**AUBURN UNIVERSITY SYLLABUS**

KINE 3680 – Physiology of Exercise

**Course Number**

KINE 3680

**Course Title**

Physiology of Exercise

**Credit Hours**

3 semester hours

**Prerequisite**

None

**Corequisite**

None

**Term**

Fall 2023

**Day/Time/Location**

Lecture:

Tuesday and Thursday – 8:00 am to 9:15 am – Student Activities Ctr 241

**Instructor**

Andreas N. Kavazis, PhD

**Office Address**

Room 287 in Kinesiology Building

**Contact Information**

Email: ank0012@auburn.edu

**Office Hours**

Tuesday: 9:15 – 10:15 am

Thursday: 9:15 – 10:15 am

By appointment

**Textbooks**

Powers and Howley. Exercise Physiology: theory and application to fitness and performance. McGraw-Hill. Tenth Edition.

**Course Description**

Energetics of exercise and physiological responses and adaptions of various organ systems (muscular, circulatory, respiratory, etc.) to acute and chronic exercise in different environments.

**Student Learning Outcomes**

Discuss the phosphocreatine energy system, glycolysis, and oxidative phosphorylation.

Describe the endocrine system and how can affect exercise performance.

Describe the acute and chronic adaptations of the neuromuscular system to exercise.

Describe the structure and function of skeletal muscle.

Describe cardiovascular function and adaptations to exercise and training.

Describe pulmonary function and adaptations to exercise and training.

Discuss regulation of blood flow, temperature and pH during exercise.

Identify and define the principles of training for performance improvement.

Discuss body composition and nutrition for health.

**Course Content Outline**

Please see page 5 for detailed schedule.

**Assignments/Projects**

Exams

Four exams will be given on the dates shown in the syllabus.

Exams can include multiple choice and/or true/false.

**Rubric and Grading Scale**

Class evaluation breakdown

Exam 1 – 100 points

Exam 2 – 100 points

Exam 3 – 100 points

Exam 4 – 100 points

Total points for the class = 400 points

Grading scale

A = 90-100% (400 – 360 points)

B = 80-89% (359 – 320 points)

C = 70-79% (319 – 280 points)

D = 60-69% (279 – 240 points)

F = 0-59% (less than 240 points)

**Class Policy Statements:**

Attendance

Although attendance is not required, students are expected to attend all classes, and will be held responsible for any content covered in the event of an absence.

Excused absences

Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student’s immediate family, the death of a member of the student’s immediate family, trips for student organizations sponsored by an academic unit, trips for university classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance, and religious holidays. Students who wish to have an excused absence from class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences is required. Please see the Student Policy eHandbook ([www.auburn.edu/studentpolicies](http://www.auburn.edu/studentpolicies))for more information on excused absences.

Make-Up Policy

Arrangement to make up a missed major examination (e.g., hour exams, mid-term exams) due to properly authorized excused absences must be initiated by the student within one week of the end of the period of the excused absences(s). Except in unusual circumstances, such as the continued absence of the student or the advent of university holidays, a make-up exam will take place within two weeks of the date that the student initiates arrangements for it. Except in extraordinary circumstance, no make-up exams will be arranged during the last three days before the final exam period begins.

Academic Honesty Policy

All portions of the Auburn University student academic honesty code found in the Student Policy eHandbook ([www.auburn.edu/studentpolicies](http://www.auburn.edu/studentpolicies)) will apply to university courses. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Disability Accommodations

Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

Course contingency

If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.

Professionalism

As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College’s conceptual framework. These professional commitments or dispositions are listed below:

o Engage in responsible and ethical professional practices

o Contribute to collaborative learning communities

o Demonstrate a commitment to diversity

o Model and nurture intellectual vitality

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| **DAY** | **TOPIC** |
| 8-17 | Syllabus and Chapter 2 – Homeostasis |
| 8-22 | Chapter 3 – Bioenergetics |
| 8-24 | Chapter 3 – Bioenergetics |
| 8-29 | Chapter 3 – Bioenergetics + Chapter 4 – Exercise metabolism |
| 8-31 | Chapter 4 – Exercise metabolism |
| 9-5 | Chapter 4 – Exercise metabolism |
| 9-7 | Review |
| 9-12 | **EXAM #1** |
| 9-14 | Chapter 5 – Hormonal responses to exercise |
| 9-19 | Chapter 5 – Hormonal responses to exercise |
| 9-21 | Chapter 7 – Neural control of movement |
| 9-26 | Chapter 7 – Neural control of movement |
| 9-28 | Review |
| 10-3 | **EXAM #2** |
| 10-5 | Chapter 8 – Skeletal muscle |
| 10-10 | Chapter 8 – Skeletal muscle |
| 10-12 | Chapter 8 – Skeletal muscle |
| 10-17 | Chapter 9 – Cardiovascular adjustments to exercise |
| 10-19 | Chapter 9 – Cardiovascular adjustments to exercise |
| 10-24 | Chapter 9 – Cardiovascular adjustments to exercise |
| 10-26 | Review |
| 10-31 | **EXAM #3** |
| 11-2 | Chapter 10 – Pulmonary adjustments to exercise |
| 11-7 | Chapter 10 – Pulmonary adjustments to exercise |
| 11-9 | Chapter 11 – Acid-base balance |
| 11-14 | Chapter 12 – Temperature regulation during exercise |
| 11-16 | Chapter 18 – Body composition and nutrition for health |
| 11-21 | **NO CLASS - Thanksgiving Break** |
| 11-23 | **NO CLASS - Thanksgiving Break** |
| 11-28 | Review |
| 11-30 | **EXAM #4** |