HEA 303 Physiology of Exercise
Directed Study
University of Maine Farmington

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Prerequisite: Bio 150: Human Anatomy and Physiology
Hea 241: Nutrition and Exercise

Required Text: *Exercise Physiology; Energy, Nutrition and Human Performance.* 6th ed., McArdle, Katch and Katch. Lippincott Williams and Wilkins. ISBN 0781749905

Note: Equal education opportunity is offered to students with special needs due to disability. Please notify me if reasonable accommodations will be needed to meet course requirements.

Course Description: This class critically examines the effects of physiological responses and adaptations to exercise by selective populations, such as the elderly, children, women, and persons with disabilities and/or chronic illnesses. Development of individualized fitness and testing programs for special populations will be implemented through a formal service-learning project.

Overview: Students participating in the Physiology of Exercise class will experience a comprehensive coverage of exercise physiology linking topics like sports nutrition, physical conditioning, weight control and special populations. Students taking this course apply previous and new knowledge from the fields of nutrition, anatomy, physiology and health promotion to analyze various perspectives, tools and programs useful in optimizing individual physical health. A synthesis of knowledge, skills and experiences is used in a culminating project designed to construct a product useful to the student and/or a specific community.

Course Objectives: upon successful completion of this course students will satisfactorily produce a product that will reflect their ability to synthesize information from the following sub-topics:

- Exercise Physiology: Roots and Historical Perspectives
- Nutrition: The Basis for Human Performance.
- Energy for Physical Activity
- Systems of Energy Delivery
- Enhancement of Energy Capacity
- Exercise Performance and Environmental Stress
- Body Composition, Energy Balance, and Weight Control
- Exercise, Successful Aging, and Disease Prevention
- On the Horizon

Course Requirements and Grading:

- There will be 6 quizzes 300 points
- Biomechanics study = 150 points
- Final exam = 200points

Total 650 points

> 600 points	A
550 – 600	B
500 – 549	C
450 – 499	D
<450	Game over, try again

Biomechanics – student selects a gross motor movement and deconstructs the motion with an analysis of each muscle and joint function.

Quizzes: Each quiz will be made available when readings are assigned

Final Exam: The final exam will follow the same format as the quizzes.

Things to keep in mind:

1) Attendance is of course required.
2) Assignments are of course due on the date on the date displayed on the syllabus.
3) Everything of course must be typed.
4) Of course spelling and grammar count.
5) Class participation is important… of course.
6) Cell phones and other electronic gadgets really bug me, I recommend you keep ‘em off :)