Academic Calendar is available at:

Student Email Policy
Electronic communication (i.e. email and Canvas announcements) are rapid and efficient forms of communication. Electronic communication is considered an official form of communication with students, faculty and staff. Students are encouraged to use email to communicate with the instructor through email (ebenson@udel.edu). Students need to be respectful in their email, follow normal writing conventions (including, but not limited to spelling, capitalization, salutation, etc.), and include their first and last name. As an instructor, my goal is to respond to emails within 24 to 48 hours.

Authorized Use of Materials
The University of Delaware owns a non-exclusive right to faculty materials that will be given to you during the course. These materials include ideas and comments provided by the instructor during class; test questions; handouts and course materials; and other materials representing the copyright-protected intellectual property of course instructors. You are prohibited from entering relationships with web sites such as Course Hero, Notehall, or similar sites under which you agree, in exchange for the payment of a fee or salary, to post these materials online. Violations of this prohibition will be referred to the Student Conduct Office for investigation and disciplinary action under UD’s Code of Conduct (https://sites.udel.edu/studentconduct/).

Student Conduct and Academic Honesty:
Students are expected to take their education seriously. Unacceptable student behavior as outlined in the code of conduct (https://sites.udel.edu/studentconduct/) will not be tolerated. Academic dishonesty will not be tolerated. Using another student’s i>Clicker for their benefit will be considered academic dishonesty and may be referred to the Student Conduct Office for investigation and disciplinary action.

In the past, some students have taken notes electronically, using a computer, tablet, or similar. You are welcome to take notes in an appropriate form; however, the notes are for your use, not commercial gain. I would suggest bringing traditional note taking means (pen, pencil, paper, etc.) even if you are planning on taking notes electronically. We have some exercises during class, so bring something to write on and a way to do so. Please do not record the lecture.

I don’t mind if you check your email or whatever occasionally. Please be somewhat discrete. If I can see which card you should play in solitaire, you might want to reconsider what you are doing. Please do not sit on Facebook, email, text, or similar the entire class period. Your phone should be on vibrate and absent an actual emergency, students should not need to take phone calls during class.
Statement of Non-Discrimination
The University of Delaware does not discriminate against any person on the basis of race, color, national origin, sex, gender identity or expression, sexual orientation, genetic information, marital status, disability, religion, age, veteran status or any other characteristic protected by applicable law in its employment, educational programs and activities, admissions policies, and scholarship and loan programs as required by Title IX of the Educational Amendments of 1972, the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VII of the Civil Rights Act of 1964, and other applicable statutes and University policies. The University of Delaware also prohibits unlawful harassment including sexual harassment and sexual violence.

Disclosures of Instances of Sexual Misconduct
If, at any time during this course, I happen to be made aware that a student may have been the victim of sexual misconduct (including sexual harassment, sexual violence, domestic/dating violence, or stalking), I am obligated by federal law to inform the university’s Title IX Coordinator. The university needs to know information about such incidents to, not only offer resources, but to ensure a safe campus environment. The Title IX Coordinator will decide if the incident should be examined further. If such a situation is disclosed to me in class, in a paper assignment, or in office hours, I promise to protect your privacy--I will not disclose the incident to anyone but the Title IX Coordinator.

For more information on Sexual Misconduct policies, where to get help, and reporting information please refer to www.udel.edu/sexualmisconduct.

At UD, we provide 24-hour crisis assistance and victim advocacy and counseling. Contact 302-831-2226, Student Health Services, to get in touch with a sexual offense support advocate.

(Note, this is not a course specific concern, but a concern that applies to all courses at the University of Delaware.)

Service Animals or Service Animals in Training
Service animals and service animals in training are welcome in class. We like dogs. Dogs are good people. There are no restrictions on documented service animals. For service animals in training, there are a few specific class sessions (for example, exams) where we may ask that the service dogs in training not attend lecture because of the planned activities.

Overview of Topics
An overview of the topics and schedule are presented below. An updated schedule with assignment due dates is available on the class Sakai page. The web schedule will serve as the master schedule; when in doubt, refer to the schedule.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction, Warm Weather</td>
</tr>
<tr>
<td>Week 2</td>
<td>Cold Weather, Foreign Animal Diseases</td>
</tr>
<tr>
<td>Week 3</td>
<td>Foot and Mouth Disease, Avian Influenza</td>
</tr>
<tr>
<td>Week 4</td>
<td>PPE, Exam 1</td>
</tr>
<tr>
<td>Week 5</td>
<td>Fire, Technical Large Animal Research</td>
</tr>
<tr>
<td>Week 6</td>
<td>Fire/Demo, Resources Tour</td>
</tr>
<tr>
<td>Week 7</td>
<td>ICS, Evacuation</td>
</tr>
<tr>
<td>Week 8</td>
<td>Situational Awareness, Biosecurity</td>
</tr>
<tr>
<td>Week 9</td>
<td>Biosecurity, Physical Methods of Depopulation</td>
</tr>
<tr>
<td>Week 10</td>
<td>Exam 2, Chemical Methods of Depopulation</td>
</tr>
<tr>
<td>Week 11</td>
<td>Foam Depopulation</td>
</tr>
<tr>
<td>Week 12</td>
<td>Quarantine, Disposal</td>
</tr>
<tr>
<td>Week 13</td>
<td>No classes</td>
</tr>
<tr>
<td>Week 14</td>
<td>Cleaning and Disinfection, Planning</td>
</tr>
<tr>
<td>Week 15</td>
<td>Indemnification, Working Animals</td>
</tr>
</tbody>
</table>