course description and objectives

This is a 2-credit lecture (ANS 3079) with 1-credit laboratory (ANS 4231, section 11CF) course focused on the principles of conformation and its relationship to biomechanics, as well as a study of anatomical and physiological aspects of major body systems that enable the horse to be a natural and noteworthy athlete.

During this course, you will:
1) gain an appreciation for the unique design of the horse as an athlete;
2) learn to evaluate conformation for correctness and faults and relate it to the biomechanics of movement;
3) develop a functional understanding of equine anatomy at the cellular, tissue and systems levels;
4) investigate the muscular, skeletal, cardiovascular, respiratory, thermo-regulatory, and support systems in horses and the response of these systems to exercise and training;
5) learn to evaluate physical fitness and design conditioning programs specific to the athletic event for which a horse was selected.

prerequisites for this course

Before taking this course you must have:
- ANS 3043 Growth and Development
- APK 2100C Human Anatomy
- Or, permission of the instructor

instructor

Dr. Lori K. Warren
- office: ANS Suite 210, Office 210G
- phone: (352) 392-1957
- email: LKWarren@ufl.edu
- *email is the preferred way to reach me

office hours

Mon 10:00 – 11:30 a.m.
Mon 1:00 – 3:00 p.m.
Wed 10:00 – 11:30 a.m.
Or, email for an appointment (I will usually respond within 24 hours)

teaching assistant

Carol Vasco
- office: ANS Room 206
- email: ana.carolinem@ufl.edu
course requirements

This course will involve reading, writing, group work, and outside effort. The study of anatomy requires memorization; you will need to absorb lecture and supplemental materials outside of class. You will need to put in consistent effort throughout the semester. To get the most out of this course, take advantage of the opportunities offered, get dirty, and ask questions! **Learning is not a spectator sport.**

lab activities – Labs will be held on Wednesdays from 3:10 - 4:55pm. Plan for most labs to last the entire 2 hours. The location of each lab will vary and will be announced at the beginning of each week. Labs will consist of live animal evaluation, dissection and study of harvested tissues, video discussions, and other activities. Each lab is designed to supplement and enhance your understanding of lecture material. All labs will have graded worksheets.

Appropriate dress is required. Unsafe footwear (flip-flops, open-toed shoes) will NOT be allowed. Boots or leather shoes are preferred, but athletic shoes can suffice. Labs may be messy (eg. tissue fluids, blood, paint, horse slobber); avoid wearing clothes that you don’t want damaged.

major assignments – You will be completing two major writing assignments. A summary of each one is provided here; further detail is provided under the “Assignments” link on CANVAS.

Relating Form to Function DUE: February 11
The purpose of this assignment is to reinforce the concept “form follows function.” You will choose your favorite equine athlete and research what made this horse excel at their sport (breed, conformation, attitude, and athleticism).

Training the Equine Athlete DUE: April 17
For this assignment, you will select and attend two different equine competitive events. You will be asked to evaluate the athletic demands of each activity and investigate how the horse should be prepared for each type of competition. A running calendar of events will be listed under this assignment on CANVAS.

other homework – In addition to the writing projects above, you will complete some shorter homework assignments. These assignments may include discussion questions, in-class short writings, article reviews, and case studies.

weekly quizzes – To encourage you to keep up with the course content, short (5 pt) quizzes will be given on Wednesdays at the beginning of each lab period.

exams – There will be 3 exams, each covering approximately one-third of the course material. Exam format will consist of multiple choice, true/false, matching, short answer, and essay questions.

Zeremonie and Laura Kraut helped team USA earn the gold medal at the 2018 FEI World Equestrian Games. Horses competing in show jumping at the Olympic level clear obstacles 5 to 6 feet high.
There will be no separate lecture and lab grades. Whatever grade you earn for the combined lecture and lab will be assigned for both ANS 3079L and ANS 4231.

**grading policy**

- Labs, Assignments & Quizzes …… 40%
- 3 Exams…………………………….. 60%

**grade distribution**

- A = 90 – 100 %
- B = 80 – 89.9 %
- C = 70 – 79.9 %
- D = 60 – 69.9 %
- E = less than 60 %

**grading scale**

- Click on the ‘Grade’ link in CANVAS for a running tally of your course grade.
- You have ONE WEEK after the return of any graded item to resolve questions. After that, all grades are final.
- Retain all graded items until assigned a final course grade.
- NOTE there will be no +/- letter grades
- UF policies for assigning grade points: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

**attendance, make-up and late work**

**attendance**

Regular attendance is expected and active participation is necessary for successful completion of this course. If you know you will be absent from class, please contact the instructor at least one week in advance of the date(s) missed. If you have an unforeseen emergency, you will need to provide written documentation to support your absence (eg, if you are sick, a doctor’s note is required).

