

Course Syllabus

Course Description

This course takes an in-depth examination of the effects of exercise on the body. Through this course, students will learn basic anatomy, biomechanics, and physiology, as well as proper principles and techniques to designing an effective exercise program. The study of nutrition and human behavior will also be integrated into the course to enhance the students' comprehension of this multifaceted subject.

Units & Tasks

This course is divided into the following Units and Sections.

- **Course Introduction**
- **Unit 1: Intro to Exercise Science**
 - 1.1 Intro to Exercise Science
- **Unit 2: Body Systems**
 - 2.1 Terminology
 - 2.2 Skeletal & Muscular Systems
 - 2.3 Respiratory & Cardiovascular Systems
- **Unit 3: Exercise Physiology**
 - 3.1 Energy Systems
 - 3.2 Muscle Physiology
 - 3.3 Gender Differences
- **Unit 4: Biomechanics & Safety**
 - 4.1 Biomechanics
 - 4.2 Exercise Safety & Injury Prevention
- **Unit 5: Exercise Programming**
 - 5.1 Exercise Programming
 - 5.2 Components of Physical Fitness
- **Unit 6: Mind & Body**
 - 6.1 Exercise Psychology
 - 6.2 Sports Nutrition
- **Unit 7: Exercise Considerations**
 - 7.1 Exercise Programming Considerations
 - 7.2 Special Populations

Within each section you will find the following tasks to view or complete:

1. **Checklist**—an outline of objectives & tasks for the section
2. **Lessons**—multimedia lessons about the section topic
3. **Field Trip**—links to other online sites with additional fitness information
4. **Skills**—lessons that teach fitness-specific skills
5. **Discussion***—class discussion on an assigned topic
6. **Assignment***—assignment that corresponds with the skills lessons
7. **Vocab Check**—a practice exercise to test your knowledge of vocabulary
8. **Quiz***—quiz covering information from the lessons

Exercise Science

At the end of each unit, there will be a unit exam. The items noted with an asterisk above are those that must be submitted for a grade. The “Course Introduction” section has more detailed information on the navigation and tasks for this course.

Assignments and Grading

Each section of this course is designed to be completed in about one week’s time. Please see the course outline for more information on points possible and due dates.

Required Materials

There are no additional materials required for this course.

Technical Requirements

Please refer to the *Technical Requirements* page in the course for more information.