OAKLAND UNIVERSITY
SCHOOL OF HEALTH SCIENCES
HUMAN MOVEMENT SCIENCE

EXS 4400: Obesity and Physical Activity (2 credits)
Winter 2018 Semester

Instructor: Myung D. Choi, Ph.D.
Office Location: HHB 3169
Class Time and Room: Wednesday 6:30-8:17pm, HHB5045
Office Hours: Wed. 4:00-6:00pm or by appointment

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COURSE DESCRIPTION: Obesity is a complex disease with myriad contributing factors. This course addresses the causes, prevention, and treatment of obesity, with particular emphasis on the role of physical activity. Metabolism, energy balance, and social, psychological, mechanical, and behavioral issues are discussed.

TEXT/READINGS (recommended):

- Obesity: Science to Practice. Gareth Williams and Gema Fruhbeck. Wiley-Blackwell.
- Articles made available, if needed.

COURSE OBJECTIVES: At the conclusion of the course the student will have an understanding of the following:

1. The students will become familiar with the general principles and applications of various field and laboratory methods used in evaluating body composition.
2. The students will demonstrate an understanding of the changes occurring in body composition throughout the life-span and in response to physical activity and understand the implications on health status.
3. The students will apply knowledge of demographic considerations (age, gender, ethnicity, etc.) on the prevention and treatment of overweight/obesity.
4. The students will analyze the prevalence of overweight, obesity, and various chronic disease risk factors.
5. The students will address the pathophysiology and risk factor considerations related to obesity, including abdominal obesity.
6. The students will express knowledge of exercise considerations for healthy participants versus participants with obesity and/or chronic disease risk factors (lipids, blood pressure, diabetes, heart disease, etc.).
7. The students will discuss body composition changes that occur with respect to the impact of hormonal and environmental (diet and exercise) factors on these changes.
8. The students will demonstrate an increase in awareness and sensitivity so they, as exercise professionals, can bring an educated perspective to health-related issues such as implications of exercise in the prevention and the control of cardiovascular and metabolic diseases.

COURSE PROCEDURES:
These objectives will be met with:

1) Lectures
2) Selected journal reviews
3) Written and/or oral presentations of papers reviewing the literature in a specified area of interest related to obesity and physical activity

Evaluation of your work (% of Final Grade) will be as follows:

Overall Grade	
Component (Tentative; may change throughout the semester)	
Exam I	30%
Exam II (April 25)	30%
Oral Presentation (April 4 and/or 11)	20%
Term Paper (due by April 11)	20%
Total 100%	

Exams require integration of material covered, rather than simply memorizing and regurgitating. The exams are comprised of multiple choice, T or F, short answers, and/or essay questions (tentative). The final examination will be comprehensive and require thorough integration of primary concepts covered throughout the duration of the course.

Note: Individual scores may be posted on Moodle.

Attendance Policy:

Attendance will be noted each class period and may impact your final grade. THREE (and more) absences will cause a **10% deduction in the final grade for the course.** FIVE (and more) absences will cause a **20% deduction in the final grade for the course.** If students miss SEVEN (and more) class meetings, they will be asked to drop the course and/or will receive an F grade. Two tardy arrivals and/or leaving class early will count as one absence. You are considered tardy if you arrive ten minutes after class starts. Students who miss no classes will receive an attendance bonus of *5 points* on the final exam.

Make-Up Policy:

There will be no chance to make-up tests, missed due to an absence. Conflicts of the student's own making will not be acceptable. All assignments are to be turned in on time (i.e., at the **BEGINNING** of the class period in which they are due). Failure to do so will result in deduction of **20% per day** for that particular assignment. University absences will be handled on an individual basis, and should be dealt with **prior** to the date of absence.

Term Paper

Each student will write a ***6-page review paper*** on a topic related to: "Obesity and Prevention related to Physical Activity". For example, the paper may include information related to:

(i) how exercise regulates hormones that regulate appetite
(ii) regulation of energy expenditure by endurance vs. resistance exercise
(iii) body weight management with nutritional plus exercise interventions

You are required to synthesize information from **at least 6 relevant peer-reviewed original journal articles**. (ideally all references should be in the last 5 years) and review articles are NOT considered as an original journal article. *Submission deadline date is April 11*.

Oral Presentation

Each student/group will be responsible for an oral presentation based on the term paper (topic to be approved by the instructor). You are required to synthesize information from at least **4 relevant original journal articles**, and present the information in an oral presentation that lasts for **15 min**. Further details are provided during the semester.

Expectations of Students: Regular class attendance and active participation in class discussions is important. Students are expected to arrive for class on time and refrain from disturbing the flow of the class through conversation or distracting behavior. Students are encouraged to exchange ideas and to integrate personal experiences in class sessions. All communication devices (pagers and cell phones) are to be turned off before entering the classroom.