**make-up work**

It is your responsibility to contact the instructor to develop a plan to make-up any work you miss. Missed work for excused class absences will be accepted with no penalty if completed by the agreed-upon extended deadline.

The opportunity to make-up missed work will not be offered without a valid excuse. This policy applies to all exams, quizzes, assignments, and labs. The nature of some lab activities may prevent a make-up lab from being offered. Class attendance and make-up work policies are consistent with UF policies found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

**late work**

It is expected that ALL assignments will be submitted on time. Without a valid absence, assignments turned in late will receive the following penalty:

<table>
<thead>
<tr>
<th>Late Time</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 – 24 hours late</td>
<td>– 25%</td>
</tr>
<tr>
<td>24 – 48 hours late</td>
<td>– 50%</td>
</tr>
<tr>
<td>&gt; 48 hours late</td>
<td>NOT accepted</td>
</tr>
</tbody>
</table>

**class etiquette and safety**

- Be respectful of other students’ opinions, knowledge and background. If you have more “horse sense” than your lab partner, be a helper, not a hater.
- Horses can exhibit unpredictable behavior that can cause serious bodily harm. Pay attention. Seek guidance if you are uncomfortable working with them.
- Dress appropriately for all labs.
- Avoid electronic distractions. Silence (& ignore!) your phone during class. Use your laptop to take notes, not surf the internet or check Facebook.

**extra credit**

Train to compete in the 25-furlong Derby!!

What does the horse go through when training for competition? Experience it yourself!

Train to run 25 furlongs (5K or 3.1 miles) this semester and earn 20 points extra credit applied to your exam grade!

Training programs such as Couch-to-5K® can prep you for a 5K race in 9 weeks!

To earn the extra credit, you must:

1) sign a commitment & release form by February 20

2) keep a training journal that documents your daily training progress and periodic fitness assessments (you will turn this in)

3) complete the 25-Furlong Derby on April 13 in 34 minutes or less or provide proof of completion of another sanctioned race approved by Dr. Warren in the same time limit.

Go to the “Assignments” link on CANVAS for additional information.

Does a health issue prevent you from running? Discuss alternative activities (swimming, biking) with Dr. Warren.

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*Canted Plan (“Scooter”) was honored as the AQHA-PRCA Steer Wrestling Horse of the Year in 2017 and again in 2018. Horses competing in this sport have a high proportion of Type 2X muscle fibers, giving them explosive speed and power.*
The four-in-hand team of Asjemenou, Boris W, First Edition, and Splash, piloted by Ocala-native Chester Weber, won the first ever gold medal for team USA at the 2018 World Equestrian Games. The sport of combined driving involves three separate carriage-pulling events: dressage, cross-country marathon, and cone driving.

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Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor of this class.

UF services

- **Student assessment of instruction is an important part of efforts to improve teaching & learning. At the end of the semester, you will have the opportunity to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Evaluations are conducted online at [https://evaluations.ufl.edu](https://evaluations.ufl.edu). You will be notified when the evaluation system is open (typically the last two weeks of the semester). It is expected that you will contribute your feedback for this course and the others in which you are enrolled this term. Summary results of course evaluations are available at [https://evaluations.ufl.edu/results](https://evaluations.ufl.edu/results).**

- **online course evaluation process**

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**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.

- **UF policies**

  **academic honesty** — UF students are bound by the Honor Pledge which states: “We the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code.” 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.” The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/).

