

Course Syllabus (Jan 15, 2014 version)
11:709:427:01

Obesity: Biology, Behavior, and Management – spring 2014- Wednesdays 9:15 am – 12:15 pm

Location: 206 Thompson Hall, Cook campus

Prerequisite: 709:255 (Nutrition & Health)

Course Director: Joseph L. Dixon, Ph.D., 132 Thompson Hall

Dixon@aesop.rutgers.edu

Office hours: To be announced

Background:

The study of obesity provides an excellent opportunity to examine a complex problem from a multidisciplinary perspective. In fact, I believe the greatest surprise from this course is that you will find that high rates of obesity in the US have many complicated causes; most of which are not directly related to biology. This course will enable students to see the connections between numerous disciplines and fields, all of which impact the same outcome, obesity. The course will provide a series of state-of-the-art lectures by scientists actively involved in different aspects of research relevant to obesity. These lecture/discussion sessions will enable the students to understand the multi-factorial etiology of the epidemic, as well as the treatment and public policy approaches that are being used in the obesity research community to combat the disease.

Objectives:

Upon completion of this course, students will be able to:

- i. describe the trends in the prevalence of obesity over the past 30 years
- ii. evaluate the interplay among causes of human obesity, i.e., nutritional, physical, behavioral, social and environmental
- iii. understand how public policy can influence obesity.

Evaluation:

Students will be evaluated by three methods. First, a one-page to one and half page summary of the two papers assigned will be due at the beginning of each class (40%). Second, working in groups of 3 to 4 persons, students will contribute to group project described below (40%). Third, participation in discussions and class attendance will be monitored (20%).

Each week, an important leading researcher in a particular field relevant to obesity will present a lecture during the first period. Students will be provided with one or two articles furnished by each lecturer, and *these should be read prior to the class*. These papers will be available on the Sakai site for this course! After the lecture, students will engage in discussion about the lecture topic and the assigned readings.

For the final hour of the class period, students will work in small groups to develop the PowerPoints needed for the group projects that probe novel strategies to prevent obesity. Each student will be responsible for the preparation of the Group's PowerPoint presentations as described below.

Grading:

Class participation	20%
Reference (weekly) write-ups	40%
Group project	40%

Class participation 20%

Description: This is a combination of class attendance and asking questions of lecturers or participating in class. You are not allowed to be on the Internet during the lectures or group presentations. Attendance is mandatory and you need to sign the sign up sheet for every class. This year I am going to tape up on a wall a large version of the sign up sheet. It is your responsibility not to forget to sign the sheet. If you miss class you need a valid excuse. Also, arriving late for class is not acceptable.

Reference (weekly) write-ups 40%

These need to be handed in the day of the class. The papers for each lecture will be available the week before the lecture is scheduled. A paragraph is required for each paper. From experience, the best write-ups usually require about $\frac{3}{4}$ of a page of **single line** printing. But some students can write very good reviews that are shorter. Absolutely no reviews longer than 2 pages! If only one paper is assigned, only one write up is required. I will be less strict in grading the first three required. Last year, several students made great strides in their writing during the course and I take this into account. You cannot copy from the papers in any way. You must write in your own words. Your interpretations (whether they are correct etc.) are not as important as your ideas, concerns and comments. If I feel you need help writing, I will have you go to the Writing center for a tutor. You must have that tutor email me to confirm you are getting help.

There are about 12 lectures and 9 total write-ups (not including the final) are required, so one or two can be dropped to obtain the final grade for the write-ups.

Each Write-up will be graded on a 0 to 10 point scale.

Group project (including final written assignment) 40%

Based upon feedback from the students last year, the group project will have a different structure this year. The group project this year will involve a true group interactive experience but it will be focused on a PowerPoint presentation instead of a 12-page group proposal. The reason for this is that the students last year were very concerned how they were going to be graded fairly, and also, I felt there was not enough time to assemble a rigorous and coherent project document. Also, the students wished to hear about the projects conceived by the other groups. Therefore, I have changed the design as follows:

First – I will assign the members to groups using random numbers. I will also assign the project to each group. The reason I am doing this is that last year we spent an enormous

amount of time self-selecting the group members and the projects (maybe the first third of the semester). This time I will formulate the groups and the projects. If it turns out that there is a problem with any particular formulation, you can ask me to make a change.

The project structure is:

Class one - Assignment of group members; assignment of group topics

Class two - Find 4 publications that are associated with the topic - show me in class or email me the 4 papers in the following week. Websites are not allowed except for “tech” based projects.