Academic Conduct Policy: Cheating on examinations, plagiarism, falsifying reports/records, and unauthorized collaboration, access, or modifying of computer programs is considered serious breaches of academic conduct. The Oakland University policy on academic conduct will be strictly followed with no exceptions. See catalog under Academic Policies and Procedures.

Professional Conduct: The faculty of the School of Health Sciences believes that the conduct of a student

registered or taking courses in the School should be consistent with that of a professional person. Courtesy, honesty, and respect should be shown by students toward faculty members, guest lecturers, administrative support staff, and fellow students. Similarly, students should expect faculty to treat them fairly, showing respect for their ideas and opinions and striving to help them achieve maximum benefits from their experience in the School.

Add/Drops: The University add/drop policy will be explicitly followed. It is the student's responsibility to be aware of the University deadline dates for dropping the course.

Special Considerations: Students with disabilities who may require special considerations should make an appointment with campus Disability Support Services. Students should also bring their needs to the attention of the instructor as soon as possible.

Incomplete Grade ("I" grade): Students who, for reasons beyond their control (illness, bereavement, accident) are unable to complete the course work by the end of the semester may request an "Incomplete" grade from the professor. The student and the professor must complete the form, "Request for an Incomplete Grade," available from the professor or the Dean's office. The "I" grade must be approved at least one day before the final examination. It is the Professor's decision whether to allow an "Incomplete" grade. An Incomplete grade must be converted to a numerical grade within the first 8 weeks of the next Fall or Winter semester for which the student registers. Procedures for completing the work in the course are spelled out on the "Request for an Incomplete Grade" form.

Class Policies

I encourage students to be active participants during lecture. I welcome questions from the class, and if you don't understand something--please ask. I encourage respectful interaction and promote an enjoyable, engaging learning environment.

1. **No** cell phones and any personal computers in class: please turn them off and have them out of sight. This no-use policy includes texting and cell phone calculator functions. You should have a traditional calculator available for class or exams or plan to do calculations by hand.
2. **No** ipods, head phones, ear buds, etc. should be on, used, or worn during class.
3. Please keep hoods off during class, and baseball caps (or any brimmed hat) should be turned backwards or taken off for tests.
4. **No** studying for other courses, working on assignments for other courses, or "resting your eyes" during class.

*****Students found texting/twittering/instant messaging, listening to or using an ipod, or sleeping in class will be asked to leave and will **receive a 5% deduction in their final grade in the class**.

GRADING SCALE

PERCENT	GRADE	PERCENT	GRADE
92 – 100	4.0	70	2.4
90 – 91	3.9	69	2.3
88 – 89	3.8	68	2.2
86 – 87	3.7	67	2.1
84 – 85	3.6	66	2.0
82 – 83	3.5	65	1.9
80 – 81	3.4	64	1.8
79	3.3	63	1.7
78	3.2	62	1.6
77	3.1	61	1.5
76	3.0	60	1.4
75	2.9	59	1.3
74	2.8	58	1.2

73	2.7	57	1.1
72	2.6	56	1.0
71	2.5	<56%	0.0

Tentative Topic Outline (may change without notice)

Date	Topic	Assessments
Week 1	• Prevalence of overweight, obesity, and various chronic disease risk factors (lipids, hypertension, metabolic syndrome) across demographics (age, gender, ethnicity)	
Week 2	• Social impact of obesity	
	• Economic aspect of obesity	
Week 3	• Social and psychological Factors in obesity	
	• Genetic influence on obesity	
Week 4	• Body composition assessment: Overview	
	• Obesity and the energy equation • Basic biology of obesity- what do we know?	
Week 5	• Measuring energy intake	
	• Measuring energy Output- Assessing physical activity and Metabolic rate	
Week 6	• Obesity-associated energy metabolism	
Week 7	• ***Exam 1 (tentative; exact date will be announced in class)***	Exam I
Week 8	• ***Spring Break-No class***	
Week 9	• The role of the endocrine system in obesity	
	• Pathophysiology and risk factor considerations related to obesity and related comorbidities	
Week 10	• Pediatric Obesity	
	• Behavioral treatment of obesity	
	• Management of Obesity and Overweight: Diet	
Week 11	• Exercise considerations for healthy participants versus participants with obesity and/or chronic disease risk factors (lipids, blood pressure, diabetes, etc.)	
Week 12	• Pharmacotherapy considerations for treating obesity and chronic disease risk factors, and the impact on exercise prescription	
	• Surgical considerations for treating obesity and the impact on exercise prescription	
Week 13	• Management of Obesity and Overweight: Exercise	
	• Management of Obesity and Overweight: Diet + Exercise	
	• Management of Obesity and Overweight: Medication + Surgery	
Week 14	• Management of Obesity and Overweight: Overview	
	• Student Presentations and discussion	
Week 15	• Student Presentations and discussion	
Week 16	• Final Exam (April 25, 7:00-10:00pm)	Exam II (Final)