**KINE 3680 Physiology of Exercise Syllabus Fall 2019**

**Course Title:** Physiology of Exercise; 3 credit hours **Course Number:**

**Co-requisite:** Physiology of Exercise Lab (KINE 3681)

**Day/Time/Location:** Tuesday and Thursday – 8:00 to 9:15 am – Student Activities Center 241

**Instructor:** Austin T. Robinson, PhD

**Contact Information:**

Office: Room 286 in Kinesiology Building

Phone: 334-844-1619

Email: atr0026@auburn.edu

**Office Hours:** Wednesday: 2:00 – 3:00 pm or by appointment

**Recommended Textbook:** 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.

**Primary Learning Objective:** Understand integrative physiological responses to acute and chronic exercise.

* Discuss energy systems: phosphocreatine, glycolysis, and oxidative phosphorylation.
* Describe the role of the endocrine system in the context of 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 acute and chronic adaptations to exercise.
* 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.

**Attendance and Participation:** Although attendance is not required, students are expected to attend classes, and engage in discussion and exercises that promote learning. We will use the [Socrative](https://socrative.com/) app to gauge collective grasp of material and perform team-based challenges. Students will be held responsible for any content covered in the event of an absence.

**\*Note\*:** This syllabus is subject to change based on the needs of the class. Changes, if any, will be announced in class and a revised syllabus will be circulated. Students will be held responsible keeping up with the course schedule.

**Course Performance Assessment:** Three in-class exams will be given on the dates shown in the syllabus. Exams may include multiple choice, true/false, and short answer questions. Note: THERE IS NOT A FINAL.

**Rubric and Grading Scale**:

* Exam 1 – 100 points
* Exam 2 – 100 points
* Exam 3 – 100 points
* Exams will be adjusted to 90% of grade
* Participation – 10%, participating in class discussion, group activities, assessments

**Total points for the class = 300 points**

Grading scale

A = 90-100% (300 – 270 points)

B = 80-89% (269 – 240 points)

C = 70-79% (239 – 210 points)

D = 60-69% (209 – 180 points)

F = 0-59% (less than 179 points)

**Class Policy Statements:**

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:

* Engage in responsible and ethical professional practices
* Contribute to collaborative learning communities
* Demonstrate a commitment to diversity
* Model and nurture intellectual vitality

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| **DATE** | **TOPIC** |
| 8/20 | Syllabus and Chapter 2 – Homeostasis |
| 8/22 | Chapter 2 – Homeostasis and Chapter 3 – Bioenergetics |
| 8/27 | Chapter 3 – Bioenergetics |
| 8/29 | Chapter 3 – Bioenergetics |
| 9/3 | Chapter 4 – Exercise metabolism |
| 9/5 | Chapter 4 – Exercise metabolism |
| 9/10 | Chapter 5 – Hormonal responses to exercise |
| 9/12 | Chapter 5 – Hormonal responses to exercise |
| 9/17 | Review |
| 9/19 | **EXAM #1** |
| 9/24 | Chapter 7 – Neural control of movement |
| 9/26 | Chapter 7 – Neural control of movement |
| 10/1 | Chapter 7 – Neural control of movement |
| 10/3 | Chapter 8 – Skeletal muscle |
| 10/8 | Chapter 8 – Skeletal muscle |
| 10/10 | Chapter 1 – Work, power, energy expenditure |
| 10/15 | Chapter 9 – Cardiovascular adjustments to exercise |
| 10/17 | Chapter 9 – Cardiovascular adjustments to exercise |
| 10/22 | Review |
| 10/24 | **EXAM #2** |
| 10/29 | Chapter 10 – Pulmonary adjustments to exercise |
| 10/31 | Chapter 10 – Pulmonary adjustments to exercise |
| 11/5 | Chapter 11 – Acid-base balance |
| 11/7 | Chapter 11 – Acid-base balance |
| 11/12 | Chapter 12 – Temperature regulation during exercise |
| 11/14 | **No Class** |
| 11/19 | Chapter 13 – Training adaptations |
| 11/21 | Chapter 18 – Body composition and nutrition for health |
| 11/26 | **No Class – Thanksgiving Break** |
| 11/28 | **No Class – Thanksgiving Break** |
| 12/3 | Review |
| 12/5 | **EXAM #3** |