Class three - Design a 4 Slide PowerPoint presentation for the topic-

Slide 1 – Title of the Project with team members

Slide 2 - Why this topic and studying it is important to combating obesity

Slide 3 - The strategy that the group is going to take in assembling the full PowerPoint presentation

Slide 4 – The four approved articles that relate to this project.

Class 4 and 5 - Presentation of your 4 slides to the entire class

Class 6 - 8 - Meet in groups to improve your PowerPoint presentations

Class 9 (after Spring break) - Present full PowerPoint presentation (15 slides maximum). I will give you some guidelines for what should be included in the PowerPoint.

Class 10 - Present full PowerPoint presentation

Class 11 - Present full PowerPoint presentation

Three classes remaining - work on 6 page final paper from each student.

The individual paper is due on the next to last class of the semester. The paper can either be a continuation of the project or idea discussed in your PowerPoint Slide Presentation, or it can be on one of the topics covered by the lectures in class. The paper should be 6 pages double lined and it should have at least 4 journal articles as references.

Novel strategies to prevent obesity - Guidelines for group projects:

Group projects provide a chance to use the disciplinary expertise from your major toward a specific goal, in this case the prevention of obesity. The problem of preventing obesity is multidisciplinary so you will need to use the expertise of all group members. Typically, the best projects are themselves multidisciplinary in approach.

The group should decide on a theme for the overall project during the first two meeting periods, and discuss this with the course director.

A good strategy for designing a program for obesity prevention might include an analysis of other “prevention” issues such as smoking, drug abuse, high serum cholesterol levels, etc. In designing a project, written rationale for your design is necessary. Creativity is encouraged in developing the PowerPoint presentation, however all approaches must have a clearly defined rationale that is based on a survey of relevant literature. You are encouraged to establish “expert consultants” or “outside mentors” who can help guide your readings and guide project development; the course director can help you identify these individuals (who may be your lecturers). Everyone is expected to read the literature for his or her group topic. In your oral presentation, you are expected to refer to the literature that you have read (4 papers and others).

Possible Group Project Topics: (These are general categories meant to start your discussions; others not included here can also be pursued).

1. Government programs to prevent obesity (this is a huge topic—federal programs, state, local governments, e.g., agricultural policies, urban planning, school breakfast and/or lunch programs; what has/has not worked?).
2. Role of fitness/exercise industry in preventing obesity (individual approaches, group approaches, home and/or workplace; what has/has not worked?).
3. School-based programs for obesity prevention (providing information, motivation, exercise and/or food-oriented programs; what has/has not worked?).
4. Public service campaigns for obesity prevention (effective marketing strategies; what has/has not worked?).
5. Community-based interventions to combat obesity (faith-based programs, community group programs, use of health professional groups, who are the high-risk groups; what has/has not worked?).
6. Role of the food industry in preventing obesity (food supply, advertising, ‘special’ foods, portion sizing; what has/has not worked?).

Topics Explored Last Year (spring 2013) - See Excel File from 2013 - You will see the titles of all the projects worked on last year. With the structure from last year, all the projects were very well conceived. However, the actual project documents needed further refinement. Therefore, I am trying the PowerPoint presentations this year as the group project.

	Obesity Course		2014	
	2014			
	Date		Topic	Lecturer
1	January 22		Overview of Obesity	Joseph Dixon
2	January 29		Psychology of Obesity:Childhood	John Worobey
3	February 5		Biology of the Fat Storage	Dixon
4	February 12		Obesity in Developing Countries 4 Slide Presentation	Dan Hoffman
5	February 19		Exercise and Obesity 4 Slide Presentation	Greg Henderson
6	February 26		Control of food intake: the Endocannabinoids 4 Slide Presentation	TBA
7	March 5		Physical Environment & Obesity	Yanhong Jin
8	March 12		TBA	
	March 19 Spring Bk		No Class	No Class
Extra	March 25		James Hill - Hans Fisher Lecture- The fight against obesity	
9	March 26		Making the Food Stamp Program anti-obesioget 15 Slide Presentation	Debra Palmer
Extra	March 27		The different adipose tissues - an update	Susan Fried
10	April 2		Psychology of Obesity:Adult 15 Slide Presentation	Charlotte Markey
11	April 9		TBA (Obesity: The primary physician's perspec 15 Slide Presentation	Jeff Levine (??)
12	April 16		Industry, Advertising & Obesity Dietary Treatment	Carol Byrd-Bredbenner Dixon (?)
13	April 23		Insights from evolutionary biology and the diets of orangatans Final Paper Due!!	Erin R. Vogel, Ph.D. Department of Anthropology Center for Human Evolution
	April 26 -30		Experimental Biology	
14	April 30 Last Class		Review of the Course No Final Exam	Dixon