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## course schedule*

<table>
<thead>
<tr>
<th>date</th>
<th>lecture</th>
<th>lab [+location]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M – jan 7</td>
<td>course intro / amazing athletes</td>
<td></td>
</tr>
<tr>
<td>W – jan 9</td>
<td>bone – skeletal anatomy</td>
<td>bone [ANS 155]</td>
</tr>
<tr>
<td>M – jan 14</td>
<td>conformation – balance &amp; symmetry</td>
<td></td>
</tr>
<tr>
<td>W – jan 16</td>
<td><em>CLASS CANCELLED today</em></td>
<td><em>NO LAB this week</em></td>
</tr>
<tr>
<td>M – jan 21</td>
<td>MLK HOLIDAY – NO CLASS</td>
<td></td>
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<tr>
<td>W – jan 23</td>
<td>conformation – proportions &amp; angles</td>
<td>balance &amp; angles [HTU]</td>
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<tr>
<td>M – jan 28</td>
<td>conformation – limb alignment</td>
<td></td>
</tr>
<tr>
<td>W – jan 30</td>
<td>gaits / quality of movement</td>
<td>gaits / limb tracking [HTU]</td>
</tr>
<tr>
<td>M – feb 4</td>
<td>conformation – functional type</td>
<td></td>
</tr>
<tr>
<td>W – feb 6</td>
<td>bone – develop. orthopedic disease</td>
<td>breed conformation [HTU]</td>
</tr>
<tr>
<td>M – feb 11</td>
<td>bone – training adaptations</td>
<td></td>
</tr>
<tr>
<td>W – feb 13</td>
<td>tendons and ligaments</td>
<td>conformation [ANS 155]</td>
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<tr>
<td>M – feb 18</td>
<td>EXAM 1</td>
<td></td>
</tr>
<tr>
<td>W – feb 20</td>
<td>tendons and ligaments</td>
<td>limb dissections [ANS 155]</td>
</tr>
<tr>
<td>M – feb 25</td>
<td>joints and osteoarthritis</td>
<td></td>
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<tr>
<td>W – feb 27</td>
<td>the hoof</td>
<td>limb dissections [ANS 155]</td>
</tr>
<tr>
<td>M – mar 4</td>
<td>SPRING BREAK – NO CLASS</td>
<td></td>
</tr>
<tr>
<td>W – mar 6</td>
<td>SPRING BREAK – NO CLASS</td>
<td></td>
</tr>
<tr>
<td>M – mar 11</td>
<td>muscle – gross anatomy</td>
<td></td>
</tr>
<tr>
<td>W – mar 13</td>
<td>energetics of exercise</td>
<td>muscle anatomy [HTU]</td>
</tr>
<tr>
<td>M – mar 18</td>
<td>muscle – physiology</td>
<td></td>
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<tr>
<td>W – mar 20</td>
<td>muscle – training adaptations</td>
<td>muscle biology [ANS 155]</td>
</tr>
<tr>
<td>M – mar 25</td>
<td>muscle – disorders</td>
<td></td>
</tr>
<tr>
<td>W – mar 27</td>
<td>cardiovascular system</td>
<td>exercise testing [CVM]</td>
</tr>
<tr>
<td>M – apr 1</td>
<td>EXAM 2</td>
<td></td>
</tr>
<tr>
<td>W – apr 3</td>
<td>cardiovascular / respiratory system</td>
<td>cardio-respiratory [HTU]</td>
</tr>
<tr>
<td>M – apr 8</td>
<td>respiratory system</td>
<td></td>
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<tr>
<td>W – apr 10</td>
<td>thermoregulation</td>
<td>thermoregulation [HTU]</td>
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<tr>
<td>M – apr 15</td>
<td>principles of conditioning</td>
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<tr>
<td>W – apr 17</td>
<td>evaluating fitness</td>
<td>fitness evaluation [HTU]</td>
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<tr>
<td>M – apr 22</td>
<td>conditioning programs</td>
<td></td>
</tr>
<tr>
<td>W – apr 24</td>
<td>conditioning programs</td>
<td>eXtreme obstacle challenge</td>
</tr>
<tr>
<td>T – apr 30</td>
<td>EXAM 3 (10am–12pm)</td>
<td>in ANS 151</td>
</tr>
</tbody>
</table>

* Lecture/Lab topics and Exam/Assignment due dates are subject to change. If any changes are made, you will receive at least one week notice.

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**location of labs**

- **ANS 155** – several labs will be held in this Animal Sciences classroom
- **HTU** – Horse Teaching Unit 1934 SW 63rd Ave, Gainesville
- **CVM** – we will have a couple of labs at the UF vet school. In all cases, we will arrange to meet at the Animal Sciences building (outside ANS 155) and walk over to the vet school together.
- **TBA** – “to be arranged”

The location of each lab will be announced in class and on CANVAS at the beginning of each week.

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**At the age of 3, Best Brew At The Bar already has a long list of world championship titles in Western Pleasure. ‘Shock Top” is also a UF Gator! Born in 2015, he was bred at the University of Florida out of the mare “Prissy Legs” and sired by “The Best Martini.”**

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**major assignments**

- **February 11**
- **April 17**

**Exams**

- **February 18**
- **April 1**
- **April 30**

**25-furlong derby**

- **February 20**
- **April 13**