**Introduction:**
The objectives of this course are to introduce you to human anatomy and physiology through the use of models, preserved specimens, dissections, histological slides, self-examination, computer simulations and student conducted experiments. This two-semester lab sequence is designed to compliment the lecture courses Fundamentals of Human Anatomy & Physiology Part 1 & 2. The lab courses will allow you to clarify and expand your understanding of material presented in lecture. The textbook used in lecture will provide excellent background reading to compliment the manual used in the lab. It is, therefore, highly recommended that you take the lab in conjunction with the lecture.

Zool 255/6 labs provide a hands-on, see for yourself exposure to the fundamentals of human anatomy and physiology. Your lab experience will be facilitated by an experienced teaching assistant (TA). However it is your responsibility to get as much out of the experience as possible. We recommend that you:

- Prepare for lab by reading the assigned chapters and assignments prior to coming to class.
- Follow all the directions given to you by your TA as well as complete the assignments listed for each week the lab meets.
- Complete the assignments during class time.
- Ask questions! Your TA is very knowledgeable and can help you understand complicated concepts - seek him/her out!

Your grade (see grading policy) will be calculated on the basis of in-class assignments, lab reports and practical exams. There will be three practical exams during the semester. The final practical exam will be partially comprehensive. The practical exams will be a written one word or short answer format. Points will be lost for spelling mistakes.

If you have a formal excuse you may make-up a missed lab or exam at the discretion of your TA. Make-ups can be conducted only on Tuesday or Wednesday of the same week you missed the lab or exam.

We encourage you to look upon these labs as a positive, fun learning experience. You will be learning about your body: how it operates in good health, what things can go
wrong and how some diseases might be prevented. We get only one chance to use our body - we hope to empower you to make informed and health choices so that your body will provide you with a long and healthy life.

**Course Requirements:**
This class meets for two hours, once per week. You need to attend every lab session. Your lab will be run by a Teaching Assistant and possibly an undergraduate assistant (490U student).

**Attendance Policy** – This is a laboratory class, therefore, attendance is necessary. You will not have points deducted or any other mark towards your grade for missing a lab, however, often activities are assigned in class that are turned in at the end of class that will affect your grade. If you know you are going to miss a lab ahead of time then let your TA know and he/she can let you know other times you can attend a lab or how you can make it up.

**Text:**
The lab manual is **required** for this class.

1. Elaine Marieb Laboratory Manual for Anatomy & Physiology.
   Benjamin Cummings Publishing. ISBN 0-8053-5471-4

**Lab Fee:**
There is a $40 lab fee that will be charged to your Iowa State bill for this lab course. This is to cover disposable goods and lab equipment consumed during this semester. This fee will be waived only if you drop this class during the first week of the semester.

**Evaluation and Grading:**
Your grade will be based on a points earned/percentage system. You will be given a combination of 3 exams, lab reports, homework assignments, and 1 case studies to complete. Below is a breakdown of the grading scheme.

**Homeworks:** worth 10 points a piece. Will be 25% of your grade.
**Test 1 and 2:** worth 100 points each. Will be 15% of your grade each for a total of 30%.
**Final:** Worth 100 points. Is cumulative. Will be 25% of your grade.
**Lab report:** Worth 100 points. Will be 10% of your grade.
**Case Study:** Worth 100 points. Will be 10% of your grade.
**Extra Credit:** Will be explained in class. Can be worth up to an extra 10% of the grade.

* The Federal Government requires that students receiving financial aid attend classes. Students who are identified by the instructor as not attending classes, will be reported to the Registrar’s Office. Students who fail to return to class will be dropped and financial aid recalculated.

* In accordance with ADA recommendations: If you require any instructional or other accommodations in order to optimize your participation and/or performance in this class, please speak to the instructor following the first class meeting. All conversations will be confidential.

**Labs meet in Rooms 208 of Science II**
All lab meeting times and lab sections are posted outside the lab room.
Tentative Weekly Schedule

Week 1/Aug 26  Introduction
Week 2/Sept 2  Microscope, anatomical positions, rat dissection
              Lab manual exercises 1, 2, 3
Week 3/Sept 9  Cells: cell division, transport across the cell membrane
              Lab manual exercises 4, 5A
Week 4/Sept 16 Four main tissue types and the integumentary system
              Lab manual exercises 6A, 7, 8
Week 5/Sept 23  Exam # 1
Week 6/Sept 30  Nervous system: nervous tissue, nerve impulse, synapse
              Lab manual exercises 17, 18
Week 7/Oct 7   Nervous system: spinal cord and spinal nerves, brain, cranial nerves, pig brain dissection
              Lab manual exercises 19, 21, 22
Week 8/Oct 14  Case study on bioethical issues
Week 9/Oct 21  Sensory senses: vision, hearing, olfactory
              Lab manual exercises 23, 24, 25, 26
Week 10/Oct 28 Autonomic nervous system & endocrine system
              Lab manual exercises 27
Week 11/Nov 4  Exam # 2
Week 12/Nov 11 Muscular system: muscle tissue, muscle contraction
              Lab manual exercises 14, 16
Week 13/Nov 18 Principle muscles
              Lab manual exercise 15
Week 14/Nov 25 No Class - Thanksgiving break
Week 15/Dec 2  Skeletal system: bone tissue; bone growth; articulations
              Lab manual exercises 9, 13
Week 16/Dec 9  Axial & appendicular skeleton
              Lab manual exercises 10, 11, 12
Week 17/Dec 16 Final Exam (during finals week) WILL BE COMPREHENSIVE